

Docket: : A-15-07-009  
Exhibit Number : \_\_\_\_\_  
Commissioner : President Picker  
Admin. Law Judge : K. Bemesderfer  
ORA Project Mgr. : Ana Maria Johnson  
ORA Witness : Enrique Gallardo



ORA  
OFFICE OF RATEPAYER ADVOCATES



**Office of Ratepayer Advocates  
California Public Utilities Commission**

**Office of Ratepayer Advocates Testimony and  
Recommendations Regarding Voice Service  
Quality and Backup Power**

**San Francisco, California  
January 15, 2016**

**- PUBLIC VERSION -**

## MEMORANDUM

This report was prepared by Enrique Gallardo of the Communications & Water Policy Branch of the Office of Ratepayer Advocated (ORA) under the general supervision of Program & Project Supervisor, Ana Maria Johnson. ORA is represented in this proceeding by legal counsel, Lindsay Brown.

A statement of qualifications of Enrique Gallardo is presented in Attachment A to this testimony.

This testimony is comprised of the following chapters.

Chapter Number	Description
1	<b>VOICE SERVICE QUALITY AND RELIABILITY</b> – examines whether the proposed transaction will maintain or improve voice service quality.
2	<b>THE PROVISION OF BACKUP POWER FOR VOIP SERVICE</b> – examines whether the proposed transaction will maintain or improve Joint Applicants’ provision of backup power for Voice over Internet Protocol (“VoIP”) service

# TABLE OF CONTENTS

<b>EXECUTIVE SUMMARY.....</b>	<b>1</b>
ORGANIZATION OF REPORT .....	1
KEY FINDINGS .....	1
<b>1. VOICE SERVICE QUALITY AND RELIABILITY .....</b>	<b>1-1</b>
INTRODUCTION .....	1-1
<b>A. OVERVIEW OF JOINT APPLICANTS’ VOICE SERVICES: CHARTER PROPOSES TO GREATLY ENLARGE ITS SERVICE TERRITORY IN CALIFORNIA. ....</b>	<b>1-1</b>
<b>B. JOINT APPLICANTS’ STATEMENTS AND PLANS REGARDING VOICE SERVICE QUALITY LACK SPECIFIC PERFORMANCE BASED OUTCOMES IN CALIFORNIA .....</b>	<b>1-4</b>
<b>C. JOINT APPLICANTS HAVE RECEIVED POOR CUSTOMER SATISFACTION AND PERFORMANCE AND RELIABILITY RATINGS. ....</b>	<b>1-5</b>
<b>D. VOICE SERVICE OUTAGES ARE A SIGNIFICANT RISK TO PUBLIC SAFETY AND AN INDICATOR OF POOR SERVICE QUALITY .....</b>	<b>1-11</b>
1. JOINT APPLICANTS HAVE A HIGH NUMBER OF SERVICE OUTAGES. ....	1-12
A) CHARTER .....	1-12
B) TIME WARNER CABLE .....	1-14
2. CHARTER HAS DEMONSTRATED A POOR RESPONSE TIME TO OUTAGES .....	1-15
3. BRIGHT HOUSE PROVIDES A LIMITED SET OF DATA REGARDING ITS SERVICE OUTAGES. ....	1-16
<b>E. JOINT APPLICANTS’ HAVE A POOR RESPONSE TO THE MOST SIGNIFICANT VOICE SERVICE OUTAGES. ....</b>	<b>1-18</b>
A) CHARTER .....	1-20
B) TIME WARNER CABLE .....	1-21
C) BRIGHT HOUSE .....	1-22
1. BOTH CHARTER AND TIME WARNER CABLE HAVE A SLOW REPAIR TIME FOR THEIR LARGEST VOICE SERVICE OUTAGES .....	1-22
2. CERTAIN GEOGRAPHIC LOCATIONS EXPERIENCE A DISPROPORTIONATE IMPACT FROM NORS OUTAGES. ....	1-24
<b>B. JOINT APPLICANTS’ SERVICE QUALITY METRICS REVEAL OTHER AREAS OF POOR PERFORMANCE .....</b>	<b>1-25</b>
1. JOINT APPLICANTS HAVE VARIED AND INCONSISTENT SERVICE QUALITY METRICS .....	1-26
2. INSTALLATION DATA REVEALS SOME AREAS OF POOR SERVICE QUALITY .....	1-27
A) CHARTER .....	1-27

B) TIME WARNER CABLE .....	1-28
C) BRIGHT HOUSE .....	1-29
3. CUSTOMER TROUBLE REPORTS REVEAL AREAS OF POOR SERVICE QUALITY AS WELL AS GAPS IN THE DATA TRACKED BY THE JOINT APPLICANTS.....	1-31
A) CHARTER .....	1-31
B) TIME WARNER CABLE .....	1-32
C) BRIGHT HOUSE .....	1-32
4. THERE ARE MANY GAPS AND INCONSISTENCIES IN THE DATA ON ANSWER TIMES.....	1-33
A) CHARTER .....	1-34
B) TIME WARNER CABLE .....	1-35
C) BRIGHT HOUSE .....	1-35
5. TIME WARNER CABLE TRACKS SOME UNIQUE DATA METRICS, BUT HAS LARGE GAPS IN THE DATA.....	1-35
<b>C. JOINT APPLICANTS DO NOT DEMONSTRATE AN ADEQUATE RESPONSE TO     CUSTOMER COMPLAINTS. ....</b>	<b>1-38</b>
1. JOINT APPLICANTS HAVE VARIED COMPLAINT PROCESSES.....	1-38
A) CHARTER .....	1-40
B) TIME WARNER CABLE .....	1-43
2. COMPLAINT DATA FROM THE COMMISSION’S CONSUMER AFFAIRS BRANCH PROVIDES A COMPARISON OF JOINT APPLICANTS’ COMPLAINTS .....	1-46
<b>2. THE PROVISION OF BACKUP POWER FOR VOIP     SERVICE.....</b>	<b>2-1</b>
INTRODUCTION .....	2-1
A. BACKUP POWER POLICIES AND PRACTICES.....	2-1
B. JOINT APPLICANTS’ GENERALLY PROVIDE BACKUP POWER THAT WOULD MEET APPLICABLE GUIDELINES. ....	2-2
C. JOINT APPLICANTS’ EDUCATION OF CUSTOMERS REGARDING BACKUP POWER FOR VOIP SERVICES IS LACKING.....	2-4
CONCLUSION.....	1

**Attachments**

**Attachment A – Statement of Qualifications of Enrique Gallardo**

## TABLES AND FIGURES

Table 1: Charter Year-End Total Number of VoIP Subscribers California, 2011-2015 .....	1-2
Table 2: Time Warner Cable Year-End Total Number of Residential VoIP Subscribers, California 2011-2015 .....	1-3
Table 3: Bright House Total Number of VoIP Subscribers California, 2011-2015 .....	1-3
Figure 1: J.D. Power Customer Satisfaction Ranking, West Region 2015 .....	1-6
Figure 2: J.D. Power Overall Satisfaction Ranking, West Region, 2012-2015 .....	1-7
Figure 3: J.D. Power Performance and Reliability Ranking, West Region 2015 ....	1-8
Figure 4: J.D. Power Performance and Reliability Ranking, West Region 2012-2015 .....	1-9
Figure 5: Percentage of Customers Experiencing General Service Outage J.D. Power Nationwide Telephone Customer Surveys, 2013-2015 .....	1-10
Figure 6: Charter Annual Voice Outages and Repairs within 24 Hours, California Jan. 2011 – Sept. 2015 .....	1-13
Table 4: Charter Annual Average Duration of Voice Service Outages California, Jan. 2011 – Sept. 2015 .....	1-14
Figure 7: Charter and Time Warner Cable Total Number of Voice Outages California, 2011 – 2015 .....	1-15
Figure 8: Average Duration of Charter and Time Warner Cable Voice Outages California, 2011 – 2015 .....	1-16
Table 5: Bright House Voice Service Out Calls Categories and Percentages California, Jan. – Oct. 2015 .....	1-17
Table 6: NORS Reporting Requirements for Interconnected VoIP Service Providers .....	1-19
Table 7: Charter NORS Voice Service Outages Annual Totals California, Jan. 2011 – Aug. 2015 .....	1-20
Table 8: Time Warner Cable NORS Voice Outages Annual Totals California, Jan. 2014 – Oct. 2015 .....	1-22
Table 9: Charter and Time Warner Cable NORS Voice Outages, Average Duration in California, 2011 –2015 .....	1-23
Table 10: Charter NORS Voice Outages, Affected Users and Affected User Minutes, California Counties, Jan. 2011 – Aug. 2015.....	1-24
Table 11: Time Warner Cable Voice Service Annual Average Installation Interval (Days to Install) California, 2011 – 2015 .....	1-28

Figure 9: Time Warner Cable Voice Service Orders Created and Installed California, Jan. 2011 – Aug. 2015 .....	1-29
Figure 10: Bright House Monthly Voice Installation Completion (in Days) California, Jan. – Oct. 2015 .....	1-30
Table 12: Bright House Voice Installation Interval Categories and Percentages California, Jan. – Oct. 2015 .....	1-31
Figure 11: Charter Percentage of Working Voice Lines with Trouble Reports California, Jan. 2011 – Sept. 2015 .....	1-32
Figure 12: Bright House Voice Trouble Reports as a Percentage of Working Lines California, Jan. – Sept. 2015 .....	1-33
Figure 13: Charter Percentage of Calls to Reach Live Agent < 60 Seconds California, Jan. 2011 – Sept. 2015 .....	1-34
Table 13: Bright House Percentage of Calls Answered < 30 Seconds California, Jan. – Oct. 2015 .....	1-35
Figure 14: Time Warner Cable Voice Conversation Quality Metrics Jan. 2015 – Oct. 2015 .....	1-36
Figure 15: Time Warner Cable Voice Call Failure Rate Jan. 2015 – Oct. 2015 .....	1-37
Figure 16: Charter Voice Complaints Average Days to Resolution (All Customer Types) California, 2010 – 2015 .....	1-41
Figure 17: Charter Total Voice Complaints (Residential and Business Customers) California, 2010 – 2015 .....	1-42
Table 14: Charter Voice Customer Complaints by Type California, 2010 – 2015 .....	1-42
Figure 18: Time Warner Cable Total Number of Complaints (Voice and Broadband) California, 2011 – 2015 .....	1-43
Figure 19: Time Warner Cable Average Business Days to Resolve Complaints (Voice and Broadband) California, 2011 – 2015 .....	1-44
Figure 20: Time Warner Cable Customer Complaints by Type of Complaint Voice and Broadband, California, 2011 – 2015 .....	1-45
Figure 21: Time Warner Cable Telephone Repair Complaints and Average Resolution Duration, California, 2011 – 2015 .....	1-46
Figure 22: Complaints and Inquiries to Commission Consumer Affairs Branch Jan. 2011 – Nov. 2015 .....	1-47

1 **EXECUTIVE SUMMARY**

2 The following testimony presents ORA’s findings concerning the proposed  
3 acquisition by Charter Communications, Inc. (“Charter”) of control of Time  
4 Warner Cable Inc. (“Time Warner Cable”), Time Warner Cable Information  
5 Services (California), LLC (“Time Warner CableIS”); Advance/Newhouse  
6 Partnership (“Bright House”), Bright House Networks, LLC (“Bright House”);  
7 and Bright House Networks Information Services (California) (“Bright HouseIS”)  
8 (collectively “Joint Applicants”) and its impact on voice service quality and the  
9 provision of backup power for Voice over Internet Protocol (“VoIP”) service.

10 **Organization of Report**

11 Chapter 1 of the report discusses the impact of the proposed transaction on  
12 voice service quality. Chapter 2 discusses the impact of the proposed transaction  
13 on the provision of backup power for VoIP service.

14 **Key Findings**

15 ORA’s analysis found a number of areas where all or some of the Joint  
16 Applicants demonstrate poor voice service quality. The Joint Applicants have not  
17 presented any plans to address these voice service quality issues. Unless these  
18 problems with voice service quality are addressed, the Joint Applicants will be  
19 unable to demonstrate that voice service quality will be maintained or improved.

20 **♦ Overview of the Proposed Transaction**

21 All three Joint Applicants provide voice services in California exclusively  
22 through VoIP service. Charter proposes to greatly increase its service territory in  
23 California by acquiring control of Time Warner Cable and Bright House. Charter  
24 would rapidly increase the number of its voice subscribers by almost [REDACTED] times its  
25 current size. Charter has problems addressing service quality and public safety  
26 issues within its current service territory. The immediate acquisition of a much  
27 larger service territory can lead to deteriorating service quality.

1                   ♦ **Joint Applicants’ Plans Regarding Service Quality**

2                   Charter provides only general statements regarding its plans to improve  
3 voice service quality should the transaction be approved. Charter makes no  
4 specific commitments to invest resources in California. Furthermore, Charter does  
5 not specifically address service quality issues, even though many issues were  
6 raised in protests. There is no basis to demonstrate that the transaction will  
7 maintain or improve voice service quality.

8                   ♦ **Third-Party Rankings Demonstrate Low Customer Satisfaction,  
9                   Especially in Regards to Performance and Reliability**

10                  J.D. Power and Associates Telephone Customer Satisfaction Studies ranked  
11 both Charter and Time Warner Cable at or near the bottom in the West Region  
12 from years 2012 to 2015. Both Charter and Time Warner Cable had similarly low  
13 rankings in the West Region regarding Performance and Reliability during these  
14 years.

15                  Nationwide customer survey data reveals that all three Joint Applicants  
16 have elevated levels of voice service outages. For each year between 2013 and  
17 2015, the Joint Applicants had the three highest percentages of customers that  
18 experienced general service outages, out of the 13 or 14 service providers ranked  
19 nationwide.

20                  ♦ **Charter Has a High Number of Voice Service Outages**

21                  Both Charter and Time Warner Cable provide data that show a high number  
22 of voice service outages. In the five years from 2011 to 2015, Charter had  
23 [REDACTED] voice service outages, while Time Warner Cable had [REDACTED] voice service  
24 outages. Charter has an especially high number of voice service outages, many  
25 more than Time Warner Cable. Moreover, as Charter has a much smaller number  
26 of voice subscribers, the number of voice service outages per subscriber is even  
27 greater compared to Time Warner Cable. When factoring in the size of the voice  
28 subscriber base, Charter averaged [REDACTED] times as many voice service outages as Time  
29 Warner Cable over five years from 2011 to 2015. A transfer of control to Charter

1 may lead to more voice service outages in the newly acquired service territory.  
2 Charter presents no specific plans to address its high number of voice service  
3 outages.

4 **◆ Charter Exhibits Extremely Long Durations for its Voice**  
5 **Service Outages**

6 Both Charter and Time Warner Cable provided data on the duration of their  
7 voice service outages. Charter has excessively long outage durations, averaging  
8 [REDACTED] to repair its voice service outages from 2011 to 2015. Time Warner  
9 Cable averages [REDACTED] to restore voice service during the same time period, a  
10 much quicker response time. If the transaction were approved, Charter's  
11 extremely poor performance in repairing service outages may be extended to the  
12 newly acquired service territory. Charter has not demonstrated that it will  
13 maintain or improve service quality, as measured by its response to voice service  
14 outages, in its own territory nor in the proposed new service territory of Time  
15 Warner Cable and Bright House.

16 **◆ Both Charter and Time Warner Cable Exhibit Long Durations**  
17 **for their Most Significant Voice Service Outages**

18 Voice service providers are required to provide reports regarding their most  
19 significant voice service outages – lasting at least 30 minutes and impacting at  
20 least 900,000 user minutes, 911 facilities or other special facilities – through the  
21 Federal Communication Commission's ("FCC") Network Outage Reporting  
22 System ("NORS") system. Charter averaged [REDACTED] and Time Warner Cable  
23 averaged [REDACTED] to repair their NORS voice service outages in years 2011 to  
24 2015.

25 In 2015, both Charter and Time Warner Cable had particularly long NORS  
26 voice service outages. Charter's average repair time of its NORS outages in 2015  
27 was [REDACTED]. Time Warner Cable also demonstrated a long repair time in 2015,  
28 averaging [REDACTED] to repair its NORS outages. Charter's exceptionally slow  
29 repair time for NORS outages in 2015 poses serious concerns on public safety.

1 Charter has not committed to reducing the duration time of NORS outages posing  
2 serious concerns of public safety and the ability of consumers to have access to  
3 emergency services.

4 **◆ Certain Geographic Locations Experience a Disproportionate**  
5 **Impact from NORS Voice Outages.**

6 Many of Charter’s NORS voice outage in years 2011 to 2015 were located  
7 in the Los Angeles Designated Market Area (“DMA”).<sup>1</sup> In the Los Angeles DMA  
8 area, there were a total of [REDACTED] outages accounting for [REDACTED] of Charter’s  
9 affected users and [REDACTED] of affected user minutes in California. Moreover, the  
10 vast majority of Time Warner Cable’s NORS outages in 2014 and 2015 in  
11 California were also located in the Los Angeles DMA. These outages constituted  
12 [REDACTED] outages in California and accounted for [REDACTED] of  
13 Time Warner Cable’s affected users and [REDACTED] of affected user minutes. Thus, a  
14 large majority of the Joint Applicants’ NORS voice outages were in the Los  
15 Angeles DMA. Given the strong market position that the proposed New Charter  
16 would have in the Los Angeles DMA, the disproportionate occurrence of NORS  
17 outages here is a serious concern.

18 **◆ Joint Applicants Have Varied Service Quality Metrics, with**  
19 **Large Gaps and Inconsistencies in the Data**

20 All three of the Joint Applicants have large gaps in their service quality  
21 data, often having no data at all for certain voice service quality topics, or only  
22 collecting data for limited time periods. Thus, in reviewing service quality metrics  
23 and performance, there is insufficient data provided by the Joint Applicants to  
24 demonstrate that New Charter will maintain or improve service quality.

25 Where data was provided by the Joint Applicants, poor service quality is  
26 evident. Time Warner Cable’s data reveals that it meets a relatively low

---

<sup>1</sup> The Los Angeles Designated Market Area constitutes the five counties of Los Angeles, Orange, Riverside, San Bernardino and Ventura.

1 percentage of its installation commitments, [REDACTED]  
2 [REDACTED] for every year  
3 between 2011 and 2015. Bright House’s data reveals a high percentage of its  
4 working lines with trouble reports, [REDACTED]  
5 [REDACTED] for every month in  
6 2015.

7 Charter provided no specific plans to improve voice service quality and  
8 makes no specific commitment of resources in California. The first step in  
9 maintaining and improving voice service quality would be to institute full,  
10 consistent metrics that tracks VoIP service quality. For example, New Charter  
11 should, for a period of three years, report to the Commission on a quarterly basis  
12 service quality metrics for VoIP services consistent with current G.O. 133 C  
13 standards the following: installation interval, installation commitments, customer  
14 trouble reports, out of service repair interval, and answer time.

15 **♦ Joint Applicants’ Do Not Demonstrate a Good Response to their**  
16 **Complaints**

17 Charter and Bright House provided only a small subset of complaints. This  
18 subset of complaints did not provide a representative sample of all of Charter’s  
19 and Bright House’s complaints. Charter’s data showed an exceedingly long time  
20 to resolve complaints. Time Warner Cable provided more comprehensive  
21 complaint data. Given the limited data provided by Charter and Bright House,  
22 Joint Applicants do not demonstrate that they will maintain or improve customer  
23 service quality or the handling of complaints regarding voice services.

24 **♦ Complaint Data from the Consumer Affairs Branch**  
25 **Demonstrates that Charter Has More Complaints per**  
26 **Subscriber than the Other Joint Applicants**

27 The Commission’s Consumer Affairs Branch (“CAB”) has a process of  
28 tracking complaints from subscribers of service providers. Charter had [REDACTED] total  
29 CAB complaints in years 2011 to 2015, compared to [REDACTED] total CAB complaints for

1 Time Warner Cable during the same period. However, Charter has a much  
2 smaller voice s subscriber base compared to Time Warner Cable, meaning that  
3 Charter had a larger amount of CAB complaints per subscriber than Time Warner  
4 Cable. Charter has [REDACTED] times as many CAB complaints per subscriber, compared  
5 to Time Warner Cable.

6 **♦ Joint Applicants’ Provision of Information to Customers**  
7 **Regarding Backup Power for VoIP Services Is Lacking**

8 Chapter 2 of this report analyzed Joint Applicants’ provision of backup  
9 power – and information regarding backup power – for VoIP service. The FCC  
10 recently instituted rules regarding the provision of backup power for VoIP service,  
11 which will become effective in February 2016. The Joint Applicants are  
12 instituting processes to come into compliance with these new rules

13 In Decision 10-02-026, the California Public Utilities Commission  
14 instituted certain requirements regarding the provision of information about  
15 backup power to VoIP subscribers. One of these requirements is that the  
16 information be “in a format the customer can utilize.”<sup>2</sup>

17 For the Joint Applicants’ provision of backup power information in  
18 hardcopy format, required informational elements are buried in lengthy user  
19 manuals or terms of service – in a format the customer is unlikely to utilize.  
20 Information on backup power is also provided on-line, through the Internet, with  
21 dedicated webpages. However, access to this information requires that the  
22 customer be directed to the relevant webpages. In order to meet Commission  
23 requirements, prominent placement of this information in hardcopy format is  
24 required.

---

<sup>2</sup> See D.10-01-026, pp. 14, Conclusion of Law 20, Order ¶¶ 6, 9.

1                   **1. VOICE SERVICE QUALITY AND RELIABILITY**

2                   **INTRODUCTION**

3                   This chapter presents ORA’s findings and recommendations regarding the impact  
4 of the proposed transaction on service quality and reliability. California Public Utilities  
5 (“P.U.”) Code § 854(c)(2) requires that the Commission consider various criteria in  
6 deciding whether the transaction is in the public interest, including whether it will  
7 “[m]aintain or improve the quality of service to public utility ratepayers in the state.”

8                   Moreover, California P.U. Code § 321.1 requires that the Commission “assess and  
9 mitigate the impacts of its decision on customer, public, and employee safety, as part of  
10 each ratemaking, rulemaking, or other proceeding...” Similarly, the Assigned  
11 Commissioner’s Scoping Ruling in this proceeding included the following question in the  
12 factors that the Commission would consider: “Are there any implications for public  
13 safety from the transaction?”<sup>3</sup>

14                   The issues of voice service quality, reliability and public safety are very much  
15 related. If a customer cannot properly use their voice service, they will be less able to  
16 address emergency situations or other situations where their safety is implicated. This is  
17 especially so if there is a service outage, and the customer cannot utilize their voice  
18 service at all. Thus, Joint Applicants’ service quality and reliability are proper issues to  
19 consider in determining whether the transaction is in the public interest.

20                   **A. Overview of Joint Applicants’ Voice Services:**  
21                   **Charter Proposes to Greatly Enlarge Its Service**  
22                   **Territory in California.**

23                   The proposed transaction involves companies that offer voice services exclusively  
24 through Voice over Internet Protocol (“VoIP”) technology. None of the Joint Applicants  
25 provides traditional circuit-switched telephone service.

---

<sup>3</sup> See Assigned Commissioner’s Scoping Ruling, issued Nov. 13, 2015, p. 5.

1 Charter offers VoIP in a service territory dispersed throughout California.  
2 However, the most significant numbers of Charter's VoIP customers are located in  
3 Southern California, especially within the greater Los Angeles area.<sup>4</sup>

4 Table 1 below provides the total number of Charter's VoIP subscribers  
5 (Residential and Commercial) in California at the end of each year from 2011 to 2015.<sup>5</sup>

6 **Table 1: Charter Year-End Total Number of VoIP Subscribers**  
7 **California, 2011-2015**



8

9



10 Time Warner Cable provides voice services in its California service territory,  
11 which includes the five greater Los Angeles area counties of Ventura, Los Angeles,  
12 Orange, San Bernardino, and Riverside, as well as the desert cities area surrounding Palm  
13 Springs, portions of San Diego County, and El Centro, in Imperial County.<sup>6</sup>

14 Table 2 below provides the total number of Time Warner Cable's Residential  
15 VoIP subscribers (Time Warner Cable provided only residential data) in California at the  
16 end of each year from 2011 to 2015.<sup>7</sup>

17

---

<sup>4</sup> See Opening Testimony of Adam Falk, Senior Vice President for State Government Affairs, Charter Communications Inc. on Behalf of Joint Applicants ("Falk Testimony"), served Dec. 4, 2015, p. 7

<sup>5</sup> See Response by Charter to the Third Set of Data Requests by ORA ("Charter Nov. 6 Response to DR-3"), Response to Data Request 3-32; Charter Exhibit ORA 3-32 (Confidential).

<sup>6</sup> See Falk Testimony, p. 9.

<sup>7</sup> See Time Warner Cable Responses to Third Set of Discovery Requests from ORA ("Time Warner Cable Nov. 6 Response to DR-3"), Response to Data Request 3-32; Time Warner Cable Exhibit 3-32 (Confidential).

1 **Table 2: Time Warner Cable Year-End Total Number of Residential VoIP**  
2 **Subscribers, California 2011-2015** [REDACTED]

3 [REDACTED]

4 [REDACTED]

5 Bright House provides VoIP in its service territory of Bakersfield and Kern  
6 County.<sup>8</sup> Table 3 below provides the total number of Bright House’s VoIP subscribers  
7 (both Residential and Business) in California at the end of each year from 2011 to 2015.<sup>2</sup>

8 **Table 3: Bright House Total Number of VoIP Subscribers**  
9 **California, 2011-2015** [REDACTED]

10 [REDACTED]

11 [REDACTED]

12 By looking at the most recent subscriber totals from all three companies, we can  
13 see that Charter proposes to rapidly increase its voice service territory in California to  
14 almost [REDACTED] times its current size. If Charter has problems addressing service quality and

---

<sup>8</sup> See Falk Testimony, p. 10.

<sup>2</sup> See Bright House Response to Third Set of Data Requests from ORA (“Bright House Nov. 6 Response to DR-3”), Response to Data Request 3-32; Bright House Exhibit 3-32 (Confidential).

1 public safety issues within its current relatively smaller service territory, the immediate  
2 acquisition of a much larger service territory can lead to deteriorating service quality.

3 **B. Joint Applicants’ Statements and Plans Regarding**  
4 **Voice Service Quality Lack Specific Performance**  
5 **Based Outcomes in California**

6 In its Application and Opening Testimony, Joint Applicants make some general  
7 statements regarding how the proposed transfer of control will affect the provision of  
8 voice services.” However, they lack specificity on how service quality will be  
9 maintained or improved. In testimony regarding “Improved Services,” Joint Applicants  
10 state that the increased scale of the merged company will allow it to make significant  
11 fixed cost investments, but do not commit to specific investments in California.<sup>10</sup> Joint  
12 Applicants also state that the transaction will allow New Charter to integrate the best  
13 features of the three companies’ voice services.<sup>11</sup>

14 In response to data requests, Joint Applicants also provide some general  
15 information about their current and future plans to improve overall service quality in  
16 California. For example, Charter proposes to transition Time Warner Cable’s and Bright  
17 House’s legacy networks to all digital within 30 months of the close of the transaction,  
18 which it claims will accelerate network reliability and service quality enhancements.<sup>12</sup>  
19 Charter also states that it has invested \$5.7 billion nationwide in technology and  
20 infrastructure since 2012, including [REDACTED]  
21 [REDACTED] However, Charter has not yet determined how much investment will  
22 be needed to convert all of New Charter’s California systems to an all-digital format.<sup>13</sup>  
23 Joint Applicants also provide information about various technologies that will be added  
24 or enhanced to improve service.

---

<sup>10</sup> See Falk Testimony, p. 11.

<sup>11</sup> See Falk Testimony, p. 12.

<sup>12</sup> See Charter Nov. 6 Response to DR-3, Response to Data Request 3-25.

<sup>13</sup> See Charter Nov. 6 Response to DR-3, Response to Data Requests 3-24, 3-25.

1 Joint Applicants mainly provide only general statements about its plans to improve  
2 service quality, but lack specific performance based outcomes and commitments. This is  
3 the case even after service quality issues were raised in filing or in data requests. For  
4 example, ORA’s protest of the merger application raised the issue of service outages of  
5 VoIP service.<sup>14</sup> Charter has not provided any specific plans to improve its poor  
6 performance in addressing VoIP service outages, in the reply to protests,<sup>15</sup> in subsequent  
7 opening testimony, or in response to data requests.

8 In analyzing service quality data provided by Joint Applicants, ORA has  
9 discovered a number of service quality issues, including service outages, that require  
10 attention. If Charter cannot provide specific, concrete, measurable, performance-based  
11 commitments to address its poor service quality outcomes, it cannot demonstrate the  
12 transaction would maintain or improve service quality.

13 **C. Joint Applicants Have Received Poor Customer**  
14 **Satisfaction and Performance and Reliability Ratings.**

15 Rankings of telephone service providers performed by J.D. Power and Associates  
16 are one of the few instances where the various voice service providers are compared to  
17 one another utilizing the same metrics and survey questions. These reports are based on  
18 customer responses to a wide variety of survey questions in the categories of  
19 Performance and Reliability, Cost of Service, Communication, Billing, and Customer  
20 Service. The overall rankings in Customer Satisfaction provide indications of the service  
21 providers’ overall performance. Moreover, the rankings and the survey results  
22 specifically relating to “Performance and Reliability” provide metrics more specifically  
23 relevant to the Joint Applicants performance as it relates to voice service quality. In

---

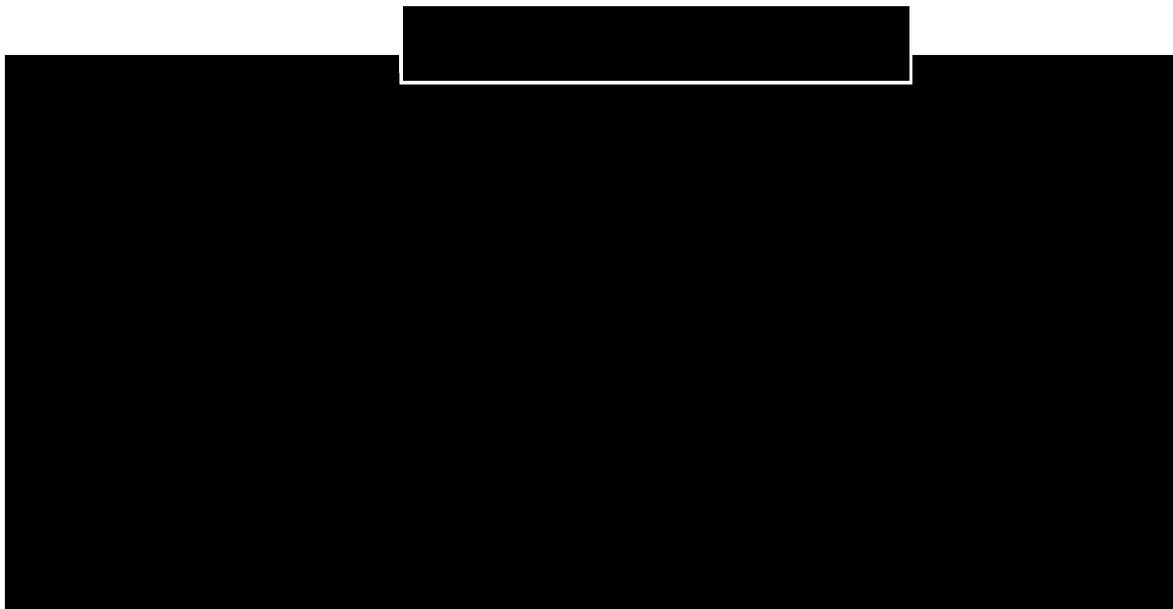
<sup>14</sup> See Protest of ORA, filed Aug. 7, 2015, pp. 18-19.

<sup>15</sup> See Joint Reply of Charter, Time Warner Cable and Bright House to Protests on the Joint Application, filed Aug. 17, 2015.

1 many cases, these rankings include data broken out for the West Region, providing  
2 greater specificity than nationwide data.<sup>16</sup>

3 Charter and Time Warner Cable both received below average ratings in the West  
4 Region in 2015 for overall Customer Satisfaction (see figure below). Of the seven  
5 companies rated in the West Region, Charter ranked [REDACTED] and Time Warner Cable ranked  
6 [REDACTED]. As it has a much smaller service territory for the West Region, Bright House was  
7 not included in these geographically specific rankings.

8 **Figure 1: J.D. Power Customer Satisfaction Ranking, West Region 2015<sup>17</sup>**



10

11

12 Charter and Time Warner Cable's poor rankings in the West Region for overall  
13 Customer Satisfaction was consistent throughout recent years. ORA compiled overall  
14 Customer Satisfaction rankings in the West Region from J.D. Power Telephone Service

---

<sup>16</sup> Charter also tracks Voice "customer satisfaction" through another means. [REDACTED]

[REDACTED] See Charter Nov. 6 Response to DR-3, Response to ORA Data Request 3-26.

<sup>17</sup> All data related to J.D. Power rankings and survey results are taken from J.D. Power and Associates Telephone Service Provider Satisfaction Studies, for 2012, 2013, 2014 and 2015. See Time Warner Cable Exhibit 3-29 (Confidential).

1 Provider Studies for years 2012 to 2015. Charter and Time Warner Cable remained  
2 below average in the Overall Satisfaction rankings throughout this time period. Figure 2  
3 below illustrates that either Charter or Time Warner Cable often [REDACTED] out  
4 of the seven or eight providers ranked.

5 **Figure 2: J.D. Power Overall Satisfaction Ranking, West Region, 2012-2015**



7  
8  
9 The J.D. Power reports also include rankings on more specific areas of customer  
10 satisfaction, including in the category “Performance and Reliability.” In 2015,  
11 “Performance and Reliability” rankings were based on customer responses regarding  
12 problems that they had experienced in the following survey categories: “Dropped Calls,”  
13 “Call Distortion” “Calls that Fail to Initially Connect,” and “General Service Outage.”  
14 The survey results in these categories are more specific indicators of the service quality  
15 and reliability problems of voice service providers.

16 Charter and Time Warner both had below average rankings in the West Region in  
17 “Performance and Reliability” in 2015, as seen in Figure 3 below. Of the seven

1 companies rated in the West Region, Charter ranked [REDACTED] and Time Warner Cable ranked  
2 [REDACTED]

3 **Figure 3: J.D. Power Performance and Reliability Ranking, West Region 2015**



7 As illustrated in Figure 4 below, Charter and Time Warner Cable’s poor rankings  
8 in Performance and Reliability was consistent throughout recent years in the West  
9 Region.<sup>18</sup> In years 2012 to 2015, either Charter or Time Warner Cable [REDACTED]  
10 [REDACTED] out of the seven or eight providers ranked. Except for one single instance,  
11 both Charter and Time Warner Cable were in the [REDACTED]

12 [REDACTED]  
13 ///  
14 ///

---

<sup>18</sup> The wording on the Performance and Reliability survey categories changed slightly from 2012 to 2015, but the metrics surveyed substantially the same issues: customer experience regarding “Dropped Calls,” “Calls that Fail to Connect,” “Distorted Calls/Audio Problems” and “General Service Outage.”

1 **Figure 4: J.D. Power Performance and Reliability Ranking, West Region 2012-2015**



3  
4

5 Since 2013, the J.D. Powers Telephone Service Providers studies have included  
6 nationwide survey results that show the percentage of customers of each service provider  
7 that experienced various performance and reliability problems. While this nationwide  
8 survey data is not as relevant as more specific geographic data, it can reveal areas of  
9 concern that can be further analyzed with more specific California data. Moreover, this  
10 nationwide data includes Bright House, unlike previously discussed J.D. Power’s data  
11 where BHN is not included.

12 The J.D. Power nationwide customer survey results reveal one area of particular  
13 concern for all three Joint Applicants: General Service Outage. Consistently from years  
14 2013 to 2015, an extremely high percentage – much higher than the study average – of  
15 the customers of each Joint Applicant experienced a “General Service Outage,” as  
16 demonstrated in Figure 5 below.

1 **Figure 5: Percentage of Customers Experiencing General Service Outage**  
2 **J.D. Power Nationwide Telephone Customer Surveys, 2013-2015**



6 In years 2013 to 2015, out of the 13 or 14 service providers ranked, each of the  
7 Joint Applicants had [REDACTED] f customers that experienced general  
8 service outages.<sup>19</sup> Such data is of particular concern particularly when New Charter has  
9 made no commitment to lower general service outages.

10 Charter's and Time Warner Cable's consistently poor rankings in Performance and  
11 Reliability in the Western Region, along with a high rate of general service outages are  
12 issues that must be addressed if Joint Applicants wish to demonstrate that the proposed  
13 transaction is in the public interest. The Joint Applicants provide no specific, concrete,  
14 measurable performance-based commitment to address and improve service performance  
15 and reliability. An example of such a commitment could be for the New Charter to be the

---

<sup>19</sup> For all the other Performance and Reliability problems surveyed by J.D. Power between 2013 and 2015, the percentage of each Joint Applicant's customers that experienced problems is generally at a relatively average or even a low level

1 top performing company in the J.D. Powers studies two years after the close of the  
2 proposed transaction.

3 **D. Voice Service Outages Are a Significant Risk to**  
4 **Public Safety and an Indicator of Poor Service**  
5 **Quality**

6 Service outages constitute a fundamental component of voice service quality.  
7 Subscribers pay their bills in order to be able to rely on their telephone to make calls; a  
8 service outage denies this elementary component of service. Moreover, service outages  
9 clearly compromise public safety. A service outage means that a subscriber may be  
10 unable to call 911 or otherwise seek access to public safety services. As the FCC  
11 recently observed in discussing the importance of the continuity of VoIP service during  
12 power outages:

13 Although we recognize that we are in the midst of sweeping change, we believe  
14 that voice communications continue to play an essential and central role in the  
15 delivery of public safety services...<sup>20</sup>

16  
17 Data on service outages provide critical measures of service reliability and the  
18 degree of risk to public safety. Both the California Public Utilities Commission (“the  
19 Commission”) and the Federal Communications Commission (“FCC”) have established  
20 rules, standards and reporting requirements relating to service outages.

21 The FCC requires reports (called Network Outage Reporting System (“NORS”)  
22 reports) on the largest service outages affecting huge numbers of people. These  
23 extremely large outages, subject to NORS reporting, will be discussed in the next section.

24 The Commission has also developed reporting requirements and standards  
25 regarding outages, called the Out of Service (“OOS”) Repair Interval, found in its  
26 General Order 133-C (G.O. 133-C).<sup>21</sup> The Joint Applicants are all VoIP service  
27 providers and G.O. 133-C is not currently applicable to them, nor are they required to

---

<sup>20</sup> See FCC, Report and Order, *In the Matter of Ensuring Continuity of 911 Communications* (“Backup Power Order”), PS Docket No. 14-174, Released August 7, 2015, at ¶18.

<sup>21</sup> See G.O. 133-C. Sec. 3.4.

1 report information to the Commission subject to G.O. 133-C. However, the metrics and  
2 standards of G.O. 133-C are an appropriate means of evaluating the service quality of  
3 VoIP providers. In order to provide for reliable service and adequate service quality, the  
4 Commission has determined that traditional circuit-switched wireline providers should  
5 meet OOS standards regarding response time to service outages. These standards are an  
6 appropriate means of determining if Joint Applicants currently provide safe, reliable  
7 service.

8 **1. Joint Applicants Have a High Number of**  
9 **Service Outages.**

10 In order to ensure that voice service subscribers are not subject to lengthy service  
11 outages, G.O. 133-C requires that service be restored within 24 hours for 90% of a  
12 service provider's outages.<sup>22</sup> G.O. 133-C also requires that the actual system-wide  
13 average duration of outages be reported. Maintenance delayed due to circumstances  
14 beyond the carrier's control, including a customer's requested appointment, is excluded  
15 from the above measures of the duration of outages.<sup>23</sup>

16 **a) Charter**

17 In response to data requests, Charter provided data regarding the total number and  
18 duration of its outages.<sup>24</sup> The data provided by Charter regarding outages is consistent  
19 with G.O. 133-C reporting procedures.

20 Figure 6 below provide the total number of Charter's outages for each year in  
21 California between 2011 and 2015, along with the total number of outages where service  
22 was restored within 24 hours, and the percentage of outages where service was restored  
23 within 24 hours.

---

<sup>22</sup> See G.O. 133-C. Sec 3.4.c.

<sup>23</sup> See G.O. 133-C. Sec 3.4.b.

<sup>24</sup> See Charter Nov. 6 Response to DR-3, Response to Data Request 3-8; Charter Exhibit ORA 3-8 (Confidential).

1 Charter has a great amount of voice service outages, totaling [REDACTED] in years  
2 2011 to 2015. This equates to an average of [REDACTED] outages per month.

3 **Figure 6: Charter Annual Voice Outages and Repairs within 24 Hours**  
4 **California, Jan. 2011 – Sept. 2015** [REDACTED]



5 [REDACTED]  
6 [REDACTED]

7 Charter also exhibits a poor response to service outages. For every year between  
8 2011 and 2015, Charter [REDACTED]  
9 [REDACTED] see

10 Figure 6 above). In the years 2014 to 2015, [REDACTED]  
11 [REDACTED]

12 In the month with the worst performance, [REDACTED]  
13 [REDACTED]

1 Table 4 below provides the average duration of all of Charter's outages for every  
2 year between 2011 and 2015.

3 **Table 4: Charter Annual Average Duration of Voice Service Outages**  
4 **California, Jan. 2011 – Sept. 2015** [REDACTED]

5 [REDACTED]

6 [REDACTED]

7 The excessive amount of time that Charter takes to repair its voice service outages,  
8 as seen in annual averages, is a concern. This will be more evident when this data is  
9 compared to data for Time Warner Cable, which will be done below.

10 **b) Time Warner Cable**

11 Time Warner Cable provided a limited set of data regarding its voice outages in  
12 California.<sup>25</sup> Time Warner Cable's data consisted only of annual totals for the number of  
13 outages, as well the annual Mean Time to Restore Service.<sup>26</sup> Thus limited data may not  
14 be consistent with the metrics of G.O. 133-C, which requires the reporting of more data  
15 points. For example, there is no way to determine with certainty if Time Warner Cable  
16 meets the standard of repairing 90% of outages within 24 hours.

17 Figure 7 below provides the total number of outages for every year between 2011  
18 and 2015 of both Charter and Time Warner Cable. For the entire period, Charter has  
19 almost [REDACTED] times as many outages as Time Warner Cable, even though Time Warner  
20 Cable has a much larger voice subscriber base, averaging [REDACTED] more residential voice  
21 customers than Charter during this same time period.<sup>27</sup> Charter had a much greater

---

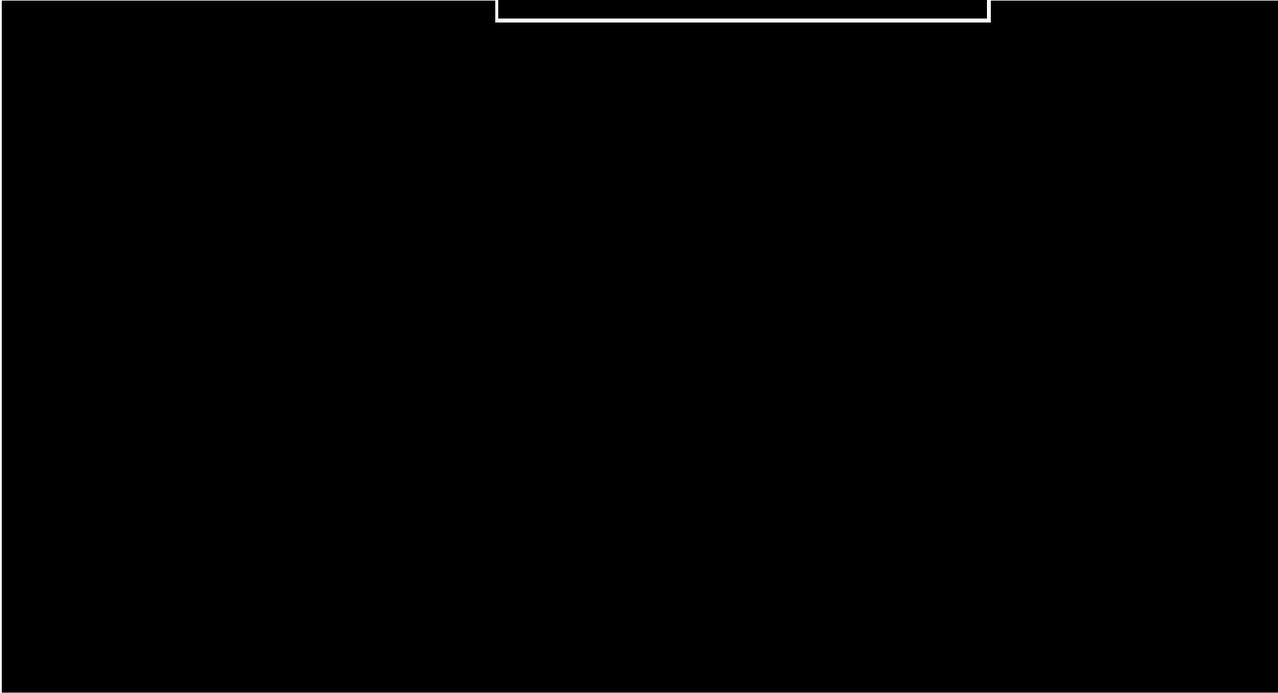
<sup>25</sup> See Time Warner Cable Nov. 6 Response to DR-3, Response to Data Request 3-13; Time Warner Cable Exhibit 3-13 (Confidential).

<sup>26</sup> Time Warner Cable defines Mean Time to Restore Service as the average amount of time in hours from outage start to outage end. Time Warner Cable's data on outages also includes additional data categories not discussed here.

<sup>27</sup> See Charter Exhibit ORA 3-32 (Confidential); Time Warner Cable Exhibit 3-32 (Confidential).

1 amount of outages per subscriber than Time Warner Cable, averaging [REDACTED]  
2 outages than Time Warner Cable in years 2011 to 2015.

3 **Figure 7: Charter and Time Warner Cable Total Number of Voice Outages**  
4 **California, 2011 – 2015** [REDACTED]



5 [REDACTED]  
6 [REDACTED]

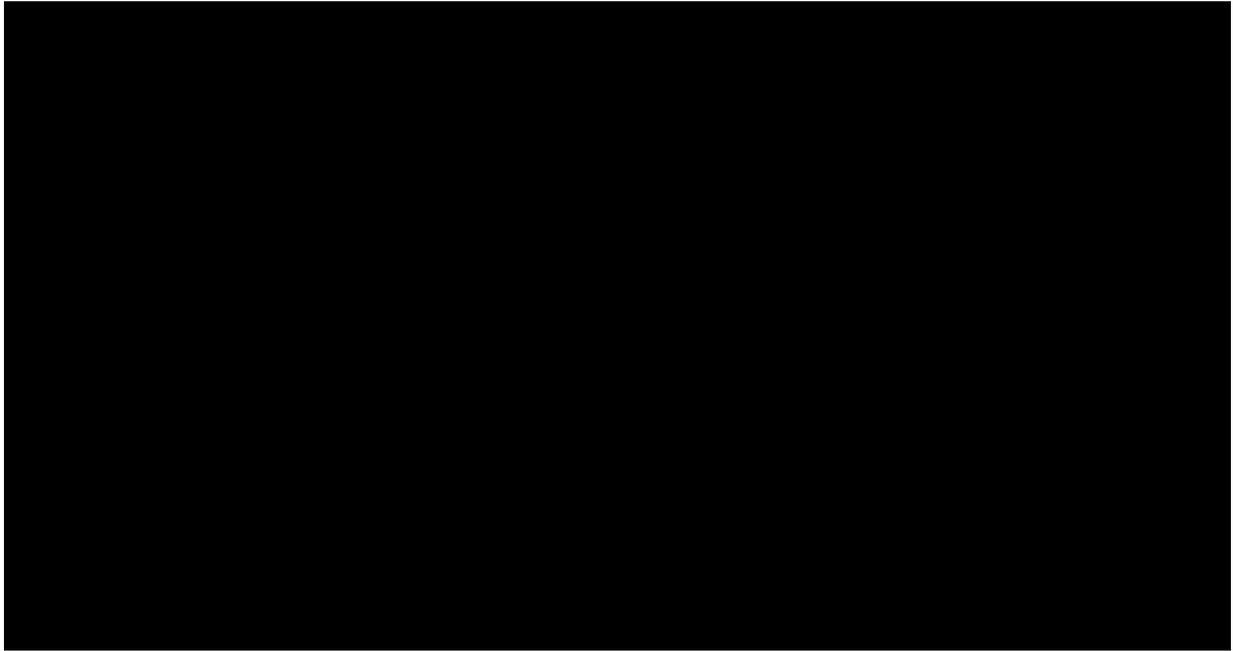
7 If the transaction were approved, Charter’s poor service quality as demonstrated  
8 by high levels of voice service outages may be extended to the newly acquired service  
9 territory. Without specific commitments to lower the occurrence of voice service  
10 outages, Joint Applicants cannot demonstrate that they will maintain or improve service  
11 quality.

12 **2. Charter Has Demonstrated a Poor Response**  
13 **Time to Outages**

14 Charter’s voice service outages had [REDACTED] than Time Warner  
15 Cable. Figure 8 below provides Time Warner Cable’s data on the Mean Time to Restore  
16 Service compared to Charter’s data on the Mean Time to Repair. The average duration of  
17 outages is presented in hours for every year between 2011 and 2015.

18

1 **Figure 8: Average Duration of Charter and Time Warner Cable Voice Outages**  
2 **California, 2011 – 2015** [REDACTED]



3  
4 [REDACTED]  
5 As can be seen in Figure 8 above, Charter has [REDACTED] to  
6 repair outages compared to Time Warner Cable. Charter’s response time in years 2011 to  
7 2015 is almost [REDACTED] than that of Time Warner Cable.

8 **3. Bright House Provides a Limited Set of Data**  
9 **Regarding Its Service Outages.**

10 Bright House also provided data regarding its outages. Bright House’s data was  
11 fairly limited, with data only available for 2015, and the data points are not the same as  
12 those tracked by Charter and Time Warner Cable. Bright House provided data on the  
13 number of Out of Service (“OOS”) Calls it received, and its response to the OOS calls, in  
14 several different categories.<sup>28</sup> This data is presented in Table 5 below.

15 In the year 2015, Bright House had an extremely high number of voice service  
16 outages in California, totaling [REDACTED] outages. This amount was [REDACTED]

---

<sup>28</sup> See BHN Supplemental Responses to Data Requests from ORA (“Bright House Nov. 19 Supp. Response”), Response to Data Request 3-2; Bright House Exhibit 3-2 (Confidential).

1 [REDACTED] during the same time period, despite the fact  
2 that Bright House had a much smaller number of voice subscribers.

3 **Table 5: Bright House Voice Service Out Calls Categories and Percentages**  
4 **California, Jan. – Oct. 2015** [REDACTED]

5 [REDACTED]

6 [REDACTED]  
7 Bright House did not provide data on the average duration of its outages. Rather,  
8 it reported on how many service out calls were restored within: [REDACTED]

9 [REDACTED]  
10 [REDACTED] The data demonstrates that for [REDACTED] voice  
11 service outages, service was not restored [REDACTED]

12 It is difficult to determine from this data whether service out calls restored by the  
13 next day would meet the standard of repair within 24 hours, and whether Bright House  
14 meets the standard of repairing 90% of outages within 24 hours. Only a very small  
15 amount of Bright House’s outages have service restored beyond the next day, aside from  
16 those outages where repair is delayed at customer request.

17 Given the service outage data reviewed for all three of the Joint Applicants, proper  
18 monitoring and maintenance of data on service outages is a necessary step. Moreover,  
19 none of the Joint Applicants tracks how many total users are impacted by all of its voice  
20 service outages.

21 Of the three Joint Applicants, Charter’s data was the most complete.  
22 Unfortunately, Charter’s data reveals a poor level of reliability and service quality.

1 Charter has not demonstrated that it will maintain or improve the service quality of Time  
2 Warner Cable voice subscribers if it applies its much higher level of outages and its  
3 slower repair time to its proposed new service territory.

4 The Joint Applicants provide no specific, concrete, measurable, performance-  
5 based commitments to improve the currently poor level of voice service quality and  
6 reliability under the New Charter. For example, the Joint Applicants could provide a  
7 commitment to meet the service quality standards of G.O. 133-C one year after the close  
8 of the transaction and for subsequent years thereafter, and could commit to provide the  
9 Commission with the necessary reports to track performance outcomes.

10 **E. Joint Applicants' Have a Poor Response to the Most**  
11 **Significant Voice Service Outages**

12 As demonstrated above, the Joint Applicants' high number of voice service  
13 outages, and slow repair times indicates problems with service outages. As will be  
14 demonstrated below, Charter's and Time Warner Cable's most significant voice service  
15 outages – those that affect the largest number of subscribers – also were of an  
16 exceptionally long duration.

17 As it pertains to major service outages, the FCC has established rules that require  
18 communication providers, including VoIP service providers, to report significant  
19 disruptions to their communications network. These NORs reports include many data  
20 points, including the duration of the outage, the number of affected users, the geographic  
21 area affected and the causes of the outage. The FCC has determined that such  
22 information is crucial to the national telecommunication infrastructure and would enable  
23 it to prevent disruptions in service that could threaten homeland security, public health  
24 and safety, as well as the nation's economic well-being.<sup>29</sup> The FCC uses such  
25 information to analyze communication vulnerabilities and share aggregate information  
26 with industry to help prevent future outages and preserve network integrity.

---

<sup>29</sup> <http://www.fcc.gov/document/time-warner-penalized-11m-network-outage-reporting-violations>

1 To gain an understanding of the current level of performance and service  
2 reliability as it pertains to the Joint Applicants' voice services in California, each  
3 company provided a copy of NORS service outage data for the period between 2011 and  
4 2015. The FCC requires NORS reports on service disruptions in VoIP service that meet  
5 certain thresholds, which are discussed in the table below

6 **Table 6: NORS Reporting Requirements for Interconnected VoIP Service Providers**

#### NORS Reporting Requirements for Interconnected VoIP Providers

All interconnected VoIP service providers who experience **an outage of at least 30 minutes duration** on any facilities that they own, operate, lease, or otherwise utilize, to submit electronically a Notification to the FCC:

- Within 240 minutes of discovering the outage that potentially affects a 911 Special Facility,<sup>30</sup>
- Within 24 hours of discovering the outage that potentially:
  - o affects at least 900,000 user minutes of interconnected VoIP service and results in complete loss of service;
  - o affects 1350 DS3 minutes<sup>31</sup>; or
  - o affects any special offices and facilities.<sup>32</sup>

7  
8 In practice, the vast majority of NORS reports deal with outages that meet the  
9 threshold of 900,000 user minutes. Total affected user minutes are determined by  
10 multiplying the duration of the outage (in minutes) by the number of affected users. Thus  
11 NORS reports based on the 900,000 user minutes threshold represent the largest voice  
12 service outages that affect the most people – at least 30,000 users for a minimum of 30  
13 minutes, resulting in at least 900,000 affected user minutes. The data below demonstrates

---

<sup>30</sup> See 47 C.F.R. § 4.5(e) for a description of an outage that affects 911 special facilities.

<sup>31</sup> A DS3 is a network connection that transmits digital signals at a rate of 44.736 megabits per second. A DS3 is the equivalent to 28 T1 lines, or 672 standard phone lines. Large businesses, including service providers, such as Local Exchange Carriers (LECs), Competitive Local Exchange Carriers (CLECs), Interexchange Carriers (IXCs), and Wireless companies might purchase DS3 lines from a service provider to support a high capacity data and voice services to connect many end users to the Internet or a private network.

<sup>32</sup> See 47 C.F.R § 4.5(b) for a definition of special offices and facilities

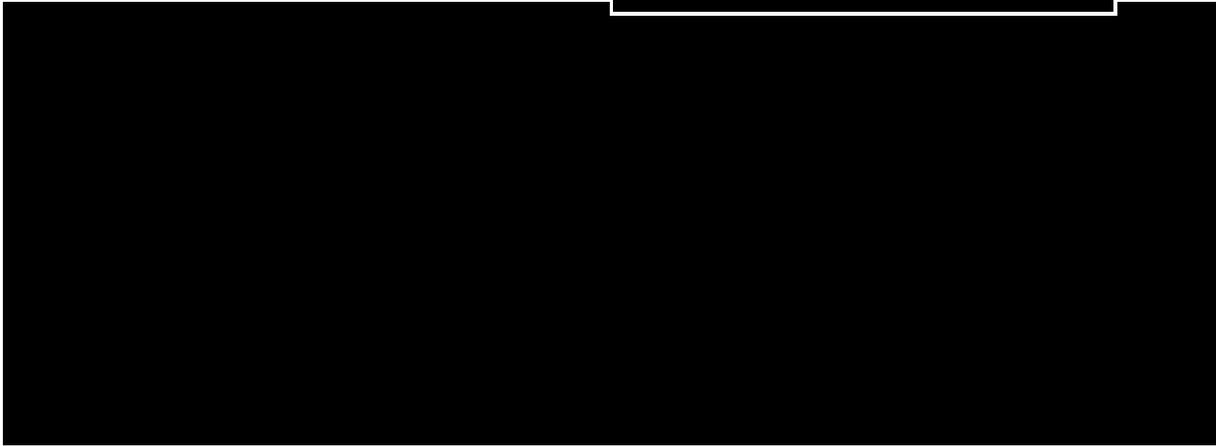
1 that some of the same problems that Joint Applicants had in repairing all outages are  
2 equally present in the case of these NORS outages.

3 **a) Charter**

4 Charter provided data regarding [REDACTED] NORS outages affecting its voice services in  
5 California for the period between January 2011 and August 2015.<sup>33</sup> Table 7 below  
6 provides the annual totals in the number of outages, the affected users, and the affected  
7 user minutes. The duration of the outages will be discussed further below.

8 **Table 7: Charter NORS Voice Service Outages Annual Totals**

9 **California, Jan. 2011 – Aug. 2015** [REDACTED]



10

11

12 As shown in Table 7 above, these outages affected a total of [REDACTED] VoIP users  
13 for a total of [REDACTED] ser minutes. The largest outage affected [REDACTED]

14 [REDACTED] times the NORS threshold for reporting. This outage occurred in

15

16 [REDACTED] This outage was also the longest duration for NORS outages  
17 reported by Charter in this time period. The extremely long time to repair this outage left  
18 subscribers without service for almost [REDACTED] implicating their safety. Although this  
19 was an extreme case, Charter's data on outage duration, discussed further below,

---

<sup>33</sup> See Charter Nov. 6 Response to DR-3, Response to Data Request 3-11; Charter Exhibit ORA 3-11 (Confidential).

1 demonstrates that Charter’s response time was excessive for the majority of its NORS  
2 outages.

3 **b) Time Warner Cable**

4 Time Warner Cable did not provide a complete data set for its NORS outages in  
5 California for years 2011 to 2015. Time Warner Cable provided data regarding [REDACTED]  
6 [REDACTED] but these all occurred in the period between January  
7 2014 and August 2015.<sup>34</sup> This data may not be a complete documentation of NORS-  
8 reportable outages, as Time Warner Cable was cited by the FCC in August of 2014 for  
9 failing to file a substantial number of reports pertaining to reportable wireline and VoIP  
10 outages.<sup>35</sup> The FCC required Time Warner Cable to pay a civil penalty of \$1.1 million  
11 and implement a three-year compliance plan.<sup>36</sup> Thus, Time Warner Cable’s NORS data  
12 prior to August 2014 is not complete. Thus, Time Warner Cable’s data must be viewed  
13 with the caveat that it may understate the true nature of its large service outages.<sup>37</sup>  
14 As shown in Table 8 below, the [REDACTED] outages reported by Time Warner Cable in years 2014  
15 and 2015 [REDACTED] users, for a total of [REDACTED] user minutes. Table  
16 8 below provides the California annual totals, the affected users, and the affected user  
17 minutes.

18 ///

19 ///

---

<sup>34</sup> See Time Warner Cable Nov. 6 Response to DR-3; Time Warner Cable Exhibit 3-11 (Confidential). One outage impacting multiple states, including California was excluded from analysis.

<sup>35</sup> See Order, *In the Matter of Time Warner, Inc.*, FCC Document. No. DA 14-1126, Released Aug. 25, 2014, ¶1.

<sup>36</sup> See *id.*, attached Consent Decree, ¶¶ 11, 14.

<sup>37</sup> Note that Time Warner Cable outage data for 2015, the first full year that Time Warner Cable was subject to a NORS compliance plan, was [REDACTED]

1 **Table 8: Time Warner Cable NORS Voice Outages Annual Totals**

2 **California, Jan. 2014 – Oct. 2015** [REDACTED]

3 [REDACTED TABLE]

4 [REDACTED]

5 **c) Bright House**

6 Bright House submitted only one NORS report for its voice services impacting  
7 California in years 2010 to 2015.<sup>38</sup> The outage lasted [REDACTED]  
8 [REDACTED]  
9 [REDACTED]

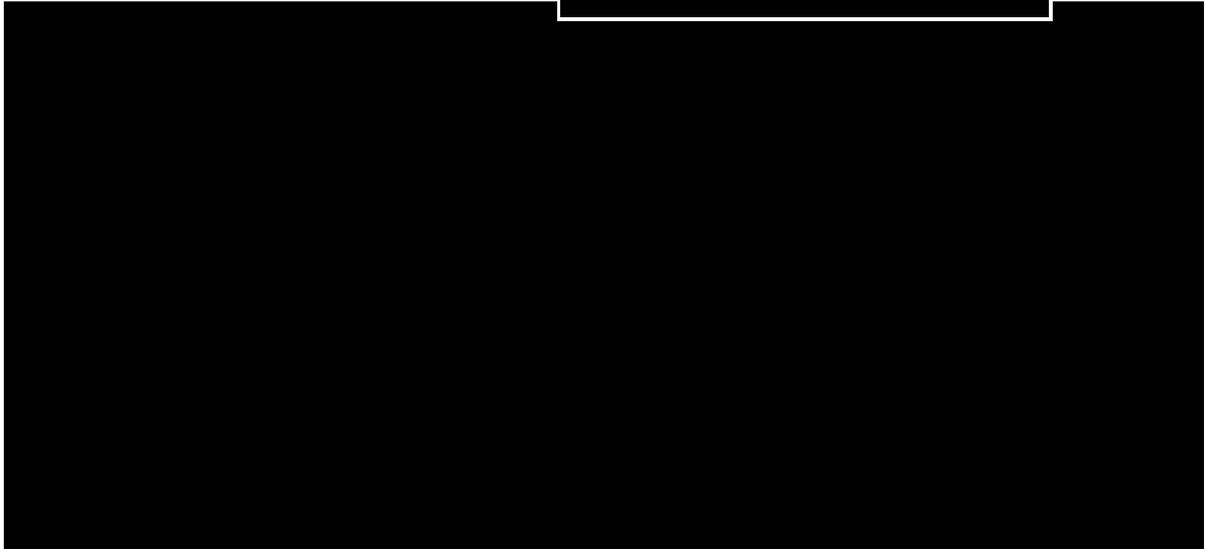
10 **1. Both Charter and Time Warner Cable Have a**  
11 **Slow Repair Time for Their Largest Voice**  
12 **Service Outages**

13 NORS reports also contain data regarding the duration of voice service outages.  
14 ORA compiled data related to Charter and Time Warner Cable to calculate the average  
15 duration of the NORS service outages for every year available. Table 9 below provides  
16 the average duration of NORS service outages for both voice service providers.<sup>39</sup>  
17 Charter’s average NORS outage duration is based on data from 2011 to August 2015.  
18 Time Warner Cable’s average NORS outage duration is based on data from 2014 to  
19 October 2015.

20  
<sup>38</sup> See Bright House Nov. 6 Response to DR-3, Response to Data Request 3-11; Bright House Exhibit 3-11 (Confidential).

<sup>39</sup> Bright House is not included in this analysis, as it had only one NORS report from 2011 to 2015. This outage lasted [REDACTED] considerably less than the average of either Charter or Time Warner Cable.

1 **Table 9: Charter and Time Warner Cable NORS Voice Outages, Average Duration**  
2 **in California, 2011 –2015** [REDACTED]



3  
4 [REDACTED]

5 In years 2011 to 2015, both Charter and Time Warner Cable have high average  
6 duration times for their NORS voice service outages. Charter averaged [REDACTED] and  
7 Time Warner Cable averaged [REDACTED] based on available data.

8 Particularly in the year 2015, both Charter and Time Warner Cable experienced  
9 long duration for NORS voice service outages. Charter’s average repair time of its 2015  
10 NORS outages lasted [REDACTED] an exceptionally long duration of time. Even though  
11 Time Warner Cable also experienced long NORS repair times, Charter’s NORS voice  
12 outages lasted more than [REDACTED] as long as Time Warner Cable’s NORS outages in  
13 2015.

14 Charter’s slow time to repair NORS outages is a serious concern. We may  
15 reference the standard found in G.O. 133-C, which calls for 90% of all outages, not just  
16 the largest outages, to be repaired within 24 hours. In 2015 [REDACTED]

17 [REDACTED]

18 Just as in the case of overall outages, for NORS outages, Charter takes  
19 [REDACTED] to restore service, especially in 2015. Joint Applicants have not

1 demonstrated that the transaction will maintain or improve service quality, given the  
2 serious problems in restoring service after outages.

3 **2. Certain Geographic Locations Experience a**  
4 **Disproportionate Impact from NORS Outages.**

5 Certain counties and cities were particularly impacted by NORS-reportable voice  
6 service outages. Table 10 below presents data on all of Charters' NORS outages in  
7 California between 2011 and August 2015, the total number of affected users, the total  
8 affected user minutes, and the county where outages occurred.

9 **Table 10: Charter NORS Voice Outages, Affected Users and Affected User Minutes**  
10 **California Counties, Jan. 2011 – Aug. 2015**



11  
12  
13 As seen in the table above, many of Charter's NORS outages in years 2011 to  
14 2015 were located in Los Angeles County; accounting for a significant amount of  
15 Charter's affected users and affected user minutes. Within Los Angeles County,  
16 [redacted] was particularly impacted by Charter's voice  
17 service outages, experiencing [redacted]  
18 [redacted] Other cities experiencing a disproportionate impact from NORS outages  
19 include: [redacted]

1 [REDACTED]  
2 [REDACTED]  
3 [REDACTED]  
4 Many of Charter's NORS outages in California in the years between 2011 and  
5 2015 were located in the five counties that make up the Los Angeles Designated Market  
6 Area ("DMA").<sup>40</sup> The Los Angeles DMA experienced a total of [REDACTED]  
7 [REDACTED] affected user minutes in  
8 California.

9 For many of Time Warner Cable's NORS reports, the descriptions of the  
10 geographic locations of outages were unclear, such that the city and even the county  
11 could not be determined with certainty. Thus, outage data by county is not available.  
12 However, Time Warner Cable's NORS reports from 2014 to 2015 noted that the vast  
13 majority of outages occurred in the Los Angeles DMA. These outages constituted [REDACTED]  
14 [REDACTED]  
15 [REDACTED] of affected user minutes in California.

16 As discussed in the Testimony of Dr. Lee L. Selwyn, if the merger were approved,  
17 New Charter would have a great deal of market power in the Los Angeles DMA. The  
18 disproportionate impact of NORS outages on the Los Angeles DMA is a serious concern,  
19 especially when New Charter has made no commitment on how it will decrease outages  
20 in the area.

21 **B. Joint Applicants' Service Quality Metrics Reveal**  
22 **Other Areas of Poor Performance**

23 As will be described below, each of the Joint Applicants has a different manner of  
24 measuring service quality of their VoIP service. The Commission's General Order 133-C  
25 ("G.O. 133-C") provides a framework for analysis of voice service quality. G.O. 133-C  
26 contains the primary metrics utilized to monitor service quality and reliability. Currently

---

<sup>40</sup> The Los Angeles Designated Market Area constitutes the five counties of Los Angeles, Orange, Riverside, San Bernardino and Ventura.

1 G.O. 133-C does not apply to VoIP service providers. However, G.O. 133-C provides  
2 standards of service that the Commission already recognizes as appropriate measures of  
3 acceptable and unacceptable service quality for voice service providers.

4 G.O. 133-C standards of service, described more fully in the analysis that follows,  
5 include: “Installation Interval,” “Installation Commitments,” “Customer Trouble  
6 Reports,” “Out of Service Repair Interval,” and “Answer Time.”<sup>41</sup> The Out of Service  
7 Repair Interval, which measures a service provider’s response time to service outages,  
8 was discussed in the Section 1.D. above.

9 In many cases, Joint Applicants track metrics that are identical or similar to the  
10 metrics of G.O. 133-C. [REDACTED] tracks service quality metrics following the  
11 standards of G.O. 133-C. There are also numerous areas of service quality where one or  
12 more of the Joint Applicants do not track metrics at all, or only have data for a limited  
13 period of time. The analyses below will, as much as possible, reconcile the various  
14 metrics utilized by each Joint Applicant with G.O. 133-C standards.

15 **1. Joint Applicants Have Varied and Inconsistent**  
16 **Service Quality Metrics**

17 Each company was asked how it defines quality of service for voice. Charter  
18 stated that it tracks [REDACTED]  
19 [REDACTED] as quality of service metrics  
20 for VoIP services.<sup>42</sup> Charter also considers customer communications, which will be  
21 described in the Complaint section below, as well as customer satisfaction, which was  
22 discussed in footnote 16 above.

23 Time Warner Cable on the other hand stated that it tracks (a) conversation quality;  
24 and (b) successful call completion.<sup>43</sup> Time Warner Cable also provided data regarding its  
25 installation intervals and its installation commitments met.<sup>44</sup>

---

<sup>41</sup> See G.O. 133-C, Sec. 2.1.

<sup>42</sup> See Charter Nov. 6 Response to DR-3, Response to Data Request 3-2.

<sup>43</sup> See Time Warner Cable Nov. 6 Response to DR-3, Response to Data Request 3-4; Time Warner Cable  
(continued on next page)

1 Bright House identified the following “customer service type” metrics that it  
2 tracks: (a) answer time; (b) installation commitment met; (c) out of service calls; and (d)  
3 trouble reports.<sup>45</sup> Bright House also stated that it uses [REDACTED]  
4 [REDACTED] as technologies to enable good  
5 service quality; however, these technologies are not tracked by a reportable set of  
6 metrics.<sup>46</sup>

## 7 **2. Installation Data Reveals Some Areas of Poor** 8 **Service Quality**

9 The metric “Installation Interval” measures the period of time taken to complete  
10 an order for the installation of services, between the date the service order was placed and  
11 the date the service becomes operational.<sup>47</sup> G.O. 133-C establishes a standard of  
12 installing voice service orders within five business days.<sup>48</sup> Delays in installation due to  
13 customer requested appointments are excluded from the metric.

14 Another metric, “Installation Commitments,” measures the percentage of service  
15 orders for installations that were completed. This data is tracked as a percentage of  
16 commitments met.<sup>49</sup> G.O. 133-C establishes a minimum standard that 95% of service  
17 orders placed should have commitments met.<sup>50</sup>

### 18 **a) Charter**

19 Charter did not provide data on the average duration it took to complete its  
20 installations (Installation Intervals). However, Charter did provide data on the percentage

---

(continued from previous page)  
Exhibit 3-2 (Confidential).

<sup>44</sup> See Time Warner Cable Nov. 6 Response to DR-3, Responses to Data Requests 3-15, 3-17.

<sup>45</sup> See Bright House Nov. 19 Supp. Response to ORA DR, Response to Data Request 3-2.

<sup>46</sup> See Bright House Nov. 6 Response to DR-3, Response to Data Request 3-2, Response to Data Request 3-8.

<sup>47</sup> See G.O. 133-C, § 3.1.

<sup>48</sup> See G.O. 133-C, § 3.1.c.

<sup>49</sup> See G.O. 133-C, § 3.2.b.

1 of its service orders that were completed within five business days.<sup>51</sup> For each year  
2 between 2012 and 2015, Charter completed [REDACTED] of the service installations  
3 within five business days. Only for a handful of months during this five-year time period  
4 did Charter [REDACTED]

5 **b) Time Warner Cable**

6 Time Warner Cable provided data describing the average duration (annually and  
7 monthly) to complete installations of its service orders.<sup>52</sup> Table 11 below contains Time  
8 Warner Cable’s annual average Installation Interval in California.

9 **Table 11: Time Warner Cable Voice Service Annual Average Installation Interval**  
10 **(Days to Install) California, 2011 – 2015** [REDACTED]

[REDACTED TABLE CONTENTS]

11  
12 [REDACTED]  
13 Looking at the annual averages, Time Warner Cable met the G.O. 133-C standard  
14 of an Installation Interval of less than five business days [REDACTED]

15 Looking at monthly data [REDACTED]  
16 [REDACTED] However, Time Warner Cable has improved  
17 its performance in 2015, reducing its installation interval [REDACTED]

18 Time Warner Cable also provided data describing the total voice service order  
19 created every year in California, and the total service orders completed.<sup>54</sup> This data is  
20 provided in Figure 9 below.

---

(continued from previous page)

<sup>50</sup> See G.O. 133-C, § 3.2.c.

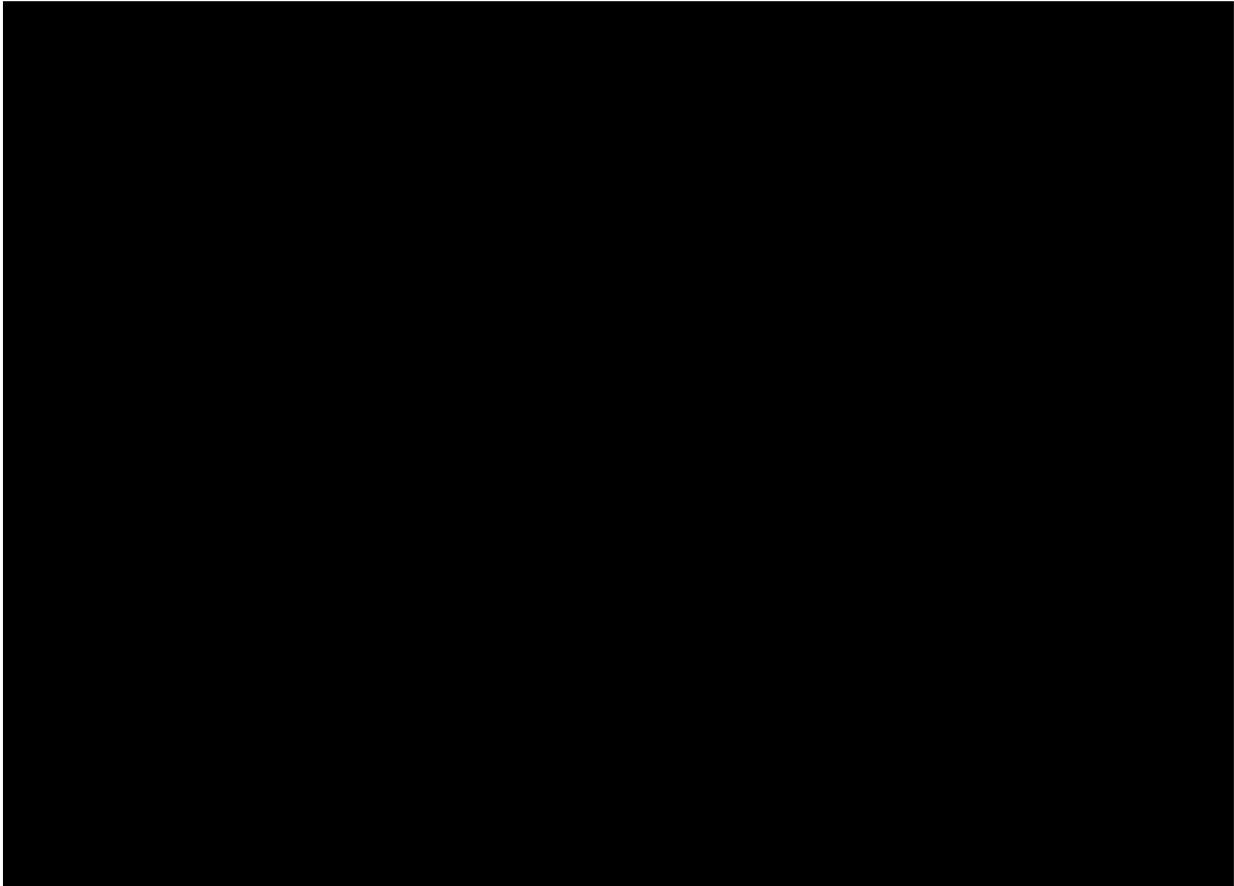
<sup>51</sup> See Charter Nov. 6 Response to DR-3, Response to Data Requests 3-15, 3-17; Charter Exhibit ORA 3-15 (Confidential); Charter Exhibit ORA 3-17 (Confidential).

<sup>52</sup> See Time Warner Cable Nov. 6 Response to DR-3, Response to Data Request 3-15.

<sup>53</sup> See Time Warner Cable Supplemental Meet & Confer Response to ORA 12.29.2015; Time Warner Cable Supp. Ex. 3-15 (Confidential).

<sup>54</sup> See Time Warner Cable Nov. 6 Response to DR-3, Response to Data Request 3-17.

1 **Figure 9: Time Warner Cable Voice Service Orders Created and Installed**  
2 **California, Jan. 2011 – Aug. 2015** [REDACTED]



3  
4 [REDACTED]  
5 Time Warner Cable [REDACTED]

6 [REDACTED] Time Warner Cable's

7 extremely poor performance in meeting installation commitments is a serious concern  
8 that requires improvement based on specific performance based outcomes.

9 **c) Bright House**

10 Bright House provided data on its Installation Interval for voice service, describing  
11 the "Average Days Between Entered and Completed Date" for installations during the  
12 first ten months of 2015; Bright House states that data before this time period is

1 unavailable.<sup>55</sup> Figure 10 below provides Bright House’s Installation Intervals for year  
2 2015 on a monthly basis.

3 **Figure 10: Bright House Monthly Voice Installation Completion (in Days)**  
4 **California, Jan. – Oct. 2015** [REDACTED]



5  
6 [REDACTED]  
7 Bright House’s data does not state if the above metric describing Installation  
8 Completion excludes installation delays due to customer requested appointments, as  
9 allowed under G.O. 133-C. Ignoring this incongruence, the data demonstrates that for the  
10 entire period (January through October 2015), Bright House’s average Installation  
11 Completion period was [REDACTED] the G.O. 133-C standard of 5 days. [REDACTED]  
12 [REDACTED]

13 Bright House also provided data that described the total number of its installations,  
14 as well as the duration to complete installations. The data provided by Bright House for  
15 the first ten months of 2015 is presented in the table below.<sup>56</sup>

16  

---

<sup>55</sup> See Bright House Nov. 19 Supp. Response, Response to Data Request 3-15; Bright House Exhibit 3-2 (Confidential).

<sup>56</sup> See Bright House Nov. 19 Supp. Response, Response to Data Request 3-15; Bright House Exhibit 3-2 (Confidential).

1 **Table 12: Bright House Voice Installation Interval Categories and Percentages**  
2 **California, Jan. – Oct. 2015** [REDACTED]

3 [REDACTED]

4 [REDACTED]

5 Bright House’s data does not track the reporting procedures for “Installation  
6 Commitments” of GO 133-C, for example, using a standard of [REDACTED]  
7 Thus, it cannot be determined with certainty if 95% of Bright House’s installation’s  
8 occurred within 5 days. In any case, Bright House had very few installations [REDACTED]  
9 that were completed beyond [REDACTED] ot at the customers’ request.

10 **3. Customer Trouble Reports Reveal Areas of**  
11 **Poor Service Quality as Well as Gaps in the**  
12 **Data Tracked by the Joint Applicants**

13 The metric “Customer Trouble Reports” describes the percentage of total working  
14 phone lines for which there are service trouble reports from customers relating to  
15 dissatisfaction with telephone company services. G.O. 133-C sets a standard that only  
16 6% or less of working lines should have trouble reports.<sup>57</sup>

17 **a) Charter**

18 Charter’s performance met G.O. 133-C standards for Customer Trouble Reports  
19 from 2011 through 2015, as much less than 6% of its customer lines experienced trouble  
20 reports, as seen in Figure 11 below.<sup>58</sup>

---

<sup>57</sup> See G.O. 133-C, § 3.3.c. ; The standard is 6% (6 per 100 lines for units w/ at least 3,000 lines.

<sup>58</sup> See Charter Nov. 6 Response to DR-3, Response to Data Request 3-8; Charter Exhibit ORA 3-8

(continued on next page)

1 **Figure 11: Charter Percentage of Working Voice Lines with Trouble Reports**  
2 **California, Jan. 2011 – Sept. 2015** [REDACTED]



3  
4 [REDACTED]  
5 **b) Time Warner Cable**

6 Time Warner Cable did not provide any data related to the percentage of it  
7 working line with trouble reports. This is a significant gap in Time Warner Cable's  
8 service quality metrics. Without any data, there is no way to determine how many of  
9 Time Warner Cable's working lines experience customer trouble.

10 **c) Bright House**

11 Bright House provided data on the total number of its trouble reports.<sup>59</sup> The data  
12 reveals a high percentage of customer lines with trouble reports, as seen in Figure 12  
13 below.

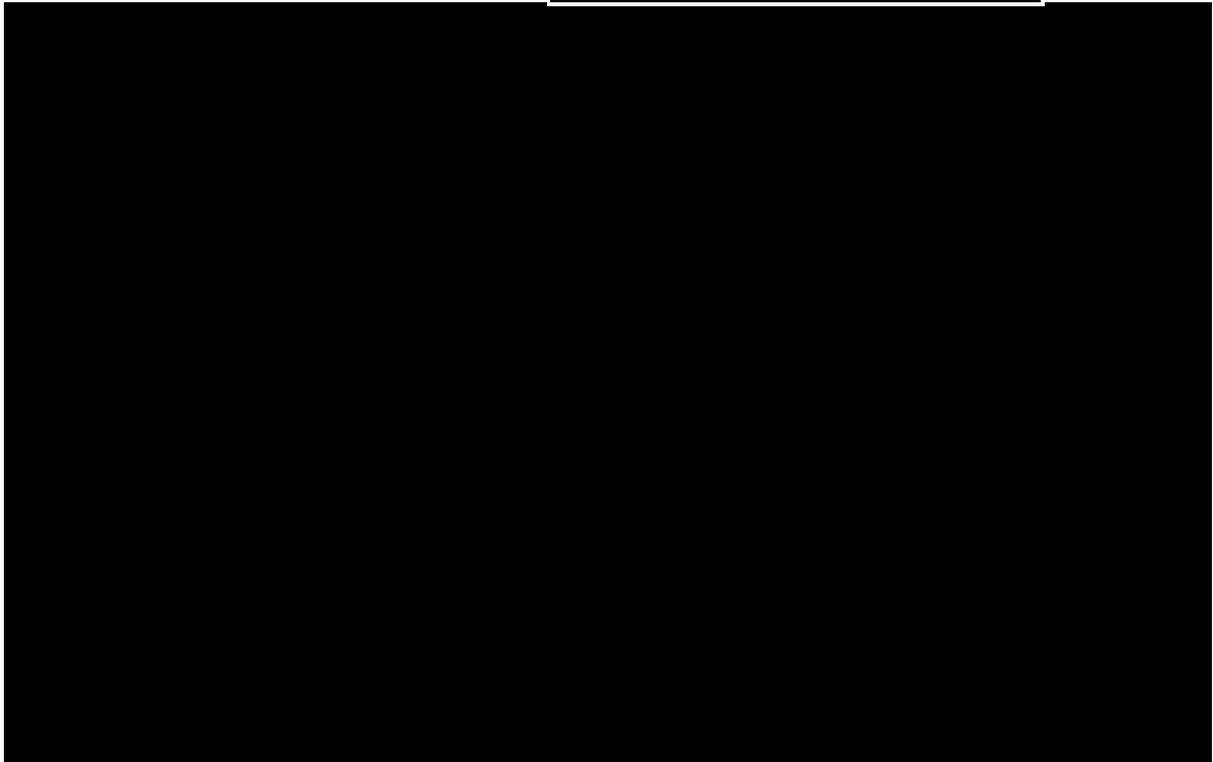
14  

---

  
(continued from previous page)  
(Confidential).

<sup>59</sup> See Bright House Nov. 19 Supp. Response, Response to Data Request 3-2; Bright House Exhibit 3-2 (Confidential). Trouble report percentage was determined by dividing the total number of Bright House's telephone lines to the total number of its trouble. See also Bright House Nov. 6 Response to DR-3, Response to Data Request 3-32; Bright House Exhibit 3-32 (Confidential).

1 **Figure 12: Bright House Voice Trouble Reports as a Percentage of Working Lines**  
2 **California, Jan. – Sept. 2015** [REDACTED]



3  
4  
5 [REDACTED]

6 Bright House provided its trouble report data in a manner different than that called  
7 for by G.O. 133-C. However, ORA utilized the data provided to demonstrate that, for all  
8 of 2015, [REDACTED]  
9 [REDACTED] For the first nine months in 2015,  
10 [REDACTED] of Bright House’s lines had trouble reports, more than [REDACTED] the recommended  
11 standard. Moreover, because data before 2015 is unavailable, we cannot determine if this  
12 is a long-standing problem. The extremely high level of Bright House’s trouble reports is  
13 an area of service quality that requires vast improvement.

14 **4. There Are Many Gaps and Inconsistencies in**  
15 **the Data on Answer Times**

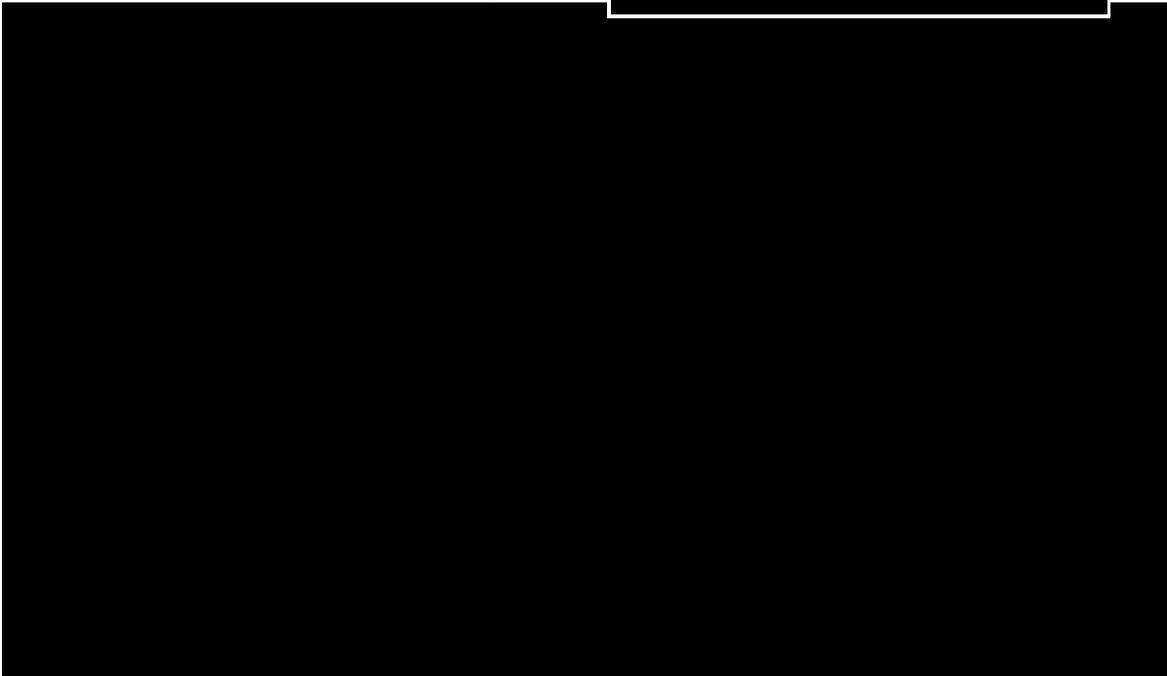
16 “Answer Times” is a metric that measures the duration of time (in seconds) for a  
17 customer’s call to be answered by a live agent. G.O. 133-C calls for 80% of calls for

1 billing and non-billing inquiries, and for trouble reports to be answered by an operator  
2 within 60 seconds.<sup>60</sup>

3 **a) Charter**

4 Charter provided fairly comprehensive data regarding its Answer Times.<sup>61</sup>  
5 Charter had mixed results for Answer Times as seen in Figure 13 below. [REDACTED]  
6 [REDACTED] to meet the G.O. 133-C standard of at least 80% of calls reaching a  
7 live agent within 60 seconds. However, for every other year analyzed [REDACTED]

8 [REDACTED]  
9 **Figure 13: Charter Percentage of Calls to Reach Live Agent < 60 Seconds**  
10 **California, Jan. 2011 – Sept. 2015** [REDACTED]



11  
12  
13

[REDACTED]

---

<sup>60</sup> See G.O. 133-C, § 3.5.a.

<sup>61</sup> See Charter Nov. 6 Response to DR-3, Response to Data Request 3-8; Charter Exhibit ORA 3-8 (Confidential).

1                                   **b) Time Warner Cable**

2                   Time Warner Cable did not provide data related to Answer Times. This is another  
3 significant gap in Time Warner Cable’s service quality metrics.

4                                   **c) Bright House**

5                   Bright House provided data on Answer Times in a different manner than that  
6 required by G.O. 133-C. Rather than reporting on the percentage of calls answered  
7 within 60 seconds, Bright House reported on the percentage of calls answered within 30  
8 seconds. This data is presented in Table 13 below.

9                   **Table 13: Bright House Percentage of Calls Answered < 30 Seconds**

10                   **California, Jan. – Oct. 2015** [REDACTED]

[REDACTED TABLE CONTENT]

11

12

13                   For the first ten month in 2015, Bright House answered [REDACTED] f calls within 30  
14 seconds, [REDACTED] ven with a much stricter 30 second  
15 call response time. Thus, Bright House demonstrated a rapid response time to customer  
16 calls in 2015. However, the lack of data prior to 2015 may hide some concerns.

17                   **5. Time Warner Cable Tracks Some Unique Data**  
18                   **Metrics, But Has Large Gaps in the Data.**

19                   As discussed above, Time Warner Cable lacked data in many G.O. 133-C metric  
20 categories, but provided some voice service quality data that the company tracks: 1)  
21 conversation quality; and 2) call failure rate.<sup>62</sup> Time Warner Cable provided a full set of  
22 data only for 2015. The data is also reported in an inconsistent manner, with some  
23 metrics [REDACTED]

<sup>62</sup> See Time Warner Cable Nov. 6 Response to DR-3, Response to Data Request 3-2; Time Warner Cable Exhibit 3-2 (Confidential).

1 [REDACTED] This limited and inconsistent set of metrics does not  
2 provide a full opportunity to analyze the state of Time Warner Cable’s voice service  
3 quality in prior years. Nonetheless, the results for the metrics provided, with standards  
4 that Time Warner Cable self-identified as internal company targets, shows that Time  
5 Warner Cable [REDACTED] its own internal service quality benchmarks  
6 regarding conversation quality.

7 Time Warner Cable provided data describing its voice “Conversation Quality.”  
8 This data is in the form of a numeric score for Conversation Quality. Time Warner Cable  
9 also supplied a target score for Conversation Quality, seeking a score [REDACTED] The  
10 data provided [REDACTED] and a full set of data was only provided for 2015. Figure  
11 14 provides Time Warner Cable’s performance in 2015 on voice conversation quality,  
12 [REDACTED] the company’s internal benchmark.

13 **Figure 14: Time Warner Cable Voice Conversation Quality Metrics**

14 [REDACTED] **Jan. 2015 – Oct. 2015** [REDACTED]



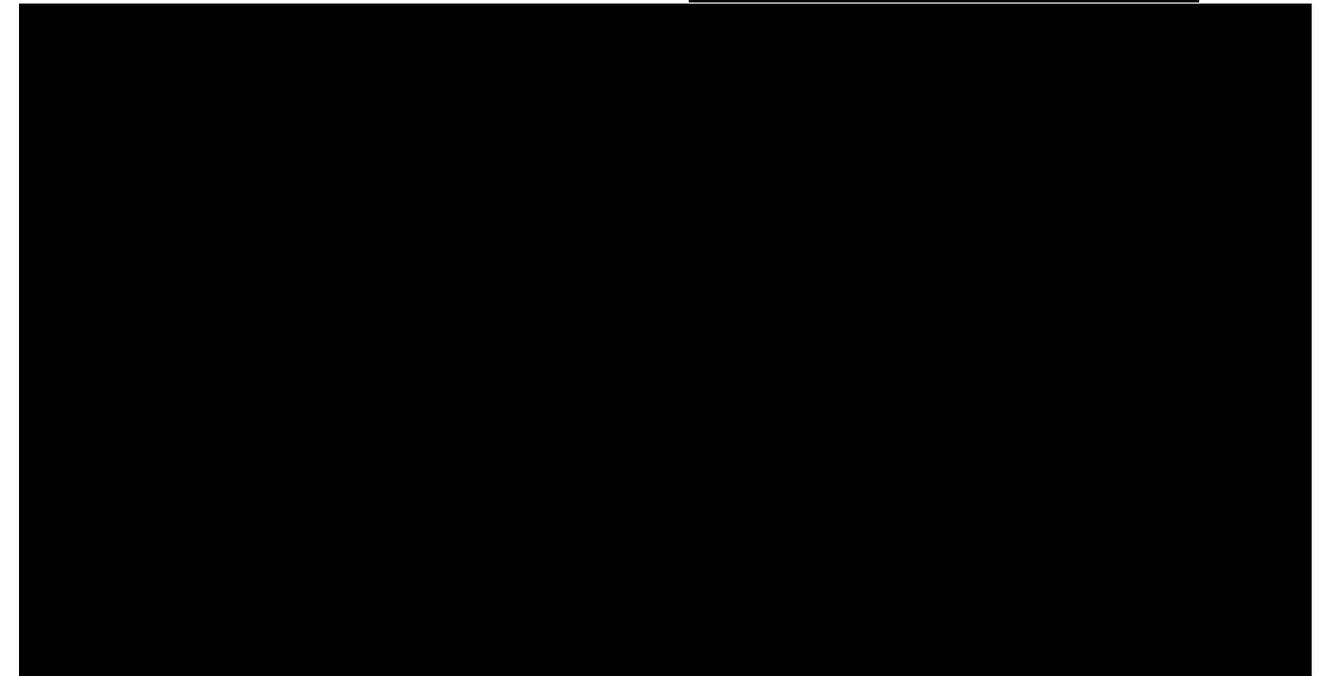
15 [REDACTED]  
16 [REDACTED]  
17 As stated above, [REDACTED]  
18 Conversation Quality for all of the reported months in 2015. For 2014, Time Warner

1 Cable provided partial data for “Conversation Quality” for three months (June through  
2 August). During this time period Time Warner Cable [REDACTED] as  
3 well.

4 Time Warner Cable tracked its voice call failure rate [REDACTED] This  
5 metric is calculated by dividing the failed call attempts by total call attempts. Time  
6 Warner Cable also provided a target for its performance, seeking to keep the percentage  
7 of failed calls below [REDACTED] Figure 15 provides the data on Time Warner Cable’s Call  
8 Failure Rate from January 2015 to October 2015.

9 **Figure 15: Time Warner Cable Voice Call Failure Rate**

10 [REDACTED] Jan. 2015 – Oct. 2015 [REDACTED]  
[REDACTED]



11  
12 [REDACTED]  
13 In 2015, Time Warner Cable [REDACTED] internal company target percentage of call  
14 failures. The lack of any data before this period may hide issues of concern.  
15

1           **C.     Joint Applicants Do Not Demonstrate an Adequate**  
2           **Response to Customer Complaints.**

3           Customer complaint data from the Joint Applicants may provide an assessment of  
4 issues customers face, the level of customer satisfaction and how effective the companies  
5 handle the complaints. Customer complaint data is an important indicator of service  
6 quality. However, only Time Warner Cable provided comprehensive data. Both Charter  
7 and Bright House provided complaint data that was likely not representative of the full  
8 range of complaints the companies received. Charter and Bright House did not provide  
9 complaint data that can demonstrate that they are maintaining or improving service  
10 quality, nor do they provide data that demonstrates a good response to customer  
11 complaints.

12                   **1.     Joint Applicants Have Varied Complaint**  
13                   **Processes.**

14           When asked to describe current process and procedures to handle customer  
15 complaints, Charter identified numerous ways in which a customer can issue a complaint,  
16 including a call to a Customer Service Representatives (“CSRs”), online through the  
17 company’s website, or by visiting a Charter store in their location.<sup>63</sup>

18           In assessing the total complaints Charter received in years 2010 to 2015, Charter  
19 only provided complaint data received by [REDACTED]  
20 [REDACTED] leaving out a potential large number of complaints that are issued  
21 following the above stated processes and not fully representative of all of the customer  
22 complaints received by Charter.

23           When asked for any changes to existing customer complaint handling processes  
24 after the proposed transfer of control takes place, Charter stated that it would be hiring

---

<sup>63</sup> See Supplemental Response by Charter to the Third Set of Data Requests by ORA (“Charter Nov. 20 Supp. Response”), Response to Data Request 3-19.

<sup>64</sup> See Charter Nov. 20 Supp. Response, Responses to Data Requests 3-18, 3-21 and 3-23.

1 and training thousands of new employees for its customer call service centers and field  
2 technician operations, but does not make a specific commitment relating to California.<sup>65</sup>

3 Time Warner Cable provided information about its complaint processes. Time  
4 Warner Cable described how complaints are “escalated” [REDACTED]

5 [REDACTED] Internal escalations occur for a variety of  
6 reasons, generally when they cannot be resolved in various internal departments, hence  
7 deemed “escalated” complaints. [REDACTED]

8 [REDACTED]  
9 [REDACTED]  
10 Bright House described its complaint process, stating that Bright House customers  
11 can contact a Bright House customer care specialist by telephone at any time, by e-mail,  
12 by “chat” over Bright House’s website, or in person by visiting any of Bright House’s  
13 four customer care centers in California, located in Bakersfield, Delano, Taft and  
14 Tehachapi.<sup>67</sup> Subscribers with concerns that are not resolved by a customer care  
15 specialist can contact the Office of the President of Bright House’s Bakersfield Division.

16 In response to a variety of data requests seeking data on customer complaints,  
17 Bright House interposed a series of objections, for example stating that it “does not  
18 maintain a repository of ‘all remaining customer-initiated complaints concerning Your  
19 VoIP services....’”<sup>68</sup> Bright House stated that it “does however track complaints that are  
20 received from government agencies, the Better Business Bureau and other consumer  
21 organizations, and from its corporate offices.”<sup>69</sup>

---

<sup>65</sup> See Charter Nov. 20 Supp. Response, Response to Data Requests 3-20.

<sup>66</sup> See Time Warner Cable Nov. 6 Response to DR-3, Response to Data Request 3-19; Time Warner Cable Exhibit 3-19 (Confidential).

<sup>67</sup> See Bright House Nov. 6 Response to DR-3, Response to Data Request 3-19.

<sup>68</sup> See Bright House Nov. 6 Response to DR-3, Response to Data Request 3-23.

<sup>69</sup> See BHN Response to ORA Meet & Confer Letter Dated December 17, 2015, Response to Data Request 3-18.

1 Bright House provided a limited set of complaints regarding all its services  
2 (broadband, video and voice) in California from the above named sources, totaling [REDACTED]  
3 [REDACTED] in years 2011 to 2015.<sup>70</sup> Such a small number of complaints may not fully  
4 represent all of the customer complaints received by Bright House. Analysis of these  
5 complaints may be found in ORA Testimony and Recommendations Regarding  
6 Broadband Service Quality, Section III.E.3. The complaint data shows an [REDACTED]  
7 in complaints from 2012 and 2015.<sup>71</sup>

8 **a) Charter**

9 As stated above, Charter provided complaint data for VoIP services limited to  
10 complaints received [REDACTED] This data is  
11 not a full representation of all of the customer complaints received by Charter through its  
12 various complaint channels. Charter provided data for only [REDACTED] complaints for the time  
13 period of 2010 to 2015.<sup>72</sup> However, Charter reported receiving [REDACTED] customer  
14 calls requiring CSR assistance during the same time period.<sup>73</sup> It is highly unlikely that  
15 the limited subset of [REDACTED] is  
16 representative of the much more numerous complaints included in the [REDACTED]  
17 [REDACTED] of customer calls requiring CSR assistance.

18 Figure 16 below provides the average number of days to resolve Charter's  
19 complaints from all customer types combined for years 2010 to 2015. The average  
20 number of days to resolution of Charter's voice complaints was [REDACTED] from 2010 to  
21 2015. Charter had [REDACTED] to resolve complaints compared to Time

---

<sup>70</sup> See BHN Response to ORA Meet & Confer Letter Dated December 17, 2015, Response to Data Request 3-18; Bright House Exhibit 3-18 (Confidential).

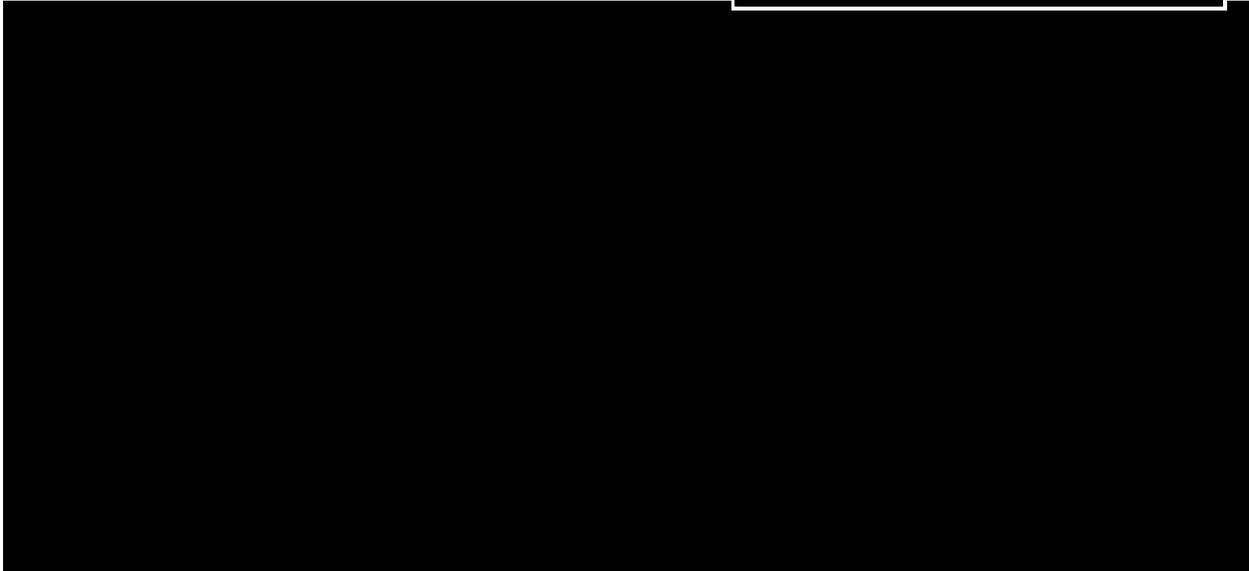
<sup>71</sup> See ORA Testimony and Recommendations Regarding Broadband Service Quality, served Jan. 15, 2016, p. III-29.

<sup>72</sup> See Charter Nov. 20 Supp. Response, Responses to Data Requests 3-18, 3-21 and 3-23; Charter Exhibit ORA 3-18 (Confidential); Charter Exhibit ORA 3-23 (Confidential).

<sup>73</sup> See Charter Response to the 11th Set of Data Requests by ORA, Response to Data Request 11-30.

1 Warner Cable (discussed further below). Time Warner Cable had a total of [REDACTED]  
2 complaints from 2010 to 2015, with an average complaint resolution period of [REDACTED]

3 **Figure 16: Charter Voice Complaints Average Days to Resolution**  
4 **(All Customer Types) California, 2010 – 2015** [REDACTED]



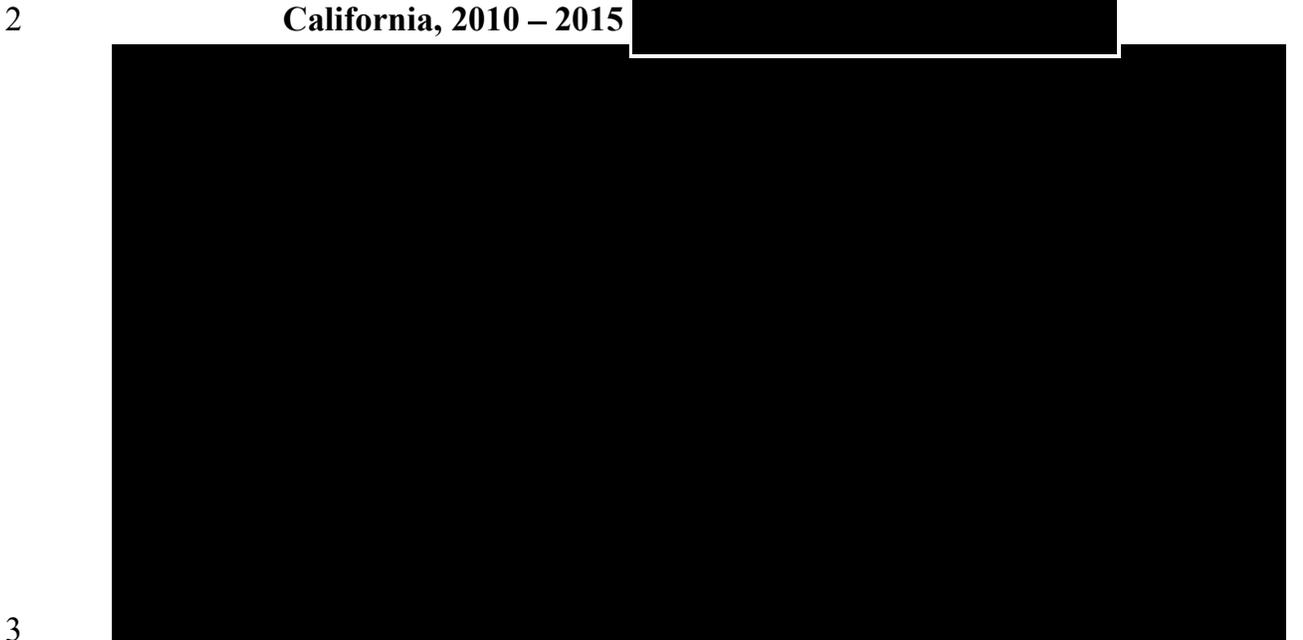
5 [REDACTED]  
6 [REDACTED]

7 Moreover, the above data demonstrates that Charter had [REDACTED] of  
8 complaint resolution in recent years, increasing by [REDACTED] from 2010 to 2015.  
9 Lengthening response times to customer complaints is an area of concern. This is  
10 especially true considering that Charter proposes to greatly increase its number of voice  
11 subscribers in California by acquiring control of Time Warner Cable and Bright House

12 Charter's [REDACTED] in California for years 2010 to 2015 included  
13 [REDACTED] from Residential customers, [REDACTED] from Business customers, and  
14 [REDACTED] from Non-customers. Complaints from residential customers account for  
15 the vast majority of Charter complaints, as shown in Figure 17 below. There is a [REDACTED]  
16 [REDACTED] in complaints regarding VoIP service from [REDACTED] in years 2014 and  
17 2015.

18

1 **Figure 17: Charter Total Voice Complaints (Residential and Business Customers)**



4 [Redacted]

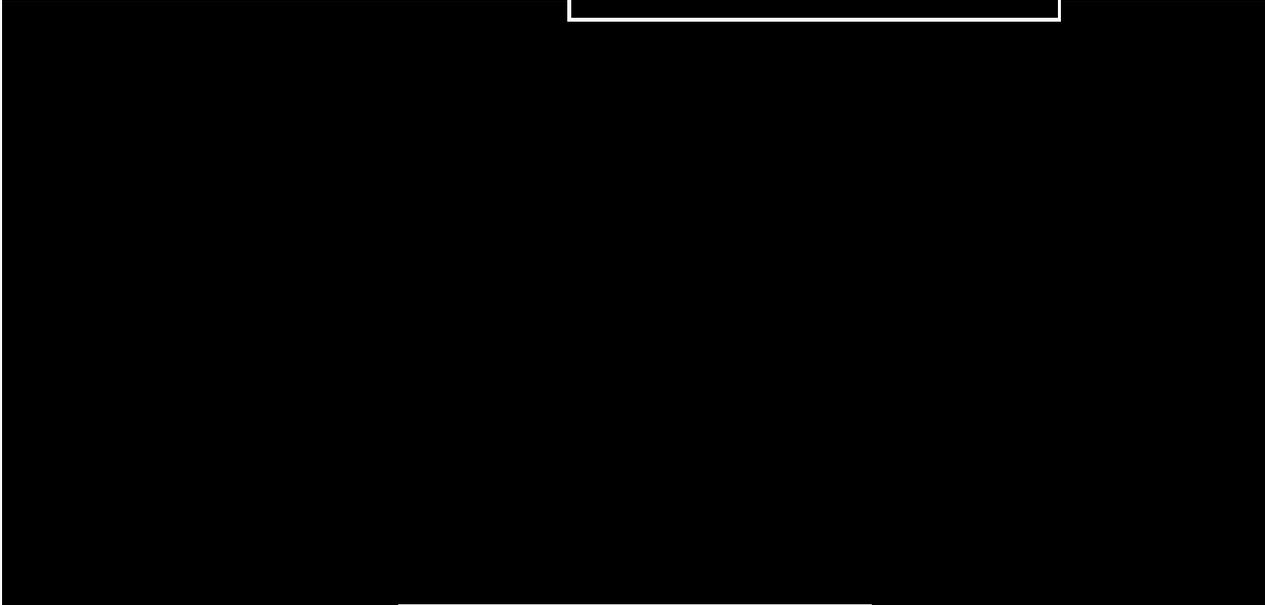
5 The majority of Charter complaints related to billing issues. There were [Redacted]

6 [Redacted] Table 14 below provides the number and

7 percentage of the most common types of customer complaints in years 2010 to 2015.

8 **Table 14: Charter Voice Customer Complaints by Type**

9 **California, 2010 – 2015** [Redacted]

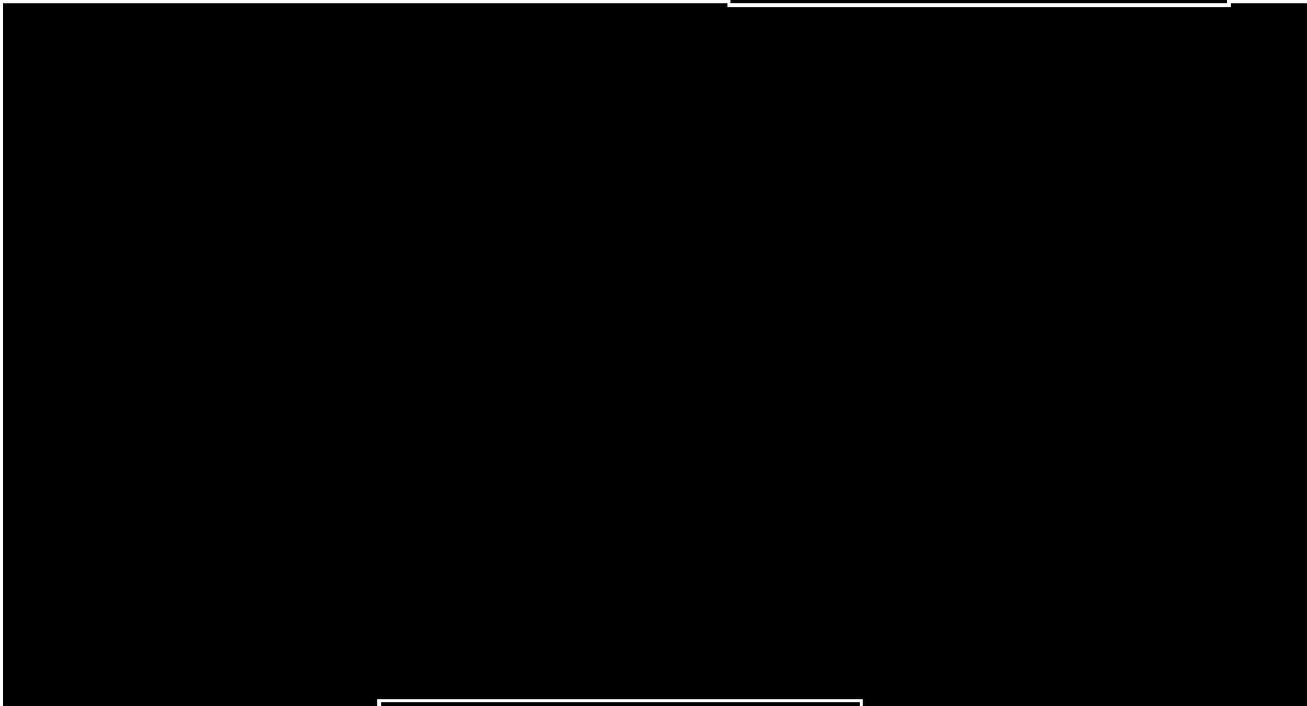


10

1                                   **b) Time Warner Cable**

2                   Time Warner Cable provided a much more comprehensive set of data regarding its  
3 complaints.<sup>74</sup> Time Warner Cable did not delineate between complaints from voice and  
4 broadband customers or whether they originated from residential or business customers.  
5 Thus, Figure 18 below provides the total of Time Warner Cable complaints involving  
6 both voice and broadband service, from all types of customers, for years 2011 to 2015.

7                                   **Figure 18: Time Warner Cable Total Number of Complaints**  
8 **(Voice and Broadband) California, 2011 – 2015** [REDACTED]



9 [REDACTED]  
10 [REDACTED]

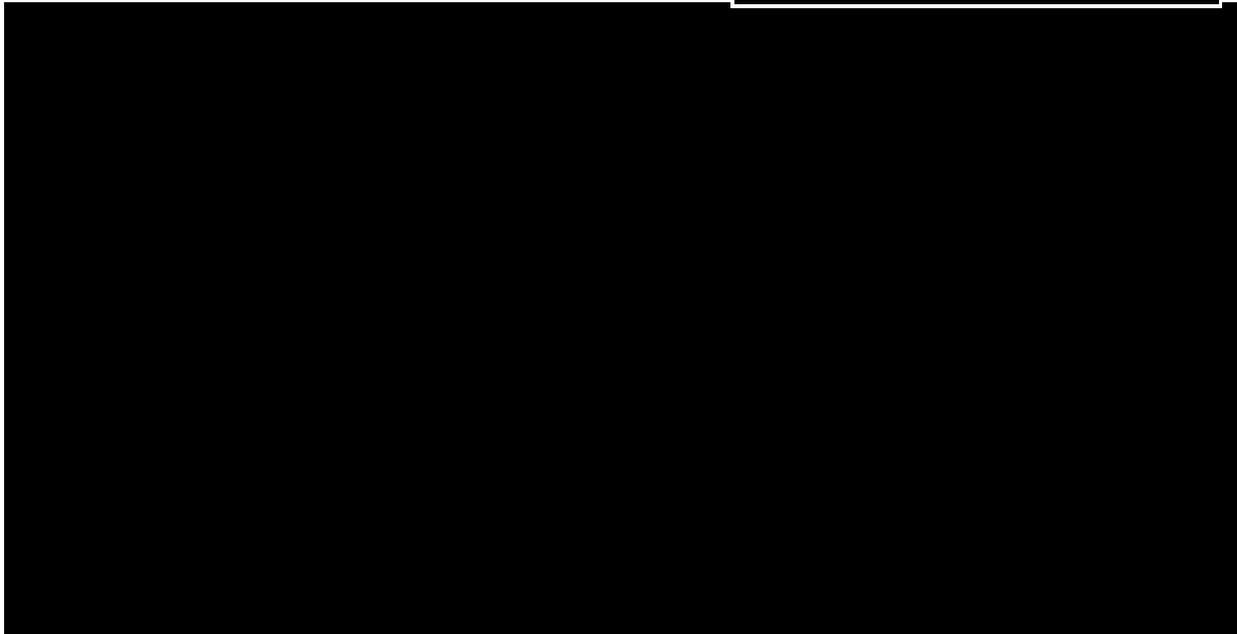
11                   Time Warner Cable’s data includes the number of business days to resolve each  
12 complaint. Figure 19 below provides the average number of business days to resolve all  
13 complaints from the years 2011 through 2015. Time Warner Cable shows fairly  
14 consistent resolution duration, [REDACTED] business days for 2011 to 2015.

15

---

<sup>74</sup> See Time Warner Cable Supplemental Responses to Third Set of Discovery Requests from ORA, Responses to Data Requests 3-18, 3-23; Time Warner Cable Exhibit 3-18 (Confidential) (Available on CD Upon Request).

1 **Figure 19: Time Warner Cable Average Business Days to Resolve Complaints**  
2 **(Voice and Broadband) California, 2011 – 2015** [REDACTED]



3  
4 [REDACTED]

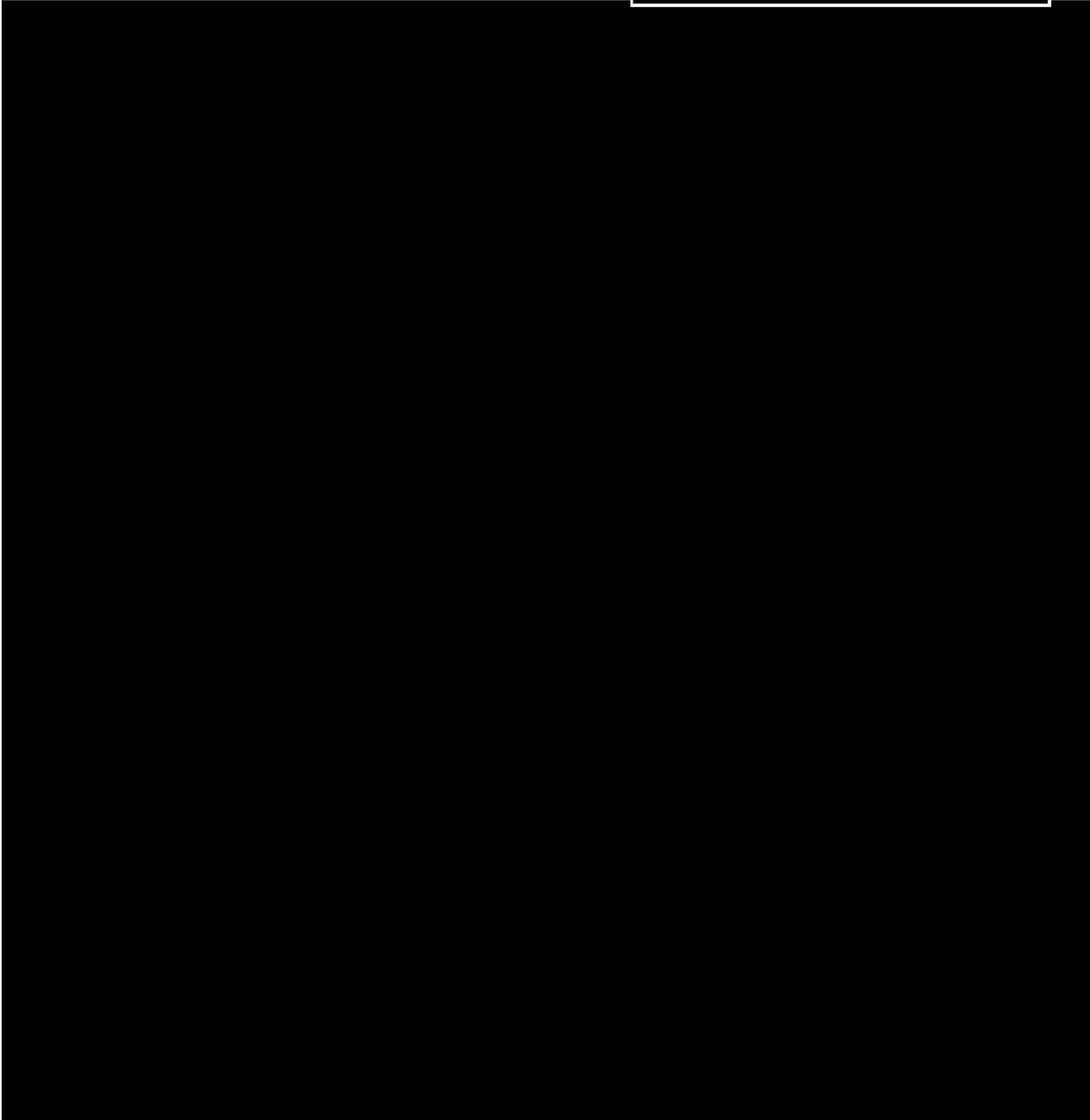
5 Time Warner Cable also provided data regarding the category or issues of each  
6 complaint. The majority of data on customer complaints included more than one  
7 category or issue for each complaint. For the purpose of discussion below, if a complaint  
8 is assigned more than one category, it will be assigned and compiled based on the first  
9 category of complaint that is listed (to avoid double counting). For example, if the  
10 complaint was categorized as billing/ appointments/ repair/ customer experience, it is  
11 counted as a billing complaint.

12 About [REDACTED] of Time Warner Cable’s complaints were related to billing issues.  
13 Figure 20 below shows the percentage of Time Warner Cable’s customer complaints by  
14 type of complaint. Time Warner Cable’s service-related customer complaints contained a  
15 variety of issues, such as dissatisfaction with customer service, disconnection,  
16 appointments, and repair issues.

17 ///

18 ///

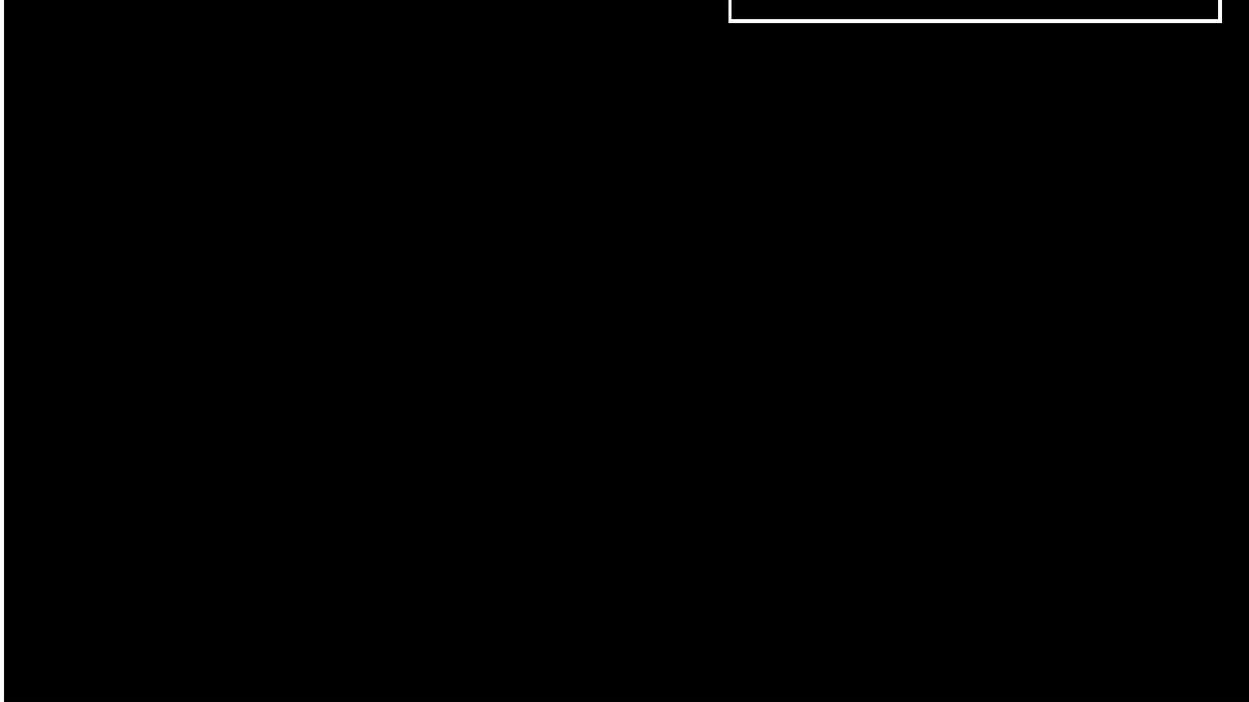
1 **Figure 20: Time Warner Cable Customer Complaints by Type of Complaint**  
2 **Voice and Broadband, California, 2011 – 2015** [REDACTED]



3 [REDACTED]  
4 [REDACTED]  
5 "Cable Repair" was a complaint category constituting [REDACTED]  
6 [REDACTED] of total complaints from 2011 to 2015. Though not a frequent complaint  
7 compared to other complaint categories, "Telephone Repair" showed [REDACTED]  
8 complaint resolution duration compared to other complaints [REDACTED]

1 This information is important given data on outages that demonstrated repair time as an  
2 area of concern. The total number of “Telephone Repair” complaints, along with the  
3 average complaint resolution duration is provided in Figure 21 below.

4 **Figure 21: Time Warner Cable Telephone Repair Complaints and Average**  
5 **Resolution Duration, California, 2011 – 2015** 



6

7 

8 **2. Complaint Data from the Commission’s**  
9 **Consumer Affairs Branch Provides a**  
10 **Comparison of Joint Applicants’ Complaints**

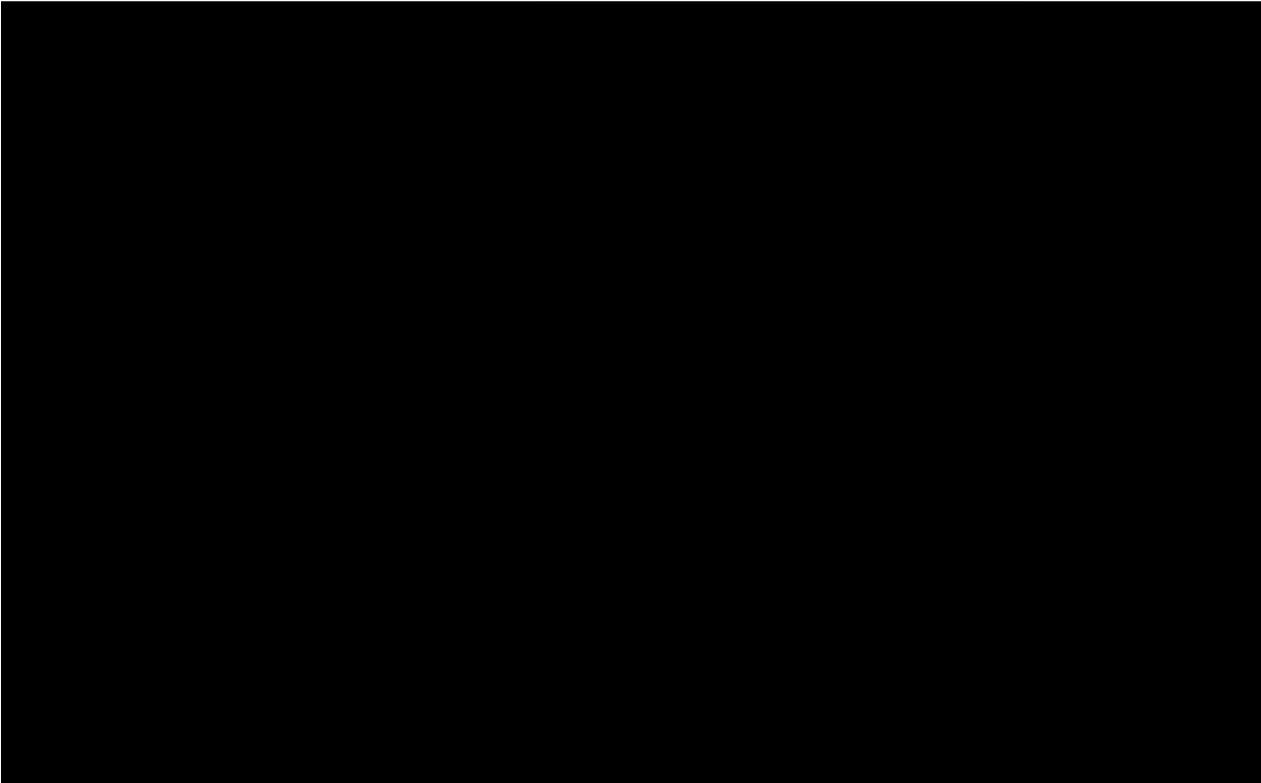
11 In addition to customer complaint data provided by each of the Joint Applicants,  
12 the Commission’s Consumer Affairs Branch (CAB) tracks complaints on services offered  
13 by the Joint Applicants. Subscribers of any service provider in California may contact  
14 CAB and lodge complaints and inquiries. CAB complaints include voice, broadband and  
15 cable television issues. Figure 22 below provides the total number of complaints and  
16 inquiries for each of the Joint Applicants from 2010 to 2015 (through November).<sup>75</sup>

---

<sup>75</sup> See Exhibit CAB Complaints Merged Companies, 2011-Aug. 2014 (Confidential); Exhibit CAB  
Complaints Charter Sept. 2014-Nov.2015 (Confidential); Exhibit CAB Complaints Time Warner Cable  
(continued on next page)

1 **Figure 22: Complaints and Inquiries to Commission Consumer Affairs Branch**

2 **Jan. 2011 – Nov. 2015** [REDACTED]



3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14

[REDACTED]

For five years between 2011 and 2015, Charter had [REDACTED] ime  
Warner Cable had [REDACTED] and Bright House had [REDACTED]

This complaint data should be analyzed keeping in mind the total number of  
subscribers for each service provider. Although Charter has less CAB complaints than  
Time Warner Cable, Time Warner Cable had much larger voice subscriber base in  
California from 2011 to 2015; about [REDACTED] times as many voice residential subscribers as  
Charter. Taking into account the size of the subscriber base, Charter averaged [REDACTED] CAB  
complaints every year for every 10,000 residential voice subscribers, while Time Warner  
Cable averaged [REDACTED] and Bright House averaged [REDACTED]

---

(continued from previous page)  
Sept. 2014-Nov.2015 (Confidential); Exhibit CAB Complaints Bright House Sept. 2014-Nov.2015  
(Confidential). All CAB Complaint data Exhibits available on CD Upon Request.

## 1       **2. THE PROVISION OF BACKUP POWER FOR VOIP SERVICE**

### 2       **INTRODUCTION**

3           This chapter presents ORA’s findings and recommendations regarding the impact  
4 of the proposed transaction on the Joint Applicants’ provision of backup power for VoIP  
5 service and their provision of 911 service. Both backup power for VoIP service and 911  
6 service have significant implications for public safety.

7           California P.U. Code § 321.1 requires that the Commission “assess and mitigate  
8 the impacts of its decision on customer, public, and employee safety, as part of each  
9 ratemaking, rulemaking, or other proceeding...”

10          Similarly, the Assigned Commissioner’s Scoping Ruling in this proceeding  
11 included the following question in the factors that the Commission would consider:

12           d. Are there any implications for public safety from the transaction?<sup>76</sup>

13  
14 Thus, it is proper to consider the impact of the proposed transaction on backup power for  
15 VoIP service and 911 service, both of which greatly impact public safety.

16          ORA examined the policies and practices of Joint Applicants regarding the  
17 provision of backup power for VoIP service and 911 service, as further discussed below.

#### 18       **A. Backup Power Policies and Practices**

19          The policies and practices of telephone service providers in regards to the  
20 provision of battery backup for VoIP service impacts public safety and service quality.  
21 Consumers of traditional landline telephone service are accustomed to being able to use  
22 their landline phones even when their residential electricity service is disconnected. This  
23 is because the copper wire network conducts electricity from the local exchange carrier’s  
24 central office or from a remote terminal to the customer premises equipment (CPE).<sup>77</sup>  
25 However, in the case of VoIP service, if the residential electricity is out, their telephone

---

<sup>76</sup> See Assigned Commissioner’s Scoping Ruling, issued on Nov. 13, 2015, p. 5.

<sup>77</sup> See FCC, *Report and Order, In the Matter of Ensuring Customer Premises Equipment Backup Power for Continuity of Communications* (“Backup Power Order”) Released August 7, 2015, at ¶11.

1 will also be out of service. When power sources fail, it often is in times of weather-  
2 related or manmade disasters – the very same time that consumers are most likely to need  
3 to call 911, communicate with others and receive incoming emergency notifications (like  
4 evacuation orders.<sup>78</sup> Thus, ensuring that customers have backup power for their VoIP  
5 communications for when their residential electricity fails is a significant public safety  
6 issue. Additionally, VoIP customers should be aware of the need for backup power for  
7 VoIP service, as they may believe that their telephone will work without electricity due to  
8 their experience with traditional landline service.

9 The FCC recently formulated rules to help ensure the continuity of  
10 telecommunications service when residential electricity service fails.<sup>79</sup> These rules are  
11 not yet in effect, but will be soon. ORA will note the anticipated effective date of the rule  
12 as it is discussed.

13 **B. Joint Applicants’ Generally Provide Backup Power**  
14 **that Would Meet Applicable Guidelines.**

15 A new FCC rule will require that service providers must offer subscribers, at the  
16 point of sale of VoIP service, the option to purchase backup power.<sup>80</sup> The FCC does not  
17 require the use of any specific backup power technology, as long as it provides at least  
18 eight hours of standby backup power.<sup>81</sup> In practice, most VoIP providers utilize  
19 rechargeable batteries for backup power. The FCC rule will require that VoIP service  
20 providers offer either a complete solution for backup power, including the battery or  
21 other power source, or the installation of a component that will accept or enable the use

---

<sup>78</sup> See Backup Power Order at ¶18.

<sup>79</sup> See Backup Power Order, Appendix C, adding 47 C.F.R. § 12.5.

<sup>80</sup> See Backup Power Order at ¶38; see also 47 C.F.R. § 12.5(b)(1).

<sup>81</sup> See Backup Power Order at ¶40.

1 of a battery or other backup power source that the subscriber will supply.<sup>82</sup> All of the  
2 above elements of the rule will become effective on February 16, 2016.<sup>83</sup>

3 Currently, both Charter and Bright House offer VoIP customers the option to  
4 purchase backup batteries directly from them for their VoIP service at the initiation of  
5 service.<sup>84</sup> Time Warner Cable refers customers to a third-party vendor to purchase their  
6 battery and can make the order on the customer's behalf.<sup>85</sup> However, Time Warner  
7 Cable is re-considering its current policies in light of the new FCC rule. Charter's battery  
8 backup costs \$40; Bright House's backup battery costs \$42.15.<sup>86</sup> As Time Warner Cable  
9 utilizes an outside vendor, Time Warner Cable does not set the cost for the battery.

10 All of the battery backup systems utilized by Joint Applicants provide at least  
11 eight hours of standby time, meeting the technical standard recommended by the  
12 Commission.<sup>87</sup> In addition, all of the Joint Applicants utilize a battery system with a light  
13 that indicates if the backup power is degraded.<sup>88</sup> While this is not a requirement of the  
14 FCC's new rule, it is a Best Practice recommendation of the FCC's Communications  
15 Security, Reliability and Interoperability Council's (CSRIC).<sup>89</sup>

---

<sup>82</sup> See 47 C.F.R. § 12.5(b)(3).

<sup>83</sup> See 47 C.F.R. § 12.5(f)(1).

<sup>84</sup> See Charter Nov. 6 Response to DR-3, Response to Data Request 3-36; Bright House Nov. 6 Response to DR-3, Response to Data Request 3-36.

<sup>85</sup> Time Warner Cable Nov. 6 Response to DR-3, Response to Data Request 3-36.

<sup>86</sup> See Charter Nov. 6 Response to DR-3, Response to Data Request 3-36; Bright House Nov. 6 Response to DR-3, Response to Data Request 3-39.

<sup>87</sup> See Charter Nov. 6 Response to DR-3, Responses to Data Requests 3-36, 3-37; Time Warner Cable Nov. 6 Response to DR-3, Response to Data Request 3-37; Bright House Nov. 6 Response to DR-3, Response to Data Request 3-37.

<sup>88</sup> See Charter Nov. 6 Response to DR-3, Responses to Data Requests 3-36, 3-37; Time Warner Cable Nov. 6 Response to DR-3, Response to Data Request 3-37; Bright House Nov. 6 Response to DR-3, Response to Data Request 3-37.

<sup>89</sup> See CPUC Backup Power Comments, p. 5, citing CSRIC Working Group 10B Final Report – CPE Powering, New Best Practices No.14, September 2014. The CSRIC's mission is to provide recommendations to the FCC to ensure, among other things, optimal security and reliability of communications systems, including telecommunications, media, and public safety.

1           Should Charter acquire control of the proposed new service territories, it may  
2 transfer its current policies in regard to the provision of battery backup. These policies  
3 should meet the requirements of the FCC rule to be in effect in February 2016.

4           **C.     Joint Applicants’ Education of Customers Regarding**  
5           **Backup Power for VoIP Services Is Lacking**

6           The CPUC adopted rules in Decision 10-01-026 requiring all VoIP service  
7 providers to educate customers about the need for backup power when their electricity  
8 service fails.<sup>90</sup> D.10-01-026 requires that information be provided upon service initiation  
9 “in a format the customer can utilize.”<sup>91</sup> If the customer was marketed in a language  
10 other than English, “the customer education information shall be presented in that  
11 language in a format they can utilize.”<sup>92</sup> Moreover, the customer is to be given an annual  
12 reminder of the need for backup power; the Commission suggests “a visually prominent  
13 notice on the customer’s bill is one way to accomplish [annual notice] at little or no  
14 cost.”<sup>93</sup>

15           D.10-01-026 requires a number of elements to be included in the education,  
16 including information about the need for backup power for VoIP service, information  
17 about the limitations of backup power and how to maximize this backup power,  
18 information about monitoring and maintaining the backup battery, and information about  
19 replacing the backup battery.<sup>94</sup>

20           In addition, a new FCC rule will require similar disclosures, at the point of sale  
21 and annually thereafter.<sup>95</sup> This new FCC rule will become effective 120 days after the  
22 FCC announces approval by the federal Office of Management and Budget.<sup>96</sup>

---

<sup>90</sup> See D.10-01-026, pp. 16-18, Conclusion of Law 28, Order ¶ 1.

<sup>91</sup> See D.10-01-026, p. 14, Conclusion of Law 20, Order ¶ 6.

<sup>92</sup> See D.10-01-026, p. 14, Conclusion of Law 21, Order ¶ 7.

<sup>93</sup> See D.10-01-026, p. 14, Conclusion of Law 22, Order ¶, 9.

<sup>94</sup> See D.10-01-026, pp. 12-14, Conclusion of Law 18, Order ¶ 5.

<sup>95</sup> See Backup Power Order, ¶ 69; 47 C.F.R. § 12.5(d).

1 All three Joint Applicants provide fairly complete information on backup power  
2 over the Internet.<sup>97</sup> However, most customers would not know how to access this  
3 information unless they were provided with a direct web address. Customers are unlikely  
4 to access such information, so that the information is not “in a format they can utilize.”  
5 Moreover, the mere continual existence of a web address with information does not meet  
6 the requirement that information be provided at “the point of sale” or “annually  
7 thereafter.”

8 All three Joint Applicants’ provision of backup power information in hardcopy is  
9 lacking. The information on backup power is hidden within lengthy user manuals or  
10 within the terms of service.<sup>98</sup> Customers are unlikely to access such information, so that  
11 the information is not “in a format they can utilize.” In addition, there are no indications  
12 that Joint Applicants provide this information annually to customers, as required by D.10-  
13 01-026 and by the upcoming FCC rule.

14 However, the education that Joint Applicants provide does not seem very effective  
15 and does not comply with Commission D.10-01-026. Information provided via a website  
16 that is not readily available unless you have direct access to it, or as part of a much longer  
17 document is likely to be overlooked. If the transfer of control is to occur, Charter should  
18 reassess its backup power education program. To meet the requirements of D.10-01-026,  
19 the information should be in a hardcopy, paper format, and should be a prominent part of  
20 document devoted only to backup power issues, or emergency issues. Charter must also  
21 meet D.10-01-026’s requirement that the information be provided in the same language  
22 in which the voice services were marketed.

---

(continued from previous page)

<sup>96</sup> See 47 C.F.R. § 12.5(f)(1).

<sup>97</sup> See Charter Nov. 6 Response to DR-3, Responses to Data Request 3-38; Time Warner Cable Nov. 6 Response to DR-3, Response to Data Request 3-38; Time Warner Cable Exhibit 3-38; Bright House Nov. 6 Response to DR-3, Response to Data Request 3-37.

<sup>98</sup> See Charter Nov. 6 Response to DR-3, Responses to Data Request 3-38; Time Warner Cable Nov. 6 Response to DR-3, Response to Data Request 3-38; Time Warner Cable Exhibit 3-38; Bright House Nov. 6 Response to DR-3, Response to Data Request 3-37.

1 **CONCLUSION**

2           ORA’s analysis found a number of areas where all or some of the Joint Applicants  
3 demonstrate poor voice service quality. Both Charter and Time Warner Cable had poor  
4 Customer Satisfaction rankings in J.D. Power and Associates Telephone Customer  
5 Satisfaction Studies rankings, especially regarding customers experiencing general  
6 service outages. Both Charter and Time Warner Cable provide data that show a high  
7 number of voice service outages, but perhaps most significantly, Charter demonstrates an  
8 exceedingly long time to repair its voice service outages. A transfer of control to Charter  
9 may lead to more voice service outages, and a slower repair time, in the newly acquired  
10 service territory. Charter presents no specific plans to address its high number of voice  
11 service outages.

12           All three of the Joint Applicants have large gaps in their service quality data, often  
13 having no data at all for certain voice service quality topics, or only collecting data for  
14 limited time periods. Where data was provided by the Joint Applicants, poor service  
15 quality is evident in meeting installation commitments and conversation quality for Time  
16 Warner Cable and in the level of trouble reports for Bright House.

17           Charter and Bright House provided extremely limited complaint data. Given such  
18 limited data, Joint Applicants do not demonstrate adequate voice service quality, or a  
19 good response to customer complaints.

20           Joint Applicants provide only general statements regarding its plans to improve  
21 voice service quality should the transaction be approved. Charter makes no specific  
22 commitments to invest resources in California. Charter does not address any specific  
23 service quality issues. There is no basis to demonstrate that the transaction will maintain  
24 or improve voice service quality.

25

1                   **Attachment A - Statement of Qualifications of Enrique Gallardo**

2 Enrique Gallardo received a Bachelors of Arts in Sociology in 1991 from the University  
3 of California at Berkeley. Mr. Gallardo received a Juris Doctor degree in 1997 from the  
4 University of California at Berkeley (Boalt Hall) School of Law. From 2001 to 2008,  
5 Mr. Gallardo was Staff Attorney with Latino Issues Forum. His work there involved  
6 participating in California Public Utilities Commission proceedings involving  
7 telecommunications and low income programs, including performing analysis of  
8 telecommunications policies and low-income programs. From 2010 to 2014, Mr.  
9 Gallardo was Legal Counsel with the Greenlining Institute. At the Greenlining Institute,  
10 Mr. Gallardo participated in California Public Utilities Commission proceedings  
11 involving telecommunications and energy. His work included policy and program  
12 analysis, drafting and sponsoring testimony and drafting comments and briefs. Mr.  
13 Gallardo was hired as a Public Utilities Regulatory Analyst with the Office of Ratepayer  
14 Advocates, Communications and Water Policy Branch, in April 2015.

15