

BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA

Order Instituting Investigation into the  
State of Competition Among  
Telecommunications Providers in  
California, and to Consider and Resolve  
Questions raised in the Limited  
Rehearing of Decision 08-09-042.

Investigation 15-11-007  
(Filed November 5, 2015)

**COMMENTS OF THE OFFICE OF RATEPAYER ADVOCATES ON THE  
PROPOSED DECISION**

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## I. INTRODUCTION

Pursuant to Rule 14.3 of the California Public Utilities Commission's (Commission) Rules of Practice and Procedure, the Office of Ratepayer Advocates (ORA) submits these comments on the Proposed Decision Analyzing the California Telecommunications Market and Directing Staff to Continue Data Gathering, Monitoring and Reporting on the Market (PD). The PD, issued on October 18, 2016, made key findings on the telecommunications market in California. ORA supports the Commission's detailed and in-depth analysis of the state of competition for broadband services in California.

However, in some respects the PD's findings of fact and conclusions of law are not supported by the analysis and discussion in the text of the PD. For example:

- After making strong findings regarding the lack of competition for broadband services in California, the PD closes the proceeding without addressing any of the initiatives or solutions presented within the analysis in the PD.
- While this proceeding was styled as a rehearing of Decision (D.) 08-09-042 wherein the Commission committed to reconsider questions raised about the sufficiency of competition in California to ensure safe and reliable service at just and reasonable rates, the PD fails to resolve any of those issues.
- The text of the PD discusses and analyzes information presented by the parties, but the findings of fact and conclusions of law fail to accurately track the discussion, and instead, in some instances rely on outdated reports issued previously by the Commission's Communication Division (CD), rather than on the more current and detailed data and analysis presented by ORA and other parties and supported by expert testimony. Indeed, most of the data presented by ORA and the other intervenors, production of which was contested for many months during this proceeding, was largely ignored.
- The PD ignores the significance of ORA's data and analysis of companies' performance on service quality when assessing competition.

ORA urges the Commission to reconsider closing this proceeding. Instead, the Commission should provide the parties the opportunity to address the initiatives or solutions presented in the PD, or to offer their own proposals. Both California and the federal government have indicated their intent to “promote competition” and “remove barriers” to facilities’ investment.<sup>1</sup> It is perplexing that the Commission closes this proceeding after making a finding that barriers to competition continue to exist. Whether remedial efforts take place in a second phase of this docket or a new proceeding, they must take place.

## **II. THE PD SHOULD NOT CLOSE THE PROCEEDING WITHOUT CONSIDERING SOLUTIONS TO A HIGHLY CONCENTRATED TELECOMMUNICATIONS MARKET**

The PD closes this proceeding.<sup>2</sup> However, closing the proceeding forecloses further Commission action, for the near future, on several unresolved action items, proposals, and recommendations made in the text of the PD.

In a section entitled “Next Steps,” the PD lays out a plan of action items that ORA supports, but which have not been implemented. If this proceeding is closed, implementing these steps would be left to some future, unnamed, and currently unplanned, proceeding. This failure to take action is inconsistent with the body of the PD, where it is acknowledged “that the telecommunications network has assumed central importance in the California economy—and for the health, welfare, and safety of Californians generally.”<sup>3</sup> In light of the importance of the network to the basic needs of Californians, the PD “propose[s] the following list of initiatives designed to promote competition and reduce barriers to entry.”<sup>4</sup>

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<sup>1</sup> PD at 147.

<sup>2</sup> PD at Ordering Paragraph #5.

<sup>3</sup> PD at 145.

<sup>4</sup> PD at 145.

- Administration of Public Purpose Programs;
- Guaranteeing Non-Discriminatory Access To The Physical Infrastructure Of The Telecommunications Network;
- Making Interconnection Dispute Resolution as Efficient as Possible Including IP to IP Interconnection;
- Continuing to Monitor Wholesale Markets as Required by Section 716;
- Obtaining Actual Speed Data for Residential Broadband;
- Continuing to Monitor Markets for Telecommunications Services.

With the exception of continuing to monitor the telecommunications market and the administration of public purpose programs, the ordering paragraphs of the PD do not implement these initiatives or “next steps.” Many of these solutions are strongly supported by ORA. In addition, the parties should be solicited for their additional input as to other initiatives or alternatives. In its Opening Brief, ORA suggested several options the Commission could consider as remedies to address lack of competition. For example, ORA suggested the Commission could consider performance and service availability targets, price or earnings regulation, wholesale/retail restructuring, and support for a public broadband network. All these items should be further discussed and vetted in a Phase 2 to this proceeding or in a new proceeding to be initiated without delay.

Moreover, closing the proceeding is at odds with the finding that “[t]he residential, high-speed broadband market in all of California’s geographic markets is highly concentrated,” and “poses risks of an insufficiently competitive marketplace.”<sup>5</sup>

#### **A. The Voice Market**

The PD focuses its analysis on intermodal voice choices such as traditional landline, wireless, and Voice over Internet Protocol (VoIP) and concludes that the

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<sup>5</sup> Findings of Fact #17 and #28.

Intermodal Voice Market is “Moderately Concentrated.”<sup>6</sup> The PD then discusses concerns about the level of competition in the “intramodal” voice market.<sup>7</sup> These two statements are at odds with each other and should be reconciled in a “next phase” of the proceeding to determine policy proposals to alleviate these concerns with competition in the California voice market. In addition, the Commission acknowledges that mobile voice service is not a substitute for landline service where there is lack of wireless service coverage or even poor coverage.<sup>8</sup> However, even where there is wireless coverage, evidence shows that nearly two-thirds of California households that have wireless phones have chosen to retain their wireline service for various reasons, such as reliable access to 911, residential alarm service, medical monitoring, and other specific needs that cannot be met by wireless service.<sup>9</sup> In addition, the fact that wireless prices, which have been falling while wireline prices have escalated since the onset of URF, do not constrain wireline prices also displays a lack of substitutability between wireless voice and wireline voice service. If wireless is a true substitute for wireline, then a decrease in the price of wireless voice service should result in a concomitant decrease in the price for wireline voice service as carriers react to the actions of their competitive rivals. However, this has not happened. In California, wireless prices have been decreasing while wireline prices have seen few, if any, reductions as just a few carriers continue to maintain dominance of traditional circuit-switched voice connections (also referred to as “wireline” or “landline”). These carriers control 88.6% of the nationwide voice market.<sup>10</sup> Pricing and service quality reflect this dominance. Basic wireline prices have increased by more than

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<sup>6</sup> PD at 9.

<sup>7</sup> PD at 74.

<sup>8</sup> PD at 36.

<sup>9</sup> ORA Opening Brief at 21.

<sup>10</sup> *Id.* at 41.

40% since 2008, during a period when wireless prices have been cut in half.<sup>11</sup> Wireline “bundles” of unlimited local and long distance calling and service features are nearly double the price for similar wireless bundles, and do not include other standard wireless features such as texting and Internet access.<sup>12</sup> Dominant wireline carriers AT&T and Verizon (now Frontier) have failed to meet service quality standards for the last 5 years.<sup>13</sup> If the wireline market was competitive or subject to serious competition from wireless, wireline carriers would have been compelled by competitive marketplace forces to maintain and improve service quality. That they have not done so provides further confirmation of the lack of competition in the wireline voice market.

ORA’s analysis of the wireline voice market demonstrates a lack of effective competition. As a result of this lack of competition, prices for traditional wireline service have increased and service quality has decreased. Therefore, the Commission cannot continue to rely on competitive market forces to ensure compliance with Public Utilities Code § 451, which mandates that rates be just and reasonable and that service be safe and reliable. A review must be undertaken to address this lack of competition in California’s wireline voice market and the concern the Commission raises about the level of competition in the “intramodal” voice market.

## **B. The Wholesale Market**

After finding that there is market power in the California wholesale telecommunications market, the PD errs by closing the proceeding without commencing remedial efforts to address this market failure. The lack of a competitive market violates Public Utilities Code § 451’s requirement that rates be just and reasonable and that service be safe and reliable. It is necessary to develop a plan to prevent further harm to

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<sup>11</sup> *Id.* at 45.

<sup>12</sup> *Id.* at 22.

<sup>13</sup> *Id.* at 48.

California consumers and businesses as a result of the uncompetitive nature of the California wholesale telecommunications market.

The PD correctly discusses concerns with the lack of competition in the California wholesale market and makes reference to the fact that, “last mile facilities still appear to be concentrated in the legacy phone companies and in the cable companies.”<sup>14</sup> In addition to last-mile access, also referred to as unbundled loops, the PD correctly states that there is market power in the provision of interconnection and special access, both in terms of backhaul and building access.<sup>15</sup> The impact of this market concentration on California consumers and businesses is higher costs, higher prices, and a higher cost of doing business that, in turn, impacts California’s economy. For example, as mentioned in the PD, the consequences of this market power are “direct overcharges for special access in the neighborhood of \$20 billion per year” and “indirect economic losses” that “add another \$20 billion to the harm.”<sup>16</sup> Ultimately, it is the California consumer who must bear the cost of overpriced special access by paying approximately an additional \$300 per year on a per-household basis.<sup>17</sup> Harm to California consumers due to special access overpricing can also be seen in wholesale prices that undermine the financial stability of non-ILEC affiliated wireless providers such as Sprint and T-Mobile. As Sprint points out, “[T]hese wholesale services are the essential links that connect wireless towers and access points to the Internet,” and that “[s]pecial access, roaming, and spectrum are the three critical inputs necessary to ensure that the wireless markets of the future are competitive.”<sup>18</sup> This issue is becoming more pertinent as wireless carriers start their shift to 5G technologies.

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<sup>14</sup> PD at 96.

<sup>15</sup> PD at 99.

<sup>16</sup> *Id.* at 101.

<sup>17</sup> *Id.* at 101.

<sup>18</sup> *Id.* at 101.

With the latest AT&T announcement to purchase media giant Time Warner, the concern of vertically-integrated firms has also become pronounced. ORA's expert witness Lee Selwyn analyzed the concern with market power in the California wholesale market. Specifically, Dr. Selwyn stated,

Vertically-integrated firms that compete in downstream markets but which maintain market power in upstream markets may limit downstream competition through their control of wholesale inputs used by downstream rivals. If wholesale input markets of this sort are no longer subject to price regulation of any sort, the result will be reduced competition in the downstream retail market.<sup>19</sup>

ORA has provided a menu of options that the Commission should explore to address the market concentration in California's wholesale market. For example, the Commission could consider adopting specific structural remedies, such as separation of wholesale and retail services along the lines adopted by Ofcom in the United Kingdom.<sup>20</sup> This structural approach created the opportunity for retail providers to compete for end-user business without having to overbuild the incumbent's network. The Commission could also consider other structural remedies such as unbundling and interconnection requirements, which are necessary to remove barriers to competition. Finally, the Commission could consider proposals that would encourage the development of a public wholesale broadband network that has been a success in other developed countries.

Willingness to offer wholesale services is consistent with a more competitive market condition since it enables each of the facilities-based incumbents to leverage their overall retail market reach by utilizing the retail distribution resources of other providers. Therefore, ORA recommends that the Commission keep this rulemaking opened or immediately open a new proceeding to determine new policies or solutions to address the lack of competition in the California wholesale telecommunications market.

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<sup>19</sup> Exhibit 15 (ORA/Selwyn March 15) at 70 ¶¶ 82-83.

<sup>20</sup> ORA Opening Brief at 72.



### III. THE PD FAILS TO FOLLOW THROUGH ON REHEARING URF I AND URF II

The PD points out that “[t]en years ago the Commission issued a pair of decisions creating a Uniform Regulatory Framework (URF I and URF II<sup>21</sup>) that largely deregulated traditional landline telephone service in California,”<sup>22</sup> and that this proceeding “was initiated to test those conclusions ten years later.”<sup>23</sup> However, any mention of URF I or URF II is noticeably absent from the Findings of Fact, Conclusions of Law, and the Ordering Paragraphs of the PD.

In URF I, the Commission specifically stated that its goal was to “address whether we can rely on market forces...to ensure that rates are ‘just and reasonable.’”<sup>24</sup> This reliance was based on whether “the California market for telecommunications services is sufficiently competitive to enable California to replace current ILEC price regulations with a reliance on competitive market forces.”<sup>25</sup> URF II implemented pricing freedom for voice services.

Considering that the PD finds that the voice market is “moderately concentrated” and that the broadband market is “highly concentrated,” it follows that California cannot rely solely on market forces to ensure safe and reliable service at just and reasonable rates. Thus, the basic premise of URF has been fatally undermined. It is highly perplexing that the PD’s findings, conclusions, and ordering paragraphs make no mention of it.

Moreover, the PD finds that it is “unclear” that voice service prices are just and reasonable.<sup>26</sup> While the PD recognizes that “the best way to gauge whether rates are just

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<sup>21</sup> D.06-08-030 and D.08-09-042.

<sup>22</sup> PD at 2.

<sup>23</sup> *Id.* at 2.

<sup>24</sup> D.06-08-030 at 52.

<sup>25</sup> *Id.* at 76.

<sup>26</sup> Finding of Fact #12.

and reasonable is to compare the rates to the underlying costs,”<sup>27</sup> the PD makes no attempt to make such a determination because, as it states, “determining costs for bundled service is substantially more difficult than the cost of service determinations in traditional telecommunications ratemaking, which were difficult enough.”<sup>28</sup> Analytical difficulties do not cancel a statutory obligation to ensure just and reasonable rates.

The correct conclusion should be that URF I and URF II are unsupported and, in fact, contradicted by the evidence of a lack of a competitive marketplace. Thus, since the means of setting present rates has not been determined to be just and reasonable, we need to establish procedures to ensure that those rates are just and reasonable. To leave URF I and URF II in place, without considering the findings that lead to the conclusion that those decisions are no longer valid, is legal error.

#### **IV. THE PD’S FINDINGS OF FACT ARE NOT CONSISTENT WITH THE TEXT OF THE PD**

Some of the PD’s Findings of Fact rely on outdated reports that were not really at issue in this proceeding, while failing to mention the voluminous up-to-date information presented by the parties and supported by their expert testimony. For example, Finding of Fact #4 relies on the Commission’s Communications Division (CD) Market Share Analyses, the most recent of which was issued in January 2015, analyzing data from 2001 to 2013.<sup>29</sup> Also, Findings of Fact #11 and #16 rely on CD’s DIVCA Report, issued in September, 2015 and based on 2013 year-end data which is considerably outdated.<sup>30</sup> The Commission should base its findings on the recent data submitted on this proceeding.

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<sup>27</sup> PD at 137, citing to the testimony by Susan Baldwin of TURN.

<sup>28</sup> *Id.*

<sup>29</sup> See PD at Footnote 189, citing to <http://www.cpuc.ca.gov/General.aspx?id=4170>.

<sup>30</sup> The DIVCA report in particular is quite outdated, analyzing 2013 data in a report issued in 2015. No updated report was issued in 2016.

Since the record in this proceeding regarding market share analysis is much more current, there is no reason to use outdated reports in lieu of the analysis of current data provided by the parties. ORA and TURN presented voluminous data and analyses that should be reflected in the PD's Findings of Fact or Conclusions of Law. Dr. Selwyn (ORA), Dr. Roycroft (TURN) and Ms. Baldwin (TURN) are mentioned dozens of times in the text of the PD and as such, should be reflected in the findings of fact. ORA and TURN faced many challenges with the carriers over discovery to obtain the most up-to-date data, which included the carriers seeking an injunction in federal court.<sup>31</sup>

Furthermore, the Findings of Fact fail to track the discussion earlier in the text of the PD that relates to the entrance of Google Fiber. New entrants like Google are important to competition because, as the PD notes, "when a new entrant (like Google) does in fact put specific plans in action to build new facilities, the incumbent carriers have reacted by increases in speed and/or decreases in cost."<sup>32</sup> However, the PD notes that "the problems that even a well-financed potential market entrant like Google has had in actually trying to enter the market underscore how difficult facilities-based market entry is."<sup>33</sup> The PD errs by closing this proceeding without addressing the initiatives proposed in the text of the PD meant to address the difficulties for new entrants in the market, like Google Fiber, which is discussed in detail in the text of the PD.<sup>34</sup>

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<sup>31</sup> On November 3, 2016, the District Court for the Northern District of California denied the carriers' request for an injunction, holding that the "CPUC's decision to require disclosure of these data to third parties under a protective order does not, in itself, conflict with federal policy."

<sup>32</sup> PD at 113, quoting TURN/Roycroft June 1 Testimony at 125.

<sup>33</sup> PD at 127.

<sup>34</sup> In fact, Google Fiber recently announced that it is suspending its plans in "most" planned cities. "Google Fiber suspended in San Jose and 'most' other planned cities; Alphabet unit CEO quits" "Google Fiber put on hold in Silicon Valley," *San Jose Mercury News*, October 26-27, 2016, <http://www.mercurynews.com/2016/10/26/google-fiber-suspended-in-san-jose-and-most-other-planned-cities-alphabet-unit-ceo-quits/>

Moreover, respondents' witnesses Mr. Topper and Mr. Katz relied on the entry of Google Fiber as an example of the existence of competition. See, e.g., Topper Reply Testimony, July 15, 2016, at 36: "...the

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The Findings of Fact do not track and reflect the discussion and analysis presented in the text of the PD. ORA has compiled a detailed list of proposed findings of fact, conclusions of law, and ordering paragraphs, that do comport with the analysis in the body of the PD. These are presented in Appendix A to these Comments.

**V. THE PD ERRS BY GIVING NO WEIGHT TO PROOF OF MARKET DOMINANCE THAT SERVICE QUALITY ISSUES PROVIDE**

The PD incorrectly states that “[i]ntervenors invite us to consider inadequate service quality as part of our competition analysis, [but] we decline to do so.”<sup>35</sup> In fact, it is not the intervenors that “invited” the Commission to consider service quality issues, but the *Commission* that had invited *intervenors* to comment on those issues. The OII makes it clear that service quality is within the scope of this proceeding,<sup>36</sup> and the ALJ and Assigned Commissioner Scoping Memo clearly includes the assessment of service quality over time in assessing market performance.<sup>37</sup>

The PD’s rationale for ignoring service quality testimony appears to be that a “competitive market might not deliver adequate service quality.”<sup>38</sup> However, the evidence set forth by ORA proves that the performance of a company in the market, such

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Commission should take into account that entry into the broadband market is possible on a wide scale. ... Some entry has already occurred and large investments point towards increased entry in the future. Google is already providing fiber-to-the-premises broadband to a small but increasing number of locations nationwide and is considering locations in California.” See also, Katz, July 15, 2016, at fn 12, p. 11: “I observe in passing that Dr. Selwyn appears to be asserting that broadband access services are available only from ILECs and cable MSOs. (Selwyn Reply Testimony, p. 20, ll. 11-17.) In doing so, he denies the existence of access providers such as Webpass, which Google Fiber recently agreed to acquire.”

<sup>35</sup> PD at 110.

<sup>36</sup> OII at 1: “The time seems ripe for us to ask whether competition is delivering the dependable, high-quality telecommunications services that are vital to California’s people and economy.” See also, Footnote 29.

<sup>37</sup> July 1, 2016 Scoping Memo, Appendix A at section 3(d)(ii).

<sup>38</sup> PD at 110.

as with regard to its service quality, is indicia of the level of competition a company faces. Without choices, customers cannot choose the carrier that offers better quality. Thus, persistent service quality problems are indicative of the lack of effective competition in California.<sup>39</sup>

ORA did not seek in this proceeding to establish service quality metrics but instead to consider a company's performance record on service quality in the assessment of the level of competition. This is implicitly acknowledged in the OII, which states that coordination with the Service Quality proceeding (R.11-12-001) is necessary. ORA put forth evidence that a company's conduct and performance in the market correlates with the level of competition the company faces. Such performance includes service quality.<sup>40</sup> As such, the PD should reflect in the findings of fact that a company's performance on service quality should be considered when assessing competition.

## **VI. CONCLUSION**

ORA commends the Commission for conducting a detailed and in-depth analysis of the state of competition in California. ORA supports the findings and conclusions regarding the lack of competition for broadband services. Lack of competition produces rates that fail the Commission's statutory requirements to be just and reasonable and safe and reliable. However, ordering further studies and monitoring does nothing to address the numerous findings of fact of this proceeding. The PD seeks to continue monitoring the telecommunications market without taking any action on some of the market failures that it has found: lack of consumer choice in a highly concentrated broadband market. Appendix A provides the necessary changes required to correct these factual and legal errors.

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<sup>39</sup> ORA Opening Brief at 46 and 56.

<sup>40</sup> ORA Opening Brief at 38.

Respectfully submitted,

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## Appendix A

Recommended Additional Findings of Fact (FoF), Conclusions of Law (CoL), and Ordering Paragraph

### Additional Findings of Fact:

#### Telecommunications Network Findings of Fact

FOF	Text	Source
	<u>Throughout the network, the physical transmission media (copper, cable, fiber, radio spectrum) can be distinguished from the technologies and protocols used to transmit voice and data over them. While TDM is typically associated with legacy copper connections and IP with fiber or coaxial cable, neither TDM nor IP services are dependent on a specific connection medium.</u>	§4.2.1, p. 18
	<u>The term “overbuilder” means any telecommunications wireline provider that constructs new wireline facilities (fiber, cable or copper) to end-users in the traditional service territory of a legacy telephone or cable incumbent. These companies altogether account for a small fraction of telephone service, less than 50,000 connections in California.</u>	§6.2.1.1.3, p. 59
	<u>Though there has been a substantial shift of customers from the legacy carriers to the cable companies, the telephone line and the coaxial cable line remain the two wired, facilities-based routes into most homes and small businesses. Since 2006, no non-cable CLEC has maintained a considerable market share among residential customers, and CLECs today supply less than 2 percent of residential lines.</u>	§7.4.1, p. 124
	<u>Access to the “physical layer,” at a level more basic and in a sense closer to the ground than even the transmission media themselves, is becoming an increasingly critical component for market entry. Google’s trouble getting access to utility poles and conduit provides an example of how difficult it is for a new facilities-based competitor to enter the market. Google has still faced difficulties in attempting to break into the market, most recently in the form of incumbent lawsuits seeking to prevent, or at least slow down, Google’s access to poles in Louisville, Kentucky, and Nashville Tennessee.</u>	§7.4.2, p. 132
	<u>The problems that even a well-financed potential market entrant like Google has had in actually trying to enter the residential broadband market underscore how difficult facilities-based market entry is.</u>	§7.4.2, p. 130
	<u>The successful implementation of 5G services and the resulting densification of the network will demand (i) increased access to utility poles and support structure; (ii) increased access to Ethernet backhaul (likely over fiber), which in turn requires (iii) increased access to underground conduit. In addition, success will also depend on access to public streets and utility easements, and consequently on municipal permitting, and ability to overcome potential neighborhood opposition. As much promise as 5G and other cutting edge technologies offer, the Commission must be careful to distinguish between actual deployed</u>	§7.4.2, pp. 132-133

	<u>facilities and merely theoretical or potential facilities in evaluating the market today.</u>	
	Some companies enjoy the benefits and advantages of vertical integration. For instance, AT&T’s landline affiliates are able to supply inputs to AT&T’s wireless affiliates. AT&T, for instance, self-supplies a large portion of its cell tower backhaul lines. AT&T’s landline affiliates also supply special access backhaul lines to its wireless competitors, including Sprint and T-Mobile, but such lines are presumably supplied at market rates.	§7.4.4, p. 138
	While wireline and wireless voice services are substitutes for some customers, for many they are not, whether due to service quality limitations, needs that require a wireline connection or other elements related to how a customer takes service.	
	Telecommunications carriers’ increasing acquisitions of content affiliates present another type of vertical integration problem.	§7.4.4, p. 138

#### Assessing Competition Findings of Fact

FOF	Text	Source
	<u>A company’s conduct and performance in the market correlates with the level of competition the company faces. A company’s performance on service quality should be reviewed when assessing competition.</u>	
	<u>Economists and the FCC both assert that competition, and well-functioning markets, rely on the distribution of information among market participants. At present, marketplace information is asymmetric, and that the marketplace is less than transparent. Asymmetric information hinders our understanding of current market conditions, impedes the efficient administration of CASF and other universal service programs, and may also hamper the efficiency of market competition.</u>	§7.2.1, pp. 113-114

#### Pricing Findings of Fact

FOF	Text	Source
	<u>Micro-targeting enables a carrier to offer lower prices in areas where some competition is present while maintaining higher prices in those markets in which the carrier is the sole monopoly provider – e.g., AT&amp;T geographically targets price reductions where Google Fiber has entered its service area.</u>	§6.1.6, pp. 53-54; fn. 152
	<u>Evidence of market inefficiency due to high “switching costs” – both monetary and structural – is seen in incompatible handsets and other equipment, early termination fees that discourage switching, the general “stickiness” of bundles, and the relatively high price of stand-alone, unbundled services, all of which leaves the customer with a choice between bundles.</u>	§7.4.1, p. 125

#### Voice Findings of Fact

FOF	Text	Source
	<u>Over-the-top (“OTT”) VoIP subscribers appear to occupy a relatively</u>	§6.2.1.1.6, p.



	<u>small slice of the voice market.</u>	63
	<u>It is unclear whether the growth of wireless, VoIP, and other alternative means of voice and data communication has kept prices and services for traditional landline service just and reasonable.</u>	§2.E, p. 4
	<u>The business wireline market is highly concentrated, with one carrier providing over half the total business landlines (incumbent and competitive carriers combined); three other carriers have, however, made inroads in this market.</u>	§6.2.6, p. 77

#### Broadband Findings of Fact

FOF	Text	Source
	<u>The FCC’s speed benchmark for “Advanced Services,” currently set at 25 Mbps download and 3 Mbps upload, is a useful, reasonable, and forward-looking dividing point to define a “high-speed” broadband tier.</u>	
	<u>A significant justification cited by the FCC in its 2015 Broadband Progress Report, in creating the new 25/3 benchmark, was that households may be comprised of multiple individuals using multiple devices.</u>	§5.3.2, p. 45
	<u>Broadband access to the Internet “drives the American economy and serves, every day, as a critical tool for America's citizens to conduct commerce, communicate, educate, entertain, and engage in the world around them.”</u>	§5.1, p. 29
	<u>Based on actual subscription numbers, both the fixed and mobile broadband markets are highly concentrated.</u>	§4.1, p. 9
	<u>The residential, high-speed broadband market in all of California’s geographic markets is highly concentrated.</u>	§4.1, p. 11
	<u>The residential broadband market is the most concentrated retail market analyzed in this proceeding.</u>	§6.3.1.3, p. 87
	<u>For roughly half or more of California customers, the choice for residential high-speed broadband at 25/3 Mbps benchmark narrows to one provider or none at all.</u>	§7.4.1, p. 129
	<u>There is some reason to question whether the traditional telephone utilities are leaving the high-speed, residential broadband market to the cable companies. Verizon first halted the development of its fiber (FIOS) plant, and then sold its entire California local wireline network to Frontier. We also observe the increasing market share of the cable carriers.</u>	§7.4.1, p. 129
	<u>In the California wireless market, about 98.5 percent of wireless connections are provided by four retail carrier families.</u>	§4.2.2, p. 21
	<u>The mobile data market is highly concentrated in all of California’s geographic markets.</u>	§4.1, p. 12
	<u>Mobile and residential broadband services are generally complementary, not substitutes.</u>	§5.3.2, p. 40

#### Wholesale/Backhaul Findings of Fact

FOF	Text	Source
	<u>Because none of the competitive carriers can build a network from the ground up, they depend on the legacy companies for wholesale inputs, including (variously) last-mile or “local loop” access, middle mile or other dedicated special access transport, pole attachments and/or conduit access, and (for the wireless carriers) spectrum.</u>	§6.4, p. 91
	<u>To facilitate market entry and put competitors on an equal footing, the Telecommunications Act of 1996 adopted mechanisms, enforced by the states, to require phone companies that owned necessary infrastructure to sell access to that infrastructure to non-owner competitors at cost.</u>	§5.2, p. 33
	<u>Although the legacy carriers have nearly ubiquitous facilities over which they can offer some form of broadband, they do not have to share their last-mile broadband access facilities with competing carriers.</u>	§6.3.1.1.i, p. 78
	<u>Cable providers are under no obligation to unbundle their last-mile loops, which makes them the sole available provider of very high-speed serves in many areas.</u>	§6.3.1.1.ii, p. 79
	<u>A wireless carrier that can obtain backhaul from an affiliated company at little or no cost is in a stronger financial position than a wireless carrier without similar backhaul access, which then has to pay the owners of backhaul infrastructure for such access. To the extent that a wireless-only competitor has to purchase backhaul from an integrated wireless-wireline competitor, the former is at a potential cost disadvantage.</u>	§5.2, pp. 31-32
	<u>By and large, last mile facilities still appear to be concentrated in the legacy phone companies and in the cable companies.</u>	§6.4.1, p. 96
	<u>Competitors’ interconnection access is fundamental to an efficiently competitive marketplace.</u>	§6.4.5, p. 109
	<u>Special access lines (recently re-christened BDS) are dedicated, generally high-speed connections provided by carriers to businesses, including other carriers. They are critical for CLECs that “depend on special access in order to fulfill the requirements of multi-location customers,” as well as wireless network providers that need to transport their calls from the cell tower back into the network.</u>	§6.4.2, pp. 96-97
	<u>The FCC has found that the legacy carriers still exercise considerable market power in the special access market, with ILECs and their affiliates accounting for \$37 billion of the \$ 45 billion in national BDS revenue, that 77.2 percent of buildings have only one fiber provider (usually the ILEC) and 57.1 percent have only one fiber or UNE (copper) provider, and that barriers remain for competitors wishing to build new BDS facilities, particularly in urban areas.</u>	§6.4.2, pp. 97-98
	<u>The provision of backhaul service is highly concentrated at a statewide level, and may be more highly concentrated within some regions. If there is inefficiency in the backhaul market, then the degree that wireless competition can constrain landline prices is limited by that inefficiency.</u>	§5.2, p. 32
	<u>Five years after the then-rejected 2011 AT&amp;T/T-Mobile merger, where it was generally shown that the legacy carriers provided the overwhelming majority of backhaul from cell sites thus potentially</u>	§6.4.2.2, p. 100

	<u>advantaging then-ILEC affiliates AT&amp;T Wireless and Verizon Wireless over Sprint and T-Mobile, cable and other providers of backhaul supply about 15-20 percent of that market, still leaving one legacy carrier supplying backhaul to a majority of cell towers statewide.</u>	
	<u>The market share data we have on cell site backhaul, in conjunction with testimony offered on the subject, raises concern about inefficiency in this marketplace. The FCC is the primary regulatory authority for this subject, but we note the state of this market for its potential to impact wireless rates, which are a primary driver of retail intermodal competition.</u>	§6.4.2.2,p. 101-102
	<u>Although there are a few exceptions at the margin, and there is the promise (as there was in 2006) that new competitors will enter the market using their own facilities or leasing facilities from wholesale carriers or municipal wholesale networks, there has been no new facilities-based market entrant with wide deployment in the last ten years.</u>	§7.4.1, p. 123

**Edits to Findings of Fact:**

FOF	Text
4.	<del>The Commission's Communications Division has prepared Market Share Analyses that show concentration throughout various communications markets in California, but that none of these markets is a monopoly. Further, it finds that competition in intermodal voice services(traditional voice, wireless and VoIP telephony taken together) has increased since 2001, predominantly due to competition of mobile and cable VoIP.</del>
11.	<del>In addition to the Market Share Analyses, the Commission's Communication Division also prepares reports in conjunction with the Digital Infrastructure and Video Competition Act (DIVCA) (Pub. Utils. Code §§ 914.3, 5800-5970), and with the Communication Division's administration of the California Advanced Services Fund (CASF). In particular the most recent DIVCA Report shows that competition in video and broadband availability has increased, but not in all areas of the state, and CASF Reports results show differences in service availability and quality between urban and rural areas.</del>
16.	<del>The September 10, 2015 DIVCA Report, based on 2013 year-end data, confirms other t</del> <u>Testimony and information in the record of this proceeding confirms that:</u> <ol style="list-style-type: none"> <li>a. In the fixed broadband market, cable companies generally provide the fastest broadband speed;</li> <li>b. Cable companies have a larger share of the fixed broadband market;</li> <li>c. In general, customers are gravitating toward faster speed broadband; and</li> <li>d. DIVCA franchise holders (most of the large broadband and video providers in the state) now provide more broadband service than they do video service.</li> </ol>

## Additional Conclusions of Law

COL	Text	Source
	<u>For purposes of this decision, we follow the FCC in setting a benchmark for Residential High-Speed Broadband to mean fixed (i.e., residential) broadband service advertised at speeds of at least 25 megabits per second download and 3 megabits per second upload.</u>	Fn. 17, P. 10.
	<u>The question posed in the original URF proceeding can now be restated as follows: (i) Is the voice market sufficiently competitive to ensure that customers receive satisfactory service at just and reasonable rates? (ii) To what extent is the larger telecommunications market (in which voice is embedded) competitive? And (iii) Is the market innovating and delivering services that meet the needs of consumers today and in the future?</u>	§5.1, p. 30
	<u>Full information about, and visibility into, the telecommunications network and its associated markets would allow the regulator’s choices to be data driven, and regulation to be as efficient as we would like the market to be. There is, however, a fundamental asymmetry at work here, as carriers possess detailed information about the operations of the network and market, while regulators can only try to piece together a picture of the network and market from incomplete information.</u>	§7.2.1, p. 111
	<u>Notwithstanding limitations on our regulatory authority, this agency remains tasked with ensuring delivery of essential telecommunications services to California businesses and consumers, which necessarily includes monitoring the evolving telecommunications marketplace, and preparing to act in the public interest where the Commission has the authority to do so.</u>	§8, pp. 154-155
	<u>Service quality problems can be an indicator of a lack of competition in the provision of service.</u>	
	<u>The broadband market is highly concentrated.</u>	Finding of Fact 17, P. 159.
	<u>The Commission has a statutory obligation to ensure that prices for services subject to our jurisdiction are just and reasonable.</u>	
	<u>Competition ostensibly provided by wireless services has not led to wireline prices that are just and reasonable.</u>	

## Ordering Paragraph

1. Pursuant to P. U. Code §§ 311, 314, and 716, all communications providers certificated and/or registered with the California Public Utilities Commission shall submit annually to the Communications Division and the Office of Ratepayer Advocates by April 1st, voice and broadband subscriber and availability block level data reflective of the prior calendar year’s end in a form designated by Communications Division Staff.
2. Pursuant to P. U. Code §§ 311, 314, and 716, all communications providers certificated and/or registered with the California Public Utilities Commission shall submit annually to

the Communications Division and the Office of Ratepayer Advocates by January 31st: (1) location of middle-mile facilities by technology type and capacities and whether such facilities are available to unaffiliated providers of Broadband Internet access service in shapefile form designated by Communications Division staff; and (2) other information as requested by Communications Division staff in order to monitor competition in California telecommunications markets.

3. The Communications Division staff shall prepare and deliver ~~by December 1, 2019~~ annually a report to the Commission ~~analyzing on~~ analyzing on voice and broadband data in the following manner: broadband availability by speed and geography; the number of broadband service providers by geographic area; broadband penetration rates by geographic area; areas of the state having a single and no broadband provider, and voice and broadband market share by various geographic areas in California.
- ~~5. Investigation 15-11-007 is closed.~~
5. Investigation 15-11-007 remains open to address the necessary steps to ensure just and reasonable rates for telecommunications services subject to the Commission's jurisdiction and to advocate in other appropriate forums for steps to promote just and reasonable rates for those services where the Commission may lack primary rate setting authority.