

**BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION
SUITE 350
121 SEVENTH PLACE EAST
ST. PAUL, MINNESOTA 55101-2147**

Nancy Lange	Chair
Dan Lipschultz	Commissioner
Matthew Schuenger	Commissioner
Katie Sieben	Commissioner
John Tuma	Commissioner

**In the Matter of the Petition of CenturyLink
QC to be Regulated Pursuant to Minn. Stat.
§ 237.025; Competitive Market Regulation**

DOCKET NO. P-421/AM-16-496

AFFIDAVIT OF JOY GULLIKSON

STATE OF MINNESOTA)
) ss.
COUNTY OF RAMSEY)

I, Joy Gullikson, having been duly sworn, state under oath as follows:

I. INTRODUCTION

1. My name is Joy Gullikson. I am a Rates Analyst with the Department of Commerce (Department). I have a B.A. with Honours in Economics from Acadia University in Nova Scotia, an M.B.A. from the University of Saint Thomas in St. Paul, and a J.D. from William Mitchell College of Law, now Mitchell Hamline, in St. Paul.
2. I began my career in 1980 with the Minnesota Department of Public Service, where I served as a Public Utilities Rates Analyst in the Telecommunications Unit, analyzing telecommunications tariff filings and rate cases, including work associated with the breakup of the AT&T monopoly in 1984. I then became an independent consultant to the Department in 1987, working on telecommunications tariff filings. From 1991 to 1995, I worked as a Public Utilities Rates Analyst for the Minnesota Public Utilities

Commission (Commission). I left the Commission Staff to join the company now known as Onvoy, Inc. and for which I worked 13 years. I started at Onvoy as a Regulatory Manager. Soon thereafter I added the positions of Product Manager, Legal Department Manager, and Costing Unit Manager. In 1999 I was promoted to Director of External Relations and in 2005 I add the role of Corporate Counsel. Throughout my tenure at Onvoy, I was responsible for management and operation of the Regulatory Department. Between 2010 and 2016, I practiced law, most recently as a partner in the law firm of Bradley, Hagen and Gullikson, LLC. During this period I also taught law students as an adjunct professor at William Mitchell College of Law. Since 2016 I have served as a Public Utilities Rates Analyst with the Department of Commerce, where I provide my review and assessment of filings submitted by telecommunications companies, review policy matters, such as the Service Quality Rules, and analyze developments in the telecommunications industry.

II. PURPOSE OF AFFIDAVIT

3. The purpose of my Affidavit is to provide and explain the results of the Department's investigation into the Petition of CenturyLink QC (CenturyLink), in this matter.¹ I also respond to information CenturyLink provided in the Affidavit of Mr. Al Lubeck dated November 18, 2016 and the Affidavit of Mr. Robert Brigham dated June 30, 2016. In addition, I respond to parts of the Affidavit and Exhibits of Mr. Adam Nelson, the CenturyLink expert whom CenturyLink retained to conduct a study of wireless propagation.

¹ Petition of CenturyLink QC to be Regulated Pursuant to Minn. Stat. § 237.025: Competitive Market Regulation, Docket No. P-421/AM-16-496 (dated June 30, 2016).

4. The issues I address are as follows:
 - Assignment of census blocks to wire centers;
 - The appropriate application of the definition of “household;”
 - The types of service that should be counted as “Primary Access lines;”
 - CenturyLink assumptions regarding the availability of broadband and the availability of voice if broadband is offered;
 - The possible impact of CAF II funding; and
 - Indoor and outdoor wireless coverage, following the analysis of Department expert Mr. Wes Legursky.

5. The Department’s expert witness, Mr. Wes Legursky, also provides an Affidavit in this matter. Mr. Legursky analyzed the wireless study provided by CenturyLink Witness, Mr. Adam Nelson. Mr. Legursky addresses the appropriate interpretation of Mr. Nelson’s results.

III. APPLICABLE STATUTES

6. Minn. Stat. § 237.025, under which the CenturyLink Petition seeks relief, allows a “local exchange carrier,”² (LEC), in exchange service areas (exchanges) where it has received Commission approval to do so, to be regulated as a “telecommunications carrier”³ under

² A “Local exchange carrier” means a telephone company or telecommunications carrier providing local exchange service.” Minn. Stat. § 237.01, subd. 8. In this Petition, CenturyLink is the local exchange carrier. Generally, a local exchange carrier is subject to earnings review for rate changes (Minn. Stat. § 237.075) or Alternative Forms of Regulation (Minn. Stat. § 237.76),

³ “Telecommunications carrier” means a person, firm, association, or corporation authorized to furnish one or more of the following telephone services to the public, but not otherwise authorized to furnish local exchange service: (1) interexchange telephone service; (2) local telephone service

Section 237.035, and as a “competitive local exchange carrier” (CLEC) under Minn. Rules, parts 7811.2210 and 7812.2210.⁴ In exchanges where the Commission has not provided approval, the regulatory scheme of section 237.025 does not apply.

7. A petitioner bears the burden of demonstrating, to the Commission’s satisfaction, that for each exchange included in the petition:

- A. The local exchange carrier serves fewer than 50 percent of the households; and
- B. At least 60 percent of households in that exchange can choose voice service from at least one unaffiliated competitive service provider.

Minn. Stat. § 237.025, subd. 4(1)⁵.

8. Minn. Stat. § 237.025 specifies that it is not to “be construed to provide or imply that a local exchange carrier regulated under this section is exempted from Minnesota Statutes and Minnesota Rules applying to competitive local exchange carriers.”⁶

Accordingly, except as expressly exempted by Minn. Stat. § 237.025, LECs that petition under the statute are subject to the laws applicable to all CLECs. The laws applicable to CLECs include not only Minn. Rules chapter 7810, regarding service

pursuant to a certificate . . . (Minn. Stat. § 237.01,subd.6.) Generally, a telecommunications carrier is subject to less regulation than a local exchange carrier.

⁴ Minn. Stat. § 237.025, subd. 6.

⁵ In the alternative, if a petitioning carrier serves more than 50 percent of the households in an exchange, the petitioning carrier may receive market based regulation statutes if it can show that 60 percent of households can choose voice service from at least one unaffiliated competitive service provider and three additional conditions are met. CenturyLink’s Petition does not pursue this alternative. The additional conditions are that no significant economic, technological, or other barriers to market entry and exit exist; no single provider has the ability to maintain prices above competitive levels for a significant period of time; and the petitioning local exchange carrier will continue to offer basic local service, as defined in Minn. Stat. § 237.025, subd. 8.

⁶ The statute states that such laws and rules as include but are not limited to:

- A. Sections 237.50 to 237.56 (regarding the telecommunications relay services , telecommunications access fund);
- B. Sections 237.66, 237.661, 237.663, and 237.665 (regarding notices to local service customers and prohibitions against unauthorized charges);
- C. Sections 237.69 to 237.71 (regarding the telephone assistance plan); and
- D. Minnesota Rules, chapter 7810 (including all service quality rules).

quality but also the statutory requirements that define the “public interest” to be protected. Minn. Stat. § 237.011 provides the following public interests goals to be considered by the Commission in its oversight of the telecommunications industry:

- A. Supporting universal service;
- B. Maintaining just and reasonable rates;
- C. Encouraging economically efficient deployment of infrastructure for higher speed telecommunication services and greater capacity for voice, video, and data transmission;
- D. Maintaining or improving quality of service;
- E. Promoting customers choice;
- F. Ensuring consumer protections are maintained in the transition to a competitive market for local telecommunications service; and
- G. Encouraging voluntary resolution of issues between and among competing providers and discouraging litigation.

No matter what the Commission decides regarding whether CenturyLink has met its burden in some or all exchanges, nothing in Minn. Stat. § 237.025 removes the obligation of CenturyLink to be a carrier of last resort for voice service. In a similar vein, the Commission must always consider the public interest when looking at utility actions and the state goals enumerated above provide the framework upon which the Commission can base its decisions.

IV. CENTURYLINK’S SUBMISSIONS IN SUPPORT OF ITS PETITION

- 9. This Petition by CenturyLink marks the first time the Commission will consider a petition filed under Minn. Stat. § 237.025.
- 10. CenturyLink first petitioned to be regulated under Minn. Stat. § 237.025 on June 30, 2016. It supported its Petition with the Affidavit of Robert H. Brigham dated June 30, 2016, as supplemented by Reply Comments on August 29, 2016. The Department filed an objection stating that the Petition was incomplete.

11. On November 2, 2016, the Commission issued its order that found the Petition to be incomplete, required further filings and initiated an expedited proceeding.⁷ On November 21, 2016, CenturyLink supplemented its Petition with additional documents to address completeness. In its November 21 filing, Century Link did not withdraw or refute any part of its Petition of June 30, 2016. In particular, CenturyLink did not withdraw the Affidavit of Robert H. Brigham. According to the Affidavit of CenturyLink witness, Mr. Al Lubeck, his “Affidavit is intended to supplement those [Brigham’s] filings but, for ease of reference, will repeat and add to the information filed at that time.” Lubeck Aff. p. 2, ¶ 2. CenturyLink’s November 21, 2016 supplement also included the Affidavit of Mr. Adam S. Nelson to support its Petition.

V. OVERVIEW OF CENTURYLINK PETITION

12. CenturyLink’s Petition sought relief in 108⁸ of its exchanges⁹ in the State of Minnesota. On January 9, 2017, in response to a Department Information Request

⁷*In the Matter of the Petition of CenturyLink QC to be Regulated Pursuant to Minn. Stat. § 237.025: Competitive Market Regulation*, Docket No. P-421/AM-16-496, Order Requiring Further Filings And Initiating Expedited Proceeding (November 2, 2016).

⁸ Brigham Aff. p. 2, ¶ 4 and Lubeck Aff. p. 3, ¶ 4.

⁹ CenturyLink did not request market based regulation in the following six wire centers/exchanges where the central office is located in another state, but the customers are served by the central office are in Minnesota:

- Estherville, served by a central office in Iowa
- Moorhead, served by a central office in North Dakota
- East Grand Forks, served by a central office in North Dakota
- Lake Park, served by a central office in Iowa
- Spirit Lake, served by a central office in Iowa
- Breckenridge, served by a central office in North Dakota.

Attachment 1 (CenturyLink Response to DOC IR No. 34).

(DOC IR) No. 41,¹⁰ CenturyLink corrected its Petition to request relief in 109 exchanges.

13. CenturyLink requested relief under Minn. Stat. § 237.025, subd. 4 (1) only. CenturyLink maintains that in none of the 109 exchanges does CenturyLink serve more than 50 percent of the households and in each of the 109 exchanges at least 60 percent of households can choose service from an “unaffiliated competitive service provider.”¹¹ CenturyLink offered no evidence to show the absence of economic, technological, and other barriers to market entry and exit or the facts to satisfy Minn. Stat. § 237.025, subd. 4 (2).
14. Minn. Stat. § 237.025 refers to “exchange service areas.” Minn. Rule 7810.0100, subp. 14 defines an exchange service area (also called an “exchange”) as:

a unit established by a telephone utility for which a separate local rate schedule is provided. It may consist of one or more central offices together with associated plant facilities used in furnishing telecommunication services in that area.

An exchange may comprise of one or more wire centers. CenturyLink offered all its supporting tables using the more granular “wire centers.” Many exchanges are comprised of one wire center, but some exchanges are comprised of several wire centers. CenturyLink’s Petition cites 109 exchanges which encompass 154 wire centers. See, for example, Mr. Lubeck’s Exhibit AL-1, which lists each wire center and its associated exchange service area. Because CenturyLink provides its

¹⁰ See Attachment 2, (CenturyLink Response to DOC IR No. 41).

¹¹ An “unaffiliated competitive service provider” is a wireless voice provider or any other provider of local voice service who owns a substantial proportion of the last-mile or loop facilities delivering service to a majority of households in an exchange service area, without regard to the technology used to deliver the service. Minn. Stat. § 237.025, subd. 1.

information at the “wire center” level in its Affidavits, my Affidavit will also refer to wire centers, unless it is necessary to distinguish an “exchange.”

VI. SEVERAL FLAWS IMPACT CENTURYLINK’S ABILITY TO MEET THE STATUTORY CRITERIA IN SOME EXCHANGES

15. The Department’s review of CenturyLink’s Petition uncovered a number of concerns with the supporting documents and the methodologies used. These flaws clearly affect the ability of CenturyLink to meet the statutory requirements in some wire centers and leaves questionable whether the criteria are met in other wire centers.

Each of the following concerns will be addressed in this Affidavit:

1. CenturyLink’s witnesses were inconsistent in the assignment of census blocks to exchanges, resulting in inconsistencies in the number of households assigned to each wire center;¹²
2. CenturyLink uses an acceptable definition of household, as the term “household” was undefined in Minn. Stat. § 237.025 however, for a few wire centers CenturyLink employs a different definition so that it can satisfy the requirement to serve fewer than fifty percent of households in each exchange;
3. CenturyLink undercounted the access lines in each wire center by failing to count UNE-P lines, resale lines, and households choosing to purchase business lines only;

¹² As stated earlier, there may be one wire center in an exchange, or there may be several. CenturyLink Affiants provide their analyses based on wire centers.

4. CenturyLink made inappropriate assumptions regarding the availability of broadband causing the over counting of broadband availability;
5. CenturyLink made the mistaken assumption that the availability of broadband equates to the availability of voice service;
6. CenturyLink failed to explain how CAF II¹³ funding affects the reported number of competitive service providers; and
7. Centurylink's wireless study shows that the wireless service in some exchanges is inadequate to support its Petition.

1. CENTURYLINK'S WITNESSES WERE INCONSISTENT IN ASSIGNING HOUSEHOLDS TO WIRE CENTERS.

16. In support of CenturyLink's Petition, Mr. Lubeck, Mr. Brigham, and Mr. Nelson provided Exhibits showing counts of households and housing units and the number of subscribers to CenturyLink service in each wire center, as well as charts summarizing data derived from various modelling efforts that attempt to show the potential availability of competitive wireless or wireline communications service to those households.
17. The counts of households per exchange by CenturyLink witnesses' are not, in fact, "actual" counts. CenturyLink used Census information as its basis for determining the count of households in each wire center. The census information shows the household count for each census block. Although most census blocks are entirely

¹³ Connect America Fund. A Federal Communications Commission/Universal Service Administrative Company program that provides ongoing support to deploy and maintain fixed-location broadband and voice services in high-cost areas at rates comparable to those offered in urban areas. <http://www.usac.org/hc/program-requirements/file-according-to-fund/phasell.aspx>

contained by wire center of exchange boundaries, census block boundaries do not correspond with wire center or exchange boundaries.

18. "Census blocks" are the smallest unit in the U.S. census. They range in geographic size from less than a tenth of a square mile to many thousands of square miles (e.g. Alaska). The Staples exchange, for example, has 610 census blocks in its exchange, while the Holdingford exchange has 147 census blocks.
19. CenturyLink's three witnesses each perform a conversion methodology to convert "households per census block" to "households per exchange." Messrs. Brigham and Lubeck used a "Centroid method"¹⁴ while Mr. Nelson used a "Random Distribution of Points method."¹⁵ Even though neither Mr. Lubeck nor Mr. Nelson used a third method, the "Actual Area Coverage method," Mr. Lubeck touted the Federal Communication Commission's (FCC's) use of this Actual Area Covered method in his Affidavit. Yet, Mr. Nelson stated that he believed the Random Distribution method to be superior to both the Centroid method and the Actual Area Coverage method. Nelson, Ex. 2 ¶ 4.1.2.1.
20. To address the census blocks that straddle two or more wire centers, Mr. Lubeck used the "centroid method" to assign all of the households within each census block to a wire center if the census block overlapped two or more wire centers, (Lubeck Aff., p. 4, fn. 5) while Mr. Nelson used the "random distribution method" (Nelson Aff., Ex. 2, ¶4.2) to assign the households within the census block to a wire center if the

¹⁴ The "centroid method" uses the geometric center (expressed in latitude/longitude) of a census block. The *entire* census block assigned to the exchange [sic] where the geometric center of the census block is located. The centroid method is explained in Nelson Aff. Ex. 2, ¶ 4.1.1.

¹⁵ The Random Distribution method assigns households randomly throughout the census block and assigns the households to the wire center based on this distribution. The random distribution method is explained in Nelson Aff. Ex. 2, ¶ 4.1.2.1

census block overlapped two or more wire centers. The centroid method and the random distribution method result in different “counts” of households in any single wire center. CenturyLink did not explain why its Messrs. Lubeck and Nelson did not choose the same methodology.

21. In DOC IR No. 76, the Department asked CenturyLink why different methods were used for wireless and wireline. CenturyLink did not answer, but instead provided a third data set that compared the differences between the wireless and wireline “actual” counts of households.¹⁶ The data shows that the average difference between Lubeck’s and Nelson’s counts over the 32 wire centers that Nelson studied is 1.2 percent. The differences range from a high of 6.4 percent in Comstock to a low of 0.2 percent in Sandstone. CenturyLink characterizes the difference as ‘minor’ but does not explain why different methodologies were required nor does any witness explain if the different counts affect the calculations of percentage of households served by either CenturyLink or by other providers.
22. The Commission should take into account that these inconsistencies, which serve to blur the line between wire centers that meet the statutory requirements and those that do not.

2. THE CENSUS DEFINITION OF HOUSEHOLD IS ACCEPTABLE, BUT SHOULD NOT BE CHANGED TO HOUSING UNITS TO MEET A DESIRED OUTCOME.

23. The first requirement for the Commission to grant the Petition under Minn. Stat. § 237.025 is for the Petitioner to demonstrate to the Commission’s satisfaction that in

¹⁶ Attachment 3 (CenturyLink Response to DOC IR No. 76).

each exchange service area at issue, the Petitioner serves fewer than 50 percent of households in the exchange service area.

24. In this case, CenturyLink proposes that the Commission find that CenturyLink serves fewer than 50 percent of households in each of the 109 exchanges (154 wire centers) included in its Petition.
25. To calculate the ratio of CenturyLink-served households to total households, the numerator of the ratio is the number of households CenturyLink serves and the denominator is the total number of households in a wire center:

$$\frac{\text{Households served by CenturyLink in wire center}}{\text{Total households in the wire center}}$$

26. To set the denominator, we must know how many households exist in a wire center. Minn. Stat. § 237.025 does not define the term “household.”
27. I agree that household, as defined by the Census Bureau¹⁷ and used by Mr. Lubeck, is an acceptable definition. However, I do not agree with Mr. Lubeck’s proposal that in certain wire centers, where CenturyLink serves more than 50 percent of households by the Census definition, and therefore the statutory 50 percent criteria would not be met, CenturyLink should redefine “household” to mean “housing unit.” Lubeck Aff. p. 6, ¶¶ 9-10.

¹⁷ A household includes all the people who occupy a housing unit (such as a house or apartment) as their usual place of residence. A household includes the related family members and all the unrelated people, if any, such as lodgers, foster children, wards, or employees who share the housing unit. A person living alone in a housing unit, or a group of unrelated people sharing a housing unit such as partners or roomers, is also counted as a household. The count of households excludes group quarters. There are two major categories of households, "family" and "nonfamily." Household is a standard item in Census Bureau population tables. <https://www.census.gov/glossary/>. Households do not include vacant housing units. Lubeck Aff., p. 4, fn. 4.

28. In response to discovery of the Department, CenturyLink provided the following justification for why the Commission should use the U.S. Census definition:

The US Census Bureau definition of ‘household’ is appropriate because the definition fits neatly with the test set forth by the legislature in Minn. Stat. § 237.025 Subd. 4 . . . Census Bureau definitions are consistent with the approach dictated by the legislation. Census Bureau data on household units is publicly available and is widely used and generally accepted for academic, government and industry purposes. The Census Bureau is independent third party data that is also granular enough to be largely matched to CenturyLink’s exchange boundaries.¹⁸

29. I conclude that the Commission should accept the Census definition of “household” and use that definition in all exchanges.
30. To determine the numerator of the ratio, one needs to know how many households are served by CenturyLink. A household is “served” when CenturyLink supplies the telephone plant/wires service to the household to enable the household to receive voice service. Sometimes, a household may subscribe to more than one access line. In the case where multiple lines enter a household, CenturyLink will count the first, or “Primary Access Line”. Messrs. Brigham and Lubeck provided two different sets of counts regarding the numbers of households served by CenturyLink in each exchange. In response to DOC IR No. 4, CenturyLink states: “[T]he residential primary access lines shown in Confidential Exhibit RHB-3 are in error.¹⁹ CenturyLink is filing a corrected version of this exhibit.”
31. CenturyLink filed no corrected version of Exhibit RHB-3, has not disclosed what the error is, or otherwise disclosed what the count/miscount was based on. Mr. Lubeck does not address this issue, but does provide a second count of households in each

¹⁸ Attachment 4 (CenturyLink Response to DOC IR No. 30).

¹⁹ Attachment 5 (CenturyLink Response to DOC IR No. 4).

exchange in his Affidavit. The Department cannot state whether the count of Primary Access Lines by either Mr. Lubeck or Mr. Brigham is accurate or reliable, but questions what the error was and why it was not disclosed.

32. Attachment 6, Column B shows the counts of service to households as reported by Mr. Brigham. The counts of service to household reported by Mr. Lubeck are shown in Column K of Attachment 6. Attachment 6 shows also shows various percentages that result from the different counts, which I discuss later in this Affidavit.

3. CENTURYLINK UNDERCOUNTERED THE ACCESS LINES IN EACH WIRE CENTER BY FAILING TO COUNT HOUSEHOLDS SERVED BY BUSINESS LINES ONLY, UNE-P LINES, AND RESALE LINES.

33. CenturyLink Petition fails to account for lines that serve a household from which a small business is operated, and the household chooses to subscribe only to a business line. Farmers, day care operators, plumbers and tax filing businesses are typical examples of end users who may subscribe to a business line to receive a business listing in the telephone directory or desire yellow page advertising, and have no need to separately subscribe to residence service. CenturyLink made no attempt to estimate the number of households that purchase a business line. The CenturyLink Petition understates the count of households CenturyLink serves in each wire center by failing to count these households.
34. In the limited amount of time the Department has had to respond to CenturyLink's Petition, the Department could not estimate the number of home based business that would subscribe to business lines in each of the CenturyLink exchanges. Thus, I could not reflect an adjustment for home based businesses to the CenturyLink numbers shown in Attachment 6. However, in light of CenturyLink's failure to include

home based business lines, it is my conclusion that CenturyLink has understated the number of households to which it provides service in all wire centers.

35. To accurately count households that CenturyLink serves in each wire center also requires CenturyLink to include UNE-P and resale lines. UNE-P lines, now known as CenturyLink Local Service Platform (CLSP) products, are “finished” services that CenturyLink provides to CLECs, for the CLECs to market and sell to customers.²⁰ If CenturyLink cannot distinguish between business and residents UNE-P lines, all lines should be included as residences lines. Resale lines are also finished services sold to wholesalers who then resell them to the end users in a similar way as CLSP lines.²¹ These lines would not exist if CenturyLink were not providing the telephone plant to households. The CenturyLink witnesses did not include either resale lines or UNE-P lines in their counts of the number of households served by CenturyLink.

Because the household is dependent upon CenturyLink for the provision of voice

²⁰ CenturyLink™ Local Services Platform (CLSP™) products provide local exchange telecommunications services to end-users on behalf of Competitive Local Exchange Carriers (CLECs) at competitive wholesale commercial rates. Functionally equivalent to comparable CenturyLink retail products, CLSP are finished services that require neither CLEC collocation nor other network involvement and are combinations of the following network elements:

- An Unbundled Local Loop (UBL); A facility or transmission path between the Distribution Frame or equivalent in the CenturyLink Central Office (CO) and the Demarcation Point at the end-user premises;
- A Local Switching Network Element Line Side or Trunk Side facility (switch port) including without limitation the basic switching function, plus the features, functions, and all vertical features that are loaded in CenturyLink's End Office Switch; and,
- The Shared Transport Network Element: The collective interoffice local transmission facilities between End Office Switches, between End Office Switches and Tandem Switches, and between Tandem Switches. CLEC traffic will be carried on the same facilities that CenturyLink uses for its own traffic.

From: <http://www.centurylink.com/wholesale/pcat/localservicesplatform.html>.

²¹ Resale - Non-Facility Based Competitive Local Exchange Carrier (CLEC) products and services include nearly all of CenturyLink's retail telecommunications offerings provided in the Wholesale channel, generally with a Wholesale discount, for resale to your business and residential end-user customers. Resale products and services are provided in our CenturyLink QC to certified CLECs and Resellers under terms and conditions and rates of an Interconnection Agreement (ICA) or Commercial Agreement. From: <http://www.centurylink.com/wholesale/pcat/resale.html>.

service, even if the bill is from another company, it is my conclusion that both UNE-P and resale lines are appropriately included in determining households served by CenturyLink.

36. In Attachment 6, Columns I and J show the UNE-P and resale lines by wire center as well as the impact their inclusion has on whether CenturyLink meets the statutory criteria for market regulation. It is reasonable to add these lines to the “Lines for households with CenturyLink Service,” since the voice service being received by the household is ultimately provided by CenturyLink.
37. If the Commission accepts Mr. Brigham’s counts of lines served by CenturyLink, but adds UNE-P lines and resale lines, there are twelve wire centers (ten exchanges),²² where CenturyLink serves more than 50 percent of the households. This is shown in Attachment 6, Column H. If the Commission accepts Mr. Lubeck's count of Primary Access lines, when UNE-P and resale lines are included, there are five wire centers/exchanges where CenturyLink serves more than 50 percent of the households. This is shown in Attachment 6, Column N.
38. I conclude that CenturyLink failed to account for households that received voice service from CenturyLink but purchase a business service and failed to count any UNE-P or resale lines that provide voice service to households. These deficiencies result in an undercount of the households served by CenturyLink.
39. I further believe that, the Commission should give consideration to whether CenturyLink has satisfied 50 percent statutory test in additional exchanges, where

²² The wire centers of Island Lake and Pike Lake are part of the larger Duluth exchange which serves, in aggregate, fewer than 50 percent of the households in the exchange.

CenturyLink has marginally satisfied the test, in light of CenturyLink's failure to provide any accounting of households that purchase business lines.

4. CENTURYLINK'S ASSUMPTIONS ABOUT THE AVAILABILITY OF CABLE AND OTHER WIRELINE SERVICE INFLATES THE REPORTED AVAILABILITY OF THESE SERVICES TO HOUSEHOLDS.

40. To grant the Petition, the Commission must find that CenturyLink has demonstrated to the Commission's satisfaction that more than 60 percent of the households in the exchange *can choose voice service* from at least one additional unaffiliated competitive service provider. The manner in which CenturyLink chose to address choice of competitive carriers was to look at wireless service in some wire centers, and to look at cable and other wireline providers in all wire centers.
41. In CenturyLink's Petition, Mr. Brigham stated: "CenturyLink does not have data that shows the exact locations of all households that are passed by, and can order voice service from, cable providers in each exchange service area". Brigham Aff., p. 8, ¶ 12. In contrast, Mr. Lubeck's Affidavit stated that CenturyLink used FCC Form 477 data to determine cable telephony and other wireline voice coverage in each census block and then associated each census block to an exchange Lubeck Aff. p. 12, ¶ 18. Mr. Lubeck states the FCC Form 477 data supports the conclusion that ... "at least 60 percent of households in the exchange service area can choose voice service from at least one additional unaffiliated service provider has been met in 130 of Century QC's wire centers in Minnesota." *Id.* Since CenturyLink has 154 wire centers in Minnesota, Mr. Lubeck's math calculation means that 24 wire centers did not meet the sixty percent statutory criterion.

42. CenturyLink used FCC Form 477 data and it made certain erroneous assumptions about the data and applied its own methodologies to reach conclusions for both cable telephony and other wireline service.²³ I address the methodology and assumptions for cable telephony and other wireline services discussed in the Lubeck Affidavit and Exhibits AL-4, AL-5, AL-7, AL-8 and AL-9. CenturyLink overstated the availability of cable and other wireline service. Specifically, CenturyLink assumed:
- A. service to one household in a census block means service to all households in that census block;
 - B. a provider that offers broadband service necessarily offers voice services.
43. CenturyLink used FCC Form 477 data²⁴ as the basis for its conclusions and assumptions regarding coverage by cable and other wireline providers, despite explicit warnings from the FCC not to make the very assumptions upon which CenturyLink relied. Mr. Lubeck assumed that “[i]f the FCC data shows that cable broadband service is available in a census block, all of the households in the census block are considered to have the option of ordering voice service from a cable provider.” Lubeck Aff., p. 11, fn 14. This assumption fails on two points. First, the availability of cable broadband internet access service to one household in a census block does not equate to the availability of cable broadband internet access service to all households in that census block; and, second, the availability of cable

²³ The Department served an IR that asked what FCC Form 477 data CenturyLink used to create the exhibits that CenturyLink states supports the households served by cable and other wireline. CenturyLink responded that the same underlying data was used for both cable and other wireline services.

²⁴ Facilities-based broadband providers are required to file data with the FCC twice a year (Form 477) on where they offer Internet access service at speeds exceeding 200 kbps in at least one direction. <https://www.fcc.gov/general/broadband-deployment-data-fcc-form-477>

broadband internet access service from a provider does not mean that voice service is available from that provider. I discuss these two errors in turn.

A. The availability of cable broadband internet access service to one household in a census block does not equate to the availability of cable broadband internet access service to all households in that census block.

44. To support his assumption of 60 percent coverage, based on Form 477 data, Mr.

Lubeck points to the FCC website, at which public form 477 data is accessible.

Lubeck Aff. p. 10, fn. 13.²⁵ The FCC reveals a warning that the data should not be used in the manner CenturyLink here proposes. The FCC website states:

Fixed providers²⁶ file lists of census blocks in which they can or do offer service to at least one location, with additional information about the service.* *Note: A provider that reports deployment of a particular technology and bandwidth in a census block may not necessarily offer that service everywhere in the block. Accordingly, a list of providers deployed in a census block does not necessarily reflect the number of choices available to any particular household or business location in that block, and the number of such providers in the census block does not purport to measure competition.²⁷

45. CenturyLink's proposal that the Commission should rely on Form 477 data is disingenuous; CenturyLink is well aware that the data cannot be used reliably in the manner assumed by Mr. Lubeck. Attachment 8 hereto is a 2015 record of a complaint to the Department by a consumer in rural Brainerd who lacked broadband access, but wanted service, and pointed to the service area map (as re-published by the Minnesota Department of Economic Development (DEED)) as proof that

²⁵ See <https://www.fcc.gov/general/broadband-deployment-data-fcc-form-477> which is the link Mr. Lubeck provides in footnote 13 on page 10 of his Affidavit.

²⁶ The term "fixed providers" includes both cable and other wireline providers.

²⁷ See Attachment 7, Fixed Broadband Deployment Data, pp. 1 and 6. See also <https://www.fcc.gov/general/broadband-deployment-data-fcc-form-477>

CenturyLink DSL access should be available to his location. CenturyLink responded to the Department inquiry stating that the broadband map cannot be relied on to determine whether broadband access is available to a particular location “because the FCC broadband map counts an area as ‘served’ if at least one customer in a census block is served.”²⁸

46. CenturyLink is asking that the Commission accept its decision to rely on public FCC Form 477 data that CenturyLink knows cannot support its petition.
47. As to Exhibits AL-4, AL-5, AL-7, AL-8, AL-9 and AL-10, which purport to show that 60 percent of households can choose cable or other wireline voice options, CenturyLink did not provide support and work papers, nor did it explain the methodology or assumptions to make its conclusions beyond what has already been discussed. The Department has no way of analyzing the data to confirm whether it agrees or disagrees with the methodology CenturyLink used to determine the number of cable voice or other wireline households that can choose voice service. However, even accepting CenturyLink’s numbers without modification or foundation, 24 of CenturyLink’s wire centers do not meet the standard in Minnesota based on cable voice and other wireline service availability.
48. The Department served discovery on CenturyLink in an attempt to understand how CenturyLink reached its conclusions that all households in a census block receive

²⁸ See Attachment 8.(CenturyLink Response to Complaint) (CenturyLink stated: “CenturyLink only offers voice service to [Customer identifying information redacted] address. The broadband map that [Customer identifying information redacted] viewed shows his area as having broadband available because the FCC broadband map counts an area as ‘served’ if at least one customer in a census block is served. Customers to the South and West of the property receive broadband due to a past build made with stimulus funds. It is possible that future builds pursuant to state and federal programs might result in some level of broadband service being available at this location. However, right now, CenturyLink does not offer such service.)

voice service if one household in the census block receives voice service. For example, DOC IR No. 35²⁹ asks CenturyLink “[if] a cable company is offering broadband/voice service to just one household in a census block, did CenturyLink include all of the households within the census block as having voice service available from the cable company”? While the question seems straight forward, CenturyLink’s response was not. CenturyLink responded: “[t]he FCC data is provided at the census block level. CenturyLink is not aware of a situation in which a cable company would offer service to a single household within a census block. CenturyLink included every census block where the cable company reported to the FCC that it was competing for services in that census block.” The response does not state whether CenturyLink did or did not include all of the households in the census block.

49. In DOC IR No. 38³⁰ the Department provided the FCC’s warning advising against misuse, as published on the FCC website discussed above³¹

“A provider that reports deployment of a particular technology and bandwidth in a census block may not necessarily offer that service everywhere in the block. Accordingly, a list of providers deployed in a census block does not necessarily reflect the number of choices available to any particular household or business location in that block, and the number of such providers in the census block does not purport to measure competition.”

and asked CenturyLink to admit that (a) if a provider reports it offers a particular technology or bandwidth in a census block that it may not offer that service everywhere in the census block, and to admit that (b) the number of such providers

²⁹ Attachment 9. (CenturyLink Response to DOC IR No. 35).

³⁰ Attachment 10, (CenturyLink Response to DOC IR No. 38, A).

³¹ <https://www.fcc.gov/general/broadband-deployment-data-fcc-form-477>

does not purport to measure competition. CenturyLink denied both requests for admission. CenturyLink responded: “CenturyLink contends that the FCC data is the best publicly-available data relevant to the criteria set forth in Minn. Stat. §237.025, subd. 4. More specific information would need to be requested from the providers themselves and is not available to CenturyLink.”³²

50. Also in DOC IR No. 38, the Department asked whether CenturyLink can provide the number and percentage of households in each census block that CenturyLink knows are subject to offers of service by a “competitive service provider.” CenturyLink replied: “CenturyLink relies on the FCC data as the best data publically available. CenturyLink is not aware of any data source that would provide conclusive data as to offerings by competitive service provider on a household-by-household basis.” *Id.*
51. I conclude that CenturyLink’s proposed assumption that all households in a census block have broadband available if one household in the census block has broadband available, as reflected on the publicly available FCC Form 477 reports, overstates the number of households that have broadband service available.

B. CenturyLink’s analysis assumes that all wireline broadband providers offer voice service.

52. Mr. Lubeck’s Affidavit states: “[w]hile the data [FCC Form 477] shows the availability of broadband services, it can be used to measure the availability of voice services, because today, where cable companies offer broadband services, they also offer voice services utilizing broadband technologies.” Lubeck Aff., p. 10, ¶ 15. This assumption cannot be supported by the facts.

³² Attachment 10 (CenturyLink’s Response to DOC IR No. 38, C and D).

53. The Department asked CenturyLink to provide support for this claim in DOC IR No. 36 shown in Attachment 11. CenturyLink responded: "...CenturyLink reviewed the website of each of the competitive providers noted in Attachment AL-8, and each offers voice services."
54. While the Department does not dispute that each competitive provider noted in AL-8 likely offers voice services in some areas, the relevant question is: do competitive providers offer voice services in the exchanges for which CenturyLink is petitioning for market regulation under Minn. Stat. § 237.025? Because CenturyLink has the burden of proof, the Department expected CenturyLink would have verified its facts as accurate. Since CenturyLink did not do so, the Department sent a DOC IR to each of the twelve companies listed in Lubeck Exhibit AL-5 that CenturyLink claims are cable companies that meet the definition of a "competitive service provider." The DOC IRs sought to confirm the assumption proposed by Mr. Lubeck in his Affidavit, at ¶ 15.
55. Several cable providers stated that they did offer voice contemporaneously with broadband; however, one cable provider said it did not provide voice service at any location where it provided broadband services, and two said they offered voice service in some areas but not all. Yet another responded that it offered voice service, but not through a VOIP platform.³³
56. CenturyLink overstates the number of households served by alternative providers from both its assumption that all households in a census block have an alternative provider if one household in that census block has an alternative provider, and the

³³ Attachment 12, (Cable Providers Responses to DOC IR 1).

assumption that all households with a non- CenturyLink broadband internet access service provider can receive voice service from that provider. These overstatements, working together, may have census blocks without a single alternative voice service provider available, with CenturyLink including all households in that same census block as having an alternative voice provider. There will clearly be an overstatement of the availability of an alternative voice provider with either assumption considered independently as well.

57. In light of the erroneous assumptions CenturyLink used in its effort to demonstrate that it has satisfied the statutory test (that 60% of the households can choose an alternative voice provider), it is reasonable to find that in exchanges where CenturyLink data shows it narrowly meets the test based on cable and other wireline voice service, CenturyLink has not satisfied its burden of proof.

5. CENTURYLINK DID NOT ACCOUNT FOR THE ABSENCE OF ALTERNATIVE PROVIDERS WHERE CENTURYLINK RECEIVED MONETARY SUPPORT FROM THE FCC’S CONNECT AMERICA FUND (CAF).

58. The Connect America Fund (CAF) is a federal program to support broadband deployment in “high cost”³⁴ rural areas. Through grants and a bidding process, incumbent price cap companies (like CenturyLink) are eligible to receive money to assist with the rollout of high speed broadband services to specific locations.
59. In 2014, the FCC approved Phase II of the CAF and clarified the specifics of the funding process.³⁵ As a general matter, only census blocks lacking 10/1 Mbps

³⁴ A “high cost” area is generally one which has a cost of service between \$52.50 and \$207.81 per line. From https://www.fcc.gov/wcb/tapd/Challenge_Process/ChallengeProcessGuide7-31-14.docx.

³⁵ https://apps.fcc.gov/edocs_public/attachmatch/FCC-14-54A1.pdf

service from any provider [are] eligible.³⁶ The FCC's determination of which geographic areas are unserved and eligible for CAF Phase II support is based on data provided to the FCC on Form 477.

60. CAF Phase II subsidies are available only to locations unserved by a subsidized broadband provider. The Lubeck Affidavit claims that availability of broadband is a proxy for availability of voice service—that is, that access to broadband service ensures access to voice service. Lubeck Aff. at p. 10, ¶ 15.
61. CenturyLink is eligible for substantial amounts in CAF II funds for Minnesota³⁷ and received over \$54 million for Minnesota in 2015.
62. While not impossible, one can reasonably conclude that a location with no alternative wireline broadband provider is unlikely to have an alternative facilities-based provider of voice services.
63. I conclude that CenturyLink's failure to address the absence of competitive voice providers in areas for which CenturyLink has received CAF Phase II funding creates a gap in the Company's support for its Petition.

6. CENTURYLINK'S WIRELESS STUDY SHOWS THAT THE WIRELESS SERVICE IN SOME EXCHANGES IS INADEQUATE TO SUPPORT CENTURYLINK'S PETITION.

64. With reference to wireless companies' marketing/advertising maps, Mr. Brigham's Affidavit observed that it appeared that, "[a]t least two wireless carriers have complete coverage for all but a few exchange service areas in the state." Brigham

³⁶ *In the Matter of Connect America Fund ETC Annual Reports and Certifications Rural Broadband Experiments*, Report and Order and FNPR (May 26, 2016).

³⁷ FCC Press Release dated August 27, 2015.

Aff., p. 7, ¶ 10. The maps attached to the Brigham Affidavit appear to have been marketing maps downloaded or printed from the public Internet.

65. Mr. Brigham conceded that the advertising maps showed that the Silver Bay, Tofte, Grand Marais, Wabasha and Sandstone exchanges had only partial coverage.

Brigham Aff., p. 7, ¶ 10. Noting the Department's objections to reliance on wireless companies' internet advertising maps, the Commission said:

The maps are not, on their face, sufficient to withstand an initial level of scrutiny for analyzing whether the company meets the statutory criteria. And there is no other information in the record, such as engineering testimony or other expert testimony, explaining the availability or adequacy of the wireless coverage areas shown on the maps. Furthermore, there are no Affidavits, or other sworn statements, from wireless companies identifying the percentage of households, by exchange service area, that can choose voice service from an unaffiliated competitive service provider.³⁸

66. On November 21, 2016, CenturyLink supplemented its Petition with the Affidavit of Adam Nelson who conducted an "Assessment of Wireless Voice Coverage in Select CenturyLink Wire Centers in the State of Minnesota."

67. Mr. Nelson's study was examined by the Department's engineering expert, Mr. Wes Legursky, who has prepared a separate Affidavit reporting his findings. Mr. Nelson examined 32 wire centers that were provided to him by CenturyLink. According to Mr. Lubeck, "CenturyLink retained Federal Engineering, Inc. ("FE") to perform an independent engineering analysis of wireless voice coverage in 32 of the more rural CenturyLink QC wire centers in Minnesota. These 32 wire centers include all of the 24 wire centers not meeting the 60 percent criteria." Lubeck Aff., p. 17, ¶ 24.

³⁸ *In the Matter of the Petition of CenturyLink QC to be Regulated Pursuant to Minn. Stat. § 237.025: Competitive Market Regulation*, Docket No. P-421/AM-16-496, Order Requiring Further Filings And Initiating Expedited Proceeding, (November 2, 2016).

Neither Mr. Lubeck nor Mr. Nelson explained why the 32 wire centers were chosen, other than to state that 24 of these wire centers did not meet the statutory “60 percent criterion” based on wireline service.

68. Based upon Mr. Nelson’s testimony, as further explained by Mr. Legursky, it is reasonable for the Commission to conclude that indoor signal strength is the appropriate measure of whether a household can choose wireless as a competitive service provider, Legursky Aff., pp. 5-6.
69. I conclude (and agree with Mr. Legursky) that whether a household can choose wireless as a reasonable competitive service alternative, particularly with respect to critical safety services such as 911, should not require that the customer go outside their home or climb to higher elevations to obtain service. Minn. Stat. § 237.025, subd. 4 (1) refers to ‘households,’ and not to geographic areas adjacent to or surrounding those households.
70. I further conclude that, based on the availability of indoor coverage, the Cook, Holdingford, Biwabik, Sabin, and Staples exchanges do not meet the statutory condition that 60 percent of households can choose voice service from a wireless service provider. The exchanges of Isanti, Nashwauk, and Marble show marginally more than 60 percent of households covered, based on CenturyLink’s data, with reported indoor coverage of 65, 63 and 63 percent respectively, as shown on Attachment 6, Column J.

VII. CONCLUSIONS AND RECOMMENDATIONS

71. The Department examined the manner in which CenturyLink supported its case and found that CenturyLink made many assumptions that skewed the numbers in favor of

finding that CenturyLink meets the criteria established in Minn. Stat. § 237.025, subd. 4 (1) for its 109 exchanges which contain 154 wire centers.

1. Several exchanges do not meet the criterion of serving fewer than 50 percent of the households

72. Attachment 6 shows the following wire centers do not meet the criterion that CenturyLink provides service to fewer than 50 percent of the households:

- A. Cook
- B. Tofte
- C. Grand Marais
- D. Swanville
- E. Biwabik
- F. Silver Bay
- G. Finland
- H. Pine City
- I. Coleraine
- J. Comstock

As explained earlier, to reach this finding, the Department used Mr. Brigham's count of service to residences, found in RHB-3, column H, and added UNE-P and Resale lines. If the Commission agrees with CenturyLink that Mr. Brigham's counts are in fact in error, then Column M of Attachment 6 is the appropriate column to use, and show that the following wire centers do not meet the 50 percent criterion:

- a. Cook
- b. Tofte
- c. Grand Marais
- d. Swanville
- e. Marginal wire centers: Biwabik (49%), Silver Bay (47%), Finland (43%), Pine City (43%), Coleraine (44%)

73. In both the above examples, the wire centers of Island Lake and Pike Lake were excluded because these wire centers are a part of the larger Duluth exchange.

74. Although CenturyLink claimed housing units is the appropriate measure of the denominator, instead of households, for the wire centers of Cook, Tofte, and Grand

Marais, CenturyLink proffered no reasonable explanation for why these exchanges/wire centers should receive different treatment from all the other exchanges/wire centers in Minnesota.

2. Several exchanges do not meet the criterion of having competitive choices available to at least 60 percent of the households

75. After having met the threshold showing that CenturyLink serves fewer than 50 percent of households in a given wire center, the second statutory criterion is that at least 60 percent of households can choose an alternative provider. Columns I and J of Attachment 6 provide this information, as provided by CenturyLink and without correction for the flaws discussed above.
76. On a stand-alone basis, the following wire centers do not meet the wireline criterion:
- A. Cook
 - B. Swanville
 - C. Island Lake
 - D. Biwabik
 - E. Pike Lake
 - F. Pine City
 - G. Comstock
 - H. Carlton
 - I. Mora
 - J. Ogilvie
 - K. Isanti
 - L. Rush City
 - M. Nashwauk
 - N. Foley
 - O. Roaylton
 - P. Cambridge
 - Q. Buhl
 - R. Keewatin
 - S. Marble
 - T. Staples
 - U. Marginal wire centers: Colerain (62%), Holdingford (62%), Sabin (63%)
77. The following wire centers do not meet the wireless criterion, but of course, only 32 wire centers were studied:

- A. Cook
- B. Biwabik
- C. Holdingford
- D. Sabin
- E. Staples
- F. Marginal wire centers: Isanti (68%), Nashwauk (63%), Marble (63%)

78. Minn. Stat. § 237.025 states that CenturyLink must show the criteria are met in each of the exchanges (with CenturyLink showing wire centers) included in the petition.

While CenturyLink's studies appear to be adequate to satisfy the criteria for many of its wire centers, in light of the flaws in CenturyLink's methodology, the wire centers that barely pass the criteria may be reasonably found to not satisfy the statutory requirement.

79. Accepting Mr. Lubeck's access line count, and adding in UNE-P and resale lines, and combining the exchanges that exceed serving 50 percent of households with those that cannot offer a competitive choice to more than 60 percent of households, including the marginal exchanges, means that the following exchanges do not meet the statutory requirements:

- A. Cook
- B. Tofte
- C. Grand Marais
- D. Swanville
- E. Biwabik
- F. Carlton
- G. Isanti
- H. Rush City
- I. Nashwauk
- J. Marble
- K. Sabin
- L. Staples
- M. Holdingford

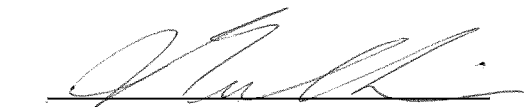
80. It is reasonable to assume that areas without competition and without regulatory protections will be the last areas to receive upgrades and investments, in the

absence of grants from government agencies. Premature regulatory relief of exchanges or wire centers will pose a burden to the consumers in areas that lack viable alternatives.


81. In examining wire centers that have questionable results, the Commission may wish to bring public interest to bear. Where options are not abundant, it is worthwhile to consider that cable broadband, and especially wireless service, may not be a perfect substitute for CenturyLink telephone service. Some security systems require land lines to operate. Some health monitoring systems require close to 100 percent reliability. Certainly, as Mr. Legursky points out, the ability to call 911 can vary greatly within a person's property and within a person's home. Extra scrutiny may be reasonable where options are limited.

82. There appears to be sufficient evidence that CenturyLink's petition for market regulation to be approved for most of the petitioned exchanges, but, in light of the flaws identified, there is not sufficient evidence as to exchanges that fail or only marginally appear to satisfy the statutory criteria.

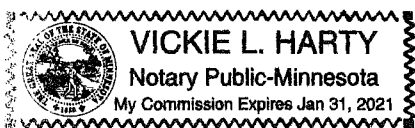
FURTHER YOUR AFFIANT SAYETH NOT.


Joy Gullikson

Subscribed and sworn to before me on
this 9th day of February, 2017.


NOTARY PUBLIC

My Commission Expires 1/31/2021



State of Minnesota
DEPARTMENT OF COMMERCE

Docket No. P-421/AM-16-496
Attachment 1
(CenturyLink Response to DOC IR No. 34)

Utility Information Request

Docket Numbers: P421/AM-16-496 & P421/AM-16-547 Date of Request: 12/20/2016

Requested From: CenturyLink Response Due: 12/28/2016

Analysts Requesting Information: Bonnie Johnson/Diane Dietz/Joy Gullikson

Type of Inquiry: Financial Rate of Return Rate Design
 Engineering Forecasting Conservation
 Cost of Service CIP Other:

If you feel your responses are trade secret or privileged, please indicate this on your response.

Request No.	
34	<p>On page 3, footnote 2 of Mr. Lubeck's affidavit states that "Exchange service areas that are served by a central office switch in a different state (such as Fargo-Moorhead) are not included."</p> <p>A. Please list each CenturyLink exchange where the central office switch is in a different state.</p> <p>B. Explain in detail why exchange service areas that are served by a central office in another state are excluded.</p> <p>C. Please list each CenturyLink exchange where the central office switch is in Minnesota, but households are served in another state by the Minnesota switch.</p> <p>D. Explain how CenturyLink has accounted for those households in another state that are served by a Minnesota switch.</p> <p>E. Identify the number of exchange service areas excluded and (by wire center) the number of access lines excluded based on the methodology described in footnote 2.</p> <p><u>Response:</u></p> <p>CenturyLink objects to Request No. 34 as not reasonably calculated to lead to the discovery of admissible evidence. These areas are not part of this petition and CenturyLink does not seek to treat them as exchange areas subject to Competitive Market regulation. Should CenturyLink decide in the future that these exchanges should be subject to Competitive Market regulation, CenturyLink will file a separate petition for these exchange areas:</p>

Response by: _____ List sources of information: _____
Title: _____
Department: _____
Telephone: _____

Wire Center Name	CLLI	Exchange	Switch State	Geographic State
COMSTOCK	CMSTMNCO	COMSTOCK	MN	ND and MN
DULUTH DOUGLAS	DLTHMNDB	DULUTH	MN	MN and WI
ESTHERVILLE	ESVLIACO	ESTHERVILLE	IA	IA and MN
FARGO-MOORHEAD	FARGNDBC	FARGO	ND	ND
FARGO-MOORHEAD	FARGNDBC	MOORHEAD	ND	MN
GRAND FORKS	GDFRNDBC	GRAND FORKS	ND	ND
GRAND FORKS	GDFRNDBC	EAST GRAND FORKS	ND	MN
LAKE PARK	LKPKIACO	LAKE PARK	IA	IA and MN
ORTONVILLE	ORVLMNOR	ORTONVILLE	MN	SD and MN
SPIRIT LAKE	SPLKIACO	SPIRIT LAKE	IA	IA and MN
WAHPETON-BRECKENRIDGE	WHTNDBC	WAHPETON	ND	ND
WAHPETON-BRECKENRIDGE	WHTNDBC	BRECKENRIDGE	ND	MN

Response by: _____

List sources of information: _____

Title: _____

Department: _____

Telephone: _____

State of Minnesota
DEPARTMENT OF COMMERCE

Docket No. P-421/AM-16-496
Attachment 2
(CenturyLink Response to DOC IR No. 41)

Utility Information Request

Docket Numbers: P421/AM-16-496 & P421/AM-16-547 Date of Request: 12/20/2016

Requested From: CenturyLink Response Due: 12/28/2016

Analysts Requesting Information: Bonnie Johnson/Diane Dietz/Joy Gullikson

Type of Inquiry: Financial Rate of Return Rate Design
 Engineering Forecasting Conservation
 Cost of Service CIP Other:

If you feel your responses are trade secret or privileged, please indicate this on your response.

Request No.	
41	<p>The affidavit of Al Lubeck, page 3, paragraph 4 states: "CenturyLink is seeking Market Regulation ... for 108 CenturyLink QC exchange service areas in Minnesota" Exhibit AL-1 appears to show 109 exchange service areas. Explain the discrepancy.</p> <p><u>Response:</u></p> <p>Mr. Lubeck's affidavit should have stated that there are 109 CenturyLink QC exchanges service areas in Minnesota. CenturyLink will file an errata correcting this error.</p>

Response by: _____ List sources of information: _____
Title: _____
Department: _____
Telephone: _____

[TRADE SECRET DATA HAS BEEN REDACTED IN ITS ENTIRETY]

State of Minnesota
DEPARTMENT OF COMMERCE

Docket No. P-421/AM-16-496
Attachment 4
(CenturyLink Response to DOC IR No. 30)

Utility Information Request

Docket Numbers: P421/AM-16-496 & P421/AM-16-547 Date of Request: 12/20/2016

Requested From: CenturyLink Response Due: 12/28/2016

Analysts Requesting Information: Bonnie Johnson/Diane Dietz/Joy Gullikson

Type of Inquiry: Financial Rate of Return Rate Design
 Engineering Forecasting Conservation
 Cost of Service CIP Other:

If you feel your responses are trade secret or privileged, please indicate this on your response.

Request No.	
30	<p>Pages 4-7 of Mr. Lubeck's affidavit discuss the data in Exhibit AL-2. Mr. Lubeck states that CenturyLink excluded access lines associated with "group quarters," and altered the results in AL-2 based on CenturyLink's decision to use the census definition of households which is, "A 'household' includes all the people who occupy a housing unit (such as house or apartment) as their usual place of residence" (Emphasis added) to the exclusion of access phone lines in non-primary residences. The Webster dictionary¹ defines household as "the people in a family or other group that are living together in one house."</p> <p>A. Please explain why CenturyLink chose the Census definition of "household". B. Please explain why CenturyLink excluded group quarters. C. Provide the number of residential access lines by wire center for the following: 1) Student housing 2) Nursing home residents 3) Assisted living residents 4) Group home residents 5) Seasonal/recreational/occasional residents 6) All other access lines excluded based on CenturyLink's definition of "household"</p> <p>For Exhibit AL-2, and all other exhibits (including, but not limited to AL-4, AL-5, AL-7, AL-8, AL-9, AL-10, AL-13, AL-14, AL-19) where access lines for "group quarters" and "seasonal/recreational/occasional"</p>

¹ See <https://www.merriam-webster.com/dictionary/household>

Response by: _____ List sources of information: _____
Title: _____
Department: _____
Telephone: _____

were excluded, provide revised exhibits that include "group quarters" and "seasonal/recreational/occasional" access lines.

Response:

CenturyLink objects to Request No. 30 as misstating Mr. Lubeck's testimony, in that CenturyLink did not "exclude" access lines associated with "group quarters" and did not "alter" the results in Exhibit AL-2. Notwithstanding and without waiving this objection, CenturyLink responds as follows:

- A. The U.S. Census Bureau definition of "household" is appropriate because the definition fits neatly with the test set forth by the legislature in Minn. Stat. § 237.025. Subd. 4:

Subd. 4. **Competitive criteria.** The commission shall approve a petition under this section if a petitioning local exchange carrier demonstrates to the commission's satisfaction that: (1) it serves fewer than 50 percent of the households in an exchange service area, and at least 60 percent of households in the exchange service area can choose voice service from at least one additional unaffiliated competitive service provider;

Census Bureau definitions are consistent with the approach dictated by the legislation. Census Bureau data on household units is publicly available and is widely used and generally accepted for academic, government and industry purposes. The Census Bureau is independent third party data that is also granular enough to be largely matched to CenturyLink's exchange boundaries.

- B. CenturyLink objects to this request as not reasonably calculated to lead to the discovery of admissible evidence. Notwithstanding and without waiving this objection, CenturyLink did not intentionally exclude group quarters from its calculations. With respect to the number of primary access lines within a wire center, CenturyLink did not review the data to remove lines associated with group quarters. Because CenturyLink used the definition of "households" provided by the Census Bureau, "group quarters" were not included in the number of households. Therefore, to the extent that CenturyLink included any of these types of lines as part of its primary access line counts, CenturyLink would be inflating its own market share. Such lines would be included in the denominator and not in the numerator of the market share calculation.
- C. CenturyLink does not maintain residential access lines counts by type of residential customer. As noted in paragraph 6 of Mr. Lubeck's affidavit, CenturyLink uses primary lines to identify the households that have CenturyLink voice service and did nothing to exclude group quarters primary access lines from its data. In counting primary lines, CenturyLink counts the first line at a given address.

Response by: _____

List sources of information:

Title: _____

Department: _____

Telephone: _____

1. To the extent CenturyLink provides residential service to student housing, each room number would be a separate address and counted as a primary line, or household. If the school provides the phone service within the residential housing, each phone line billed would be considered a business line. Because the Census Bureau excludes these quarters from its definition of household, to the extent that CenturyLink included any of these types of lines as part of its primary access line counts, CenturyLink would be inflating its own market share because the lines would be included in the denominator and not in the numerator.

- 2-4. To the extent CenturyLink provides residential service to nursing home, assisted living or group home residents that each resident pays for separately, rather than provided by the nursing home, each room would be considered a separate household. To the extent the facility provides the phone service to the residents, each phone line billed would be considered a business line. Because the Census Bureau excludes these quarters from its definition of household, to the extent that CenturyLink included any of these types of lines as part of its primary access line counts, CenturyLink would be inflating its own market share because the lines would be included in the denominator and not in the numerator.

5. To the extent a consumer purchases residential service, the first line purchased at each address would be considered a primary access line.

6. CenturyLink objects to Part C(6) of Request No. 30 as vague and ambiguous. Notwithstanding and without waiving this objection, CenturyLink is not aware of other exclusions based on the definition of household used.

Response by: _____

List sources of information:

Title: _____

Department: _____

Telephone: _____

State of Minnesota
DEPARTMENT OF COMMERCE

Docket No. P-421/AM-16-496
Attachment 5
(CenturyLink Response to DOC IR No. 4)

Utility Information Request

Docket Number: P-421/AM-16-496

Date of Request: 7/22/2016

Requested From: CenturyLink

Response Due: 8/1/2016

Analysts Requesting Information: Bonnie Johnson/Diane Dietz

Type of Inquiry: Financial Rate of Return Rate Design
 Engineering Forecasting Conservation
 Cost of Service CIP Other:

If you feel your responses are trade secret or privileged, please indicate this on your response.

Request No.	
4	<p>Robert Brigham's Affidavit uses a different term to describe data included in two of his Exhibits. Exhibit RHB-2 uses the term "Residence Primary Access Lines" and RHB-8 uses the term "Access lines."</p> <p>A. Please explain how CenturyLink defines "Residence Primary Access Lines". B. Please explain how CenturyLink defines "Access Line". C. If a customer has a bundle of services that includes voice and internet, are such customers included as having a Residence Primary Access Line? D. If CenturyLink is providing service to a residential customer with IP technology, is such a customer included as having a Residence Primary Access Line? E. Please explain why the Primary Res Access Lines in Confidential Exhibit RHB-6 differs from 2015 Access Lines in Confidential Exhibit RHB-8. F. Explain why "Residence Primary Access Lines" as shown in RHB-2 is different than "Residence Household with CenturyLink Voice Service (Primary Access Lines)" as shown in RHB-3.</p> <p><u>Response:</u></p> <p>A. A Residence Primary Access Line represents the first voice access line at a service location (e.g., household). For example, if a customer has three CenturyLink lines, the first line is a "primary" line and the other two lines are "additional" lines. Thus, the</p>

Response by: _____

List sources of information: _____

Title: _____

Department: _____

Telephone: _____

existence of a "primary" line shows that the customer has voice service from CenturyLink. The existence of additional lines is not relevant to this determination.

- B. An "access line" is defined as a customer connection to the switched voice network that includes dialtone.
- C. If a residence customer has a bundle of services that includes local exchange service along with internet or any other services, this customer would have a Residence Primary Access Line since he or she purchases switched voice service from CenturyLink.
- D. CenturyLink began offering VoIP service to residential customers in spring of 2016. The access line data included in Mr. Brigham's affidavit are based on end of year 2015 and earlier timeframes. No VoIP customer "lines" are included.
- E. The access lines in Exhibit RHB-6 are residential primary lines, and do not include additional residence lines or business lines. The access lines in Exhibit RHB-8 are total access lines, including all residential and business access lines.
- F. The residential primary access lines shown in Confidential Exhibit RHB-3 are in error. CenturyLink is filing a corrected version of this exhibit. The residential primary lines in column D of the spreadsheet in Confidential Exhibit RHB- 3 are the same as the residential primary lines in column D of the spreadsheet in Confidential Exhibit RHB-2.

Response by: _____

List sources of information:

Title: _____

Department: _____

Telephone: _____

[TRADE SECRET DATA HAS BEEN REDACTED IN ITS ENTIRETY]



Docket No. P-421/AM-16-496
Attachment 7
Fixed Broadband Deployment Data

[Home](#) / [Wireline](#) /

Fixed Broadband Deployment Data from FCC Form 477

Who Files What?

- **All** facilities-based broadband providers are required to file data with the FCC twice a year (Form 477) on where they offer Internet access service at speeds exceeding 200 kbps in at least one direction.
- **Fixed** providers file lists of census blocks in which they can or do offer service to at least one location, with additional information about the service.*
- **Mobile** providers file maps of their coverage areas for each broadband technology (e.g., EV-DO, HSPA, LTE). See [Mobile Deployment Data \(/form-477-data\)](#).

[Explanation of the Data \(/general/explanation-broadband-deployment-data\)](#)

Nationwide Fixed Broadband Deployment Data

Data As Of	Version	Data Files	Release Date
December 31, 2015	Version 2 (includes revisions made between 8/29/16 and 10/12/16)	<p>US - Fixed with Satellite - Dec 15 (/http://transition.fcc.gov/form477/BroadbandData/Fixed/Dec15/Version2/US-Fixed-with-Satellite-Dec2015.zip) (CSV)</p> <p>US - Fixed without Satellite - Dec 15 (/http://transition.fcc.gov/form477/BroadbandData/Fixed/Dec15/Version2/US-Fixed-without-Satellite-Dec2015.zip) (CSV)</p> <p>Fixed Provider Summary Table (/file/4269/download) (Excel)</p>	12/07/16

Earlier versions: [Dec 15 v1 \(/form-477-broadband-deployment-data-december-2015-version-1\)](#) | [Jun 15 v3 \(/form-477-broadband-deployment-data-june-2015-version-3\)](#) | [Jun 15 v2 \(/wireline-competition/form-477-broadband-deployment-data-june-2015-version-2\)](#) | [Jun 15 v1 \(/form-477-broadband-deployment-data-june-](#)

[2015-version-1](#) | [Dec 14 v2 \(/state-level-form-477-broadband-deployment-data-december-2014-version-2\)](#) | [Dec 14 v1 \(/state-level-form-477-broadband-deployment-data-december-2014-version-1\)](#)

State-Level Fixed Broadband Deployment Data

Data as of December 31, 2015 (version 2, includes satellite) posted below.

Earlier versions: [Dec 15 v1 \(/form-477-broadband-deployment-data-december-2015-version-1\)](#) | [Jun 15 v3 \(/form-477-broadband-deployment-data-june-2015-version-3\)](#) | [Jun 15 v2 \(/wireline-competition/form-477-broadband-deployment-data-june-2015-version-2\)](#) | [Jun 15 v1 \(/form-477-broadband-deployment-data-june-2015-version-1\)](#) | [Dec 14 v2 \(/state-level-form-477-broadband-deployment-data-december-2014-version-2\)](#) | [Dec 14 v1 \(/state-level-form-477-broadband-deployment-data-december-2014-version-1\)](#)

State / Fixed Broadband Deployment

Territory Block Data

	AK - Fixed - Dec 15
AK	(/form477/BroadbandData/Fixed/Dec15/Version%202/AK-Fixed-Dec2015.zip) (CSV)
	AL - Fixed - Dec 15
AL	(/form477/BroadbandData/Fixed/Dec15/Version%202/AL-Fixed-Dec2015.zip) (CSV)
	AR - Fixed - Dec 15
AR	(/form477/BroadbandData/Fixed/Dec15/Version%202/AR-Fixed-Dec2015.zip) (CSV)
	AS - Fixed - Dec 15
AS	(/form477/BroadbandData/Fixed/Dec15/Version%202/AS-Fixed-Dec2015.zip) (CSV)
	AZ - Fixed - Dec 15
AZ	(/form477/BroadbandData/Fixed/Dec15/Version%202/AZ-Fixed-Dec2015.zip) (CSV)
	CA - Fixed - Dec 15
CA	(/form477/BroadbandData/Fixed/Dec15/Version%202/CA-Fixed-Dec2015.zip) (CSV)
	CO - Fixed - Dec 15
CO	(/form477/BroadbandData/Fixed/Dec15/Version%202/CO-Fixed-Dec2015.zip) (CSV)
	CT - Fixed - Dec 15
CT	(/form477/BroadbandData/Fixed/Dec15/Version%202/CT-Fixed-Dec2015.zip) (CSV)
	DC - Fixed - Dec 15
DC	(/form477/BroadbandData/Fixed/Dec15/Version%202/DC-Fixed-Dec2015.zip) (CSV)

DE [DE - Fixed - Dec 15](#)
[\(/form477/BroadbandData/Fixed/Dec15/Version%202/DE-Fixed-Dec2015.zip\)](#) (CSV)

FL [FL - Fixed - Dec 15](#)
[\(/form477/BroadbandData/Fixed/Dec15/Version%202/FL-Fixed-Dec2015.zip\)](#) (CSV)

GA [GA - Fixed - Dec 15](#)
[\(/form477/BroadbandData/Fixed/Dec15/Version%202/GA-Fixed-Dec2015.zip\)](#) (CSV)

GU [GU - Fixed - Dec 15](#)
[\(/form477/BroadbandData/Fixed/Dec15/Version%202/GU-Fixed-Dec2015.zip\)](#) (CSV)

HI [HI - Fixed - Dec 15](#)
[\(/form477/BroadbandData/Fixed/Dec15/Version%202/HI-Fixed-Dec2015.zip\)](#) (CSV)

IA [IA - Fixed - Dec 15](#)
[\(/form477/BroadbandData/Fixed/Dec15/Version%202/IA-Fixed-Dec2015.zip\)](#) (CSV)

ID [ID - Fixed - Dec 15](#)
[\(/form477/BroadbandData/Fixed/Dec15/Version%202/ID-Fixed-Dec2015.zip\)](#) (CSV)

IL [IL - Fixed - Dec 15](#)
[\(/form477/BroadbandData/Fixed/Dec15/Version%202/IL-Fixed-Dec2015.zip\)](#) (CSV)

IN [IN - Fixed - Dec 15](#)
[\(/form477/BroadbandData/Fixed/Dec15/Version%202/IN-Fixed-Dec2015.zip\)](#) (CSV)

KS [KS - Fixed - Dec 15](#)
[\(/form477/BroadbandData/Fixed/Dec15/Version%202/KS-Fixed-Dec2015.zip\)](#) (CSV)

KY [KY - Fixed - Dec 15](#)
[\(/form477/BroadbandData/Fixed/Dec15/Version%202/KY-Fixed-Dec2015.zip\)](#) (CSV)

LA [LA - Fixed - Dec 15](#)
[\(/form477/BroadbandData/Fixed/Dec15/Version%202/LA-Fixed-Dec2015.zip\)](#) (CSV)

MA [MA - Fixed - Dec 15](#)
[\(/form477/BroadbandData/Fixed/Dec15/Version%202/MA-Fixed-Dec2015.zip\)](#) (CSV)

MD

	<u>MD - Fixed - Dec 15</u> <u>(/form477/BroadbandData/Fixed/Dec15/Version%202/MD-Fixed-Dec2015.zip)</u> (CSV)
ME	<u>ME - Fixed - Dec 15</u> <u>(/form477/BroadbandData/Fixed/Dec15/Version%202/ME-Fixed-Dec2015.zip)</u> (CSV)
MI	<u>MI - Fixed - Dec 15</u> <u>(/form477/BroadbandData/Fixed/Dec15/Version%202/MI-Fixed-Dec2015.zip)</u> (CSV)
MN	<u>MN - Fixed - Dec 15</u> <u>(/form477/BroadbandData/Fixed/Dec15/Version%202/MN-Fixed-Dec2015.zip)</u> (CSV)
MO	<u>MO - Fixed - Dec 15</u> <u>(/form477/BroadbandData/Fixed/Dec15/Version%202/MO-Fixed-Dec2015.zip)</u> (CSV)
MP	<u>MP - Fixed - Dec 15</u> <u>(/form477/BroadbandData/Fixed/Dec15/Version%202/MP-Fixed-Dec2015.zip)</u> (CSV)
MS	<u>MS - Fixed - Dec 15</u> <u>(/form477/BroadbandData/Fixed/Dec15/Version%202/MS-Fixed-Dec2015.zip)</u> (CSV)
MT	<u>MT - Fixed - Dec 15</u> <u>(/form477/BroadbandData/Fixed/Dec15/Version%202/MT-Fixed-Dec2015.zip)</u> (CSV)
NC	<u>NC - Fixed - Dec 15</u> <u>(/form477/BroadbandData/Fixed/Dec15/Version%202/NC-Fixed-Dec2015.zip)</u> (CSV)
ND	<u>ND - Fixed - Dec 15</u> <u>(/form477/BroadbandData/Fixed/Dec15/Version%202/ND-Fixed-Dec2015.zip)</u> (CSV)
NE	<u>NE - Fixed - Dec 15</u> <u>(/form477/BroadbandData/Fixed/Dec15/Version%202/NE-Fixed-Dec2015.zip)</u> (CSV)
NH	<u>NH - Fixed - Dec 15</u> <u>(/form477/BroadbandData/Fixed/Dec15/Version%202/NH-Fixed-Dec2015.zip)</u> (CSV)
NJ	<u>NJ - Fixed - Dec 15</u> <u>(/form477/BroadbandData/Fixed/Dec15/Version%202/NJ-Fixed-Dec2015.zip)</u> (CSV)
NM	

	<u>NM - Fixed - Dec 15</u> <u>(/form477/BroadbandData/Fixed/Dec15/Version%202/NM-Fixed-Dec2015.zip)</u> (CSV)
NV	<u>NV - Fixed - Dec 15</u> <u>(/form477/BroadbandData/Fixed/Dec15/Version%202/NV-Fixed-Dec2015.zip)</u> (CSV)
NY	<u>NY - Fixed - Dec 15</u> <u>(/form477/BroadbandData/Fixed/Dec15/Version%202/NY-Fixed-Dec2015.zip)</u> (CSV)
OH	<u>OH - Fixed - Dec 15</u> <u>(/form477/BroadbandData/Fixed/Dec15/Version%202/OH-Fixed-Dec2015.zip)</u> (CSV)
OK	<u>OK - Fixed - Dec 15</u> <u>(/form477/BroadbandData/Fixed/Dec15/Version%202/OK-Fixed-Dec2015.zip)</u> (CSV)
OR	<u>OR - Fixed - Dec 15</u> <u>(/form477/BroadbandData/Fixed/Dec15/Version%202/OR-Fixed-Dec2015.zip)</u> (CSV)
PA	<u>PA - Fixed - Dec 15</u> <u>(/form477/BroadbandData/Fixed/Dec15/Version%202/PA-Fixed-Dec2015.zip)</u> (CSV)
PR	<u>PR - Fixed - Dec 15</u> <u>(/form477/BroadbandData/Fixed/Dec15/Version%202/PR-Fixed-Dec2015.zip)</u> (CSV)
RI	<u>RI - Fixed - Dec 15</u> <u>(/form477/BroadbandData/Fixed/Dec15/Version%202/RI-Fixed-Dec2015.zip)</u> (CSV)
SC	<u>SC - Fixed - Dec 15</u> <u>(/form477/BroadbandData/Fixed/Dec15/Version%202/SC-Fixed-Dec2015.zip)</u> (CSV)
SD	<u>SD - Fixed - Dec 15</u> <u>(/form477/BroadbandData/Fixed/Dec15/Version%202/SD-Fixed-Dec2015.zip)</u> (CSV)
TN	<u>TN - Fixed - Dec 15</u> <u>(/form477/BroadbandData/Fixed/Dec15/Version%202/TN-Fixed-Dec2015.zip)</u> (CSV)
TX	<u>TX - Fixed - Dec 15</u> <u>(/form477/BroadbandData/Fixed/Dec15/Version%202/TX-Fixed-Dec2015.zip)</u> (CSV)
UT	

	UT - Fixed - Dec 15 (/form477/BroadbandData/Fixed/Dec15/Version%202/UT-Fixed-Dec2015.zip) (CSV)
VA	VA - Fixed - Dec 15 (/form477/BroadbandData/Fixed/Dec15/Version%202/VA-Fixed-Dec2015.zip) (CSV)
VI	VI - Fixed - Dec 15 (/form477/BroadbandData/Fixed/Dec15/Version%202/VI-Fixed-Dec2015.zip) (CSV)
VT	VT - Fixed - Dec 15 (/form477/BroadbandData/Fixed/Dec15/Version%202/VT-Fixed-Dec2015.zip) (CSV)
WA	WA - Fixed - Dec 15 (/form477/BroadbandData/Fixed/Dec15/Version%202/WA-Fixed-Dec2015.zip) (CSV)
WI	WI - Fixed - Dec 15 (/form477/BroadbandData/Fixed/Dec15/Version%202/WI-Fixed-Dec2015.zip) (CSV)
WV	WV - Fixed - Dec 15 (/form477/BroadbandData/Fixed/Dec15/Version%202/WV-Fixed-Dec2015.zip) (CSV)
WY	WY - Fixed - Dec 15 (/form477/BroadbandData/Fixed/Dec15/Version%202/WY-Fixed-Dec2015.zip) (CSV)

***Note:** A provider that reports deployment of a particular technology and bandwidth in a census block may not necessarily offer that service everywhere in the block. Accordingly, a list of providers deployed in a census block does not necessarily reflect the number of choices available to any particular household or business location in that block, and the number of such providers in the census block does not purport to measure competition.

Bureau/Office:

[Wireline Competition \(https://www.fcc.gov/wireline-competition\)](https://www.fcc.gov/wireline-competition)

Tags:

[Broadband Deployment Data \(/tags/broadband-deployment-data\)](#) - [Broadband, Internet & IP \(/tags/broadband-internet-ip\)](#) - [Data \(/tags/data\)](#) - [Data, Maps, Reports \(/tags/data-maps-reports\)](#) - [Form 477 Data \(/tags/form-477-data\)](#)

Updated:

Friday, October 16, 2015

[TRADE SECRET DATA HAS BEEN REDACTED IN ITS ENTIRETY]

State of Minnesota
DEPARTMENT OF COMMERCE

Docket No. P-421/AM-16-496
Attachment 9
CenturyLink Response to DOC IR No. 35

Utility Information Request

Docket Numbers: P421/AM-16-496 & P421/AM-16-547 Date of Request: 12/20/2016

Requested From: CenturyLink Response Due: 12/28/2016

Analysts Requesting Information: Bonnie Johnson/Diane Dietz/Joy Gullikson

Type of Inquiry: Financial Rate of Return Rate Design
 Engineering Forecasting Conservation
 Cost of Service CIP Other:

If you feel your responses are trade secret or privileged, please indicate this on your response.

Request No.	
35	<p>Pages 10-11 paragraph 15 of Mr. Lubeck's Affidavit states: "We can utilize the FCC's broadband data to determine at a very granular (census block) level where each cable company is offering broadband/voice service within each CenturyLink QC wire center."</p> <p>A. If a cable company is offering broadband/voice service to just one household in a census block, did CenturyLink include all of the households within the census block as having voice service available from the cable company?</p> <p>B. If CenturyLink did not include all of the households within the census block as having voice service available from the cable company, please describe in detail the methodology used to determine the number of households per census block to whom broadband voice service is available, and provide all information of which CenturyLink is aware that relates to the accuracy of CenturyLink's counts in each census block and wire center.</p> <p><u>Response:</u></p> <p>A. The FCC data is provided at the census block level. CenturyLink is not aware of a situation in which a cable company would offer service to a single household within a census block. CenturyLink included every census block where the cable company reported to the FCC that it was competing for services in that census block.</p>

Response by: _____ List sources of information: _____
Title: _____
Department: _____
Telephone: _____

- B. CenturyLink included every census block where the cable company reported to the FCC that it was competing for services in that census block. This approach is appropriate because the median area of census blocks containing households in Minnesota is 0.028 square miles.

Response by: _____

List sources of information: _____

Title: _____

Department: _____

Telephone: _____

State of Minnesota
DEPARTMENT OF COMMERCE

Docket No. P-421/AM-16-496
Attachment 10
CenturyLink Response to DOC IR No. 38

Utility Information Request

Docket Numbers: P421/AM-16-496 & P421/AM-16-547 Date of Request: 12/20/2016

Requested From: CenturyLink Response Due: 12/28/2016

Analysts Requesting Information: Bonnie Johnson/Diane Dietz/Joy Gullikson

Type of Inquiry: Financial Rate of Return Rate Design
 Engineering Forecasting Conservation
 Cost of Service CIP Other:

If you feel your responses are trade secret or privileged, please indicate this on your response.

Request No.	
38	<p>When discussing Exhibit AL-4, Mr. Lubeck provides a link to an FCC website on page 10, in footnote 13,¹ which states:</p> <p>Note: A provider that reports deployment of a particular technology and bandwidth in a census block may not necessarily offer that service everywhere in the block. Accordingly, a list of providers deployed in a census block does not necessarily reflect the number of choices available to any particular household or business location in that block, and the number of such providers in the census block does not purport to measure competition.</p> <p>A. For each wire center to which Exhibit AL-4 relates, identify the number and percentage of households in each census block as to which CenturyLink knows that service is <i>offered</i> by a “competitive service provider” as defined in Minn. Stat. 237.025 subd 1 (a).</p> <p>B. For each wire center to which Exhibit AL-4 relates, identify the number and percentage of households in each census block as to which CenturyLink knows that service is <i>actually provided</i> at present by a “competitive service provider” as defined in Minn. Stat. 237.025 subd 1 (a).</p> <p><i>Continued on next page</i></p>

¹ See <https://www.fcc.gov/general/broadband-deployment-data-fcc-form-477>

Response by: _____	List sources of information: _____
Title: _____	_____
Department: _____	_____
Telephone: _____	_____

- C. Admit that a provider that reports deployment of a particular technology and bandwidth in a census block may not necessarily offer that service everywhere in the census block in the data CenturyLink used to create AL-4? If you deny this request, provide all information and documents that support your denial and identify each person with knowledge that supports your denial.
- D. Admit that the number of such providers in the census block does not purport to measure competition in the data CenturyLink used to create AL-4? If you deny this request, provide all information and documents that support your denial and identify each person with knowledge that supports your denial.

Response:

- A. CenturyLink relies on the FCC data as the best data publicly available. CenturyLink is not aware of any data source that would provide conclusive data as to offerings by competitive service provider on a household-by-household basis.
- B. CenturyLink objects to Request No. 38(B) as not calculated to lead to the discovery of admissible evidence, as the provision of service, as opposed to the offering of service, by competitive service providers, is not relevant to the criteria set forth in § 237.025, subd. 4.
- C. Deny. CenturyLink contends that the FCC data is the best publicly-available data relevant to the criteria set forth in Minn. Stat. § 237.025, subd. 4. More specific information would need to be requested from the providers themselves and is not available to CenturyLink.
- D. Deny. CenturyLink contends that the FCC data is the best publicly-available data relevant to the criteria set forth in Minn. Stat. § 237.025, subd. 4. More specific information would need to be requested from the providers themselves and is not available to CenturyLink.

Response by: _____

List sources of information:

Title: _____

Department: _____

Telephone: _____

State of Minnesota
DEPARTMENT OF COMMERCE

Docket No. P-421/AM-16-496
 Attachment 11
 CenturyLink Response to DOC IR No. 36

Utility Information Request

Docket Numbers: P421/AM-16-496 & P421/AM-16-547 Date of Request: 12/20/2016

Requested From: CenturyLink Response Due: 12/28/2016

Analysts Requesting Information: Bonnie Johnson/Diane Dietz/Joy Gullikson

Type of Inquiry: Financial Rate of Return Rate Design
 Engineering Forecasting Conservation
 Cost of Service CIP Other:

If you feel your responses are trade secret or privileged, please indicate this on your response.

Request No.	
36	<p>Page 10 paragraph 15 of Mr. Lubeck's Affidavit states: "While the data shows the availability of broadband services, it can be used to measure the availability of voice services because today, where cable companies offer broadband services, they also offer voice services using VoIP technology".</p> <p>A. Please provide all information and documents of which CenturyLink is aware that supports the statement that "where cable companies offer broadband services, they also offer voice services using VoIP technology."</p> <p>B. Mr. Lubeck also makes this claim on page 12, paragraph 17, when discussing other wireline carriers, but provides no citation to this statement. Please provide all information and documents of which CenturyLink is aware that supports the statement that where other wireline providers "offer broadband services, they also offer voice services using VoIP technology."</p> <p><u>Response:</u></p> <p>A. CenturyLink reviewed each competitive provider website or other marketing materials to determine that all offered voice service. The primary cable companies in Minnesota, including Charter and Comcast, utilize VoIP technology for voice services. There have been several dockets in Minnesota recognizing this, including a current lawsuit between the Commission and Charter, where the Commission is seeking to impose regulations on VoIP service. See <i>In the Matter of the Complaint of the Minnesota</i></p>

Response by: _____ List sources of information: _____
 Title: _____
 Department: _____
 Telephone: _____

Department of Commerce Against Charter Affiliates Regarding Transfer of Customers, MPUC Order Finding Jurisdiction and Requiring Compliance Filing, MPUC Docket No. P-6716, 561/C-14-383 ("Charter Complaint Case"), dated July 28, 2015, page 1

- B. CenturyLink objects to Request No. 36(B) as mischaracterizing Mr. Lubeck's testimony. Notwithstanding and without waiving this objection, CenturyLink reviewed the websites of each of the competitive providers noted in AL-8, and each offer voice services. Attached as Attachment 36A is a chart with appropriate references.

Response by: _____

List sources of information:

Title: _____

Department: _____

Telephone: _____

[TRADE SECRET DATA HAS BEEN REDACTED IN ITS ENTIRETY]