BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

UM 1481

In the Matter of	)
PUBLIC UTILITY COMMISSION OF OREGON	)
Staff investigation of the Oregon Universal Service Fund	)

REBUTTAL TESTIMONY

OF

AUGUST H. ANKUM, Ph.D.

ON BEHALF OF

THE OREGON CABLE TELECOMMUNICATIONS ASSOCIATION

January 30, 2013

PUBLIC

Confidential Data are marked with ***___***

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I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, TITLE AND BUSINESS ADDRESS.

A. My name is August H. Ankum. I currently serve as Senior Vice President and Chief Economist of QSI Consulting, Inc. My business address is 429 North 13th Street, Apt. 2D, Philadelphia, Pennsylvania 19123.

Q. ARE YOU THE SAME AUGUST H. ANKUM WHO SUBMITTED DIRECT TESTIMONY IN THIS CASE?

A. Yes.

Q. ON WHOSE BEHALF ARE YOU FILING THIS DIRECT TESTIMONY?

A. I am filing this testimony on behalf of the Oregon Cable Telecommunications Association ("OCTA" or the "Association").

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. The purpose of my rebuttal testimony is to address arguments raised in direct testimonies of other parties in this case filed on December 20, 2012, including Opening Testimony of Roger White on behalf of Staff ("Staff testimony"), Opening Testimony of John M. Felz on behalf of CenturyTel of Oregon, Inc., CenturyTel of Eastern Oregon, Inc., United Telephone Company of the Northwest, Qwest Corporation ("CenturyLink testimony"), Direct Testimony of R. Kirk Lee on behalf of Frontier Communications Northwest Inc. and Citizens Telecommunications Company of Oregon ("Frontier testimony"), Opening Testimony of Chad Duval on behalf of Oregon Telecommunications Association ("OTA") ("Duval testimony"), Opening Testimony of John Hemphill on behalf of OTA

("Hemphill testimony"), Opening Testimony of Don Lawrence on behalf of OTA ("Lawrence testimony"), Opening Testimony of James Rennard on behalf of OTA ("Rennard testimony") (collectively "OTA testimony"), Testimony of Jeffrey E. Anspach on behalf of Warm Springs Telecommunications Company ("Warm Springs testimony) and Opening Testimony of Don Price on behalf of Verizon ("Verizon testimony").

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. The overarching theme in the opening testimony filed on behalf of incumbent Local Exchange Carriers ("ILECs") is that the status quo should be preserved, at least with regard to their own OUSF subsidy. Commission Staff, Verizon and OCTA, on the other hand, propose reforming the manner in which the OUSF is calculated and distributed.

First, I respond to the proposals made by Staff. While I agree in principle with the rationale underlying a number of Staff's proposals, including allocating the cost of the loop between shared services, adjusting the benchmark and capping the fund, I recommend certain alternative mechanisms for achieving the same goals.[1] Second, I respond to the ILEC testimony by pointing out significant flaws in the assumptions underlying their arguments in support of maintaining the status quo. Third, in response to the testimony filed on behalf of the Warm Springs Telecommunications Company, I propose a modification to the manner in which support for competitive local exchange carriers ("CLECs") should be calculated.

[1] While the approaches differ, OCTA also supports in principle the recommendations made on behalf of Verizon.

I. Reply to Staff: Regarding the Staff's opening testimony, my reply testimony addresses four of Mr. White's proposals: 1) allocating the cost of the ILEC networks between basic local telephone service and non-basic services that share the network; 2) modifying the benchmark to account for inflation; 3) capping the level of the surcharge; and 4) the comparison of model-based support with ILEC reports of projected "need".

1) Cost Allocation. I agree with Staff that the cost estimates from the Synthesis model (the model used to generate current OUSF cost estimates for non-rural ILECs) must be adjusted to reflect the fact that basic local telephone service and other non-basic services all share the ILEC networks. In my opening testimony I proposed a cost allocation methodology based on comparing revenue streams of the basic local telephone service and non-basic services (*e.g.*, broadband services) that share the network. Given the Rulings issued by the Administrative Law Judge ("ALJ") restricting the scope of discovery in this proceeding, I propose allocating ILEC network cost based on the bandwidth requirements of basic voice service compared with non-basic services (*e.g.*, broadband services). In summary, my proposal is as follows:

- **For the per line Cost calculation of all ILECs:** Apportion the per line Cost between basic voice and broadband service proportional to their relative bandwidth use.

This approach is consistent with the Ruling of the Administrative Law Judge regarding cost allocation methods the Commission can consider in this docket.[2] It is also consistent with the underlying approach recommended by the Commission Staff.

[2] *See* ALJ Ruling Denying OCTA's Motion to Certify ("ALJ Ruling on OCTA Motion to Certify") dated January 17, 2013, p. 3.

2) Modifying the Benchmark for Inflation. I agree with Staff that the benchmark should be updated to reflect inflation. However, that adjustment should only be made for purposes of calculating RLEC OUSF support, not for purposes of calculating non-rural ILEC OUSF support. In addition, while I maintain my recommendation that the benchmark should be adjusted by two standard deviations above average cost for purposes of calculating non-rural ILEC support, I recommend that the benchmark not be adjusted by two standard deviations above average cost for purposes of calculating RLEC OUSF support. In summary, my proposal is as follows:

- **Use two separate OUSF benchmarks when determining support for rural and non-rural LEC study areas:** When calculating the Cost component of the Benchmark, for non-rural ILECs, use the formula "weighted average cost in non-rural wire centers plus two standard deviations;" for rural LECs, use the current benchmark ($21) adjusted for inflation.[3]

3) Capping the Surcharge: I agree in principle with Staff that the OUSF should be capped and have proposed in my direct testimony that the Commission cap the overall size of the OUSF at the level calculated under the modifications to the methodology for calculating support adopted by the Commission in this proceeding. Staff proposes instead to cap the OUSF surcharge by annually adjusting the benchmark to reach a target surcharge level (such as the range of a 5.5% to 7.0%[4]). While I support the Staff's proposal in principle, I believe the surcharge range proposed by Staff is likely too high in light of the other modifications to support calculation that Staff, OCTA and Verizon have proposed.

[3] This proposal modifies the proposal contained in my direct testimony, where I proposed using the same benchmark for rural and non-rural LEC study areas.

[4] PUC Staff Response to OCTA-Staff 7, attached hereto as Exhibit OCTA/201 (AHA-4).

4) ILEC "Needs" Reports: I disagree with Staff's proposal to base OUSF support in part on ILEC annual reports of projected need. This additional step will create unwarranted additional administrative burden on the Commission, is not proposed as an open and transparent process subject to review and input from other parties, and will provide additional incentive to ILECs to "gold-plate" their networks rather than provide service on an efficient basis.

II. Reply to ILECs. Regarding the opening testimony filed on behalf of the various ILEC parties to this proceeding, my reply testimony addresses five of their primary arguments: 1) contrary to ILEC claims, per line Synthesis model cost estimates would not likely increase if the model were updated; 2) contrary to ILEC "donut and hole" arguments, basing support on Synthesis model cost estimates of the average per line cost per wire center does not understate cost; 3) ILEC COLR obligation arguments are flawed because (a) the ILECs do not necessarily build out to all potential customers in their territories, and (b) line extension charges allow ILECs to recoup costs associated with such build out; 4) contrary to ILEC claims, a revenue-based benchmark is not prohibited; and 5) contrary to ILEC claims, reductions to OUSF based on reforms that better calculate cost and need are in no way tied to automatic ILEC rate increases; nor is OUSF intended as a make-whole for ILEC costs that cannot be recovered through retail and access rates.

III. Reply to Warm Springs. In response to the testimony filed on behalf of the Warm Springs Telecommunications Company, I propose a modification to the manner in which CLEC OUSF support is calculated. In my opening testimony I recommended that OUSF

support be made available only in geographic areas where there is no unsubsidized competitor. Consistent with that recommendation I propose that OUSF support be made available to CLECs who serve areas not served by any other provider, including un-served areas within ILEC wire centers, and that CLEC support be calculated based on the CLEC's embedded cost of service. In summary, my proposal is as follows:

- **For the support calculations of CLECs:** In cases in which a competitive carrier builds out plant to *previously un-served* areas, the OUSF subsidy level for this carrier should be set based on this competitive carrier's *own* per line cost, which should be determined on the basis of the competitive company's actual (embedded) cost, the method used for RLECs. The OUSF subsidy calculations for the competitive provider serving previously un-served areas should be based on the same benchmark as the benchmark for RLECs.

Q. YOU INDICATE THAT THERE ARE THREE MODIFICATIONS TO YOUR PREVIOUS RECOMMENDATIONS. DO YOU HAVE ANY OTHER MODIFICATIONS TO THE RECOMMENDATIONS SET FORTH IN YOUR OPENING TESTIMONY?

A. No I do not. For the convenience of the reader, I have attached as Exhibit OCTA/202 (AHA-5) hereto a list of the proposals contained in my direct testimony that still stand as initially proposed.

II. ISSUE 1: WHAT CHANGES SHOULD BE MADE TO THE EXISTING OUSF RELATED TO THE CALCULATION, COLLECTION AND DISTRIBUTION OF FUNDS?

Q. YOUR OPENING TESTIMONY IS ORGANIZED ACCORDING TO THE ISSUES AS SET FORTH IN THE ALJ'S RULING ON THE ISSUES LIST FOR

THIS PROCEEDING. HAVE YOU FOLLOWED THIS SAME CONVENTION FOR PURPOSES OF YOUR REPLY TESTIMONY?

A. Yes. However, it should be noted that all of the issues addressed in my reply testimony fall under "Issue 1" on the issues list. Subheadings are provided for convenience.

(a) Broadband Shares Network with Voice Services (Response to Staff)

Q. WHAT IS STAFF'S SPECIFIC RECOMMENDATION FOR ALLOCATING THE NETWORK COST AMONG SERVICES THAT USE IT?

A. Staff's direct testimony did not make a concrete recommendation. Instead, it provided a hypothetical example in which the cost of the network was equally divided between the three types of services that may use the network.[5] However, Staff did not include this adjustment when presenting the impact of its recommendations in the summary section of its testimony, which Staff projected to be a reduction of OUSF from $44 to $33 million annually.[6]

Q. YOUR DIRECT TESTIMONY CONTAINED A RECOMMENDATION TO APPORTION COST ESTIMATES BETWEEN BASIC LOCAL TELEPHONE AND BROADBAND SERVICES BASED ON RELATIVE REVENUE. A RECENT ALJ RULING DENIED OCTA'S MOTION THAT WAS SEEKING TO

[5] Staff testimony, p. 16. In response to discovery, Staff called this method its "initial recommendation." *See* PUC Staff Response to OCTA-Staff 5, attached hereto as Exhibit OCTA/203 (AHA-6).

[6] This is evident from Staff's Data Response to Frontier Data Request 2-13 and the associated confidential attachments, which shows that the "new" support (support corresponding to the $33 million fund) is calculated simply by increasing the benchmark from $21 to $30. *See* PUC Staff Response to FTR-Staff 2-13 and FTR 3 Exhibit, attached hereto as Exhibit OCTA/204 (AHA-7).

COLLECT DATA ON BROADBAND REVENUE, CITING CONFLICT WITH ORS 759.218.[7] WHAT IS YOUR RESPONSE?

A. One important outcome of the ALJ ruling is a clarification contained on page 4 that consistent with the statutes, "this decision does not preclude the consideration of methods to allocate the costs of services provided over a shared network (both regulated and unregulated), in order to determine the [sic] how those costs should be allocated amongst the services." Indeed, the statute referenced by the ALJ actually highlights the need to allocate the network cost between all services utilizing the network. ORS 759.218 reads as follows:

> **Revenues and expenses of unregulated activities**
>
> (1) A telecommunications utility may not use revenues earned from, or allocate expenses to, that portion of the utility's business that is regulated under this chapter in order to subsidize activities that are not regulated by this chapter.
>
> (2) The Public Utility Commission may not require revenues or expenses from an activity that is not regulated under this chapter to be attributed to the regulated activities of a telecommunications utility.
>
> (3) The commission may approve a telecommunications utility rate proposal for basic local service rates that utilizes revenues from other regulated services to partially cover the costs of providing basic local service.

Basic local telephone service is a regulated activity. Broadband revenue would fall under the category "non-regulated activities." The telecommunications loop facilities that are the subject of the cost estimates generated by the Synthesis Model are not a "regulated activity" (or "non-regulated" activity) -- they are simply physical assets jointly used by regulated and non-regulated activities.

[7] ALJ Ruling on OCTA Motion to Certify, p. 3.

A lay person's reading of sub-item 1 of the statute suggests that a telecommunications utility may not use revenues earned from, or allocate expenses to, regulated services such as basic local telephony in order to subsidize non-regulated activities such as broadband. In light of the fact that the same network supports both regulated (basic local telephone) and non-regulated (broadband) services, combined with the fact that the OUSF subsidy is calculated based on the overall cost of the jointly used network, OUSF effectively subsidizes non-regulated activities *unless an appropriate allocation of costs is made*. In other words, *to not allocate costs* would be inconsistent with the language contained in sub-item (1) of the above cited statute.

Sub-item (2) of the above cited statute deals with revenue and expense associated with non-regulated activities. It says that the Commission may not require revenues or expenses from an activity that is not regulated under this chapter to be attributed to the regulated activities. In plain English, the word "attributed" means "being caused by" or/and "belonging to a person."[8] In other words, this sub-item suggests that expenses from unregulated activity such as broadband should not be attributed to regulated activity such as basic local telephony. Again, *to not allocate costs* would be inconsistent with the language contained in this sub-item of the above cited statute.

To summarize, in order for OUSF distributions to be consistent with the language in ORS 759.218, it is necessary to apportion OUSF cost estimates using some reasonable method.

[8] *See*, for example, http://dictionary.reference.com/browse/attribute and http://www.merriam-webster.com/dictionary/attributed.

Q. IN LIGHT OF THE ALJ RULING ON OCTA'S MOTIONS TO COMPEL AND TO CERTIFY, WHAT METHOD OF ALLOCATING (APPORTIONING) COST BETWEEN BASIC LOCAL TELEPHONY AND BROADBAND SHOULD THE COMMISSION CONSIDER?

A. A fair and reasonable method of apportioning the available cost estimates between basic local telephony and broadband is a method based on the relative bandwidth used by each service. Bandwidth measures capacity of the connection, typically expressed as the volume of information per unit of time that a service can handle, such as the number of bits per second. The capacity of a voice channel, when measured in kilobits per second ("kbps") is no more than 64 kbps.[9] Broadband speeds vary by provider, and for residential customers, "upstream" (upload) broadband speeds are typically lower than "downstream" (download) broadband speeds. CenturyLink is currently offering three tiers of broadband service, with the lowest speed tier being between 768 kbps and 3 megabits ("Mbps"), the middle tier being from 7 to 12 Mbps, and the fastest tier being between 20 and 40 Mbps downstream.[10] Frontier offers three speed tiers (15, 25 and 35 Mbps) over FiOS network[11] (where available). The current FCC target broadband speeds (speeds necessary to receive federal CAF support) are 1 Mbps upstream / 4 Mbps

[9] This is the theoretical capacity of a voice grade equivalent digital signal channel DS0.

[10] Current CenturyLink's "generic" (not location-specific) offerings. *See* http://www.centurylink.com/home/internet/ (Tab "Speeds"). Speeds up to 12 Mbps are available in metro Portland (zip code 97068).

[11] Current Frontier's offering in Oregon (zip code 97229). *See* http://www.frontierforhome.com/fios/services.php.

downstream.[12] However, historically the FCC tracked statistics on all connections with speeds of at least 200 kbps.[13] Based on the most recent FCC *Internet Access Report* (data as of June 2011), 91% of Oregonians had access to DSL broadband speeds of at least 200 kbps in locations where the ILEC was offering local telephone service. [14] In addition, 67% of Oregon households subscribed to broadband with speeds at least 200 kbps in one direction,[15] and 48% of Oregon households subscribed to broadband speeds that were at least 768 kbps upstream and 3 Mbps downstream.[16]

Given the lack of data available in this docket, I modify my original proposal to use revenue-based allocation[17] in favor of the allocation based on bandwidth use.

Q. PLEASE PROVIDE AN ILLUSTRATION OF YOUR PROPOSAL TO ALLOCATE THE COST BASED ON BANDWIDTH USE.

A. The following table utilizes the above cited FCC broadband speed and take rate figures to provide an illustration of my proposal. As noted above, ILEC broadband speeds can vary from 200 kbps to at least 35 Mbps. In this table, I provide calculations for two conservative cases. The first case assumes that the speed is only 200 kbps (column

[12] *In the Matter of Connect America Fund, A National Broadband Plan for Our Future, Establishing Just and Reasonable Rates for Local Exchange Carriers, High-Cost Universal Service Support, Developing an Unified Intercarrier Compensation Regime, Federal-State Joint Board on Universal Service, Lifeline and Link-Up, Universal Service Reform – Mobility Fund*, WC Docket No. 10-90, GN Docket No. 09-51, WC Docket No. 07-135, WC Docket No. 05-337, CC Docket No. 01-92, CC Docket No. 96-45, WC Docket No. 03-109, WT Docket No. 10-208, Report and Order and Further Notice of Proposed Rulemaking, FCC 11-161, released on November 18, 2011 ("*USF/ICC Transformation Order*"), ¶ 94.

[13] *See*, for example, the FCC Report *Internet Access Services: Status as of June 30, 2011* ("*FCC Internet Access Report*"), p. 10.

[14] *FCC Internet Access Report*, Table 24.

[15] *FCC Internet Access Report*, Table 16.

[16] *FCC Internet Access Report*, Table 15.

[17] Ankum Direct testimony, p. 40.

labeled "Low Speed Broadband"), which is likely an absolute lower boundary as I am not aware of any landline companies still offering such low speed service. The second case assumes that the speed is 768 kbps (column labeled "Medium Speed Broadband"), which again is a very conservative assumption as I took the lower speed in the FCC category "at least 768 kbps upstream and 3 Mbps downstream."[18] I calculate the apportionment factors using the same general methodology as the one used to calculate revenue-based apportionment.[19] Under this approach, the broadband bandwidth is adjusted down by broadband take rates, while the voice bandwidth is not adjusted for take rates (since we are calculating cost apportionment factors for customers who subscribe to local basic voice service).

Table 1.

Bandwidth-Based Apportionment of the Cost Study Cost Per Line Between Voice and Broadband Services (Hypothetical Example)

Line	Measure	Low Speed Broadband	Medium Speed Broadband	Formula
L1	Average Cost per Line from the "Traditional" Cost Study	$ 70.00	$ 70.00	input
L2	Bandwidth Used -- Basic Voice Service (kbps)	64	64	input
L3	Bandwidth Used -- Broadband Service (kbps)	200	768	input
L4	Average Broadband Take Rate (% Voice Lines)	67%	48%	input
	Apportionment Factors:			
L5	**Basic Voice**	**32%**	**15%**	L2 / (L2 + L3 * L4)
L6	Broadband	68%	85%	1 - L5
L7	**Average Cost per Line of Basic Voice Service**	**$ 22.63**	**$ 10.36**	**L1 * L5**

[18] This combination is tracked by the FCC such as in the above discussed FCC Internet Access Report, Table 15.

[19] Ankum Direct testimony, p. 41 Table 4.

The resulting apportionment factors for basic local telephony are contained in Line 5 of the table. Under the first scenario (broadband speeds are only 200 kbps) local voice is assigned 32% of cost; under the second scenario (broadband speeds are 768 kbps) local voice is assigned 15% of cost. In general, the higher broadband speeds, the lower the apportionment factor (share of cost) for basic local telephony. As I noted above, 200 kbps is likely the absolute minimum boundary for broadband speeds, meaning that 32% is the absolute maximum share of local basic voice telephony in total cost if bandwidth-based apportionment method is used. Likewise, 768 kbps is likely significantly lower than the "prevalent" speeds in today's consumer markets. Companies with all-fiber networks, as well as companies offering video service over the same (fiber, copper or coaxial) network tend to offer very high broadband speeds, meaning that a significantly smaller portion of bandwidth would be allocated to voice services. For example, as I mentioned above, Frontier's "starting" broadband speed offering associated with its all-fiber FiOS network (network that was designed to carry not only voice and broadband, but also video services) is 15 Mbps, while its fastest tier is 35 Mbps. Speeds offered by providers of "video-centric" networks such as Comcast can be as high as 50 or 105 Mbps.[20]

[20] Current Comcast's generic (not location-specific offering. *See* http://www.comcast.com/internet-service-west.html?iq_id=48056385&CMP=KNC-IQ_ID_48056385-VQ2-g-VQ3--VQ6-31028922576. Speed of at least 50 Mbps is available in metro Portland (zip code 97068).

Q. DO YOU PROPOSE THAT THE COMMISSION USE THE SAME APPORTIONMENT METHOD FOR BOTH NON-RURAL AND RURAL LECS?

A. Yes. The fact that OUSF cost estimates capture the cost of the network that is used to provide not only local basic voice, but also broadband service, is true for all ILECs. Customers of Rural LECs subscribe to broadband services just like customers of non-rural LECs do. Many Oregon RLECs provision their services over fiber-to-the home ("FTTH") loop facilities -- technology that permits even higher broadband speeds than DSL technology (the technology ridding on copper and hybrid copper-fiber loops and employed by CenturyLink in its non-rural wire centers). For example, Mr. Hemphill (OTA) explained in his testimony that his company, Pine Telephone Systems ("Pine"), had been building FTTH in its serving territory in four phases with the intention to have fiber at all locations.[21] He also explained that the last two build out phases were negatively affected by the FCC decision to set target broadband speeds at only 1 Mbps upstream / 4 Mbps downstream,[22] which is lower than what Pine is capable of offering over fiber.[23] Another OTA witness, Mr. Lawrence, testified that his companies (Peoples and Stayton telephone cooperatives) use both DSL and FTTH technology, and offer speeds in the range 1.5 Mbps to 50 Mbps downstream.[24] More generally, a recent nationwide survey conducted by the National Telecommunications Cooperative Association ("NTCA") found that 98% of cooperatives' customers can receive 200 to 768 kbps downstream service, 95% -- 768 kbps to 1.0 Mbps, 91% -- 3.0 to 4.0 Mbps, 90% --

[21] Hemphill testimony, p. 6.

[22] *USF/ICC Transformation Order*, ¶ 94.

[23] Hemphill testimony, p. 5.

[24] Lawrence testimony, p. 3.

4.0 to 6.0 Mbps, etc.[25] The NTCA survey also found that the overall take rate for broadband service among its member companies was 66%.[26] This take rate is very close to the FCC measure, according to which 67% of Oregon households subscribed to broadband with speeds at least 200 kbps in one direction.[27]

Q. ON A RELATED ISSUE, DO YOU AGREE WITH STAFF'S STATEMENT ON PAGE 15 THAT BROADBAND NETWORKS ARE MORE EXPENSIVE THAN VOICE NETWORKS?

A. Not really. I do not think there is enough evidence to make a categorical statement like this, especially considering the joint product nature of the network, which requires a careful allocation of costs between voice and broadband services. While networks for broadband services do require some specialized equipment not generally used by voice networks, the opposite is also true -- voice networks require equipment that is not necessary for broadband services. For example, a switch is a piece of equipment necessary to support voice, but not broadband service. Further, in my direct testimony (on page 24) I cited the FCC opinion that there is "evidence that the forward-looking cost of deploying voice and broadband-capable networks today is generally not significantly higher than deploying voice-only networks."[28] But the key issue in the context of OUSF is not whether broadband networks are more or less expensive than voice networks. The key issue is that to a large extent, broadband services use the same network as voice services. For example, in my direct testimony I cited the preliminary results of the FCC

[25] NTCA *2011 Broadband/Internet Availability Survey Report*, March 2012, p. 3

[26] NTCA 2011 *Broadband/Internet Availability Survey Report*, March 2012, p. 3

[27] FCC Internet Access Report, Table 16.

[28] *USF/ICC Transformation Order*, ¶ 65, footnote 72.

broadband cost model, according to which at least 75% of the total cost of providing broadband consists of cost for cable, trenching, conduit and poles[29] -- which are the same cost components that are present in voice networks.

The joint use of the same network by broadband and voice services is even more evident if we look at the historical ways in which broadband services became available. In order to offer broadband services such as DSL to a location where broadband service was previously unavailable, an ILEC had to install a piece of circuit equipment called a Digital Subscriber Line Access Multiplexer ("DSLAM") on top of existing (voice) loop facilities. In addition, in some cases loop facilities needed to be "conditioned," which means removal of devices such as loading coils -- devices that boost voice signal on long copper loops. Note that when developing the Synthesis Model (the model used to generate current OUSF cost estimates for non-rural ILECs), the FCC explicitly disallowed the use of longer loop lengths and loading coils in the model network design "because their use may impede high-speed data transmission."[30] In other words, the model's loop design (and therefore, OUSF cost estimates generated by the model) reflects a network that is already "conditioned" to offer broadband (high speed data) services.

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[29] *See* FCC WC Docket Nos. 10-90, 05-337 September 13, 2012 Model Workshop presentation "CAF 2 Model Overview, CostQuest Associates" Part 2, p. 114 available at http://www.fcc.gov/events/connect-america-phase-ii-cost-model-workshop. This page shows a pie chart labeled "Review of Current Results" and is associated with network design "Fiber to the Digital Subscriber Line Access Multiplexer" ("DSLAM"). The 75% figure quoted above is based on the visual examination of this chart. Here the main components of "broadband circuit equipment" include DSLAM, routers, modem and optical network terminal ("ONT"). While this chart is for demonstration purposes and may not reflect the current model's output, it reflects a common-sense expectation that the majority of cost of providing broadband service would be associated with cable facilities. (This footnote was inadvertently deleted from the final version of Ankum direct where it should have appeared on page 25 line 5.)

[30] *See* FCC CC Docket Nos. 96-45, 97-160, Fifth Report & Order, adopted: October 22, 1998 ("Model Platform Order) ¶ 67.

Q. DOES YOUR DISAGREEMENT WITH STAFF ON WHETHER BROADBAND NETWORKS ARE MORE EXPENSIVE THAN VOICE NETWORKS AFFECT YOUR POSITION ON STAFF'S RECOMMENDATION THAT A PORTION OF THE COST SHOULD BE ALLOCATED TO NON-VOICE SERVICES?

A. Not at all. Staff's recommendation to allocate a portion of loop cost to services other than basic local telephone service is correct. Based on Staff's observation that the loop is shared (used) by several services, including basic local telephone service and broadband, I agree with Staff's recommendation to allocate the costs of the loop.[31]

Q. ALSO ON A RELATED TOPIC, OTA'S WITNESS MR. RENNARD CLAIMS THAT THERE IS NO "CROSS-SUBSIDIZATION" OF RLECS' UNREGULATED ACTIVITES BY OUSF FUNDING BECAUSE ACCOUNTING RULES DO NOT ALLOW THAT.[32] DOES THIS STATEMENT CONFLICT WITH YOUR PROPOSAL THAT OUSF COST ESTIMATES SHOULD BE ALLOCATED/APPORTIONED BETWEEN VOICE AND BROADBAND SERVICES?

A. No. First, Mr. Rennard's statement covers only a very narrow case in which an RLEC offers a non-regulated service. It is my understanding that broadband end-user service is typically offered by ILEC affiliates, rather than by the regulated entity. Second, the very issue here is that accounting cost allocation rules do not work well with broadband service because they were developed before offerings of broadband services over

[31] In fact, as described more fully above, given ORS 759.218, such an allocation appears to be required in order to ensure that ILEC basic service does not subsidize non-regulated services.

[32] Rennard testimony (OTA), pp. 6-7.

"common" telephone lines became broadly available. For example, page 14 of Staff's testimony references a white paper on the "separations" accounting rules (a paper prepared to the state members of the Federal-State Joint Board on Universal Service).[33] This paper noted that "[h]aving been written before broadband was widely used, separations rules do not aptly measure broadband cost provided over DSL facilities."[34] It also noted that because the FCC treats stand-alone broadband Internet access transmission as regulated service,[35] "DSL loop transmission costs are included in the costs used to determine [federal] HCL [High Cost Loop] support, ICLS [Interstate Common Line Support] support, the SLC [Subscriber Line Charges], local rates, and possibly other regulated services for these [rate of return] companies."[36] The same conclusion holds for OUSF support because the RLEC OUSF cost studies are based on essentially the same accounting rules.[37]

[33] Peter Bluhme, Lorraine Kenyon, Robert Loube *Separation,* White Paper to State members of the Federal-State Joint Board on Universal Service, February 7, 2011 ("White Paper on Separations"), provided as attachment to Staff's Response to Verizon's Data Request 2-8 (2nd Set). *See* PUC Response to Verizon-Staff 2-8 and Verizon 2 Exhibit, attached hereto as OCTA/205 (AHA-8).

[34] *White Paper on Separations*, p. 2.

[35] Here the *White Paper on Separations* cites FCC CC Docket Nos. 02-33, 01-337 95-20, 98-10, WC Docket Nos. 04-242, 05-271, Report and Order and Notice of Proposed Rulemaking, Adopted: August 5, 2005 ¶¶ 128-138.

[36] *White Paper on Separations*, p. 7.

[37] More specifically, based on Order No. 03-082 in docket UM 1017, which added rural ILECs to the OUSF, the RLEC OUSF cost studies utilize the unseparated cost of common subscriber lines, the separated (based on 2001 frozen FCC factors) cost of local switching and local transport and etc. (*See* Order No. 03-082, Attachment A, p.5).

(b) Adjusting the Value of the Benchmark for Inflation (Response to Staff)

Q. WHAT IS STAFF'S PROPOSAL REGARDING ADJUSTING THE BENCHMARK TO REFLECT INFLATION?

A. On page 3 (lines 9-11) Staff proposes use of the same benchmark as the one Staff used in UM 1017.[38] Staff's response to a Frontier data request clarified that the numerical value of the benchmark proposed in this portion of the testimony is $30.[39] Based on Staff's testimony on pages 13 (lines 15-16) and 21 (lines 12-14), Staff's rationale for increasing the Benchmark from the current level of $21 to the proposed level of $30 is an inflation adjustment.[40]

Q. IS IT APPROPRIATE TO ADJUST THE CURRENT $21 BENCHMARK UPWARDS BY THE AMOUNT OF INFLATION?

A. The answer depends on whether the new benchmark is used to set OUSF subsidy for non-rural versus rural LECs, since OUSF subsidies for the former are based on older cost estimates (that do not reflect input-price changes to account for inflation) and for the latter they are based on more recent embedded cost estimates that do reflect inflation. Again, the benchmark will be compared to the LEC per line cost in order to identify the amount of subsidy. The current benchmark was set as a weighted average of the per line cost in non-RLEC wire centers. Both the current benchmark and the per line cost of non-rural LECs date back to the 1999/2000 time frame. Since Staff is not advocating an

[38] The exact wording is as follows: "Under Staff's proposal, using the same benchmark Staff used in Docket UM 1017 to set the support amounts, the annual disbursements would fall to approximately $33 million." (Staff's testimony, page 3).

[39] *See* Exhibit OCTA/204 (AHA-7).

[40] Note, however, that in response to OCTA's data request, Staff clarified that it was not proposing a specific numerical benchmark. *See* PUC Staff Response to OCTA-Staff 6, attached hereto as Exhibit OCTA/206 (AHA-9).

update to the per line cost in non-RLEC wire centers (and I support Staff's position), it would be incorrect to only adjust the benchmark (which was originally derived as the average cost), but not individual wire-center level cost. As explained in my direct testimony, I recommend using a cost-based benchmark (with several modifications). Therefore, I do not support a "one-sided" inflation adjustment to the benchmark used for the non-rural ILEC wire centers while ignoring the per line cost (which presumably underlie the benchmark). Further, I also do not support an inflation adjustment for the per line cost of the non-rural ILECs: For reasons discussed below (when responding to the non-rural ILEC testimony regarding cost model estimates), I disagree with the notion that the forward-looking per line cost in non-rural ILEC wire centers would necessarily increase compared to the existing (1999/2000) cost estimates. As explained, technological advancements and synergy savings in recent merger transactions likely reduced the forward-looking per line cost in these wire centers.

The RLECs case is different because the RLEC cost studies are current actual (embedded) cost studies and, therefore, the impact of inflation is already captured in these cost studies.

In short, while it may be reasonable to adjust the $21 benchmark upwards for inflation when setting OUSF subsidy for rural LEC study areas, it is not reasonable to do so for the non-rural LECs.

Q. ARE YOU MODIFYING YOUR PREVIOUS PROPOSAL REGARDING THE USE OF A SINGLE BENCHMARK FOR NON-RURAL AND RURAL ILECS TO INSTEAD CREATE TWO SEPARATE BENCHMARKS, ONE FOR NON-RURAL WIRE CENTERS AND ONE FOR RURAL STUDY AREAS?

A. Yes. Recall that in my direct testimony I proposed four modifications to the benchmark.[41] At a high level, when taken together, my proposals created a benchmark composed of two components -- (1) cost component and (2) revenue component. Here I am proposing to bifurcate the cost component: For non-RLEC study areas, I propose to use the same cost component as the one I proposed in my direct testimony, which was the *average cost plus two standard deviations from the average cost* (as derived from the existing cost model estimates for non-rural wire centers). For RLEC study areas, I propose a different cost component: I propose to use the current cost-based benchmark ($21) adjusted upwards for inflation, which will result in a value of $30 as calculated by Staff. I no longer propose to use the "two standard deviation" additive for the benchmark in RLEC study areas.

[41] Ankum Direct, pp. 40-54. First, instead of using the current formula *Benchmark = average cost*, I propose to use the formula *average cost + two standard deviations above the average*. Second, I propose that the benchmark for business lines consider additional revenue that a business line generates compared to residential lines. Third, for areas served by unsubsidized competitors, I propose to set a special benchmark so as to produce zero support for these areas. Fourth, as an alternative to my proposal to apportion the existing cost estimates between voice and broadband services (services that share the same network), I propose to include in the benchmark revenue associated with broadband and other unsupported services that share telecommunications network with basic voice service.

Q. WHY ARE YOU NO LONGER PROPOSING TO USE THE ADDITIVE "TWO STANDARD DEVIATIONS ABOVE THE AVERAGE" WHEN SETTING THE BENCHMARK FOR RLEC STUDY AREAS?

A. The per line cost of rural LECs are calculated on a total study area basis. The per line cost of non-rural LECs are calculated on a more granular wire center basis. This dichotomy results in a more favorable treatment of non-rural LECs compared to rural LECs when OUSF subsidy is calculated. For example, consider a simple hypothetical: a LEC has only two wire centers -- the first wire center is a "low cost" wire center, and the second is a "high cost" wire center. Assume that on average, the LEC per line cost is below the benchmark. If this company is an RLEC, it would not receive OUSF subsidy because its "low cost" wire center is offsetting the cost in the "high-cost" wire center. However, if this company is a non-rural LEC, it would receive OUSF subsidy for its "high-cost" wire center (because no offset takes place for non-rural LECs). More generally, the concept of "standard deviations above the average" comes from the fact that non-rural LEC costs are measured at a granular (wire center) level. Since the costs of rural LECs are measured at the total study area basis (where deviations above the average inherently offset deviations below the average), the approach based on standard deviations may be inconsistent with the way RLEC cost is calculated. More generally, because the costs of non-rural and rural LECs are measured at different levels of granularity, it is logical that two sets of benchmarks (instead of one) be used.

(c) Adjusting the Benchmark to Cap the Surcharge (Response to Staff)

Q. WHAT IS THE STAFF'S PROPOSAL REGARDING ADJUSTING THE BENCHMARK TO ENSURE A CAP ON THE SURCHARGE?

A. On page 18 (lines 12-13) Staff makes the following proposal regarding the benchmark: "I would set the benchmark rate based on a target range for the surcharge rate and the needs of the companies." A similar statement was made on p. 22 (lines 8-10) of Staff's testimony. To re-phrase, this portion of Staff's proposal regarding the benchmark is that first a cap ("target range") be established for the OUSF surcharge on end user bills, and then the benchmark be calculated to fall within this range. In other words, Staff is proposing a method of implementing a cap on the OUSF.

Q. WHAT IS YOUR RESPONSE TO STAFF'S PROPOSAL TO FIRST SET A CAP ON THE OUSF SURCHARGE AND THEN CALCULATE THE LEVEL OF BENCHMARK TO ENSURE THAT THE SUPPORT AMOUNT FALLS WITHIN THE RANGE OF THE CAP?

A. I agree in principle with Staff's proposal to set a cap on the OUSF surcharge since it is consistent with the proposal, made in my direct testimony, to cap the overall fund size. There are pros and cons in each approach. One advantage of Staff's proposal, to cap the OUSF surcharge, is that the "tax" burden of OUSF on Oregon consumers who pay into the fund would be capped.

However, Staff's testimony did not specify the numerical level of the surcharge cap that it is proposing, and thus, I cannot fully evaluate this proposal without having concrete figures. In a discovery response Staff indicated that the proposed cap would be in the

range 5.5% to 7.0%.[42] I believe that this range may be too high because a number of necessary changes to OUSF subsidy calculations (as recommended in my testimony) should bring the overall fund size (and the associated surcharge) down well below the 5.5% to 7.0% surcharge range.

(d) ***Adjusting the Benchmark to Reflect Projected ILEC "Needs" (Response to Staff)***

Q. WHAT IS STAFF'S PROPOSAL REGARDING MODIFICATION TO THE BENCHMARK BASED ON PROJECTED ILEC NEEDS?

A. Staff proposes to adjust the benchmark to account for the needs of the companies that receive support when setting the benchmark and resulting OUSF subsidy. This proposal is further explained in the following excerpt from Staff's testimony on page 22, lines 19-23:

> The third step in Staff's proposal consists of comparing each company's support as calculated by the modeling process with what each company needs for the upcoming year, based on the reports filed with Staff. Actual support for each company is calculated as the smaller of the model results and what they report that they need.

Q. WHAT IS YOUR RESPONSE TO STAFF'S PROPOSAL TO CALCULATE EACH COMPANY'S ACTUAL SUPPORT AS THE MINUMUM OF (1) MODEL-BASED SUPPORT, AND (2) THE COMPANY "NEEDS" AS IDENTIFIED IN REPORTS FILED WITH STAFF?

A. While the Staff proposal has some merit at a theoretical level, I do not support this proposal for the following reasons. First, this proposal creates significant reporting burden on the LECs as they would presumably need to go through a careful cost forecasting exercise at least every year in order to receive support. Second, Staff

[42] *See* Exhibit OCTA/201 (AHA-4).

proposal implies an incorrect assumption that OUSF subsidies in any given year should match actual investment and expense in that year. However, in real life, business does not follow this pattern, and often telecommunications investments are lumpy, come in spurts and are driven by the needs of end users. For example, if a LEC replaced a switch in 2010 in its high-cost wire center, the switch would be in service for 10-15 years, and it would not be part of the 2014 (as an example) current investment in Staff-proposed reports. A LEC may not have plans to build out new loop facilities at the time it is compiling Staff-proposed reports, but it may end up doing so because it receives a request to build special construction facilities from a large business that just moved into the area. Third, for non-rural ILECs, this approach considers actual embedded cost, and it would give the ILECs inappropriate incentives to over-spend (make imprudent investments) in high-cost wire centers in order to at least match the model-based estimates (which, as I discuss below, may be overstating current cost). Fourth, for rural LECs, it is not clear how this step is different from the "regular" embedded cost study calculation. It appears that the main difference is that the embedded cost study is based on actual historical cost, while the Staff-proposed calculation of "needs" would be based on the forecast of future cost. Fifth, Staff is not addressing an important issue of what type of "needs" should be included in the LEC "reports of needs." Specifically, how should investment and expense associated with the supported service (basic local telephone service) be distinguished from investment in joint use facilities (facilities used for basic local phone, broadband, etc.)? How should investment be annualized, which is necessary when comparing the "needs reports" with the cost model estimates. How should imprudent investment be identified and treated? In short, in order to solve these

conceptual problems, the "needs report" would need to be turned into a "classical" cost study (*i.e.*, the cost study that is already part of the OUSF calculation).

Q. DO YOU HAVE ANY ADDITIONAL COMMENTS ON OTHER ELEMENTS OF STAFF'S PROPOSAL THAT RELY ON THE REPORTS OF "COMPANY NEEDS," SUCH AS THE PROPOSED "RECALIBRATION OF THE MODEL" BASED UPON THE "PERCENT REDUCTION THAT OCCURS WHEN THE REPORTED REQUIREMENT IS COMPARED TO THE MODELED REQUIREMENT?"[43]

A. Yes. Staff's proposal to rely heavily on LECs' "reports of needs" and Staff's own review of those needs when setting the amount of OUSF subsidy results in a significant loss of transparency and predictability compared to the current system. In the current system, the amount of the per line subsidy for non-rural LEC wire centers was set in a contested case setting using a well-established costing methodology (the FCC Synthesis model). From there, the calculation of actual support is "automatic" -- it is the product of the company line counts and the per line support. In contrast, under Staff's proposal the calculation is not automatic; it requires significant Staff involvement (likely, an additional and undue burden on the Commission), and there is no mechanism in place that would allow public and industry participation in the review and audit of ILECs' "reports of needs."

[43] Staff testimony, p. 23 ("fifth step").

(e) ***Updating the Cost Model Will Not Increase Per Line Cost Estimates (Response to CenturyLink and Frontier)***

Q. CENTURYLINK AND FRONTIER RECOMMEND THAT THE COMMISION CONTINUE USING THE EXISTING SYNTHESIS MODEL COST ESTIMATES,[44] WHICH IS ALSO YOUR RECOMMENDATION. DO YOU AGREE WITH THE CENTURYLINK AND FRONTIER REASONING THAT UNDERLIES THEIR RECOMMENDATION?

A. Only partially. I agree only with the practical consideration that efforts to update the model would be substantial. I do not agree with the speculative assertions of CenturyLink and Frontier that, if the cost model were updated, then the resulting cost per line would be greater than the currently available (year 2000) cost estimates. First, this speculation is at odds with the CenturyLink and Frontier main recommendation, which is to preserve status quo regarding the OUSF calculations for these carriers.[45] Clearly, if the CenturyLink and Frontier updated per line cost *were* higher than the original (year 2000) cost model estimates, as conjectured by the companies, the status quo OUSF formula would produce inadequate funding going forward.[46] Yet, neither CenturyLink nor Frontier is asking to increase the funding; *i.e.*, their conjectures seem insincere.

Second, the CenturyLink and Frontier speculations are based on an incorrect presumption that the model line counts (the denominator of the per line cost) should be updated to

[44] CenturyLink testimony, pp. 14-15, Frontier testimony, pp. 12-13.

[45] CenturyLink testimony, pp. 12-17, Frontier testimony, pp. 12-14.

[46] The other possibility is that the original cost model estimates overstated true cost at the time OUSF was set, meaning that the two ILECs were over-funded by OUSF in the previous years.

reflect the ILECs current line counts.[47] CenturyLink and Frontier expect that since they lost lines to competitors, the per line cost produced by the model should go up. In reality, the issue of whether the model line counts should reflect only the ILEC line counts, or all locations passed (total market demand), is not settled by regulators. As noted in the Frontier testimony on page 12, the current OUSF cost model estimates are based on the assumption that the LEC is serving all locations in the area. This very issue is currently being addressed by the FCC in the course of the development of the new cost model that will be used to distribute federal USF (Connect America Fund ("CAF")) support in the future.[48] It is significant that as part of this effort, the FCC Wireline Competition Bureau is currently proposing to calculate unit costs on a per-location-passed basis (total potential demand), rather than on a per-subscriber ("ILECs lines only") basis.[49] It is also significant that CenturyLink and Frontier (as part of a coalition with other large ILECs) have not rejected this proposal outright, noting only that "[t]he Coalition cannot support this change until the Bureau makes clear what other changes it intends to introduce (with respect to thresholds, take rates, etc.) and until the Coalition members have an opportunity to assess the impact these changes may have on eligible census blocks, support levels, and build-out requirements."[50] The Texas Public Utility Commission

[47] CenturyLink testimony, pp. 14-15, Frontier testimony, p. 13.

[48] This discussion takes place at the FCC Wireline Competition Bureau model virtual workshop (available at http://www.fcc.gov/blog/wcb-cost-model-virtual-workshop-2012). The line count issue is the topic titled "Calculating Average Per Unit Cost/Take Rates" posted under link http://www.fcc.gov/blog/calculating-average-per-unit-costs-take-rate.

[49] *See* "Calculating Average Per Unit Cost/Take Rates" posted under link http://www.fcc.gov/blog/calculating-average-per-unit-costs-take-rate.

[50] *See* FCC WC Docket Nos. 10-90 and 05-337, Comments Of The United States Telecom Association, AT&T, CenturyLink, Frontier Communications, Verizon, And Windstream Communications In Response To The Bureau's Public Notices of December 11 & 17, 2012 dated January 11, 2013, p. 30.

("Texas PUC") also recently addressed this issue.[51] While there was no ruling on this issue by the Texas PUC because the case was settled, the Texas Commission Staff recommended (just like the FCC Wireless Competition Bureau is recommending today) that total demand, rather than the ILEC line counts, be used when modeling forward-looking per line cost for purposes of USF.[52] In short, these regulatory developments suggest that when modeling the per line cost for USF purposes, total demand, rather than ILEC line counts, should be used. Indeed, it makes sense that total demand, rather than the ILEC lines, is used when modeling forward-looking cost in the USF context: As noted in the Verizon testimony, "universal service is a *service*, and not a network,"[53] meaning that USF should not be used as a make whole mechanism for one set of providers (the incumbents in this case). If the OUSF per unit cost is recalculated when the incumbent loses lines to competitors, the resulting increase in OUSF subsidy to the incumbent serves as protection against competitive losses, rather than a benefit to end users. In addition, if line counts are adjusted to reflect the current ILEC line counts, subsidy flow would be shifted over time towards wire centers where ILEC line losses are most significant (*i.e.*, where ILECs face the strongest competition) rather than to wire centers that are "true" high cost wire centers. As noted in my opening testimony, the

[51] Public Utility Commission of Texas, Case No. 34723, *In the Matter of Petition For Review Of Monthly Per Line Support Amounts From The Texas High Cost Universal Service Plan Pursuant To PURA § 56.031 And Subst. R. 26.403.*

[52] Public Utility Commission of Texas, Case No. 34723, *In the Matter of Petition For Review Of Monthly Per Line Support Amounts From The Texas High Cost Universal Service Plan Pursuant To PURA § 56.031 And Subst. R. 26.403*, Direct Testimony of Mark Bryant, Public Utility Commission of Texas Oversight and Enforcement Division, February 29, 2008, p. 6.

[53] Verizon testimony, p. 23 (emphasis original to the source).

Commission should instead attempt to calculate support in a manner that provides ILECs an incentive to operate their networks in an efficient manner.

Third, CenturyLink's and Frontier's speculation that updating the model would result in higher per line cost estimates ignores the cost-saving impact of mergers and technological innovations. In my direct testimony I explained how the recent merger transactions (CenturyLink's acquisition of Qwest, and Frontier's acquisition of Verizon properties in Oregon and some other states) resulted in significant operating and capital expense savings and synergies.[54] In addition, a number of significant technological innovations in the telecommunications industry have transpired since the time the OUSF cost model was developed. Softswitches, Internet Protocol ("IP")-based transmission and Voice over IP ("VoIP") telephony are common place today, but are not reflected in the Synthesis model, which utilizes engineering design based on now outdated circuit switching and transmission technology. Just like mergers, technological innovations decrease cost over time. An illustration of the potential cost-cutting impact of softswitch technology is the fact that for the federal USF model currently being developed by the FCC, the Wireline Competition Bureau proposes to include *one softswitch per state per carrier* to support voice capability of the modeled networks.[55] CenturyLink and Frontier (acting in coalition with other large ILECs) have supported this proposal.[56] For comparison, the model cost estimates currently used for OUSF assume that CenturyLink operates seventy

[54] Ankum Direct testimony, pp. 84-92.

[55] *See* the FCC Wireline Competition Bureau model virtual workshop, subtopic "Voice Capability" available at http://www.fcc.gov/blog/wcb-cost-model-virtual-workshop-2012-voice-capability.

[56] *See* FCC WC Docket Nos. 10-90 and 05-337, Comments Of The United States Telecom Association, AT&T, CenturyLink, Frontier Communications, Verizon, And Windstream Communications In Response To The Bureau's Public Notices of December 11 & 17, 2012 dated January 11, 2013, p. 20.

eight local switches (based on the number of its wire centers) plus several additional access tandem switches. Clearly, a reduction of the number of switches from seventy eight to one would have a dramatic effect on the total switching, land and building costs.

(f) Using Average Cost Per Wire Center Does Not Understate Costs (Response to CenturyLink)

Q. CENTURYLINK PROVIDED AN EXAMPLE OF THE MAPLETON WIRE CENTER, WHICH IS A WIRE CENTER WITH VERY LOW DENSITY. HOW USEFUL IS THIS EXAMPLE FOR THE COMMISSION TO UNDERSTAND WHETHER CHANGES NEED TO BE MADE TO OUSF?

A. This example does not provide any principally new information. CenturyLink's testimony is that Mapleton is a relatively high cost wire center within CenturyLink's serving territory, and that this result is driven by low density and long loop lengths. The same observation can be made by examining the existing cost model estimates, according to which Mapleton is one of the highest-cost wire centers in the state. More specifically, based on the model, Mapleton is the fifth highest-cost wire center among the legacy Qwest wire centers, with a cost of $93.68 per line per month.[57] CenturyLink currently receives $66.70 per line per month in OUSF support in the Mapleton wire center.[58] What CenturyLink does not explain is why it picked this wire center as its example, rather than one of the other thirty-nine wire centers where it receives OUSF subsidy. For example, given that CenturyLink is advocating preservation of the status quo, it may be more

[57] Cost information is based on Staff's responses to OCTA discovery. *See* PUC Staff Response to OCTA-Staff 1 and Data Request 1: Attachment A, attached hereto as Exhibit OCTA/207 (AHA-10).

[58] *See* "OUS Support for ILEC Wire Centers in Oregon" posted at http://www.oregon.gov/puc/ousf/docs/Support%20by%20Wire%20Center%20-%20Oregon.pdf.

useful to look closer at one of the "borderline high cost" wire centers (wire centers that are just above the threshold that qualifies them for OUSF funding).

Q. AT PAGE 6, CENTURYLINK'S TESTIMONY USES THE MAPLETON WIRE CENTER EXAMPLE TO INTRODUCE THE CONCEPT OF "DONUT AND HOLE." SHOULD THE COMMISSION BE CONCERNED ABOUT THE ISSUE OF "DONUT AND HOLE?"

A. No. CenturyLink explains that "donut and hole" arises because population density in the central part of a wire center ("hole") is higher than density in the remainder ("donut") of the wire center. But the model cost estimates (and the OUSF subsidy) are based on the average wire-center level cost, which is lower than the cost in the "hole" and higher than the cost in the "donut." As a result, while CenturyLink is "over-subsidized" for customers located in the "hole" of the Mapleton wire center, and "under-subsidized" for customers located in the "donut," on average it receives the "right"[59] amount of subsidy. More generally, the issue of "donut and hole" is an unavoidable reality of using averages: Because of practical considerations, cost cannot be estimated at the individual customer level, and therefore, some kind of geographic averaging has to take place. At some locations the true cost is greater than the average; in other locations the true cost is less than the average.

[59] Here for simplicity I am ignoring other factors that may render the level of subsidy for the Mapleton wire center too high.

Q. DO CENTURYLINK AND FRONTIER TARIFFS ALLOW THESE CARRIERS TO CHARGE THEIR END USERS SPECIAL CHARGES WHEN CONSTRUCTING FACILITIES IN THE "DONUT" (LOWEST DENSITY) AREAS?

A. Yes. CenturyLink, Frontier and other ILECs can assess line extension charges in situations where the needed plant extension is longer than a certain threshold. For example, the CenturyLink Qwest tariffs dictate that line extension charges apply when the extension is outside the Base Rate area,[60] which is "[t]he area of highest population density within an exchange where local exchange access line rates apply without any additional mileage charges."[61] According to the CenturyLink Qwest Price List, line extension charges apply to extensions in excess of 1/10th of a mile, and amount to $440 per each 1/10th of mile for individual applications and $740 per each 1/10th of a mile for group applications.[62] The Frontier (legacy Verizon) tariff contains very similar provisions, with line extension charges applying to extensions in excess of 1/10th of a mile, and amounting to $440 per each 1/10th of mile for all applications.[63]

Line extension charges can offset the extraordinary cost of telecommunications networks in the highest-cost portions of each wire center. Yet, when calculating the average per line cost, the cost model does not distinguish between customer locations subject to line extension charges, and all other customer locations. This means that the model cost

[60] Qwest Corporation, Price List Exchange and Network Services, Section 4 p 4.

[61] Qwest Corporation, Tariff P.U.C. Oregon No. 33, section 2 page 1.

[62] Qwest Corporation, Price List Exchange and Network Services, Section 4 p 12.

[63] Frontier Communications Northwest, Inc., Oregon PUC Tariff No. 18, Section 4, pp. 104-105.

reflects the cost of construction to ***all*** locations, and OUSF subsidy is calculated to support service to ***all*** locations in a wire center despite the fact that construction costs to some of these locations may be compensated through line extension charges paid by end-users.

(g) Unserved Areas Exist Despite ILEC COLR Obligations (Response to ILECs)

Q. THE ILECS ARGUE THAT THEY ARE ENTITLED TO OUSF BECAUSE OF THEIR STATUS AS CARRIERS OF LAST RESORT.[64] HOW DO LINE EXTENSION CHARGES AND THE EXISTENCE OF UN-SERVED AREAS WEAKEN THEIR COLR ARGUMENT?

A. In theory, the COLR obligation implies that a LEC is obliged to provide service to its entire service territory. In practice, some areas within ILEC serving territories are un-served or under-served (do not have telephone plant facilities), and line extension charges present a barrier for end users to obtaining the service. This issue is documented in the testimony of Mr. Anspach, on behalf of Warm Springs Telecommunications Company. As a background, Warm Springs Telecommunications Company is a facilities-based competitive provider that serves tribal lands ('the donut") within the CenturyLink Warm Springs wire center. Based on the OUSF cost model estimates, this wire center is the highest-cost wire center in the CenturyLink Qwest territory at $176.79 per line per month.[65] It currently receives a subsidy in the amount of $149.81 per line per month. [66] According to Warm Springs Telecommunications Company, before it started building

[64] CenturyLink testimony, p. 17, Frontier testimony, p. 11, Testimony of Mr. Duval on behalf of OTA, p. 12.

[65] *See* Exhibit OCTA/207 (AHA-10).

[66] *See* "OUS Support for ILEC Wire Centers in Oregon" posted at http://www.oregon.gov/puc/ousf/docs/Support%20by%20Wire%20Center%20-%20Oregon.pdf.

facilities in the area, 40% of residents on the reservation did not have access to landline telephone service,[67] and residents who tried to obtain service from Qwest were told to pay $1,000 line extension charges -- an amount of money they were not able to afford.[68] As this example illustrates, line extension charges allow ILECs to essentially avoid serving very high cost customers.

The testimony filed on behalf of OTA by Mr. Hemphill, vice-president of Pine, provides further evidence that CenturyLink does not make accessible its service to all customers within its serving territory. Mr. Hemphill explained that one of Pine's exchanges was formed from a portion of CenturyLink Qwest's Culver exchange that was completely un-served by Qwest.[69] For example, Pine identified over 600 establishments that were without service. [70] Mr. Hemphill further explained that, as a result of Pine's efforts beginning in 2005, this un-served portion of Qwest's Culver exchange has been re-allocated to Pine and now constitutes the Three Rivers exchange. [71] As background, based on the OUSF cost model estimates, the Culver exchange is thirteenth highest cost exchange in the CenturyLink Qwest territory at $55.80 per line per month, and CenturyLink Qwest is currently receiving support in this exchange in the amount of $28.82 per line per month. [72]

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[67] Warm Springs testimony, p. 3.

[68] Warm Springs testimony, p. 3.

[69] Hemphill testimony, p. 3.

[70] Hemphill testimony, p. 3.

[71] Hemphill testimony, pp. 3-4.

[72] *See* "OUS Support for ILEC Wire Centers in Oregon" posted at http://www.oregon.gov/puc/ousf/docs/Support%20by%20Wire%20Center%20-%20Oregon.pdf.

(h) ***Revenue-Based Benchmark (Response to CenturyLink)***

Q. CENTURYLINK CLAIMS ON PAGE 16 THAT THE BENCHMARK SHOULD NOT CONSIDER REVENUE FROM ANY OTHER SERVICE (OTHER THAN THE BASIC LOCAL TELEPHONE SERVICE), CITING ORS 759.425(3)(A). DO YOU AGREE?

A. No. This portion of CenturyLink's testimony is misleading. The testimony reads "[i]n addition, based on my understanding of ORS 759.425(3)(a), the Commission is directed to establish a benchmark for basic telephone service and accordingly the benchmark should not consider revenues from other services." The referenced statute, ORS 759.425(3)(a), actually reads as follows:

> (3)(a) The Public Utility Commission shall establish a benchmark for basic telephone service as necessary for the administration and distribution of the universal service fund. The universal service fund shall provide explicit support to an eligible telecommunications carrier that is equal to the difference between the cost of providing basic telephone service and the benchmark, less any explicit compensation received by the carrier from federal sources specifically targeted to recovery of local loop costs and less any explicit support received by the carrier from a federal universal service program.

While the statute does direct the Commission "to establish a benchmark for basic telephone service", as stated in the first part of CenturyLink's assertion, nothing in this statute prohibits the Commission from considering revenue from other services -- which is what CenturyLink's second part of the sentence and connecting term "accordingly" suggests. In fact, the next provision, ORS 759.425(3)(b) gives the Commission broad powers to "periodically review the benchmark and adjust it as necessary to reflect: (A) Changes in competition in the telecommunications industry; (B) Changes in federal

universal service support; and (C) Other relevant factors as determined by the commission." If the Legislature had wanted to restrict the Commission's discretion in this respect it could have simply used appropriate language, such as "shall establish an average cost benchmark". The Legislature did not do so, and the Commission has in previous Orders recognized that whether the benchmark is determined based on cost, revenues or rates lies squarely within the discretion of the Commission.[73]

(i) Revenue Neutrality and the Specter of Rate Increases (Response to Staff, Frontier and OTA)

Q. STAFF, FRONTIER AND OTA ADDRESS THE REVENUE NEUTRAL REQUIREMENT.[74] PLEASE RESPOND.

A. Frontier testified that if OUSF funding is decreased as a result of this proceeding, "[o]ffsetting increases in basic local service rates would need to be immediately implemented."[75] Frontier mentions that when OUSF was implemented in 2001, Frontier (then GTE) implemented rate rebalancing, and those rate reductions continue to be in place today.[76] Mr. Lawrence makes similar claims that if OUSF support is increased for his companies (Peoples and Stayton), local rates would need to go up.[77] I disagree. I am not aware of a Commission rule that contains the referenced revenue neutrality requirement. Staff's testimony explains that ILECs were required in the past to offset any

[73] *See* Order No. 00-312 in docket UM 731, dated June 16, 2000, pp. 20-22.

[74] Staff testimony, p. 26, Frontier Direct, p. 9, OTA Lawrence testimony, pp. 5-6.

[75] Frontier testimony, p. 9.

[76] Frontier testimony, p. 9.

[77] Lawrence testimony (OTA), pp. 5-6

money received from the OUSF by an equal amount of revenue reduction achieved by lowering prices.[78] But this does not constitute a rule.

Staff is correct that OUSF subsidy should *not* be conditioned on revenue neutral rate reductions. As I understand, the ILECs were required to reduce some local and access rates at the time OUSF was first distributed to them. That was made to prevent a revenue windfall: At that time an implicit subsidy (subsidy built in rates) was *replaced* with an explicit subsidy, OUSF. If OUSF is reduced as a result of this proceeding, the reduction would be driven by recognition that there is a *reduced* need for subsidy (not because the same subsidy is re-packaged). An "immediate rate increase" (as proposed by Frontier) would only be needed if explicit funding *were* being replaced with implicit funding -- a process that no party proposes here.

Q. OTA'S WITNESS MR/ DUVAL SAYS THAT THE REASON OTA IS AGAINST INCREASING THE BENCHMARK IS BECAUSE "THE OUSF IS DESIGNED TO RECOVER COSTS THAT CANNOT BE REASONABLY RECOVERED FROM END USER AND ACCESS CUSTOMERS."[79] DO YOU AGREE?

A. No. The OUSF design is evident from the statutory formula for calculating support, which is *Cost minus Benchmark minus Federal Explicit Loop Compensation minus Federal USF Support*. There is nothing in the formula that would suggest that the OUSF needs to fully compensate a carrier for the shortfall between recovery from end user/access customers, and cost. If the OUSF design *were* as described by Mr. Duval, the

[78] Staff testimony, p. 26.

[79] Duval testimony (OTA). p. 11.

OUSF formula would have contained a component *LEC End User and Access Revenue* instead of the *Benchmark*, which would in essence reduce the entire exercise to a traditional rate case. This is not the purpose of the OUSF. In fact, the Commission has expressly confirmed that OUSF cannot be used as an offset to access losses.[80]

Q. CENTURYLINK CLAIMS THAT THE FCC USF/ICC REFORM "SET THE STAGE TO NEARLY ELIMINATE ANY REMAINING TERMINATING SWITCHED ACCESS REVENUES OVER THE NEXT FEW YEARS, TRANSFERRING THOSE COSTS TO THE END USERS."[81] CENTURYLINK COMPLAINED ABOUT THE INCREASED INCERTAINTY CAUSED BY THE FCC REFORMS.[82] DO YOU AGREE?

A. No. First, even if CenturyLink were correct in its assessment, I do not see the relevance: any FCC/ICC reforms are federally mandated and this Commission should not seek to compensate or make accommodations for such reforms, so CenturyLink's testimony seems out of place. Further, CenturyLink is grossly misrepresenting the FCC reforms. While the FCC reforms did mandate a gradual reduction of *certain* (not all[83]) terminating switched access revenue, they also created a new recovery mechanism for the lost ILEC terminating access revenue. Under this recovery mechanism, a bulk of recovery comes

[80] *See* Order No. 11-472 in UM 1017 Phase III.

[81] CenturyLink testimony, p. 12.

[82] CenturyLink testimony, p. 13.

[83] The Order does not deal with tandem switching, neither does it provide a transition path for dedicated switched access facilities (*see* USF/ICC Transformation Order ¶ 801 (the Timeline table) and ¶ 1297 (explaining that "[a]lthough we specify the implementation of the transition for certain terminating access rates in the Order, we did not do the same for other rate elements, including originating switched access, dedicated transport, tandem switching and tandem transport in some circumstances, and other charges including dedicated transport signaling, and signaling for tandem switching.")

from the newly created federal USF program -- Connect America Fund Intercarrier Compensation Support ("CAF ICC"),[84] while recovery from end users, which takes place through a new Access Recovery Charge, is limited to a maximum annual increase ($0.50 for residential and small business customers).[85] As I noted in my direct testimony, the CAF ICC mechanism applies to both non-rural and rural ILECs, and companies started receiving it in July 2012 (the month when the FCC-mandated access reductions were first implemented). While the FCC reforms do include a gradual decline in CAF ICC support, this decline is designed to capture reductions in access revenue that would likely happen anyway (without the reform). Another reason why the FCC reforms are not revenue-neutral is that carriers such as CenturyLink Qwest have been enjoying cost savings from declining switching cost without a matching reduction in access rates. Specifically, the FCC explained as follows:

> 38. In defining how much of their lost revenues carriers will have the opportunity to recover, we reject the notion that ICC reform should be revenue neutral. We limit carriers' total eligible recovery **to reflect the existing downward trends on ICC revenues with declining switching costs and minutes of use**. For price cap carriers, baseline recovery amounts available to each price cap carrier will decline at 10 percent annually. Price cap carriers whose interstate rates have largely been unchanged for a decade because they participated in the Commission's 2000 CALLS plan will be eligible to receive 90 percent of this baseline every year from ARCs and the CAF. In those study areas that have recently converted from rate-of-return to price cap regulation, carriers will initially be permitted to recover the full baseline amount to permit a more gradual transition, but we will decline to 90 percent recovery for these areas as well after 5 years. All price cap CAF support

[84] *USF/ICC Transformation Order*, ¶¶ 850-851 (outlining intercarrier compensation revenue eligible for recovery) and 853 (describing CAF ICC mechanism).

[85] *USF/ICC Transformation Order*, ¶ 36: "We permit incumbent telephone companies to charge a limited monthly Access Recovery Charge (ARC) on wireline telephone service, with a maximum annual increase of $0.50 for consumers and small businesses, and $1.00 per line for multi-line businesses, to partially offset ICC revenue declines. To protect consumers, we adopt a strict ceiling that prevents carriers from assessing any ARC for any consumer whose total monthly rate for local telephone service, inclusive of various rate-related fees, is at or above $30."

> for ICC recovery will phase out over a three-year period beginning in the sixth year of the reform
>
> 39. For rate-of-return carriers, recovery will be calculated initially based on rate-of-return carriers' fiscal year 2011 interstate switched access revenue requirement, intrastate access revenues that are being reformed as part of this Order, and net reciprocal compensation revenues. This baseline will decline at five percent annually to **reflect combined historical trends of an annual three percent interstate cost and associated revenue decline, and ten percent intrastate revenue decline**, while providing for true ups to ensure CAF recovery in the event of faster-than-expected declines in demand. **Both recovery mechanisms provide carriers with significantly more revenue certainty than the *status quo***, enabling carriers to reap the benefits of efficiencies and reduced switching costs, while giving providers stable support for investment as they adjust to an IP world.[86]

As noted in the above citation from the *FCC USF/ICC Transformation Order*, the FCC reforms provided ILECs with more stability (less risk) than the pre-reform system: It replaced the unstable stream of switched access revenue (which was declining due to the decline in access lines and minutes of use) with a more predictable stream of federal CAF ICC support.

Q. DOES OTA'S TESTIMONY PROVIDE A BALANCED VIEW OF THE IMPACT OF THE FCC REFORMS ON THE RLECS?

A. No. OTA's Mr. Duval simply complains about the unspecified "significant risk" faced by RLECs due to the FCC reforms.[87] While he acknowledges the existence of the new federal CAF ICC support mechanism, he does not say directly that this mechanism offsets the FCC-mandated switched access reductions -- instead, he vaguely notes that CAF ICC "is associated with" the FCC-mandated intercarrier compensation reform.[88]

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[86] *USF/ICC Transformation Order*, ¶¶ 38-39 (bold font added for emphasis; italics font is original to the source).

[87] Duval testimony, p. 7.

[88] Duval testimony, p. 13 footnote 17.

The testimony filed on behalf of OTA by Mr. Lawrence, President and CEO of Stayton Cooperative Telephone Company ("Stayton") and Peoples Telephone Company is misleading the Commission when he notes that "Stayton can no longer receive compensation for terminating wireless intraMTA calls on its network."[89] A critical fact that Mr. Lawrence neglects to mention is that while the FCC did adopt bill-and-keep as a default compensation for wireless/landline intraMTA traffic, the CAF ICC mechanism simultaneously provided the RLECs with recovery of the lost terminating wireless intraMTA revenue.[90] In addition, while Mr. Lawrence acknowledges that access revenue being reduced as part of the FCC reforms is being made up through federal compensation mechanism (*i.e.*, CAF ICC), he complains that this compensation is subject to a 5% annual reduction.[91] As noted above, the gradual decline in CAF ICC support is designed to capture a reduction in access revenue that would likely happen anyway (without the reform). As an illustration, between 2009 and 2011, Stayton's switched access minutes of use declined at an annualized rate of *** ___ ***.[92] Absent changes in access rates, this decline in access minutes translates into a *** ___ *** annual decline in access revenue. The FCC reform, which creates a guaranteed and predictable stream of CAF ICC likely reduced riskiness of Stayton's operations compared to an alternative scenario in which no reform has taken place.

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[89] Lawrence testimony, p. 5.

[90] *See* 47 CFR § 51.917 "Revenue recovery for Rate-of-Return Carriers", where item (d) "Eligible Recovery for Rate-of-Return Carriers "includes "CMRS Net Reciprocal Compensation Revenues."

[91] Lawrence testimony, p. 5.

[92] Calculated from Stayton's 2011 and 2009 *Annual Form O Report*, schedule S-2, line 13 ("Total [interstate and intrastate] Access Minutes Billed to IXCs") provided as confidential attachments to OTA Data Response to OCTA's Data Request 1-1 (1st Set). *See* OTA Response to OCTA-Stayton 1 (selected pages), attached hereto as Confidential Exhibit OCTA/208 (AHA-11).

(j) ***CLEC OUSF Support (Response to Warm Springs and Staff)***

Q. IN LIGHT OF THE WARM SPRINGS TESTIMONY, DISCUSSED EARLIER IN YOUR REPLY TESTIMONY, DO YOU HAVE A NEW PROPOSAL REGARDING THE CALCULATION OF OUSF SUBSIDY FOR COMPETITIVE CARRIERS SERVING PREVIOUSLY UN-SERVED AREAS?

A. Yes. I propose that in cases such as that of Warm Springs Telecommunications Company, *i.e.*, where a competitive carrier builds out plant to *previously un-served* areas, the OUSF subsidy level for this carrier be set based on the competitive carrier's own embedded per line cost. Under the current mechanism, Warm Springs Telecommunications Company is receiving OUSF support based on CenturyLink Qwest average cost in the Warm Springs wire center. Yet, as noted above, CenturyLink Qwest does not even have facilities to end users served by Warm Springs Telecommunications Company. In other words, the cost model estimates for this wire center are not representative of the cost associated with serving end users of the competitive provider. My proposal increases the accuracy of measuring cost in previously un-served areas because the per line cost will be based on the competitive company's actual (embedded) cost study -- similar to the cost methodology used for RLECs. I also propose that OUSF subsidy calculations for the competitive provider serving previously un-served areas are based on the same benchmark as the benchmark for RLECs. As I explain earlier in my reply testimony, I have modified my previous benchmark proposal by recommending use of two different benchmarks for rural and non-rural LEC study areas.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

UM 1481

EXHIBIT AHA-4

TO

REPLY TESTIMONY
OF

AUGUST H. ANKUM, Ph.D.

ON BEHALF OF

THE OREGON CABLE TELECOMMUNICATIONS ASSOCIATION

PUBLIC

Data Request OCTA-Staff 7:

In Mr. White's prefiled testimony at Staff/100, White/22 lines 8-10, Mr. White proposes establishing a target range for the OUSF surcharge: At what levels does Staff propose to establish this target range?

PUC Staff Response to OCTA-Staff 7:

Staff's initial proposal would be in the 5.5%-to-7.0% range, which is approximately the historical range, excluding the most recent rate and one other that was used to make a rapid adjustment to the size of the fund. The actual surcharge rate could be below this range, but not above it.

BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

UM 1481

EXHIBIT AHA-5

TO

REPLY TESTIMONY
OF

AUGUST H. ANKUM, Ph.D.

ON BEHALF OF

THE OREGON CABLE TELECOMMUNICATIONS ASSOCIATION

PUBLIC

LIST OF PROPOSALS FROM DIRECT TESTIMONY

Issue 1: *What Changes Should Be Made To The Existing OUSF Related To The Calculation, Collection And Distribution Of Funds?*

- The Commission should modify the methodology for calculating OUSF support based on the following principles:
  - The overall size of the fund should be capped. The cap should be based on the fund size calculated under the modifications to the methodology for calculating support adopted by the Commission in this docket.
  - Areas in which one or more unsubsidized competitor is present should not receive OUSF support.
  - Affordability is a concept that varies by customer class, and business lines should be supported, if at all, to a lesser extent than residential lines.
  - There is no need to support non-primary residential and business lines.
  - There is no need to support non-rural ILEC study areas.
- The Commission should make the following changes to the methodology for calculating the components of the OUSF support formula:
  - For the per line Cost calculation of rural carriers:
    - Implement caps on the supportable levels of capital, operating expense, and corporate overhead consistent with the approach taken by the FCC.
    - Reduce the cost of capital assumption to levels that reflect current (low) interest rates.
  - For the per line Cost calculation of all ILECs: Apportion the per line Cost between basic voice and broadband service.[1] As an alternative to this solution, modify the benchmark by adding the average broadband revenue per line in the Benchmark.

[1] See the new proposal above regarding the specific apportionment methods.

- For the Benchmark calculation:
    - Calculate the Benchmark as a sum of Cost and Revenue Components.
    - Bifurcate the Benchmark: Calculate a separate (higher) Benchmark for business lines as follows: the Benchmark for residential lines plus a Revenue Component, calculated as the difference between the national average urban residential and business rates (approximately, $20).
    - Consistent with the principle that no support should be given in areas served by an unsubsidized competitor, set the Benchmark in those areas equal to the Area-Specific Cost minus Federal Explicit Loop Compensation minus Federal USF Support.[2]
    - To account for the issue that the same network supports voice and broadband services, and as an alternative to the cost-based solution to this problem: Modify the benchmark by adding the average broadband *revenue* per line in the Benchmark.[3]

- With respect to the calculation of the Federal Explicit Loop Compensation, the Commission should order the following:
    - For non-rural ILECs, update the amounts of the per line Federal Explicit Loop Compensation to reflect the current levels of these carriers' Subscriber Line Charges ("SLC").
    - For the three rural ILECs affiliated with non-rural ILECs (CenturyLink, Citizens and United): Given that the change in the FCC support mechanism according to which high-cost support for these carriers is frozen at 2011 levels and moved to a single "Frozen High-Cost Support" mechanism, the Commission should order the use of the 2011 per line levels of Interstate Common Line Support ("ICLS") and Interstate Access Support ("IAS") going forward. Except for this change, continue using the current formula for calculating the Federal Explicit Loop Compensation formula for these ILECs.

- With respect to the calculation of the Federal USF Support, the Commission should order:
    - For non-rural ILECs (ILECs for which the federal high-cost USF support is assumed to be zero in the current formula), include the IAS funding in the calculation of their Federal USF Support. Because IAS was frozen at the 2011 levels and moved to the "Frozen High Cost Support" category, use the 2011 zoned per line levels to allocate this support to the appropriate wire centers.

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[2] The effect of this calculation is to set support at $0.00.

[3] Pursuant to the Rulings of the ALJ Denying OCTA's Motion to Compel and OCTA's Motion to Certify, the requisite data for this calculation is not available.

- For all ILECs: include the new Connect America Fund Intercarrier Compensation Support ("CAF ICC") and IncrementalSupport ("IS") funding in the calculation of the Federal USF Support.

- For non-rural ILECs: include the new Incremental Support funding in the calculation of the Federal USF Support.

Issue 2: *What Changes Should Be Made To The Existing OUSF Related To How Funds Are Used?*

- Adopt measures to increase accountability of OUSF moneys.

- Make a policy decision to provide OUSF support only to residential primary lines or, at most, only to a residential primary and single line business lines.

Issue 3: *What Changes Should Be Made To The Existing OUSF Related To Transparency And Accountability?*

- Conduct periodic reviews of the OUSF, which will include a review of areas served by unsubsidized competitors and/or revisions to the fund cap.

BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

UM 1481

EXHIBIT AHA-6

TO

REPLY TESTIMONY
OF

AUGUST H. ANKUM, Ph.D.

ON BEHALF OF

THE OREGON CABLE TELECOMMUNICATIONS ASSOCIATION

PUBLIC

Data Request OCTA-Staff 5:

In Mr. White's prefiled testimony at Staff/100, White/16 lines1-7, Mr. White discusses a method of allocating joint network cost among broadband services and basic local service. In his prefiled testimony at Staff/100, White/17 lines1-5, Mr. White states: "Staff's proposal will address how to incorporate the method discussed above into the support calculation." Please provide additional details on Staff's proposal regarding the allocation method. Specifically, does Staff propose to allocate one third of cost to basic local service as discussed at Staff/100, White/16 lines 1-7? If not, what is Staff's proposal regarding how to allocate cost?

PUC Staff Response to OCTA-Staff 5:

Staff's initial proposal for the treatment of cost, found on page 20, is to allocate the network cost equally among the services using the network. If the network is used to provide voice, TV, and intranet, the cost would be allocated equally among these three services.

BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

UM 1481

EXHIBIT AHA-7

TO

REPLY TESTIMONY
OF

AUGUST H. ANKUM, Ph.D.

ON BEHALF OF

THE OREGON CABLE TELECOMMUNICATIONS ASSOCIATION

PUBLIC

Date: January 3, 2013

TO: Renee Willer
Frontier Communications
20575 NW Von Neumann Drive
Beaverton OR 97006

FROM: Roger White
Program Manager
Universal Service & Regulatory Analysis Section

OREGON PUBLIC UTILITY COMMISSION

Docket No. UM 1481– 2nd Set of Frontier's Data Requests to OPUC

Filed: December 21, 2012 Due: January 4, 2013.

Data Request: FTR-STAFF-Staff 2-1 to Staff 2-13

Data Request FTR-STAFF 2-1:

With regard to Frontier NW (which Mr. White calls "Legacy Verizon"), provide all documentation and other material on which Mr. White based his statement that the "modeled network" was "more expensive than the actual one in place" (p. 11, line 11).

PUC Staff Response to FTR-STAFF 2-1:

FTR1-Exhibit contains a study conducted in 2005 that compares the results of the HCPM model with the results of embedded cost studies for each of the rural/small companies. The findings strongly suggest that the modeled costs are higher than the embedded costs, which reflect the actual company cost.

Data Request FTR-STAFF 2-2:

On page 3 of his testimony Mr. White states that "the current annual disbursement" from the OUSF is "approximately $44 million." On page 11 he states that the two non-rural companies receive approximately $30 million per year, and on page 12 he states that the rural companies are receiving approximately $9 million per year, for a total of $39 million per year. Explain the difference between this $39 million total and the $44 million figure.

PUC Staff Response to FTR-STAFF 2-2:

On page 11, when I was addressing the approximate amount of support that the non-rural companies receive, I was not differentiating between rural and non-rural business units within Frontier and CenturyLink. The two companies together receive $33 million, which I rounded down to $30 million. The remaining rural companies received $9.5 million, which I rounded down to $9 million. The table below gives a breakdown of the support and shows how the $44 million was reached.

The complete breakdown of the $44 million is as follows:

Company Groups	Sub-Totals	Totals
Rural Property	593,200	
Non-Rural Property	11,033,076	
Total Frontier		11,626,276
Rural Property	5,569,000	
Non-Rural Property	16,067,154	
Total CenturyLink		21,636,154
CLECs		1,259,360
Other Rural Companies		9,488,733
TOTAL SUPPORT		44,010,523

Data Request FTR-STAFF 2-3:

With regard to page 14, lines 4-6, explain Mr. White's possible exception of Frontier's "rural company" (i.e., Citizens) from his statement that "almost a hundred percent of the rural companies' customers are served by broadband networks."

PUC Staff Response to FTR-STAFF 2-3:

On page two of Mr. Wolf's presentation, there is a list of 29 companies that are providing service in Oregon. Neither Citizens nor Frontier was on the list of companies. Based upon that, I assumed Citizens was not part of the 27 covered by the broadband deployment slide.

Data Request FTR-STAFF 2-4:

Assuming Frontier's "rural company" (i.e., Citizens) does not serve almost one hundred percent of its customers by a broadband network, does Mr. White propose subjecting that company to his recommend cost allocation process?

PUC Staff Response to FTR-STAFF 2-4:

No. I am not proposing to subject any company to a specific cost allocation process. My initial proposal is to ensure that the people who pay into the fund are not subject to paying expenses that should not be allocated to the fund.

Data Request FTR-STAFF 2-5:

(a) With regard to Mr. White's proposal to allocate costs among "services sharing the same network" (page 20, lines 10-15), if at a future time a company ceases to provide one or more such services, would the cost allocation be revised to reflect that change?

(b) If the answer is other than an unqualified "yes," explain the reasons for the answer.

PUC Staff Response to FTR-STAFF 2-5:

a. It is possible the cost allocation could change.
b. At this time I do not know what data will be available from the companies.

Data Request FTR-STAFF 2-6:

With regard to Page 23, lines 13-22,

(a) identify the CLECs currently receiving OUSF support;

(b) identify the wire centers for which they are receiving support;

(c) Identify the "model" that would – under the Staff's proposal, be used for calculating the CLEC's support for each such wire center.

PUC Staff Response to FTR-STAFF 2-6:

a. The CLECs are Warm Springs and Comspan.
b. Warm Springs is serving the Warm Springs wire center. Comspan is serving Bandon, Coquille, Myrtle Point, Reedsport, Sutherlin, Veneta, and Winston.
c. The FCC model would be used for all of these wire centers.

Data Request FTR-STAFF 2-7:

With regard to page 24, lines 7-9,

(a) identify each company Mr. White believes is "utilize[ing] VoIP to deliver basic local service" and is not paying into the OUSF based on the revenues from those services;

(b) describe such service(s) being provided by each such company.

PUC Staff Response to FTR-STAFF 2-7:

a. We do not have this information.
b. We do not have this information.

Data Request FTR-STAFF 2-8:

With regard to page 25, lines 3-4, identify the FCC decision(s) to which Mr. White refers.

PUC Staff Response to FTR-STAFF 2-8:

The decision I was referencing is the one noted below that found that state universal service funds may assess nomadic VoIP intrastate revenues. See WC Docket No. 06-112, FCC 10-185, Declaratory Ruling (rel. Nov. 5, 2010).

Data Request FTR-STAFF 2-9:

With regard to page 26, lines 1-3, explain whether Mr. White's answer applies to both nomadic and fixed VoIP services.

PUC Staff Response to FTR-STAFF 2-9:

Fixed VoIP.

Data Request FTR-STAFF 2-10:

With regard to page 26, lines 12-14 and page 29, line 4, describe the "improvements" Mr. White mentions.

PUC Staff Response to FTR-STAFF 2-10:

The improvements are to the Public Switched Telephone Network and include investments in the local loop, interoffice facilities, and switching in the high cost areas.

Data Request FTR-STAFF 2-11:

With regard to page 29, lines 6-12,

(a) identify the rates Mr. White would allow to be increased;

(b) state whether the allowed rate increases would be designed to fully replace the reduced OUSF support;

(c) describe the "transition" to which he refers, including its timeframe;

(d) describe the regulatory process by which each company would be allowed to make such rate increases.

PUC Staff Response to FTR-STAFF 2-11:

a. See FTR 2-Exhibit.
b. No.
c. The transition being described is from a state where the company is being paid to not increase the rates for the services indentified in FTR 1-Exhibit to one where the OUSF funds that the company is receiving are used only for the high cost areas. The timeframe will be determined once the final process is in place.
d. Issue 12 in Order No. 00-312 required the two non-rural companies to make a revenue neutral filing in which they lowered the prices and presumably would keep them at that level going forward. The statement "I believe that it is fair to allow the companies to change prices..." means the companies are no longer bound to keep those prices fixed once the use of the funds has been repurposed. Any rate changes would have to follow the normal requirements a company faces for making rate changes.

Data Request FTR-STAFF 2-12:

(a) If Staff's answer to Data Request FTR-Staff 2-11(b) is other than an unqualified "yes," state whether Staff would support relieving the company of its carrier-of-last-resort obligations for the wire center(s) for which it did not obtain rate increases sufficient to fully offset the reduced OUSF support.

(b) State whether there is a threshold lost OUSF support offset at which Staff would support relieving the company of its carrier-of-last-resort obligations for the affected wire center(s); i.e., would Staff support such relief if the rate increases only offset X% of the OUSF support reduction.

(c) If either answer or both answers to the preceding parts of this data request are other than an unqualified "yes," explain the reasons for the answer(s).

PUC Staff Response to FTR-STAFF 2-12:

a. No. Staff would not support relieving the company of its Carrier Of Last Resort obligations.
b. No. There is no such threshold.
c. The prices coming out of a rate case would be set based upon the findings in the rate case.

Data Request FTR-STAFF 2-13:

At page 3, lines 9 –12 of his testimony, Mr. White estimates that adoption of Staff's proposals for changes to the OUSF would reduce OUSF "annual disbursements . . . to approximately $33 million.

(a) Provide the estimated annual OUSF support amount for each Frontier NW if Staff's proposal described in the referenced testimony were adopted.

(b) Provide the estimated annual OUSF support amount for each Citizens if Staff's proposal described in the referenced testimony were adopted.

(c) Please provide all studies, analyses and work papers supporting the amounts provided in response to the preceding two parts of this data request.

PUC Staff Response to FTR-STAFF 2-13:

a. See FTR 3-Exhibit
b. See FTR 3-Exhibit. Because each of Citizens' wire centers gets the same support per line, Citizens was treated as a single entity in the study.
c. The work papers are provided in FTR 3-Exhibit. The support per line is reduced by $9 when the benchmark is moved from $21 to $30. Support per line values are constrained to be greater than or equal to zero.

CONFIDENTIAL

BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

UM 1481

EXHIBIT AHA-8

TO

REPLY TESTIMONY
OF

AUGUST H. ANKUM, Ph.D.

ON BEHALF OF

THE OREGON CABLE TELECOMMUNICATIONS ASSOCIATION

PUBLIC

Data Request Verizon-Staff 2-8:

Please produce a copy of the white paper, titled "Separations," referred to in Staff/100, page 14, footnote 2.

PUC Staff Response to Verizon-Staff 2-8:

See Verizon 2- Exhibits

VERIZON 2 EXHIBIT

SEPARATIONS

A White Paper To The

State Members

Of The

Federal-State Joint Board

On

Universal Service

Peter Bluhm, Lorraine Kenyon, and Dr. Robert Loube

February 7, 2011

DISCLAIMER

THIS WHITE PAPER HAS BEEN PREPARED BY MEMBERS OF THE STATE STAFF OF THE FEDERAL-STATE JOINT BOARD ON UNIVERSAL SERVICE AND ITS CONSULTANTS IN ORDER TO ASSIST THE RELEVANT DELIBERATIONS OF THE STATE MEMBERS OF THE JOINT BOARD. THE ANALYSIS AND VIEWS EXPRESSED IN THIS WHITE PAPER ARE THOSE OF THE AUTHORS AND DO NOT REFLECT THE FORMAL POSITIONS OR OPINIONS OF THE REMAINING STATE STAFF, STATE MEMBERS, OR GOVERNMENTAL/NON-GOVERNMENTAL ENTITIES THAT CURRENTLY EMPLOY THESE AUTHORS.

VERIZON 2 EXHIBIT

Separations

This paper discusses the extent to which separations should continue to be part of the inputs for calculating federal universal service support or as a guide to how support funds should be used.

I. Separations and Ratemaking

One of the complexities of telecommunications regulation is that carriers use the same plant to provide jurisdictionally intrastate services, jurisdictionally interstate services, and non-regulated services. Services provided by incumbent local exchange carriers (ILECs) in most states are subject to economic regulation[1] by the FCC for interstate services and by the states for intrastate services. So long as dual economic regulation remains, some means must exist to virtually divide the company into an intrastate component and an interstate component. This conclusion is supported by past court decisions that recognize a constitutional necessity for distinguishing between the jurisdiction of interstate and intrastate regulators.[2]

The separations rules of 47 C.F.R. Part 36 are the current method of making the division between intrastate and interstate components. Separations rules apply only to ILECs.[3] Some separations rules apply to plant and operating costs, while others apply to revenue, taxes and reserves.[4] Under the rules for costs, adding the interstate portion plus the intrastate portion should ideally produce 100% of unseparated costs.[5]

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[1] The scope of economic regulation in each jurisdiction can include setting rate-of-return carrier rates, prescribing exogenous adjustments to price cap carrier rates, and providing universal service funding.

[2] *Smith v. Illinois Bell Telephone Co.*, 282 U.S. 133, 148-149 (1930) ("The separation of the intrastate and interstate property, revenues and expenses of the company is important not simply as a theoretical allocation to two branches of the business. It is essential to the appropriate recognition of the competent governmental authority in each field of regulation. . . . [T]he validity of the order of the state commission can be suitably tested only by an appropriate determination of the value of the property employed in the intrastate business and of the compensation receivable for the intrastate service under the rates prescribed."); *see also Crocket Telephone Co. v. FCC*, 963 F.2d 1564, 1571 (1992) ("Lest we hide our holding in verbiage, we summarize. *Smith v. Illinois Bell* recognized a constitutional necessity for distinguishing between the jurisdiction of interstate and intrastate regulators.").

[3] There are exceptions. Certain ILECs do not perform separations studies and instead develop rates on an "Average Schedule" basis using a formula to estimate costs. Alascom, Inc., an Alaskan incumbent interexchange carrier, is subject to jurisdictional separations even though it is not an ILEC.

[4] 47 C.F.R. § 36.1(a).

[5] This is not exactly true because states are free to set depreciation rates as they wish, and not all states match the FCC's depreciation rules.

VERIZON 2 EXHIBIT

If separations is done properly, the ILEC's operation in each jurisdiction has an opportunity to establish just and reasonable rates for regulated services within its realm. In each jurisdiction the regulated rates should not be so low as to create a risk of confiscating the ILEC's property, and they should not be so high as to require customers to pay more than just and reasonable rates. Further, for each jurisdiction, there should be a match between allocated costs and jurisdictional authority over revenues and services.

"Categorization" is a separations process. ILECs must subdivide broad accounting categories of investment and expense into categories and sub-categories. For example, by categorizing its broad "Cable and Wire Facilities" (C&WF) investment, an ILEC obtains a value for "subcategory 1.3," which is the subcategory for "subscriber or common lines that are jointly used." This is an important category because it holds a large amount of investment.

Under separations rules, the resulting quantities are multiplied by different "factors" or percentages that divide costs between the intrastate and interstate jurisdictions. The interstate factor and the intrastate factor for a particular cost add to 100%. The "gross allocator" is an important factor because it applies to C&WF category 1.3, a large investment category. The gross allocator assigns 25% of loop cost to the interstate jurisdiction and 75% to the state jurisdiction. Another factor is "DEM" (dial equipment minutes), a usage-based factor that allocates switching costs between the jurisdictions based on measured switch usage.

While separations rules apply solely to ILECs, even within that limited set, they have real effects primarily over rate-of-return companies.[6] Having been written before broadband was widely used, separations rules do not aptly measure broadband costs provided over DSL facilities. Having been written for wireline networks, separations rules cannot aptly measure wireless costs, and do not purport to apply to wireless carriers.

For rate-of-return companies, separated cost results are the basis for setting interstate access rates. Many states use separations results to set intrastate access rates, local rates, intrastate toll rates, and at times to determine universal service payments. For price cap companies, rates are not necessarily based on embedded costs. However, changes in separations procedures may lead to "exogenous" changes that affect price cap rates. In addition, some states may have the ability to rebase a utility's price cap rates based on a review of separated results. The separations process therefore affects intercarrier compensation rates and potentially affects intercarrier compensation reform.

The separations process has been subject to a freeze for roughly a decade. The freeze allows carriers to set their jurisdictional costs based on historic relationships in plant categories and historic jurisdictional factors from roughly a decade ago rather than update the information based on current use of plant.

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[6] Price cap ILECs are only affected by separations changes if a separations rule change is considered an "exogenous change."

II. Separations and Universal Service

A. Background

For decades, separations has been used to further universal service goals. Prior to the early 1980s, separations, through a series of regulatory plans, gradually increased the percentage of non-traffic sensitive (NTS) costs -- mostly loop costs -- assigned to the interstate jurisdiction.[7] This policy intentionally promoted higher interstate per-minute toll rates and lower flat local rates for all local subscribers, with the goal of encouraging local and toll subscribership.

Much of that changed in the early 1980s when the FCC limited the interstate share of common NTS loop costs to 25%. The combined effect of these changes was to reduce interstate toll costs (and ultimately toll rates) and increase state costs. The FCC, recognizing that these changes could unduly affect local rates for some carriers, instituted various support mechanisms many of which are explained in the next section.

At the same time, the FCC instituted the federal Subscriber Line Charge (SLC) to recover a large share of interstate costs. The arrival of the SLC shifted recovery of interstate revenue requirement from per-minute charges to flat monthly charges. This meant that cost shifts to interstate through a separations change might lower local rates (and state access) but at the same time would increase SLC fees for the same customer base. Potentially, the customer might see little change in overall flat monthly fees.

The FCC's change in policy had another side effect. States were responsible for 75% of common NTS loop costs while the interstate jurisdiction was responsible for only 25%. This increased the likelihood of a disparity between state and interstate access rates.

Today's numerous universal service mechanisms remain entwined with separations in several ways. Each of the programs was created to meet a specific need; each has its own history and unique mechanism.

1. High Cost Loop (HCL) Support

The HCL support mechanism supports loop revenue requirement. HCL support is paid to rural carriers.[8] In defining the level of support, HCL relies on using two plant "sub-categories" defined by separations rules.[9]

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[7] By 1976 the average interstate NTS percentage was 20.37% among the Bell operating companies. However, individual carrier percentages were as high as 53% and as low as 13.4%.

[8] 47 C.F.R. § 36.631(c) & (d).

[9] Only some sub-categories are recognized for HCL support. For purposes of determining HCL support, loop investment is the sum of Joint-Use Cable and Wire Facilities that connect end-users with wire centers (C&WF Category 1.3) and Central Office Equipment that supports transmission of telecommunications on joint-use cable and wire facilities (COE Category 4.3). The HCL cost formula includes loop cost related to Category 1.1 and 1.2 private lines. However, these private lines do not receive support.

The mechanism for calculating HCL support does not separate the loop costs and investment into the state and federal jurisdictions. Instead, HCL support is based on the total or unseparated loop revenue requirement (loop cost). From this, NECA subtracts a number (115% of "adjusted NACPL").[10] If the difference is positive, the carrier receives a portion of that difference as support. As the system works today, this mechanism provides no support unless the carrier's annual unseparated cost per loop exceeds $43.93 per month ($527.11 per year).[11] In 2001, carriers with costs above $23.00 per month ($276.00 per year) received HCL support.[12]

Although HCL support is based on unseparated cost, it does rely on separations factors. Under separations rules, the "gross allocator" assigns 25% of each carrier's loop costs to interstate. Once a carrier's loop costs exceed 115% of the adjusted NACPL, then 65% of all additional loop costs (or 75% in some cases) are supported from the HCL fund. The percentages were selected to be complementary. When the 65% HCL support is added to the 25% separations factor, the total is 90%. This means that a high-cost carrier (with costs above 115% of the adjusted NACPL) receives an incremental $0.90 of revenue from federal sources for every incremental $1.00 in its unseparated incremental loop cost.[13]

Under the separations manual, HCL support appears as an "expense adjustment" to interstate revenue requirement.[14] The net effect is to reduce each high-cost carrier's net intrastate loop costs to a level somewhat above the adjusted NACPL, which in turn provides an opportunity for state commissions to approve reasonable local exchange rates. In that sense HCL support is "tagged" for the intrastate jurisdiction even though it technically is recorded in the interstate jurisdiction.

2. Local Switching Support

The Local Switching Support (LSS) mechanism supports switching investment. LSS is paid to smaller rural companies. The LSS mechanism transfers a portion of each affected carrier's unseparated local switching revenue requirement from the state jurisdiction to the interstate jurisdiction. That transferred cost is then recovered through explicit support payments. For that reason, LSS is intended to benefit the state jurisdiction.

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[10] Under the current rules, the number subtracted is nominally 115% of the adjusted national average cost per loop (NACPL). For many years, however, NACPL has been adjusted annually to meet the high cost loop funding cap. The funding cap is equal to last year's cap times the change in the sum of inflation and percent change in supported lines. Because the percent change in lines has been negative, the funding cap amount has been decreasing in recent years, which further increases the adjusted NACPL.

[11] The adjusted NACPL is now $458.36 per line per year.

[12] In 2001 the NACPL was $240.00 per line per year.

[13] For this reason, the design of the HCL support mechanism would likely require review should there be a change in the basic separations factor for loop costs. This question is discussed in more detail below.

[14] The process under the manual is somewhat complicated. First the amount of HCL support is calculated in accordance with Part 36. Then, costs in equal amount are transferred from the carrier's intrastate revenue requirement to the carrier's interstate revenue requirement, a process called an "expense adjustment." HCL support then pays the exact amount that was transferred to interstate.

Because "unseparated switching revenue requirement" is one of the elements used to calculate LSS support, the separations categorization rules come into play.[15] The other major input to LSS support is the separations factors for switching, which is currently based on frozen 2000 switching usage data. To the normal interstate "DEM" factor is added another percentage which is based in part on company size and in part on 1996 switch usage. Small companies receive more LSS support than larger companies, because their factor shift to interstate is a higher multiple[16] of their 1996 measured DEM. Carriers with more than 50,000 per study area are ineligible.[17] Carriers that had high interstate usage in 1996 today generally receive more LSS support than other carriers. In this sense, the LSS program today is a "factor shift" rule, which inevitably produces a revenue requirement shift.

LSS was originally called "DEM Weighting." In its original form, the mechanism also contained a factor shift, but no explicit support payment was made. Instead, costs were shifted to the interstate jurisdiction and were later recovered from interstate access charges. In 1998, this implicit support mechanism was replaced with LSS, which today provides an explicit means of recovering the costs that are shifted to interstate through the expense transfer.

3. Non-rural Model Support

"Forward-looking" or "model-based" support is provided to non-rural carriers. The mechanism attempts to estimate the cost of an efficient provider and considers all forward-looking costs associated with supported services, including local exchange service.[18] Cost amounts are calculated by a computer model and not embedded costs. Carriers therefore do not need to use separations categories to receive support. The FCC intended non-rural model support to be used to reduce intrastate rates.[19]

Model-based support is based on the difference between the forward-looking costs in each state and a number based on the national average cost among non-rural companies. After that difference is calculated, it is reduced by 24 percent.[20] The 24 percent reduction is based on the fact that, on average, 24 percent of the cost of providing telephone services is generally

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[15] The separations category for local switching investment (Central Office Equipment Category 3) is used to calculate the unseparated switching revenue requirement. *See* 47 C.F.R. § 54.301(a); 47 C.F.R. § 36.125.

[16] This multiple is also commonly referred to as a "weight," which is why LSS was originally called "DEM Weighting."

[17] For example, companies with less than 10,000 lines receive a weighting of 3.0 which provides a benefit of 200% of unweighted DEM interstate assignment. Companies with 40,000 lines receive a weighting of 2.0 or a benefit of 100% of unweighted DEM, half as much benefit as the smaller company. 47 C.F.R. § 36.125(f).

[18] CC Docket No. 96-45, Report and Order, 12 FCC Rcd 8776, (1997), at ¶ 224.

[19] *See* 36 C.F.R. § 36.631(c) (Expense adjustment (additional interstate expense allocation) for non-rural telephone companies serving study areas reporting 200,000 or fewer working loops equals model-based support).

[20] 47 C.F.R. § 54.309(a)(4).

separated to the interstate jurisdiction through separations. Model-based support therefore depends indirectly on separations factors.

4. Interstate Access Support (IAS)

IAS provides revenue support to price cap carriers. IAS was created to replace some of the ILEC revenue lost through interstate rate design changes under the CALLS plan.[21] IAS allowed the FCC to avoid increasing the cap on residential SLCs beyond $6.50.[22] IAS support is intended to benefit only the interstate jurisdiction.

The national total of IAS support was tied to the initial amount of allowed interstate common line, marketing and transport revenues.[23] That amount, in turn, depended on separations factors from the 2000 operating year and separations rules from 2000.

5. Interstate Common Line Support (ICLS)

ICLS provides revenue support to rate-of-return carriers. The ICLS mechanism was created in 2001 to replace some of the ILEC revenue eliminated through interstate rate design changes.[24] ICLS allowed the FCC to eliminate the carrier common line access charge for rate of return carriers and to avoid increasing the cap on residential SLCs beyond $6.50.[25] ICLS support is intended to benefit only the interstate jurisdiction.

ICLS is a cost-based mechanism that supports the difference between a carrier's "interstate common line revenue requirement" and its interstate common line revenue.[26] In order to calculate the former, ICLS uses both separations categories and factors. The gross allocator that allocates 25 percent of loop investment and expense to the interstate jurisdiction is particularly important.[27]

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[21] As did the CALLS plan, the MAG plan eliminated the "carrier common line charge" paid by interexchange carriers. 47 C.F.R. § 69.104(n) & (o).

[22] IAS and the increase in the residential SLC were the primary reasons price cap carriers were able to set interstate common line access rates at zero. In many instances, this made interstate access rates substantially lower than comparable intrastate access rates.

[23] A portion of total transport revenue associated with the transport interconnection charge was assigned to the common line basket.

[24] When the ICLS mechanism was initiated, the FCC eliminated the interstate carrier common line rates paid by interexchange carriers and raised the cap on the residential SLC from $3.50 to $6.50. Thus, the decrease in intercarrier (carrier common line) revenue was offset by both an increase in universal service support and by an increase in end-user charges.

[25] ICLS and the increase in the residential SLC were the primary reasons rate-of-return carriers were able to set interstate carrier common line access rates at zero. In many instances, this made interstate access rates substantially lower than the comparable intrastate access rates.

[26] 47 C.F.R. § 54.901.

[27] For this reason, a change in the basic separations factor for loop costs would likely require review of the design of the ICLS support mechanism. This question is discussed in more detail below.

6. State Support

State universal service programs often respond to intrastate revenue requirements. For that reason, state USF programs can depend on both separations categories and separations factors. Many states continue to authorize implicit support mechanisms such as study area wide average local service pricing or value of service pricing, and this has been upheld by the courts.[28]

7. Implicit Broadband Support

The FCC has allowed all rate of return carriers to treat costs for broadband Internet access transmission as Title II regulated costs that flow through the separations process.[29] As a result, DSL loop transmission costs are included in the costs used to determine HCL support, ICLS support, the SLC, local rates, and possibly other regulated services for these companies. Existing federal support mechanisms and voice rates therefore implicitly support the loop costs associated with broadband internet access transport.[30]

8. Summary

The following table summarizes how separations rules relate to universal service.

Program	Support Calculation		Intended Jurisdictional Beneficiary ("tag")
	Uses Sep. Categories	Uses Sep. Factors	
HCL	Yes	Yes (indirectly)	State
LSS	Yes	Yes (DEM)	State
Model	No	Yes (indirectly)	State
IAS	No	Yes (revenue accounts)	Interstate
ICLS	Yes	Yes (overall factor)	Interstate

Similarly, any change in non-regulated cost allocation or the separations categories that comprise the revenue requirement could also change ICLS support amounts.

[28] The Tenth Circuit Court of Appeals ruled that Congress did not "expressly foreclose the possibility of the continued existence of state implicit support mechanisms that function effectively to preserve and advance universal service." *See Quest Commc'ns Int'l, Inc. v. FCC*, 398 F.3d 1222, 1233 (10th Cir. 2005).

[29] *Wireline Broadband Order*, FCC 05-15, at ¶¶ 128-138.

[30] NECA DSL Broadband Internet Access Transport rates are developed assuming no contribution to loop costs even though the DSL service depends on the loop.

Program	Support Calculation		Intended Jurisdictional Beneficiary ("tag")
	Uses Sep. Categories	Uses Sep. Factors	
State	Yes	Yes (overall factor)	State

III. Two Paths Ahead for Universal Service

It is likely that universal service will eventually include broadband services. Four years ago the Joint Board recommended including broadband in the list of supported services. More recently, the National Broadband Plan proposed that the FCC should conduct a comprehensive reform of universal service and intercarrier compensation in three stages to close the "broadband availability gap."[31] In addition, the FCC is currently preparing to release an NOI or NPRM asking questions about how to adapt high-cost programs to broadband technology.

This paper addresses two distinct methods of approaching separations and universal service for wireline rural carriers. Both approaches assume that the FCC will continue to operate a cost-based high-cost support program for broadband that will replace similar current programs such as HCL, LSS, Model-based Support and ICLS.

The first approach is to redesign the new programs for broadband but with minimal (or possibly no) interactions with separations. This approach takes a "total company financial view" of supported carrier finances.

The second approach is to continue to develop support while considering the jurisdictional nature of costs. This would require replacing the existing separations rules with an updated system that identifies broadband costs and then supports those costs with specific universal service mechanisms.[32]

IV. Minimal Dependence on Separations

The first path, the "total company financial view," is to redesign new broadband-compatible high-cost support programs using cost-based principles, but with minimal reliance on separations categories and factors to calculate support amounts.

A total company financial view would consider the costs and revenues generated by the carrier and its affiliates within a single state. It will be somewhat challenging to define those borders. A supported company might have affiliates engaged in unrelated industries ranging

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[31] FCC, *Connecting America: The National Broadband Plan* (March, 2010) at 135.

[32] This second approach would establish new categories and factors that are relevant to the broadband world and to networks that provide multiple types of narrow band and broadband services.

from railroad car leasing to horse farms. Obviously, those types of affiliates should not be included. The system would, however, include affiliates that use the basic network infrastructure to deliver their services and would consider the costs and revenues of all services provided on the common network.[33] Internet and voice services provided over the same distribution network would definitely be included.

A company and its affiliates may also have operations that span several states. Costs and revenues would have to be developed separately for each state operation.

Revenue expectations might have to be set for all service groups, including intercarrier services and broadband services. For example, it may be necessary to impute minimum revenue levels to protect against the possibility that support payments are used to subsidize unduly low rates. As another example, determining support needed for unserved areas could require estimating average revenues per unit (ARPU)[34] and take-rates. The FCC performed a similar analysis in the Broadband Availability Gap Paper, except that in a total company approach, all relevant revenues would be considered, including broadband and voice revenues.[35]

The Joint Board would need to decide explicitly whether to include video services.[36] Video services need special consideration because small carriers often find today that the high cost of video content makes the service unprofitable. Many carriers therefore offer video services as a loss leader in order to retain customers. If video costs and revenues are included in the support calculation, the resulting support amount could eventually be used to support video content providers rather than the broadband infrastructure. One possible solution to this problem would be to exclude the video service revenue and costs from the total company financial view. Another possibility is to impute a lease payment from the video affiliate to the telephone carrier that owns the broadband infrastructure.[37]

The Joint Board would need to decide explicitly whether to include wireless services. If a company's wireless costs and revenues are included in the support calculation, special

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[33] In this context "common" does not refer to common carriage but to the base network that enables telecommunications and broadband related services.

[34] FCC, *The Broadband Availability Gap*, OBI Technical Paper No. 1 (April, 2010) at 33-39. For example, if policy makers are concerned that the unbundled flat rate for local voice service might be too low, a revenue benchmark for local service could be included in the plan. The carriers' revenue could be calculated using a benchmark guideline for local service, such as $20 per month for residential local service (the $20 benchmark would be the sum of the local rate, interstate and intrastate SLCs and required charges). Similar expectations could be established for Internet services and bundled services.

[35] FCC, *The Broadband Availability Gap*, OBI Technical Paper No. 1 (April, 2010) at 49.

[36] Because mobility services generally use a different last mile network and compete for wireline subscribers, affiliates providing wireless services would not necessarily be included in the affiliate list of a wireline ETC.

[37] A state commission conducting an intrastate rate case would also have to determine the reasonable imputed lease payment. State commissions have shown remarkable ingenuity in determining rates for a variety of products such as UNE rates. Therefore, a solution to this problem should be within the jurisdiction and ability of state commissions.

treatment might be needed. The FCC has proposed to separately fund mobility. The two programs would have to be coordinated to prevent double recoveries and to manage eligibility.

Existing universal service mechanisms are based on cost estimates that do not recognize jurisdictional boundaries. The HCL, LSS, and Model-Based support mechanisms each estimate the total regulated "unseparated" costs of providing voice services and, to a limited extent, broadband services.[38] A new total company approach would go beyond present programs, however, in considering all revenues and costs for both "regulated" and "non-regulated" communications services.

The total company method can define costs using embedded cost methods, using a forward-looking cost model, or using a combination of the two. In any case, the new mechanisms will probably be more complex than present mechanisms, because the costs and revenues from a wider variety of services (i.e., voice, data, and possibly video) must be estimated.

The principal advantage of the total company approach is that it could make universal service programs more effective at preserving universal service. With most carriers now offering a range of regulated and unregulated services, losses in an unregulated area can drive an ILEC into bankruptcy. Bankruptcy is no longer a remote possibility for ILECs, as Hawaii, Maine, New Hampshire, and Vermont have discovered. A support system that focuses only on regulated operations therefore can be victimized by economic forces that are beyond its horizon of recognized events. A total company approach utilizes support and revenue estimates that are closer to the financial facts that allow supported companies to continue operating.

The reverse side of the same coin is that a total company financial view could make the use of support funds more effective. Support would be calculated taking into consideration the broad range of revenues generated by modern networks. In contrast, existing programs have often assumed that the only revenues available to carriers are switched voice revenues.[39] These networks actually provide local voice, toll voice, "vertical" services, intercarrier services (including special access), broadband Internet, and sometimes video.. Future high-cost mechanisms could demand less funding if they recognize all revenue streams.[40]

A total company financial view may eliminate the need to use conventional separations categories and factors as inputs in calculating total company universal service support. In recent years, both separations and universal service changes have been made more difficult because of

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[38] While these programs do not explicitly include broadband cost, model-based support is based on a wireline network that is capable of providing standard DSL, and the rural support may be used to support DSL cable and fiber-to-the-home networks. Further, rate of return carriers are allowed to include broadband Internet access transport costs when developing HCL support levels.

[39] For example, model-based support establishes its "benchmark" at a point two standard deviations above the average reported residential rate in urban areas, with the data first aggregated by state. There is no consideration of special access revenue or DSL revenue.

[40] In addition, companies bundle these service elements in various ways. This makes it particularly difficult for any voice-only cost mechanism to estimate current voice rates, since large segments of the subscriber base do not pay the basic rate.

their interdependence. Under a total company approach, universal service support would not be affected by separations changes.

While there are potentially many benefits to a total company approach, there may also be drawbacks that would need to be considered or addressed. Even if federal support is calculated using a total company financial view, some states still need jurisdictional separations data to perform their own ratemaking work. States that engage in ratemaking for intrastate services will still use Part 36 (separations) to determine intrastate costs and revenues.[41] If federal support is provided on a total company basis, it will no longer be automatically "tagged" for use by one jurisdiction. The only constraint is that support funds must be used for provisioning, maintaining, or enhancing any federally supported universal service. States would then need some method to allocate a portion of the federal support to be treated as intrastate revenue for ratemaking purposes.

Allocating support for each jurisdiction's use will be complicated and may inevitably raise questions that can only be answered by using some form of separations rules. For example, a state might not be able to assert that 40% of federal support is intrastate if the supported company or the FCC asserts that 80% of that federal support has been assigned for other purposes.[42] This problem will be particularly difficult if federal support is not sufficient to support fully both voice and broadband services.

The Universal Service Joint Board might leave this issue to be resolved by the Separations Joint Board or the FCC. Alternatively, the Universal Service Joint Board might want to offer guidance as to the portion of federal support that should be considered regulated intrastate revenue.[43]

The interaction between regulated intrastate operations and a total company financial view for federal support could produce some unexpected results. For example, a carrier with low state earnings but high total company earnings would not be eligible for federal universal service support. This could lead a profitable carrier to seek an increase in its local and other state rates. If state law, federal law, or other regulatory constraints limit the state commission's ability to allocate sufficient federal support to state services, then the state commission might have to allow a local rate increase. These problems will be fact-specific and will depend heavily on state and federal law.

A state may be able to address some of these concerns by excluding broadband and other nonregulated costs through a Part 64 type analysis. The Part 64 approach is likely to be

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[41] They will also use Part 64 to identify costs and revenues from non-regulated services.

[42] One possible answer is that states may set intrastate rates based on the residual of total costs less total revenues and support. This option, however, creates a possibility that local rates might increase to compensate for broadband losses, a distinct possibility in the many states that have abandoned or curtailed regulation of local rates.

[43] For example, if federal support is calculated in part based on one or more rate benchmarks (such as a per-subscriber revenue estimate for local rates), the Joint Board might recommend that state commissions be permitted to use federal support to ensure that intrastate rates do not exceed those benchmarks.

controversial and problematic due to the fact that the FCC no longer requires carriers to exclude non-common carrier service costs as regulated costs for interstate ratemaking or federal universal service support. So long as the FCC has this policy for interstate ratemaking, it is difficult for states to assert their authority to exclude nonregulated costs under Part 64. Even if a state decided to use Part 64, there are no standardized procedures for a Part 64 exclusion, and companies will argue that making such an exclusion is burdensome.

V. Using Separations as a Tool for Universal Service Policy

The second broad approach available to the Joint Board is to continue to use the separations framework as a tool in managing intrastate rates, and possibly to extend it. The Universal Service Joint Board could endorse separations changes that identify broadband costs and move costs between the two regulated jurisdictions, thereby reducing rate pressure on fixed voice rates and promoting universal service. This second approach involves establishing new categories and factors that are relevant to the broadband world and to networks that provide multiple types of narrow band and broadband services.

A. Current Separations Issues

Separations should maintain a correspondence or balance between allocated costs and jurisdictional authority over revenues and services. Since 2000, however, a number of factors have compromised the relationship between separated cost assignments and the revenues generated by services actually provided over the network:

1. Separations factors have been frozen by the FCC since 2000.[44] Current separations factors fail to recognize the substantial growth in interstate traffic over that decade as well as several jurisdictional reclassifications during the same period. Although customers today make more interstate calls than ever, costs are still being assigned based on network usage in 2000.

2. For price cap companies and some rate-of-return companies, category relationships have also been frozen by the FCC since 2000. Current categories of investment thus fail to recognize the substantial growth in broadband and special access networks over that decade and the rapid growth of interstate special access revenues.

3. The separations regulations were developed over a decade ago assuming a switched circuit network structure. The rules do not reflect the current dominance of new technologies such as packet switching.

[44] CC Docket No. 80-286, Report and Order, FCC 01-162, (2001), released May 22, 2001.

4. AT&T, Qwest, and Verizon were granted forbearance from various cost assignment rules, including those related to jurisdictional separations.[45]

5. The FCC's Wireline Broadband order has allowed ILECs to include certain non-common carrier broadband costs in regulated costs and the separations process, while excluding the parallel revenues.[46] As a result, ILECs are able to recover some broadband costs through local rates, access charges, the federal SLC, and universal service funding mechanisms.

6. The FCC does not require or allow companies to allocate common loop cost to DSL services.

It is important to note that state regulators currently have other tools to address at least some of these problems. State commissions can apply the Part 64 rules so that non-regulated costs are no longer assigned to the state jurisdiction, though this approach may be problematic for the reasons cited earlier. However, if a Part 64 approach was successful, a state regulator might be able to maintain reasonable rates without having to reach for non-regulated or interstate revenue.

B. Proposals from the State Members of the Separations Joint Board

The State Members of the Separations Joint Board have forwarded to the FCC a separations proposal designed to restore some of the lost balance between costs and revenues. The proposal has two parts, and each focuses on cable and wire facilities (C&WF):

i) Broadband. Category 1 C&WF plant is Exchange Line C&WF. There are already three sub-categories under separations. The proposal would establish additional sub-categories within Category 1 C&WF. The new sub-categories are shown in Appendix A. Each new sub-category would have a new state/federal

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[45] *See* WC Docket Nos. 07-21, 05-342, Memorandum Opinion and Order, 23 FCC Rcd 7302 (2008); WC Docket Nos. 08-190, 07-139, 07-204, 07-273, 07-21, Memorandum Opinion and Order and Notice of Proposed Rulemaking, 23 FCC Rcd 13647 (2008); and WC Docket Nos. 07-204, 07-273, Memorandum Opinion and Order, 23 FCC Rcd 18483 (2008).

[46] CC Docket Nos. 02-33, 01-337, 95-20, 98-10 and WC Docket Nos. 04-242, 05-271, Report and Order and Notice of Proposed Rulemaking, FCC 05-150, (2005). This order at paragraph 131 states:

"In this Order, we allow the non-common carrier provision of wireline broadband Internet access transmission that we previously have treated as regulated, interstate special access service, but we do not preemptively deregulate any service currently regulated by any state. Therefore, as specified in section 32.23 of our rules, the provision of this transmission is to be classified as a regulated activity under part 64 'until such time as the Commission decides otherwise.' We do not 'decide otherwise' at this time because we find that the costs of changing the federal accounting classification of the costs underlying this transmission would outweigh any potential benefits and that section 254(k) of the Act does not mandate such a change."

allocation factor that assigns more than 25% to interstate.[47] The additional investment and expenses for broadband would not be allocated to the interstate jurisdiction until the broadband service is sold, rather than when the investment takes place. The net effect would be to allocate gradually more loop plant investment to the interstate jurisdiction for facilities that support broadband, data, and video services.

ii) Special Access. Special access investment amounts are determined by studies that measure the portions of C&WF plant that are used for special access circuits. For carriers with frozen categories (including all large price cap ILECs), these studies have not been done since 2000. This proposal would assign special access C&WF investment based on a new revenue allocator that reflects special access earnings. For carriers with substantial interstate revenues from special access, the net effect would be to allocate more loop plant investment to the interstate jurisdiction.

That state members' proposal remains under review by the entire Joint Board.[48] The current separations factor and category freeze is set to expire on June 30, 2011, absent action to extend the freeze.

C. Likely Effects of the Separations Reform Proposals

Each of the two proposed reforms would have material effects on universal service programs.

1. New Sub-Categories for Broadband

The new proposed sub-categories of investment would immediately affect two of the five existing USF programs, HCL and ICLS.

1. HCL. If the FCC does create new C&WF sub-categories for broadband, two key questions will be: (1) will the investment in the new sub-categories remain in category 1,[49] and (2) will the lines in the new sub-categories be reported as supported lines for HCL support? [50] Regardless of the outcome of these issues,

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[47] The FCC could also determine that the additional allocation should be directed to information services.

[48] With some exceptions, the FCC is obligated to refer to the Separations Joint Board "any proceeding regarding the jurisdictional separations of common carrier property and expenses between interstate and intrastate operations" which the FCC institutes pursuant to a notice of proposed rulemaking. 47 U.S.C. § 410(c).

[49] The state members recommended that it be included in category one, but the FCC might include it in category 2 wideband services or establish a new category 5 for broadband.

[50] Even if the broadband lines are placed in Category 1, the FCC may decide that they are not supported under HCL, just as Category 1.1 and 1.2 lines are not supported.

companies are likely to have substantial changes in their HCL support, although the total amount of support is unlikely to change.

a. The Universal Service Joint Board might want to reexamine the marginal support percentages that are hard-coded into the HCL support mechanism. Category 1 as defined by Separations rules should not include any "broadband" lines. If the new sub-categories of broadband investment remain in Category 1, each carrier's HCL cost per line will remain unchanged, and therefore the national average cost per line will remain unchanged. Moreover, if lines in the new sub-categories continue to be counted as supported lines, then the current HCL support calculation will not change for any company. However, since the changes would reduce the amount of total loop cost assigned to the state jurisdiction below the current 75%, some carriers might recover more than 100% of their loop cost. That suggests a need to revise the HCL program parameters.

b. It may be appropriate to begin to provide broadband support at the time of or soon after making the separation changes. If the new sub-categories are not created within Category 1, then HCL support could decrease for some carriers and increase for others. Carriers with installed broadband facilities could see their support decrease, and they might have to raise rates to pay debt service. A new broadband program could assist with those broadband costs.

c. The changes could also spread HCL support to more carriers. The FCC might decide that *lines* in the new sub-categories will not be supported by HCL.[51] In that case the separations change would reduce the amount of support per line for some companies. For individual carriers, the effects of the change would depend on the interaction between the capped and uncapped support calculation, and the extent of the carrier's broadband and video deployment. The probable result is that more carriers would receive support, and the carriers with very high support levels and those that deployed broadband would receive less support.

2. LSS. The proposed separations changes would not have any effect on LSS. LSS is based on the COE Category 3 allocator and unseparated switching investment. Neither is affected by the separations proposals.

3. Model-based Support. The proposed separations changes would not affect model-based support because its costs are unseparated estimates produced by a model. Nevertheless, model-based support is based on an assumed overall separations factor that is 24% interstate. The Joint Board might want to recommend reevaluation of this design factor that is currently hard-coded into the model support mechanism.

[51] The same decision has already been made for special access lines (sub-categories 1.1 and 1.2).

4. ICLS. The proposed cost shift to interstate would increase the interstate revenue requirement. The FCC would probably allocate this new revenue requirement to the "common line basket." This in turn would allow some carriers to increase SLC rates up to the current caps.[52] Any revenue requirement not covered by SLC increases would be picked up by ICLS.[53] In the alternative, the FCC could allocate the new revenue requirement to DSL /broadband services, which would appear to be the intent of the state proposal.

5. IAS. The proposed category changes would likely have no effect on IAS. The FCC's price cap system would likely consider the separations changes to be an exogenous change. Following an exogenous change, price-cap ILECs could increase both residential and business SLCs to the SLC caps, if they are not already at those levels. IAS probably would not be affected, however, because IAS support is based on past revenue differences and is not affected by separations cost changes.

2. Special Access Adjustment

The second proposed separations change would assign special access investment based on revenues. The immediate separations effects are as follows:

- Reduced intrastate investment in C&WF Category 1.3 Joint-use plant and local inter-office and toll trunks.

- Reduced intrastate revenue requirement associated with common loops.

The effects on rural carriers should be minimal because they do not provide a substantial amount of special access services, and the cost shift should be minimal. However, the large non-rural price cap carriers do rely heavily on interstate special access revenues, and they could see a major shift in investment and expenses allocated to the interstate jurisdiction. The foreseeable results of that shift are:

- Reduced local rates and any state SLC.

- Potential increases in interstate special access rates governed by price cap rules.[54] The FCC is currently investigating the reasonableness of special access rates. However, in many areas those rates are now set using pricing flexibility rules that

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[52] Most rate-of-return carriers already have SLC rates at the SLC cap level.

[53] If the FCC does not consider the new interstate costs to be part of the "common line basket," neither SLC rates nor ICLS levels would be affected. Depending on FCC action, the additional interstate revenue requirement could possibly be recovered from DSL revenues (NECA DSL rates currently do not recover any loop costs, even though DSL requires use of the loop) or from other interstate or non-regulated services.

[54] This conclusion assumes that the shift in investment and expenses would be an exogenous change under the price cap rules.

are market-based and no longer depend on price-cap rules or separated costs. In pricing flexibility areas, a separations change presumably would not affect rates.

- Minimal effects on federal high-cost support. Rural company HCL and ICLS could be affected, but, because these companies generally have small special access revenues, the effects should be minimal.

3. The Net Effect on the Federal Subscriber Line Charge

For large price-cap non-rural carriers (such as the former Bell Operating Companies) the special access and Category 1 proposed separations changes have offsetting impacts on SLC rates. The use of higher interstate allocators for the new sub-categories could increase the interstate common line revenue requirement, which in turn would increase the SLCs. On the other hand, the shift of investment into special access plant categories (such as C&WF Category 2) would reduce the common line revenue requirement and therefore reduce the SLC rates. For the price cap companies, it is currently not known which impact would be greater. The results would vary by company.

D. Separations-Supported Reforms

As mentioned above, the Universal Service Joint Board might want to continue to use separations in one form or another as a tool to estimate support levels and promote intrastate rate affordability. The members could endorse the preceding separations changes proposed by the State Members of the Separations Joint Board because the changes improve the linkage between revenue and cost across the jurisdictions, but mainly because they would reduce intrastate costs, thereby facilitating lower local rates for voice service.

That proposal would direct additional investment and expense to the interstate jurisdiction. Once those costs are within the interstate jurisdiction, the Universal Service Joint Board should determine the portion of those costs that should be supported by universal service funds and the portion of those costs that should be recovered from end-users.

In addition, the Universal Service Joint Board could take the following steps that would extend the Separations Joint Board state members' proposal to cover broadband platforms:

1. Recommend that other categories be established for plant used for broadband purposes. For example, categories of transport investment and expense could be established related to middle mile services. Universal service support for such middle mile services would allow remote rural carriers to connect to Internet backbone carriers at a cost that is comparable to the connection costs of non-rural carriers.

2. Recommend shifting broadband C&WF costs sooner than the Separations Joint Board proposed. As described above, the State Members of the Separations Joint Board proposed allocating more cost to interstate, and some of those costs will be passed to the ICLS program. The state members proposed that the additional investment and expenses be reallocated when customers begin subscribing to broadband service. The Separations Members viewed that policy as desirable

because, while many rural carriers offer DSL to 90% of their customers, they sell to only 30%. The current proposal therefore allows voice to continue subsidizing unsubscribed broadband capable lines. If there is going to be a broadband support mechanism, however, it might be desirable to allocate investment and expenses to the interstate jurisdiction immediately following the investment.

3. Ensure that states receive guidance on how much support is "tagged" to benefit the intrastate jurisdiction. As described above, for example, HCL support benefits the intrastate jurisdiction through an expense transfer. Likewise, IAS is considered only interstate revenue. Similar mechanisms could be used in connection with new support mechanisms.

VI. Summary

Separations rules have had and still have a profound impact on universal service. In the past, separations rules were themselves the sole vehicle for achieving universal service goals. That method is no longer used, but many current universal service programs still operate using separations as a foundation for support calculations, and the support programs all "tag" support for use in one jurisdiction or the other.

The fundamental question addressed here is whether and how separations should affect the calculation of federal universal service support amounts and guide how support funds are used. One option for future support design is to take a "total company financial view." This approach minimizes separations inputs and focuses on the overall financial operations of supported companies.

A second option is to advance universal service goals through separations changes. This can involve supporting and elaborating on the interim adjustments proposed by the State Members of the Separations Joint Board that were aimed at recognizing the increasing importance of broadband and special access services. It can also involve taking further steps along similar lines that would serve over a longer term.

BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

UM 1481

EXHIBIT AHA-9

TO

REPLY TESTIMONY
OF

AUGUST H. ANKUM, Ph.D.

ON BEHALF OF

THE OREGON CABLE TELECOMMUNICATIONS ASSOCIATION

PUBLIC

Data Request OCTA-Staff 6:

In Mr. White's prefiled testimony at Staff/100 White/29 lines 6-7 and White/21 lines 10-15, Mr. White proposes a method for modify the benchmark. Please confirm or correct OCTA understands that Staff is not proposing a specific numerical benchmark, but instead proposing to vary the benchmark over timer as needed in order to keep the OUSF surcharge at or below the target level.

PUC Staff Response to OCTA-Staff 6:

That is correct. Staff is not proposing a specific numerical benchmark in its initial proposal, nor is Staff proposing a benchmark that will remain fixed as it was in the past.

BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

UM 1481

EXHIBIT AHA-10

TO

REPLY TESTIMONY
OF

AUGUST H. ANKUM, Ph.D.

ON BEHALF OF

THE OREGON CABLE TELECOMMUNICATIONS ASSOCIATION

PUBLIC

Date: November 5, 2012

TO: Mark P. Trinchero
Davis Wright Tremaine LLP
1300 SW Fifth Avenue, Suite 2400
Portland, OR 97201-5630

FROM: Roger White
Universal Service & Regulatory Analysis Section

OREGON PUBLIC UTILITY COMMISSION

Docket No. UM 1481– OCTA's 1st Set of Data Requests to OPUC

Filed: October 23, 2012 and Due: November 6, 2012

Data Request Nos. OCTA-Staff 1- 3

Data Request OCTA-Staff 1:

Please provide the following information that was used to establish the current levels of the per line Oregon Universal Service Fund ("OUSF") support for the non-rural incumbent Local Exchange Companies ("ILECs"):

A. Per line cost by wire center;
B. Line counts used to calculate the $21 benchmark;
C. The federal USF and other relevant federal support (see OPUC Order No. 03-083 in docket UM 1017) per line by wire center (listing all relevant components separately).

Please provide this information in an electronic spreadsheet form (if available).

PUC Staff Response to OCTA-Staff 1:

A. Per line cost by wire center

Per line cost by wire center that was used to establish the current levels of the per line OUSF support for the non-rural ILECs, US West and GTE of The Northwest, was based on the calculation developed in the UM731 FCC Hybrid Cost Proxy Model (November 1999). See details at **DATA REQUEST 1: ATTACHMENT A**

B. Line counts used to calculate the $21 benchmark

Line counts (for the calculation of the $21 benchmark) that was used to establish the current levels of the per line OUSF support for the non-rural ILECs, US West and GTE of The Northwest, was based on the calculation developed in the UM731 FCC Hybrid Cost Proxy Model (November 1999). See details at **DATA REQUEST 1: ATTACHMENT A**

C. The federal USF and other relevant federal support (see OPUC Order No. 03-083 in docket UM 1017) per line by wire center (listing all relevant components separately)

- No Federal Universal Service Fund amounts are paid to Oregon's two non-rural ILECs.
- Other relevant federal support included:

Federal Loop Compensation	
US West	$5.98
GTE Of The Northwest	$5.15

Data Request OCTA-Staff 1

Please provide the following information that was used to establish the current levels of the per line Oregon Universal Service Fund ("OUSF") support for the non-rural incumbent Local Exchange Companies ("ILECs"):

A. Per line cost by wire center
B. Line counts used to calculate the $21 benchmark

US West

Source: UM 731 FCC Hybrid Cost Proxy Model (HCPM) Oregon Scenario 5

clli	A. Avg Monthly Cost Per Line	B. Total Switched Lines	Company Cost per Line
ADARORA21	$40.76	1,626	$20.48
ALBYOR63	$21.07	30,811	
ASLDOR55	$23.99	14,534	
ASTROR64	$23.46	9,561	
ATHNOR56	$63.90	1,180	
BAKROR23	$27.16	7,591	**Company**
BENDOR24	$22.30	43,019	**Total**
BLBTOR01	$125.41	760	**Switched**
BLRVOR53	$76.26	956	**Lines**
BURLOR62	$45.21	1,591	1,370,689
CLCKOR53	$166.80	339	
CLVROR01	$55.80	1,418	
CNBHOR64	$51.88	664	
CNPNOR29	$21.61	8,483	
CRVSOR65	$19.00	34,537	
CTGVOR53	$32.74	9,123	
DLLSOR58	$26.95	10,037	
EUGNOR28	$19.44	28,640	
EUGNOR53	$16.78	87,255	
FLCYOR58	$49.67	535	
FLRNOR53	$26.81	8,288	
GLHLOR55	$46.96	2,962	
GRPSOR29	$24.59	35,920	
HMTNOR56	$22.06	9,518	
INDPOR58	$28.84	7,331	
JCVLOR56	$54.37	2,678	
JFSNOR63	$35.10	3,137	
JNCYOR51	$33.80	8,374	
KLFLOR54	$23.34	30,864	
LAPIOR52	$38.35	3,453	
LEBGOR54	$63.69	942	
LKOSOR62	$17.86	26,877	
LWLLOR53	$56.48	1,755	
MDFDOR33	$17.19	48,453	
MDRSOR52	$33.70	4,622	
MLTNOR56	$35.04	5,462	
MLWKOR17	$16.24	46,298	
MPTNOR54	$93.68	958	

GTE of the Northwest

Source: UM 731 FCC Hybrid Cost Proxy Model (HCPM) Oregon Scenario 5

clli	A. Avg Monthly Cost Per Line	B. Total Switched Lines	Company Cost per Line
ALOHORXX	$17.64	30,869	$23.11
AMTYORXX	$39.18	2,469	
AMVLORXX	$33.57	2,374	
BKNGORXX	$27.27	8,570	
BNDNORXX	$39.31	3,899	
BNKSORXX	$50.06	2,340	**Company**
BVTNORXB	$16.24	57,792	**Total**
CLTSORXA	$48.84	2,878	**Switched**
COVEORXX	$63.37	581	**Lines**
CQLLORXX	$34.12	4,313	482,275
CSBYORXX	$26.77	12,491	
DTRTORXA	$114.35	192	
DYTNORXA	$35.50	2,231	
ELGNORXX	$64.91	1,518	
EMPRORXX	$24.24	5,638	
ENTRORXX	$33.32	2,235	
FRGVORXX	$23.83	18,112	
GDISORXX	$50.30	443	
GLBHORXX	$53.63	3,280	
GRHMORXB	$17.65	57,778	
GSTNORXX	$53.78	1,135	
HDLDORXA	$39.61	2,210	
HLBOORXB	$17.95	31,387	
IMBLORXX	$86.78	587	
IMNHORXX	$711.35	101	
JSPHORXX	$65.36	1,132	
LAGRORXB	$24.23	11,696	
LKSDORXX	$40.29	1,250	
LNGLORXX	$101.82	344	
LOSTORXX	$144.92	209	
MLCYORXA	$55.82	1,863	
MMVLORXX	$20.46	16,174	
MRPHORXX	$50.06	1,294	
MYPNORXX	$55.25	2,833	
NBNDORXX	$23.52	8,716	
NWBRORXA	$22.46	14,981	
ORNTORXA	$26.47	6,403	
PRVTORXX	$69.78	2,232	

DATA REQUEST 1: ATTACHMENT A

clli	A: Avg Monthly Cost Per Line	B: Total Switched Lines
MRCLOR53	$77.75	991
NPLNOR62	$44.74	2,788
NWPTOR35	$17.41	8,023
OKRGOR01	$67.61	2,128
ORCYOR18	$18.49	43,026
PHNXOR55	$25.92	8,930
PNTNOR56	$24.28	11,765
PRVLOR53	$36.84	8,061
PTLDOR02	$17.23	18,471
PTLDOR08	$17.83	21,764
PTLDOR11	$16.11	66,454
PTLDOR12	$15.31	64,165
PTLDOR13	$14.62	66,421
PTLDOR14	$16.13	44,172
PTLDOR17	$17.32	40,485
PTLDOR18	$16.42	44,269
PTLDOR69	$13.33	94,236
PTLDOROW	$13.21	3,818
RANROR01	$43.01	3,055
RDMDOR01	$26.75	12,050
RGRVOR55	$38.31	4,694
RSBGOR57	$22.50	25,021
SALMOR58	$18.62	100,313
SALMOR59	$19.25	25,961
SESDOR64	$22.47	6,256
SLTZOR66	$72.10	1,228
SPFDOR01	$20.84	45,649
SPRVOR02	$43.38	2,135
SSTROR01	$47.18	1,798
STFDOR56	$49.87	946
STHNOR40	$24.55	9,437
STHROR58	$44.91	6,500
TOLDOR66	$36.59	2,841
UMTLOR57	$35.34	3,444
VENTOR54	$38.71	5,947
WDBNOR59	$21.39	11,708
WNTNOR57	$36.47	7,040
WRSPOR52	$176.79	623
WRTNOR64	$28.02	3,345
WSPTOR64	$123.97	179

clli	A: Avg Monthly Cost Per Line	B: Total Switched Lines
PTORORXX	$51.74	1,291
PWRSORXX	$105.47	411
RDPTORXX	$30.49	4,168
SCHLORXX	$39.77	2,864
SHWDORXA	$24.29	5,710
SLTNORXA	$32.78	8,152
SMRWORXA	$18.32	20,380
SNDYORXA	$27.82	8,972
SNSDORXX	$24.64	5,460
STFRORXX	$23.51	5,168
TGRDORXA	$15.91	39,465
TGRDORXC	$18.49	13,769
TRNRORXA	$28.77	978
TULTORXA	$16.05	15,242
UNINORXA	$57.72	1,198
VRNNORXX	$46.79	1,985
VYVWORXA	$15.58	9,370
WIVLORXA	$16.89	10,797
WLLWORXX	$71.23	755
YMHLORXA	$61.11	1,590

BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

UM 1481

EXHIBIT AHA-11

TO

REPLY TESTIMONY
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ON BEHALF OF

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