### BEFORE THE NEBRASKA PUBLIC SERVICE COMMISSION

In the Matter of the Nebraska Public Service	) App	olication No. NUSF-100
Commission, on its own motion, to consider	)	PI-193
revisions to the universal service fund	)	
contribution methodology.	)	

### Pre-Filed Reply Testimony of Joseph Gillan on behalf of Charter Fiberlink – Nebraska, LLC and Time Warner Cable Information Services (Nebraska), LLC April 21, 2017

1	Q.	Please state your name, business address and the parties sponsoring your reply
2		testimony.
3	A.	My name is Joseph Gillan. My business address is P. O. Box 540386, Merritt Island,
4		Florida 32954. As with my initial testimony, my reply testimony is filed on behalf of
5		Charter Fiberlink – Nebraska, LLC and Time Warner Cable Information Services
6		(Nebraska), LLC.
7		
8	Q.	What is the purpose of your reply testimony?
9	A.	The purpose of my reply testimony is two-fold. First, I rebut the claim (generally
10		asserted by the incumbents) that a "connections-based" contribution system can be
11		implemented without significant confusion, instability, and substantially increased costs.
12		The Rural Independent Companies' ("RIC") testimony (properly analyzed) suggests that
13		"connections" will also likely decline in the future, which means that all of this cost,
14		complexity and confusion will only shift the funding of the Nebraska Universal Service
15		Fund (the "NUSF") from one declining metric to another.

1		
2		Second, I discuss the fundamental flaw of adopting an incumbent-only broadband
3		deployment model that always assumes that an existing ILEC is the least costly (and/or
4		most expeditious) path to improved broadband availability in Nebraska. An auction-
5		based approach provides a structure where the rural incumbents would have to earn their
6		subsidy by being the low bidder, rather than <i>inherit</i> it simply by being the incumbent.
7		The FCC experience suggests that the cost-model approach provides excessive subsidy,
8		and the FCC is turning from this approach towards a more incentive-based auction format
9		to choose the recipient of high-cost support. Likewise, the Nebraska Public Service
10		Commission (the "Commission") should look to the auction-based systems that are being
11		created instead of a cost-model system. <sup>1</sup>
12		
13		The False Promise of a Connections-Based Contribution System
14		
15	Q.	Are you recommending that the Commission reconsider its <i>February Order</i> <sup>2</sup> in this
16		proceeding?
17	A.	I realize that the February Order can be interpreted as though the Commission has
18		decided to move to a connections-based approach and the only question that remains is

<sup>&</sup>lt;sup>1</sup> The FCC is currently developing procedures for the national auction of support declined by price cap ILECs as well as for extremely high-cost areas. In addition, the State of New York is preparing to auction the federal support for that state that Verizon declined.

<sup>&</sup>lt;sup>2</sup> Order and Order Seeking Further Comments and Setting Hearing (Feb. 22, 2017) ("*February Order*").

1		how to do so. But the "how to do so" fundamentally informs the "whether it should be
2		done," and the initial (or "direct") testimony demonstrates that nobody knows how to
3		implement this idea without combining it with arbitrary allocations and charges, as well
4		as a reliance on data sources that have never been used as assessable metrics before.
5		While a revenue-based contribution system has flaws, these are at least known flaws, and
6		the current system is the product of a twenty-year (and continuing) effort at refining how
7		revenues should be allocated between the interstate and intrastate jurisdictions (as well as
8		between telecommunication and information services). <sup>3</sup> By adopting <i>any</i> connections-
9		based approach, the Commission will essentially be starting over, and it should expect a
10		similar multi-decade effort to refine its approach in response to new technology and
11		services.
12		
13	Q.	Why would it make sense to retain the existing revenue-based approach?
14	A.	There is no perfect answer as to how to collect revenues for high cost subsidies. Even
15		CTIA's proposal to seek funding from general revenues ultimately distributes the cost of
16		serving high cost areas among Nebraska's consumers and businesses in proportion to the
17		taxes they presently pay. <sup>4</sup> The revenue-based model normalizes the burden (whatever it

<sup>&</sup>lt;sup>3</sup> See, for instance, Order, Federal Communications Commission Docket Nos. 96-45, CC Docket No. 97-21, and WC Docket No. 06-122, March 30, 2017, further addressing the relevant evidence that should be considered in determining whether particular private lines should properly be classified as intrastate, an issue that first emerged nearly thirty years ago.

<sup>&</sup>lt;sup>4</sup> Direct Testimony of Don Price, at pp. 11-12. To be clear, I am not opposing funding broadband expansion costs from general appropriations. Such a proposal is beyond the scope of my testimony and, as I understand it, the options before the Commission in this proceeding.

1	is) among customers based on how much they spend, which may seem "fairer" to users
2	than other methods that are harder to understand.
3	
4	"Fairness" is not an economic concept (and I address it no further here). The very
5	practical advantages, however, of the existing system include:
6	
7	• Revenues are recorded in accordance with standardized, generally
8	accepted accounting treatments;
9	
10	• Revenues provide a lowest-common-denominator metric that all
11	providers record, even though there is a great diversity in business
12	plans and technologies; <sup>5</sup>
13	
14	• Compliance with the existing revenue-based system is incremental
15	to each company's compliance with federal rules, greatly reducing
16	implementation costs;
17	
18	• Contributions are audited by USAC, thereby allowing states to
19	piggy-back on federal enforcement mechanisms; and

<sup>&</sup>lt;sup>5</sup> For instance, an OTT VoIP provider may have virtually nothing in common with a traditional exchange carrier in terms of technology, marketing or pricing, but both will ultimately record revenue for the service that they provide.

1		
2		• The issues raised by revenue-based contributions are constantly
3		reviewed and refined by the FCC (frequently in response to the
4		appeal of USAC audits).
5		
6		In contrast, there is no commonly understood method to quantify "connections," or a
7		clear definition of "connections" – facts demonstrated by the confusion revealed in the
8		direct testimony as to exactly which data should be used. It seems that several parties
9		have concluded that the Form 477 "subscription" data is a proxy for the Commission's
10		term "connection," but even here different data is used by the Staff/Commission and
11		RIC. <sup>6</sup>
12		
13	Q.	Why do you argue that the term "connection" is unclear?
14	A.	The testimony in this docket demonstrates that the term engenders confusion. The
15		Commission defined the concept of an assessable connection through two interrelated
16		definitions:
17 18		Connection: A wired line or wireless channel used to provide end users with access to any assessable service; <sup>7</sup>

<sup>7</sup> *February Order* at p. 20.

<sup>&</sup>lt;sup>6</sup> Moreover, Form 477 "subscription" data is not subject to audit and it is unknown whether different firms – particularly those that compete in the business market – complete the form in a consistent manner.

1 2 3	Assessable service. A service which allows a network connection that is identified through the use of an inter-network routing number as the means to provide telecommunications. <sup>8</sup>
4	These definitions assess the "connection" (not the service), so long as the connection is
5	used as part of a networked service. There is an immediate problem with this approach:
6	no carrier has ever operationalized this metric. The Commission recognized this
7	dilemma and decided (temporarily it would seem) to "agree with RIC that the use of
8	working telephone numbers for routing would serve as a readily available method to
9	identify assessable connections." <sup>9</sup> Although the Commission indicated it would use
10	working telephone numbers, the February Order used "subscription" data from the
11	FCC's 2015 Form 477 Summary, <sup>10</sup> which is unrelated to working telephone numbers
12	(which is also a metric that has never been consistently measured). $^{11}$

13

#### 14 Q. Doesn't the use of Form 477 subscription data remove controversy?

- 15 A. No. The FCC separately reports the number of over-the-top ("OTT") VoIP and other
- 16 Interconnected VoIP subscriptions. The distinction is that OTT VoIP is offered by a

<sup>&</sup>lt;sup>8</sup> *Ibid* at p. 21.

<sup>&</sup>lt;sup>9</sup> Ibid.

<sup>&</sup>lt;sup>10</sup> *Ibid* at p. 22; Appendix A (page 2).

<sup>&</sup>lt;sup>11</sup> Because it appears that the parties have moved beyond the concept of a telephone-number based approach, I do not address it further in this rebuttal. If the Commission resurrects the approach later in the proceeding, it should provide parties an opportunity to thoroughly address its flaws, many of which are summarized in the Direct Testimony of Pamela Hollick at pp. 4-5.

1		provider that is unaffiliated with the provider of the broadband connection. <sup>12</sup> The
2		testimony reveals that different parties used different counts for VoIP. Specifically, OTT
3		VoIP was not counted by the Commission in its February Order (presumably because
4		they are offered independently of a connection), <sup>13</sup> while OTT VoIP subscriptions were
5		counted by RIC in its calculations (without explanation). <sup>14</sup>
6		
7	Q.	Why does OTT VoIP present a unique set of issues?
8	A.	The fundamental structure of the connections-based approach is that the network
9		connection is counted, but not its use. This approach may seem workable where the
10		connection and the service is provided by the same entity (on a one-for-one basis), but in
11		the case of OTT VoIP, that is not the case. The <i>connection</i> is typically obtained from an
12		ILEC, CLEC or cable provider, while the <i>service</i> is offered by a different provider.
13		
14		In the residential market, the connection is typically the customer's Broadband Internet
15		Access Service (BIAS), while in the business market the connection is most likely to be
16		special access or metro ethernet. None of these connections are assessable by the
17		Commission because they are interstate or because of FCC restrictions (or both).

<sup>&</sup>lt;sup>12</sup> See Form 477 Instructions (p. 23) that directs providers to "count a subscription as an Over-thetop Subscription if you (including affiliates) **do not** supply (that is, do not sell to the end user) the highcapacity connection that terminates at the end user's premises and delivers the *interconnected VoIP service*. If a subscription **is not** an Over-the-top Subscription, count it among All Other Subscriptions." Emphasis in the original.

<sup>&</sup>lt;sup>13</sup> *February Order* at p. 22, Table 1: Estimated 2015 Connections.

<sup>&</sup>lt;sup>14</sup> Direct Testimony of Edit Kranner, Attachment 1.

1 Consequently, as presented, the proposed approach will assess VoIP when offered by the 2 provider of the physical connection, but not when it is offered by an unaffiliated provider. 3 The problem is that these OTT services compete directly with the VoIP and wireline 4 services offered by the broadband and telephone companies that are assessed, providing 5 an advantage to the services offered by non-facility based (*i.e.*, companies without local networks) providers. 6 7 8 Are OTT services competitively significant? **Q**. 9 A. In my view, OTT services in the residential sector have had limited impact (as is 10 illustrated by the Vonage example below), but of course this experience does not include 11 an environment where OTT VoIP would enjoy the advantage discussed here. 12 13 In contrast, the business market is moving towards "cloud based" services that typically 14 replace a PBX with an integrated suite of services (sometimes referred to as Unified 15 Communications as a Service, or UCaaS). These cloud-based services empower all kinds 16 of new features that are attractive to the business market. These services typically permit 17 the integration of IP telephony solutions with instant messaging, mobility, desktop 18 collaboration and video, and integrate with common software systems such as Microsoft Lync, Microsoft Exchange, Microsoft Office and Microsoft Internet Explorer.<sup>15</sup> 19 20 Although these services are "OTT" in that they are typically offered independently from

2016 10-K Annual Report of ShoreTel Inc., at p. 7.

1		the customer's network connections, they bear little resemblance to the far simpler OTT
2		services that are offered in the residential market.
3		
4	Q.	Do you have any evidence that illustrates the growing importance of "OTT VoIP" in
5		the business market?
6	A.	Yes. Vonage provides a useful example because it is well-known, publicly-traded, and
7		illustrates its own shift from consumer offerings to more complex business services.
8		Table 1 (below) compares Vonage's revenue and operational data between 2014 and
9		2016 and demonstrates its change in focus from consumer services and business
10		products.

<b>Operational Metric</b>	2014	2016	% Change
Consumer Lines	2,144,681	1,711,366	(20%)
Business Seats <sup>17</sup>	311,193	638,096	105%
Revenue (thousands)			
Consumer Segment	\$774,410	\$579,269	(25%)
Business Segment	\$94,444	\$376,352	298%

Table 1: Vonage's Shift from Residential to Business Services<sup>16</sup>

Vonage's experience vividly illustrates the shift from residential OTT services (which it
once heavily advertised on television, an advertising strategy it has now abandoned) to

<sup>&</sup>lt;sup>16</sup> 2016 Vonage 10-K Annual Report, at pp. 29-30.

<sup>&</sup>lt;sup>17</sup> Business VoIP solutions are commonly organized by "seats," which are (for example) assigned phone numbers to particular employees and/or departments. These "seats" are not geographically limited in the same way as traditional telephony. For example, a VoIP seat phone number can be easily arranged to ring three times at a desk softphone, then ring three times on that person's cell phone, and then ring at another desk three times before going to voicemail.

1	cloud-based business services. While simple consumer-level OTT services may be
2	simpler to count as "subscriptions," that is not true for highly complex business services
3	that commingle voice sessions with other information streams, and for which there are no
4	fixed (that is, "countable") channels.
5	Indeed, one of the benefits of IP technology is that it is eliminating networks with defined
6	channels (which are effectively the "connections" that the Commission seeks to assess).
7	Rather, these integrated services dynamically scale to the customers' telephone needs on
8	a call-by-call ( <i>i.e.</i> , session) basis, without (typically) a meaningful limitation on the
9	devices or uses. <sup>18</sup> Fundamentally, the Commission is attempting to construct an USF
10	funding system based on a metric (a connection or channel) that technology is rapidly
11	eliminating, particularly for business services.
12	
13	I do not specifically know how a company such as Vonage (or any other SIP trunking
14	provider) completes Form 477. What I do know, however, is that it has not particularly
15	mattered, because Form 477 "subscription counts" have never carried a financial
16	consequence such as considered here. As a result, Form 477 has not been litigated in the
17	same way as Form 499 ( <i>i.e.</i> , the form used by providers to report revenues to USAC) –
18	but that is a weakness, not a virtue. It is precisely because of the disputes concerning
19	how revenues should be reported that the industry has received continuing guidance. If

<sup>&</sup>lt;sup>18</sup> This is not to say that IP networks do not confront congestion, but rather that the number of concurrent voice sessions is not likely to be the gating factor in a customers' broadband connection.

1		Form 477 data is used to assess USF charges, the Commission should fully expect that
2		additional guidance will be needed (but it is decidedly unclear what process will be used
3		to expose disputes and resolve these issues). <sup>19</sup>
4		
5	Q.	RIC claims that connections are more stable and will continue to be so in the
6		future. <sup>20</sup> Do you agree?
7	A.	No. It is important to look within the RIC projections to determine whether (or not) the
8		projections – and the associated claims of stability – are reasonable.

# Table 2: The Core Components of the RIC Projection<br/>(thousands of subscriptions)

Category	December 2015 (actuals)	June 2019 (RIC Estimate)	% Change
Business - Wireline	382	455	19%
Residential - Wireline	363	306	(16%)
Wireless	1,886	2,053	9%
Total	2,631	2,814	7%

9 As Table 2 shows, the RIC claim that network subscriptions will increase is dependent

10

entirely on its wireless and business projections. Even RIC expects that residential

wireline subscriptions will decline significantly in the future, but RIC claims that this

<sup>&</sup>lt;sup>19</sup> As I explained earlier, one of the benefits of the existing system is that it has been extensively litigated, with decades of guidance provided by the FCC as to how Form 499 should be completed, with compliance encouraged by the possibility of USAC audit. I do not mean to suggest that this process has eliminated all controversy (it hasn't), but it has addressed the wide variety of issues that emerge once a contribution methodology is subjected to the real world.

<sup>&</sup>lt;sup>20</sup> Direct Testimony of Edit Kranner at p. 5.

<sup>&</sup>lt;sup>21</sup> Contrary to the Staff Analysis and the *February Order*, the RIC projections include OTT VoIP without explanation as to how these "connectionless" subscriptions would be assessed by the Commission.

1		collapse will be more than offset by increases in wireless and business subscriptions.
2		Consequently, whether the RIC analysis is reasonable depends upon whether its projected
3		growth in business and wireless subscriptions is reasonable. As I explain below, one
4		projection (business) is implausible; the other (wireless), merely improbable.
5		
6	Q.	Why do you believe that the projected increase in business subscriptions claimed by
7		RIC is implausible?
8	A.	While there has been a shift in business subscriptions between traditional wireline and IP
9		technologies, the overall level (i.e., wireline and VoIP combined) has been reasonably
10		stable. Despite this stability, however, the RIC projections assume (without explanation)
11		a sudden, significant, and steady increase in the total number of business subscriptions.



Figure 1: The RIC Projections in Business Subscriptions (thousands)<sup>22</sup>

1 Figure 1 graphically illustrates the radical increase in business subscriptions that RIC 2 asserts will occur in the future (striped pattern), as compared to the actual counts that 3 have occurred in the past (solid fill). RIC claims that its forecast takes into consideration the business cycle,<sup>23</sup> but there is no business cycle justification to the sudden increase in 4 5 business voice subscriptions shown in Figure 1. Yet, without the projected increase in business subscriptions (as well as the increase in wireless subscriptions discussed below), 6 7 the RIC projection would show that subscriptions are expected to decline. Of course, such a forecast would eliminate the rationale for the adoption of a subscription-based 8 9 approach to begin with (*i.e.*, that it will be more stable than revenues).

<sup>&</sup>lt;sup>22</sup> Direct Testimony of Edit Kranner, Attachment 1 at p. 7.

<sup>&</sup>lt;sup>23</sup> *Ibid* at p. 4.

1

#### 2 Q. Do you believe that RIC's projection concerning wireless subscriptions is also

#### 3 inflated?

- 4 A. Yes. Table 3 compares RIC's projected wireless voice subscriptions to the estimated
- 5 Nebraska population in June 2019 (estimated by applying the average population growth
- 6 over the last five years). As Table 3 indicates, there are *already* almost as many wireless

7 subscriptions reported for Nebraska as there are people.<sup>24</sup>

#### Table 3: Comparing RIC Wireless Projections to the Estimated Population (thousands)

Category	Dec. 2015 (actual)	June 2019 (estimate)
Wireless Subscriptions <sup>25</sup>	1,886	2,053
Population	1,896	1,944
Saturation Rate	99.5%	105.6%

8 There are certainly people who have more than one wireless device, but that is the 9 exception and not the rule. There is simply no reason to anticipate that wireless 10 subscriptions will grow at the rate assumed by RIC, given that the saturation rate is nearly 11 100% already. Moreover, as I have repeatedly explained, the current subscription data is 12 reported in an environment where no carrier has an incentive to look closely at its 13 Nebraska-related filing, which is a circumstance certain to change if the Commission

<sup>&</sup>lt;sup>24</sup> It should be noted that the use of "population" includes both infants and inmates, two groups that (for differing reasons) are not properly part of the addressable wireless market. As such, the data understates the actual saturation rate of mobile voice subscriptions if calculated as a percentage of the addressable market.

*Ibid* at Attachment 1, p. 9.

1		assesses a charge on each reported subscription. Together, these factors suggest there is
2		some limit to the number of wireless voice subscriptions that will be added in the
3		future. <sup>26</sup>
4		
5	Q.	Do the parties generally acknowledge that any connections-based system will be
6		difficult to implement?
7	A.	Yes and no. Although some parties claim it can be implemented easily, <sup>27</sup> there is
8		widespread agreement that the mechanism presents serious issues in the business market:
9 10 11 12 13		RIC has significant concerns regarding the level of surcharges proposed for assessment on business customers, and believes that the proposed treatment of businesses may run afoul of competitive neutrality standards. <sup>28</sup> ***
14 15 16 17 18		Frontier's billing system, and perhaps other carriers' as well, is not currently able to make these [business] customer-by-customer evaluations and surcharge applications. <sup>29</sup> ***
19 20 21 22		[T]he tiered aspect of the business surcharge poses challenges for administration. <sup>30</sup> ***

<sup>&</sup>lt;sup>26</sup> RIC acknowledges that "the wireless market is highly saturated and population growth rates have not been keeping up with the growth rates seen in the number of wireless connections." Direct Testimony of Edit Kranner at p. 4.

<sup>&</sup>lt;sup>27</sup> For instance, in what must be considered understatement, RIC states (Direct Testimony of Ken Pfister at p. 13): "While it is an untested assessment methodology, RIC believes that the connectionsbased NUSF contribution mechanism will be reasonably easy to administer. With that said, RIC recognizes that the real world implementation will prove whether this belief is true..."<sup>27</sup>

<sup>&</sup>lt;sup>28</sup> *Ibid* at p. 11.

<sup>&</sup>lt;sup>29</sup> Direct Testimony of Scott Bohler at p. 3.

<sup>&</sup>lt;sup>30</sup> Direct Testimony of William Kreutz at p. 10.

1 2 3 4 5 6		I am concerned that the proposal outlined on Appendix A would not result in an equitable and nondiscriminatory assessment on all customer classes, and could have a disproportionate impact on enterprise customers, like the customers served by Level 3. <sup>31</sup>
7		The concerns expressed above are in addition to the fundamental issue I described earlier
8		that the Commission is considering moving to a connections-based approach in an era in
9		which networks and business services are moving to an environment where voice calls
10		are dynamically established without regard to fixed channels. When you combine these
11		concerns with the fact that a connections-based system is both unstable and untested, the
12		rationale for the approach evaporates altogether.
13		
14		The Commission Should Not Adopt a Cost-Model/ILEC-Only Approach
15		
16	Q.	RIC claims that the SBCM provides a useful estimate of the cost to extend
17		broadband to unserved locations in Nebraska. Do you agree?
18	A.	No. As RIC explains, the State Broadband Cost Model (SBCM) is a descendent of the
19		Connect America Fund Cost Model (CAF Model) and Alternative Connect America Cost
20		Model ("A-CAM") used by the FCC. <sup>32</sup> It is not my purpose here to debate the basic
21		structure of the model, or its inputs. Such an analysis is beyond the scope of this rebuttal,
22		which is fundamentally focused on the contribution methodology.

<sup>31</sup> Direct Testimony of Pamela Hollick at p. 3.

<sup>&</sup>lt;sup>32</sup> Direct Testimony of Edit Kranner at p. 5.

1		
2		I do, however, dispute the foundational proposition that the Commission can best
3		determine the cost to extend broadband by asking what a <i>single</i> provider $-i.e.$ , the
4		existing rural phone company – <i>claims</i> it needs to construct a fiber network to support
5		broadband services. As I explain below, the Commission will likely pay more than
6		necessary if it establishes a subsidy system based on offering support to rural ILECs
7		premised on a cost-model approach.
8		
9	Q.	Why do you argue that a cost-model approach is inherently flawed?
10	A.	The cost-model approach automatically assumes that the winner should be the incumbent
11		LEC because the model estimates how much subsidy that one market participant might
12		require to profitably deploy broadband. To determine potential profitability inherently
13		involves projecting revenues and costs, and the risk of being wrong. In a competitive
14		environment – even a competitive environment where companies are seeking subsidy –
15		the estimates of these unknowns are prepared by individuals and firms looking at detailed
16		information concerning each market and network technology. <sup>33</sup> The cost model approach
17		substitutes this decentralized decision process with a rulemaking. The CAM Inputs Order
18		alone is 91 pages in length, <sup>34</sup> reflecting hundreds of input choices, several based on a

<sup>&</sup>lt;sup>33</sup> There is no reason to conclude that fiber technology is necessarily the best medium to costeffectively deploy broadband, particularly in a state such as Nebraska with terrain that is likely best suited for a wireless solution.

<sup>&</sup>lt;sup>34</sup> As noted, the SBCM is based on the FCC's CAF Cost Model. In addition to adopting specific inputs in the *CAF Inputs Order*, the process required a 29-page Order addressing the underlying model

1		single, nationwide, determination (such as, for instance, the expected average revenue per
2		customer and take-rate) that ignores any real-world variation in markets.
3		
4	Q.	Is there evidence to indicate that the CAF Model overestimates the cost of
5		broadband deployment?
6	A.	Yes. There are two data sets that suggest that the CAF Model (which is the basis for the
7		SBCM) overstates the cost of broadband deployment. The first data-set is drawn from
8		the FCC's Rural Broadband Experiments, <sup>35</sup> and the second data-set concerns the very
9		high acceptance rates for the "statewide offers" of support that the FCC made to the price
10		cap ILECs. <sup>36</sup>
11		
12	Q.	Please explain how the Rural Broadband Experiments suggest that the CAF Model
13		overestimates the cost of broadband deployment.
14	A.	As part of its Connect America Fund reforms, the FCC established a limited (\$100
15		million) program to fund Rural Broadband Experiments (RBEs). <sup>37</sup> Without getting into

platform. *See Connect America Fund et al.*, WC Docket No. 10-90 et al., Report and Order, 29 FCC Rcd 3964 (Wireline Comp. Bur. 2014) ("*CAF Inputs Order*") and *Connect America Fund; High-Cost Universal Service Support*, WC Docket Nos. 10-90, 05-337, Report and Order, 28 FCC Rcd 5301 (Wireline Comp. Bur. 2013) (*CAF Platform Order*). Rel. April 22, 2013.

<sup>35</sup> See Connect America Fund; ETC Annual Reports and Certification, WC Docket Nos. 10-90, 14-58, Report and Order and Further Notice of Proposed Rulemaking, 29 FCC Rcd 8769 (2014) (*Rural Broadband Experiments Order*).

<sup>36</sup> I note that there was a greater than anticipated acceptance of the A-CAM subsidy offers to rateof-return carriers as well, but I have not analyzed that portion of the program.

<sup>37</sup> The RBE should not be confused with the Remote Area Fund (RAF), which was given a similar annual budget of "at least" \$100 million. The RAF relates to areas that were too expensive to finance

1	the details as to how the FCC managed the experiments, what is relevant here is that the
2	FCC's limited experience opening the subsidy program to other providers showed that a
3	competitive bidding process can produce results that are superior to a cost-model/ILEC-
4	only system, at least for certain areas. Although public information concerning the terms
5	of specific bids is limited, the FCC did disclose that:
6 7	• Each of the rural broadband experiments proposed to offer service requesting support at or below model-calculated levels; <sup>38</sup> and
8 9 10 11 12 13	• High-performance network bidders ( <i>i.e.</i> , bidders that offered to build networks with 100/25 Mbps download/upload speeds) collectively requested \$69 million in annual support for census blocks that would have received \$149 million in model-based support (which required only that the ILECs build networks capable of 10/1 Mbps speeds). <sup>39</sup>
14	The RBEs proved that competitive bidders are able to propose networks far more capable
15	than that required of the ILECs by the FCC, at subsidies less than half of the level that the
16	cost-model calculated. This experience demonstrates that competitive bidding can be
17	more efficient than simply offering a cost-model-calculated amount to the incumbent
18	LEC.
19	

<sup>38</sup> Connect America Fund; ETC Annual Reports and Certifications; Petition of USTelecom for Forbearance Pursuant to 47 U.S.C. § 160(c) from Obsolete ILEC Regulatory Obligations that Inhibit Deployment of Next-Generation Networks, WC Docket Nos. 10-90, 14-58, 14-192, Report and Order, FCC 14-190, (rel. Dec. 18, 2014) ("December CAF Order") at ¶ 85.

<sup>39</sup> *Ibid.* at ¶ 85 ftn 193.

<sup>(</sup>given the \$1.8 billion budget for price cap areas). The RBE relates to areas that would otherwise be part of the ILECs' CAF Offer, but for which the FCC found (through the process described here) that other providers were willing to do more for less.

1	Q.	What is the second data-set that suggests that the CAF Model provided more
2		subsidy than was necessary?
3	A.	The second data-set is simply that nearly all of the subsidy offers were accepted by the
4		price cap ILECs. (The initial cost-model offers were limited to price cap ILECs.) While
5		something of a subjective conclusion, if the cost-model only estimated the bare amount
6		needed to make broadband profitable, I would have expected more of the offers to be
7		rejected. Table 4 compares the number (and amount) of statewide offers made and
8		accepted, excluding of offers made to Verizon. <sup>40</sup> Acceptance rates at this level can either
9		be explained by a near-miraculously accurate cost-model, or evidence of a biased error
10		that systematically overstated the amount of subsidy needed by providers.
11		

<sup>&</sup>lt;sup>40</sup> Verizon declined to participate in the CAF program, so no inference should be drawn with respect to the offers made to it. At the time the CAF offers were being made, Verizon was selling its properties in Washington, Texas and Florida to Frontier. It is useful to note that Frontier accepted the CAF-support in each of these states, providing further evidence that Verizon's decision not to participate in the CAF program was unrelated to the level of support being offered.

Metric	Offered	Accepted	Acceptance Rate
Number of Offers	179	168	93.9%
Total Value of Offers	\$1.576	\$1.501	95.2%

# Table 4: Comparison of CAF Offers and Acceptance(Value in billions)

# **Q.** Please summarize your reply testimony.

3	A.	The initial testimony demonstrates that a connections-based contribution system is ill-
4		advised and likely to become as unstable as revenues, but requiring far more guidance
5		and transaction costs to implement. Moreover, rather than using the SBCM to determine
6		subsidy levels, the Commission should look to establish a competitive bidding process to
7		ensure that maximum broadband deployment is achieved with whatever funding level is
8		available.

## **Q.** Does this conclude your reply testimony?

11 A. Yes.