BEFORE THE NEBRASKA PUBLIC SERVICE COMMISSION

In the Matter of the Nebraska Public Service Commission, on its own Motion, to consider revisions to the universal service fund contribution methodology

Application No. NUSF-100 PI-193

REPLY TESTIMONY OF DON PRICE ON BEHALF OF CTIA – THE WIRELESS ASSOCIATION®

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Nebraska
Public Service Commission

April 21, 2017

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1	<u>I.</u>	INTRODUCTION AND BACKGROUND
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3	Q.	Please state your name and business address.
4	A.	My name is Don Price. My business address is 2304 S Lakeline Blvd, #221,
5		Cedar Park, TX, 78613.
6	Q.	By whom are you employed, and in what capacity?
7	A.	l am an independent consultant specializing in public policy issues in the
8		communications industry.
9	Q.	Are you the same Don Price who previously filed direct testimony in
10		this proceeding?
11	A.	Yes, I am.
12	Q.	What is the purpose of your testimony?
13	A.	My testimony responds to issues raised in the other parties' testimonies
14		filed in this proceeding on March 21, 2017. I will explain that none of the
15		testimonies provide a basis for the Commission to move forward with the
16		proposals in its February 22, 2017 Order, which were unsupported by any
17		evidence, or to impose an additional \$27M in Nebraska Universal Service
18		Fund ("NUSF") assessments on Nebraskans. I recommend instead that the
19		Commission urge the Federal State Joint Board on Universal Service to
20		comprehensively address contribution reform. My testimony explains why
21		other witnesses' testimonies do not constitute a legitimate basis for the
22		Commission's proposal to eliminate the current NUSF contribution

mechanism. Rather, the testimonies identify fundamental legal and policy

concerns, including conflicts with federal and state statutory policies.

Beyond those threshold issues, numerous practical, administrative, and other implementation problems are expressed. I also present to the Commission information on potential customer impacts, demonstrating that the Commission has no basis to conclude that any proposed contribution mechanism satisfies the statutory requirements for funding the NUSF. In sum, the testimony overwhelmingly supports keeping the existing contribution mechanism for the present.

My testimony also discusses the other witnesses' testimonies regarding the Commission's proposed NUSF budget, and their recommendations that the Commission defer action on that budget to a separate proceeding. I explain why the testimonies of the RIC witnesses do not compensate for the substantial lack of record evidence for the proposed NUSF budget, and instead raise additional matters for consideration.

A.

Q. Please provide any preliminary comments you have for the Commission.

There is little disagreement as to the importance of broadband for Nebraska's future. But as I explained in my direct testimony, the Commission's proposal of a massive increase to the NUSF, funded by ratepayers, more than two-thirds of which would go to pay for a single form of wired broadband technology, is contrary to state and federal policy. Because of the Commission's emphasis on funding fiber networks, and

endorsement of that specific technology (without even attempting to
evaluate alternatives), the proposals are not supported by the statutory
requirement that "telecommunications and information services" (not
"facilities") be made available through the NUSF. And the proposals are
inconsistent with both federal and state policy requirements of
technological and competitive neutrality, and make no effort to demonstrate
that they represent an "efficient" method of distributing universal service
funding. Tellingly, the proposals give no indication that they comply with
the statutory requirement that NUSF funding is no more than "sufficient" to
meet the other statutory obligations. Indeed, lacking any consideration of
other alternatives, some of which may be lower cost, the Commission cannot
make a finding based on record evidence of the level at which NUSF funding
is "sufficient" to meet statutory objectives. The Commission is bound by the
policy direction set forth by the Legislature, and as CenturyLink witness
Lubeck states:
The Commission cannot ignore either the current legislative policy or the consumer consequences of the changes it is proposing. ¹
Relating to the "consumer consequences" of its proposals, CTIA previously

advised the Commission that "Nebraska ranks second among the states for

combined federal and state rate of 24.99%." $^{2}\,$ As I will explain, the record

the highest wireless taxes and fees on monthly wireless service, at a

¹ Lubeck Direct at 3.

 $^{^2}$ Comments of CTIA in Response to the Commission's April 5, 2016 Order Seeking Further Comments, filed June 6, 2016, at footnote 5.

1	contains no support for adding an even greater burden on wireless
2	consumers in Nebraska.
3	If policymakers desire to establish a broadband funding more

If policymakers desire to establish a broadband funding mechanism in Nebraska, the better approach would be to phase down the existing voice-focused NUSF. In its place, a mechanism to fund broadband could be established by general revenues, as recommended in my direct testimony.³ A significant benefit of this approach is that relying on general revenues to fund broadband would resolve the Commission's concerns with the current NUSF funding mechanism.

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II. THE COMMISSION SHOULD NOT MODIFY THE NUSF CONTRIBUTION MECHANISM

- A. The Record Does Not Support a Conclusion That the NUSF is Imperiled
 by the Existing Contribution Mechanism, or That a New Mechanism
 Would Be Beneficial
- Q. Do the testimonies support the Commission's conclusion that a new
 contribution mechanism is necessary?
- A. No. They contain only vague references to the existing contribution

 mechanism not being "stable," but no witness has presented evidence to

 demonstrate that the NUSF is threatened at current funding levels. As an

 example, RIC witness Ken Pfister argues that "the meshing of federal and

 state USF programs *cannot continue* without reform of the state

 contributions mechanism." However, he offers no historical NUSF data,

³ Price Direct at 12.

⁴ Pfister direct at 7-8 (emphasis added).

analysis of recent fund receipts, or other information to support his dire conclusion. Instead, he merely refers to prior Commission Orders, arguing as a "fact" "that the current revenue-based NUSF contribution mechanism is unstable and thus lacks predictability." As discussed in my direct testimony, the PSC's website shows a steady (and increasing) reserve,6 so Mr. Pfister's conclusion is contradicted by the only data in the record.

Furthermore, Mr. Pfister's statement about the fund's lack of "predictability" is inconsistent with the Commission's own Orders that make predictions about anticipated declines in NUSF revenues.⁷

- Are there other reasons supporting your statement that there is no evidence supporting the Commission's claim that a new contribution mechanism is necessary?
- Yes. Nebraska is not unique in seeing declining revenues for its universal service program. Other states are seeing similar trends. The Commission, however, is presently alone in tentatively deciding to adopt introduce a novel contribution mechanism. As CTIA and others have noted previously in this docket, any new funding mechanism should be developed only after federal reform has been announced. Before this Commission moves forward on USF reform, it should work with other states to urge the Federal State Joint Board on Universal Service to comprehensively address contribution reform

Q.

Α.

⁵ Pfister direct at 4. See also, Brigham Direct at 4 ~ "the NUSF ... is demonstrably unsustainable under its current revenues-based contributions methodology," citing only the Commission's February 22 Order.

⁶ Price direct at 25-26.

⁷ February 22, 2017 Order, at 1. The Commission provides no data supporting its projections.

focusing on federal and state issues. CTIA and its member companies would
be pleased to work with the Joint Board and other stakeholders toward
developing comprehensive reform of universal service funding mechanisms
in a fair, rational, and sustainable manner. The result of that process would
yield a result that providers can implement, and avoid many of the problems
identified here, as the Commission would avoid misaligning the NUSF with
the federal program.
What other reasons weigh against adopting the Commission's proposed
contribution mechanism?
A Commission decision to move forward should be based on specific
evidence that the NUSF would be improved by implementing the proposed
contribution mechanism. But no specific evidence has been presented.
Rather, the few witnesses that support implementing a connections-based
mechanism express only vague abstractions. For example, the testimony of
Windstream witness William F. Kreutz poses the question "would the
Proposed Mechanism provide stable and predictable funding?" Mr. Kreutz's
response is "generally, yes." Elsewhere, Mr. Kreutz states:
In theory, a connection-based mechanism can be an equitable way of funding universal service. ⁸
Windstream's testimony presents a theoretical comparison of generic
connection-based and revenue-based mechanisms, with no reference to

Q.

A.

specifics of the Commission's proposed mechanism.

⁸ Kreutz direct at 9. Emphasis added.

	A similarly general statement appears in the testimony of RIC
witnes	ss Pfister.

As a policy and practical matter, flat rate surcharges are straightforward for consumers to understand and can be more readily explained....9

Such statements do not represent endorsements of the Commission's proposed mechanism. Rather, they support only a hypothetical or idealized connections-based mechanism that does not exist (and has not been proposed).

The alternate proposal of RIC witness Pfister is inconsistent with the principles of connections-based mechanisms. Mr. Pfister seeks to compensate for what he views as a flaw in the Commission's proposal that would eliminate the "NUSF surcharge assessment on certain telecommunications *services* – for example, intrastate toll service." This appears to contradict his own testimony that a benefit of connections-based mechanisms is "remov[ing] from the equation the concept of "use" of services." But Mr. Pfister fails to explain what it means to have an "intrastate toll connection," or why that is its own category of "connection" and not included in the category of "local exchange switched access lines." The RICs' proposal appears to be a form of hybrid contribution mechanism that will only further complicate carriers' administration of NUSF contribution obligations and raises its own set of problems.

⁹ Pfister direct at 9.

¹⁰ Id., at 12 (emphasis added).

¹¹ <u>Id.</u>, at 9.

B. The Proposed Contribution Mechanism Is Problematic

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- 3 Q. How would you characterize the witnesses' testimonies on the
- 4 Commission's proposed mechanism?
- 5 A. The testimonies detail a variety of concerns, including significant unresolved
- 6 policy and legal questions and a variety of "red flags" pertaining to
- 7 operational, administrative, and reporting issues.

8 Q. Please elaborate.

A. Importantly, the Commission's proposal is not consistent with the limits of its jurisdictional authority. The Commission is preempted by the FCC's 2015 *Open Internet Order* from imposing NUSF surcharges on broadband Internet Access Services (BIAS). As stated by Charter's witness Joseph Gillan, "[t]he "proposed definition of "connection" is flawed because it proposes to assess services beyond the limits of the Commission's jurisdiction. He notes that it fails to exempt wired or wireless "channels" used for BIAS (notwithstanding the Commission's statements that it does not intend to assess BIAS). CTIA's comments of August 3, 2016 and August 25, 2016 explain in detail why it is highly complicated and risky to implement a connections-based methodology without knowing the results of the FCC's efforts toward contribution reform. For all these reasons, the Commission's proposed definition of "connection" is not legally sustainable.

¹² Mr. Pfister acknowledges this current limitation in his direct testimony at 12.

¹³ Gillan Direct at 5.

¹⁴ Id., at 6

Q. What other policy and legal questions have the witnesses raised
 regarding the Commission's proposed mechanism?

Virtually every witness illustrates or concludes that the proposal is neither competitively neutral nor nondiscriminatory, both of which are required by the NUSF enabling statute, although witnesses' specific concerns vary. 15

Even RIC witness Pfister, who is generally supportive of the Commission's proposals, expressed "reservations about the *competitive neutrality* of the Commission's proposal [and] significant concerns regarding the level of surcharges proposed for ... business customers. 16 Windstream witness Mr. Kreutz observes in one portion of his testimony that "the Proposed Mechanism appears to be reasonably headed in the right direction, 17 but states that it is "difficult to determine" whether the proposal meets the statutory requirements of competitive and technological neutrality. 18

Similar concerns are raised by other witnesses. CenturyLink's witness Lubeck concludes that "[h]aving different surcharges for mobile and fixed wireline residential connections would be *neither equitable nor nondiscriminatory.*" He further observes that "[h]aving wildly different surcharges for mobile business connections and fixed wireline business connections is *not competitively neutral.*" Level 3's witness Hollick expresses concern "that the proposal outlined in Attachment A would not

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¹⁵ See, Price Direct at 13-14, citing Neb. Rev. Stat § 86-323.

¹⁶ Pfister Direct at 11 (emphasis added).

¹⁷ Kreutz Direct at 7.

¹⁸ "It's difficult to determine if the Proposed Mechanism is competitively and technologically neutral." Id.

¹⁹ Lubeck Direct at 4 (emphasis added).

²⁰ <u>Id.</u>, at 5 (emphasis added).

result in an equitable and hondiscriminatory assessment on all customer
classes, and could have a disproportionate impact on enterprise
customers"21 Charter's witness Gillan concludes that the "proposed
surcharges, particularly with respect to fixed business services, are
arbitrary and appear to violate federal law."22 And addressing the potential
that the proposed mechanism would impose disproportionate burdens on
certain providers, Mr. Gillan questions "whether the NUSF would be
administered consistently with the requirements of section 254(f) of the
Federal Act, which requires state universal service funds to be implemented
"on an equitable and nondiscriminatory basis.""23

It is telling that witnesses representing varying perspectives and different aspects of the industry express similar concerns, strongly suggesting that the Commission's proposed contribution mechanism has virtually no legal or policy support.

Q. Have the witnesses voiced other areas of criticism of the Commission's proposed contribution mechanism?

Yes. The testimony of Charter witness Gillan raises the threshold (and extremely thorny) matter of jurisdictional allocations of mixed use facilities (or connections). As noted above, both regulators and the industry have developed processes and systems – including allocators – for usage and revenues for such situations. These are not without complications, but

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²¹ Hollick Direct at 2.

²² Gillan Direct at 5.

²³ Id., at 13.

substantial cooperative efforts over the years by all participants have addressed many problems. As a result, these processes and systems are workable. For Nebraska to move unilaterally to a novel and untested contribution-based mechanism would mean throwing out much or all of that experience. As characterized by Mr. Gillan:

Today's need to attribute revenue [between jurisdictions] is difficult enough, it is *essentially impossible* with connections.²⁴

Other witnesses simply ignore the problems inherent in the Commission's proposed approach. For example, Mr. Pfister makes the remarkable statement in his Attachment One that both "local consumer connections" and "local business connections" are assessed as "100% intrastate service." He offers no explanation how this is consistent with existing federal regulations requiring specific allocations of different types of facilities. Were Mr. Pfister correct, not only would his scheme directly violate federal regulations, but it would also totally disregard the statutory requirement that federal and state universal support contribution mechanisms must complement each other. Instead, he merely asserts that it is reasonable to require customers to pay both a federal USF contribution and an NUSF surcharge on the same "connection," with no effort to coordinate the two jurisdictional requirements. Without such coordination, the Commission's plan will almost certainly violate federal law.

²⁴ Gillan Direct at 8. Emphasis added.

²⁵ Pfister Direct at 29.

²⁶ See, Part 36 of the FCC's rules, *available at* https://www.ecfr.gov/cgi-bin/text-idx?SID=570d5100afc4517e915313601f2cb894&mc=true&node=sg47.2.36 1142.sg4&rgn=div7

Q.	What other areas of criticism exist in the Commission's	proposal?
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A.

One example raised by witnesses with knowledge of larger enterprise customers is that the FCC's Form 477 does not capture telephone numbers. This means the Commission's proposal cannot be implemented at present, and it would need to work with the providers to develop reporting requirements on this issue – requirements that would be unnecessary for universal service contributions in any other jurisdiction, creating administrative waste for providers.

An unrelated concern (with both technical and policy/legal implications) arises from the Commission's proposal to rely on FCC Form 477 data. The FCC's Form 477 only collects information from *facilities-based* providers. Relying on Form 477 data means the Commission would have no information on – and therefore no means to collect contributions from – resellers, including wireless resellers, which constitute a substantial share of the wireless market. This would require resolution to enable the Commission to conclude that any new contribution mechanism meets the legislature's requirement that NUSF funding be nondiscriminatory and competitively neutral.

Q. What about RCTN witness Brigham's testimony that the Commission could utilize information filed with the North American Number Plan

²⁷ Hollick Direct at 7; Gillan Direct at 10.

²⁸ Facilities-based Providers of Mobile Telephony Service are required to file FCC Form 477. FCC Form 477 Instructions (December 15, 2016 version) at 8. "Mobile voice service resellers" are expressly "not facilities-based providers for Form 477 purposes."

1		Administrator (NANPA) on FCC Form 502 (the Numbering Resource
2		Utilization Report (NRUF))?
3	A:	For the reasons discussed by Charter witness Gillan and Level 3 witness
4		Hollick, telephone numbers are not synonymous with "connections" for
5		enterprise customers. The Form 502 information on numbers provides no
6		information that would assist the Commission or NUSF administrator in
7		distinguishing the two. NANPA's Form 502 information does not save the
8		Commission's proposed contribution mechanism.
9		
10 11	C.	The Commission Lacks Sufficient Information to Evaluate Its Proposals
12	Q.	What information should the Commission review to evaluate the
13		various proposals?
14	A.	Regulators typically are hesitant to render decisions when the consequences
15		are uncertain. The Commission sought information from the parties on
16		customer impact. ²⁹ The testimony of staff witness Mr. Robbins presents no
17		analyses demonstrating the expected impact of any proposal on any
18		customer class. The testimony of Mr. Pfister, however, does present
19		information on the expected effect of the RIC alternative proposal on
20		residential wireline customers. Below, I present impacts of the various

 $^{^{29}}$ The February 22, 2017 Order asks the parties to comment "on how to achieve the appropriate balance between meeting the desired goals of each program with the coterminous impact of the surcharge level on consumers." Order at 25.

proposed surcharges for residential wireline customers, using the information in Mr. Pfister's Attachment One.

A word of caution is in order. Because the Commission has chosen to proceed simultaneously with both a novel contribution mechanism *and* a significantly expanded NUSF budget, no analysis can separate the individual impact of one proposal from the other. As Charter witness Gillan noted, the Commission's combined proposals make "it impossible to distinguish cause and effect."³⁰

Q. How were these residential impact comparisons developed?

The assumptions presented by Mr. Pfister in support of the RIC alternative proposal were used. He estimates the impact of RIC's proposal on residential customers to be a 31% increase.³¹ His two key assumptions are 1) a \$19.95 monthly "base rate" charged to residential wireline local service customers, and 2) a residential wireline customer average of \$7.50 each month for other "assessable intrastate services." These assumptions allow Mr. Pfister to estimate a surcharge from the first assumption of \$1.39, to which he adds a \$0.52 surcharge (for other "assessable services," his second assumption), for an estimated residential wireline customer surcharge of \$1.91. This amount represents what a residential wireline customer might pay under the current NUSF contribution mechanism, and I refer to it as the baseline.

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³⁰ Gillan Direct at 15.

³¹ In Pfister's Attachment One, he estimates that the proposed \$2.50 surcharge represents a \$0.59 increase, or 31%, above the \$1.91 "baseline" surcharge. See Note 2 to Pfister Attachment One.

As you can see in the table below, the first two columns contain the name of the entity proposing the wireline residential surcharge and the corresponding proposed surcharge amount. Although Mr. Pfister presented the estimated impact from the alternate RIC proposal, he did not use his baseline information to estimate impacts for the other proposals. I offer those here.

CTIA Analysis of Wireline Residential Customer Impacts

		Pfister Baseline Surcharge	CTIA Alternate Baseline 1	CTIA Alternate Baseline 2
		(Note 1)	(Note 2)	(Note 3)
		\$1.91	\$1.39	\$1.22
Recommending Party	Proposal	P	ercent Chang	ge
RIC	\$2.50	31%	80%	105%
PSC	\$1.24	-35%	-11%	2%
Robbins 1/2	\$1.29	-32%	-7%	6%
Robbins 3	\$4.63	142%	233%	280%
Note 1: Pfister Atta	achment On	e Note 2		

Note 1: Pfister Attachment One, Note 2

Note 2: Pfister assumptions, excluding additional "other assessable revenues" of \$7.50

Note 3: Assumes \$17.50 residential local service rate, excluding additional "other assessable revenues" of \$7.50

A.

Q. Please explain CTIA Alternate Baseline 1.

This column makes one modification to Mr. Pfister's assumptions – specifically, his assumption of an assumed \$7.50 in residential monthly expenditures on "other assessable intrastate services." This alternative takes into consideration the fact residential customers who spend *less than*

the average currently are assessed a smaller amount than Mr. Pfister's
estimated \$1.91. This column estimates a surcharge amount (under the
current mechanism) of \$1.39 for residential wireline customers who have
no vertical services or toll usage (consistent with Mr. Pfister's Attachment
One).

Although the record contains no data on the portion of customers at varying levels of toll usage, there can be no question that a portion of households with wireline phones rarely use them. The Centers for Disease Control and Prevention conducts regular analyses of household telephone usage in the U.S. Its most recent report states:

[S]ome people living in households with landlines cannot be reached on those landlines because they rely on wireless telephones for all or almost all of their calls.³²

The CDC has published state-level data indicating that the proportion of Nebraska households categorized as "wireless mostly" is 16%.³³

Additionally, data compiled by the Federal and State Staff for the Federal-State Joint Board on Universal Service reveals that "toll service" revenues for the entire industry have declined by nearly half over the past ten years.³⁴

Even without Nebraska-specific detail, it is undisputed that "toll" usage continues to decline. There is a portion of residential wireline customers for

³² Blumberg SJ, Luke JV. Wireless substitution: Early release of estimates from the National Health Interview Survey, January-June 2016. National Center for Health Statistics. December 2016, at 3. Available from: http://www.cdc.gov/nchs/nhis.htm.

³³ http://www.cdc.gov/nchs/data/nhis/earlyrelease/wiress_state_201608.pdf.

³⁴ Universal Service Monitoring Report, 2016 (data received through September 2016), Table 1.2. Available at https://apps.fcc.gov/edocs-public/attachmatch/DOC-343025A1.pdf

whom Mr. Pfister's assumption of additional "assessable revenues" does not apply. CTIA Alternate Baseline 1 depicts the likely effect of the various proposals on those customers.

4 Q. Please explain CTIA Alternate Baseline 2.

A. This column represents a second modification to Mr. Pfister's assumptions, capturing estimates for the approximately 13,000 Nebraska wireline residential customers whose monthly "base rate" is below his assumed monthly rate of \$19.95.35 This yields a different baseline under the current mechanism of \$1.22 (\$17.5 * 0.0695 = \$1.22). This column depicts the impact of the various proposals on these customers. The RIC proposal, for example, would effectively *double* the NUSF burden for such a customer who purchases no other "assessable intrastate services," increasing his or her USF assessment by 105%!36

14 Q. What conclusions can the Commission draw from the above table?

A. The Commission can draw several conclusions from this presentation. One, determining the true impact on residential wireline customers requires a substantial amount of data on customers' purchasing habits – data that has not been presented. Two, because of the added complication of a proposal

³⁵ The Commission's website shows ten ILECs, with more than 13,000 customers, with pending rate increases. The monthly wireline local service rates for these customers is \$17.50. See, http://www.psc.nebraska.gov/telecom/telecom/pending-rate-increases.html. While some or all of these ILECs are on the record regarding their intent to raise their rates, their current rates remain relevant.

³⁶ At a "base rate" of \$17.50, the existing revenue-based surcharge would be \$1.21, meaning the RIC proposal of \$2.50 adds \$1.29, for an increase of 105%. For Mr. Pfister's "average" customer who purchases \$7.50 in other "assessable services," the existing surcharge would be \$1.74 (6.95% on \$25.00 revenues -- \$17.50 plus \$7.50). For these customers, the RIC \$2.50 surcharge proposal would mean a 44% increase in the NUSF surcharge.

to significantly increase the NUSF budget, the Commission cannot determine
the customer impact of the contribution mechanism alone. Three, $\mathbf{M}\mathbf{r}$.
Pfister's assumed "average" residential wireline customer can help the
parties determine who are "winners and losers" in the Commission's
proposals. Mr. Pfister calculates that an "average" residential customer
today is paying \$1.91 under the existing NUSF contribution mechanism. In
contrast, the Commission's February 22 Order proposes a \$1.24 residential
surcharge under its new proposed contribution mechanism. To the extent
Mr. Pfister's estimations are realistic, the Commission's proposed residential
surcharge of \$1.24 surcharge represents a \$0.67 (35%) reduction to the
estimated current \$1.91 surcharge. Because the Commission is also
proposing to expand the NUSF by nearly \$30 million to support a
"broadband everywhere" initiative, this result is nonsensical and
unsupportable. Wireline residential customers would be major
beneficiaries of the Fixed Broadband Fund, and yet the Commission
proposes to give that customer class a 35% reduction while increasing the
fund by 60%! The result also demonstrates the wisdom of those witnesses
who urge the Commission to consider these issues in separate
proceedings. ³⁷
Have you developed an analysis of the potential impact on wireless
customers of the various proposals?

Q.

 $^{^{\}rm 37}$ See, e.g., the direct testimonies of Gillan, Hollick, Lubeck, and Price.

A. Yes. The starting point was a monthly per-line charge of \$40.00 for a voice/data bundle. Using a 65/35 apportionment between data/text and voice, the "assessable" revenues for both federal and state universal service is \$14.00 (.35 * \$40.00 = \$14.00). The intrastate proportion of the telecommunications component is based on aggregate industry data from the Universal Service Administrative Company ("USAC") website.³⁸

Calculation of Wireless Baseline NUSF Surcharge

Bundle Service Charge (Per Line)	\$40.00		
Bundle Component	Share	Formula	Amount
Total	100%		\$40.00
Data/text	65%	[.65 * \$40.00]	\$26.00
Voice	35%	[.35 * \$40.00]	\$14.00
Intrastate Portion of Voice (Note)	72.7%	[.727 * \$14.00]	\$10.18
"Baseline" Wireless Surcharge	6.95%	[.0695 * \$10.18]	\$0.71

The baseline surcharge amount (per wireless line) resulting from these calculations is \$0.71, allowing a determination of wireless customer impacts using the various proposed wireless surcharges, as shown below.

Wireless Customer Impact Analysis

Proposing Party	Proposed Mobile Surcharge	Wireless Baseline NUSF surcharge (per- line)	\$\$ Increase	Per-line Mobile Customer Impact
RIC	\$1.57	\$0.71	\$0.86	+121%
Commission Order	\$1.29	\$0.71	\$0.58	+82%
Robbins 1/2/3	\$1.29	\$0.71	\$0.58	+82%

³⁸ Data from USAC 2015 Detailed Telecommunications Revenues; Table S.1.1; Total Retail Mobile Service Revenues -- Intrastate as fraction of Total (Intrastate, Intestate, and International).

RICalt	\$1.82	\$0.71	\$1.11	+156%
Modit	ψ1.02 ·	μ0./1	Ψ 1. 1 1	1 13070

Q. Please explain the results displayed in the table.

A.

The first two columns display each proposed mobile surcharge adjacent to the entity proposing that surcharge amount. The third column contains the \$0.71 Wireless Baseline NUSF surcharge described above, and the fourth column ("\$\$ Increase") is derived by subtracting each proposed wireless surcharge from the baseline amount. The fifth column ("Per-line Mobile Customer Impact") depicts the percent change for each proposed wireless surcharge. Of course, because they are "per line" calculations, the number would be multiplied for each line in a household's family plan.

There is one row in the table that requires additional explanation.

The row labeled "RIC alt" represents a modification to one aspect of the RIC proposal. In place of the FCC's "safe harbor" percentage of 62.9% used by Mr. Pfister to determine the intrastate portion of the voice component, "RIC alt" uses the 72.7% intrastate revenue factor used in calculating the "Wireless Baseline NUS surcharge" discussed above, based on actual industry data. In my opinion, the "RIC alt" calculation is consistent with the logic used by Mr. Pfister but based on more accurate data.

As can be seen, each of the proposals would significantly increase the burden on wireless customers – all of them nearly or more than *doubling* the monthly surcharge amounts. Recall that Nebraska is already second highest in combined federal and state wireless taxes and fees. These results demonstrate that adopting any of the proposals would put Nebraska in the

1		unenviable position of naving the highest combined state and federal taxes
2		and fees on wireless, with a devastating impact on Nebraska's wireless
3		customers and competitiveness.
4	Q.	Do you have any concluding comments on the issue of customer
5		impact?
6	A.	Yes. This portion of my testimony demonstrates that implementing a new
7		contribution mechanism and expanding the NUSF based on the record
8		would have potentially significant impacts on at least some customer
9		classes. Further, the Commission has no basis to conclude that adopting any
10		of the proposals will satisfy the statutory requirements that NUSF
11		contributions be nondiscriminatory and competitively neutral. Indeed, the
12		notations included in the Commission's proposals confirm that several key
13		inputs are completely unsubstantiated: "No data to support these
14		allocations" and "Assumed % for illustrative purposes."39
4 -	Б.	
15 16	D.	The Record Shows That Adopting a New Contribution Mechanism Would Create More Problems Than it Would Resolve
17		
18	Q.	Will the proposed contribution mechanism create problems?
19	A.	Yes. Revenue-based funding mechanisms have existed for years, and the
20		success of those mechanisms is due to coordination and cooperation by
21		regulators and providers in multiple jurisdictions. Adopting an entirely
22		new, unprecedented and untried mechanism for Nebraska and Nebraska

 $^{^{39}}$ See Attachment to February 22, 2017 Order; Robbins Direct at Attachments "Alternative 1," "Alternative 2" and "Alternative 3."

alone would toss out the entirety of that collective experience and expose
the NUSF to significantly more uncertainty than currently exists. As Charter
witness Gillan stated:

"a revenue-based contribution arrangement is a system with *known* (and corrected, to the extent correctable) flaws, while a connection-based regime is a system of *yet-to-be appreciated* distortions, inevitable complexities and significant transaction costs." ⁴⁰

In other words, the Commission is seeking to replace a flawed but workable mechanism with a novel, untried and untested mechanism for Nebraska, without working with other states and the FCC, without any assurances that the new mechanism will accomplish its intended purpose. Furthermore, the Commission has no estimates on the cost of implementation, and no basis to conclude that it is reasonable to move forward toward implementation.⁴¹ Even if the Commission is to move forward, doing so will generate substantial costs for the industry, and the Commission should consider the amount of reimbursement from NUSF funds it will provide to defray those Nebraska-specific costs.

Q. What specific implementation concerns have the witnesses raised?

A. Witnesses raised concerns about providers' ability to administer the

Commission's proposed mechanism.⁴² A number of witnesses mentioned

problems with trying to bill the Commission's proposed tiered system of

⁴⁰ Gillan Direct at 4 (emphasis in original).

⁴¹ As Level 3 witness Hollick stated: "a connections-based mechanism entails complexities that have not been fully assessed because this type of connections-based contribution mechanism does not exist anywhere in the country." Hollick Direct at 2.

⁴² See Kreutz Direct at 10: "the business surcharge poses challenges for administration."

business surcharges. CenturyLink, for example, expressed concern that implementation would require a "large number of significant process and program changes."43 And CenturyLink further cautioned the Commission "that providers will not be able to properly calculate the business surcharge in their systems based on the tiers listed in Attachment A."44 Similarly, Level 3 warned the Commission that implementation of its proposed mechanism "would require modifications to several internal systems and might necessitate a manual process to deal with Nebraska invoices, injecting the potential for error and delay."45 These issues should give the Commission pause, raising the very real possibility that businesses across the state could experience additional billing errors and possibly delays in receiving bills from providers. What other problems would result from the Commission's proposed contribution mechanism?

Q.

The Commission anticipates that adoption of its proposed contribution mechanism would be a step forward for the NUSF, but the facts suggest otherwise. For example, the NUSF today assesses the surcharge on intrastate dedicated circuits -- private lines and special access circuits. These unquestionably are "connections," but the Commission would forego NUSF collections from those services under its proposal, raising questions of

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⁴³ Lubeck Direct at 1.

⁴⁴ Id., at 6.

⁴⁵ Hollick Direct at 6.

competitive neutrality.⁴⁶ For years, this has been recognized as a flaw in the potential use of Form 477 information as a basis for a new contribution mechanism. The FCC concluded, in its 2012 Further Notice of Proposed Rulemaking, that "because the [Form 477] is designed mainly to track residential connections, it does not capture many connections provided to businesses, governmental entities, and other large institutions."⁴⁷ No witness has provided a recommendation to correct this substantial limitation. This underscores the fact that implementing the Commission's proposed contribution mechanism would favor certain services and thereby deprive the NUSF of certain known (and quantifiable) funding sources. With a completely unknown and untested replacement mechanism, this clearly would be a step backward for the NUSF.

E. The Commission Has Not Adequately Addressed The Timing for Implementing a New Contribution Mechanism

Q. What implementation issues have the witnesses discussed?

17 A. There are many issues arising out of the proposed business surcharges,
18 including whether providers' back office systems would be able to properly
19 calculate the various surcharges. Additionally, the testimony includes
20 additional implementation issues that would have to be resolved before a
21 connections-based mechanism could be initiated. For example:

⁴⁶ This concern applies with equal force to the alternate proposals, none of which would include dedicated circuits.

 $^{^{47}}$ FCC Further Notice of Proposed Rulemaking, Order 12-46 in WC Docket 06-122 and GN Docket 09-51, released April 30, 2012, \P 246.

1 2 3		 "CenturyLink is concerned that providers will not be able to properly calculate the business surcharge in their systems based on the tiers listed in Attachment A."⁴⁸
4 5 6		- "Nothing in our back-office systems currently associates "working telephone numbers" with the billing and invoice systems that we use to generate invoices for business customers."49
7 8		- " the Commission's Proposal would impose significant costs for data collection, billing, and reporting systems"50
9 10		 "Business Fixed Voice surcharge tiers are difficult to understand and may be very complex to implement"
11 12 13 14		- "Surcharge tiers present "challenges to administration," and "assuming that the mechanism could be billed, the ongoing operational tasks associated with a variable surcharge would be burdensome."52
15		
16		These testimonies demonstrate that, even if the proposed mechanism could
17		overcome the numerous problems described herein, moving forward
18		exposes the NUSF to delays and uncertainties, and would add unknown
19		costs to NUSF administration.
20	Q.	What other issues affect the likely timing of implementation?
21	A.	The testimonies raise substantial reporting issues that would need to be
22		addressed, ⁵³ meaning the Commission would need to develop novel
23		reporting obligations, thereby delaying implementation.
24		The Commission has yet to address that providers would need time
25		to implement a new mechanism, and has made no mention of a grace period
26		for providers to make the necessary systems modifications. Nor has the

⁴⁸ Lubeck Direct at 6.

⁴⁹ Hollick Direct at 6.

⁵⁰ <u>Id</u>.

⁵¹ Kreutz Direct at 7-8.

⁵² Kreutz Direct at 7-8.

⁵³ See, Hollick Direct at 7: "FCC Form 477 data does not capture working telephone numbers." See also Gillan at 9 discussing the flaws in equating telephone numbers with "connections."

Commission noted the very real possibility that all providers'
implementation efforts will be wasted if or when the FCC modifies the
federal contribution mechanism

The testimonies also explain to the Commission that providers will incur costs to implement a novel collection mechanism. Mr. Gillan stated that "moving away from [a revenue-based] system will be complex, costly, confusing, and will likely need to be duplicated if the FCC ultimately changes the federal system." He likewise cautioned that "the costs to operate a connections-based system will be higher than the existing system... [and] would impose new costs on both industry and its administrator in the form of new data collection and reporting requirements, necessitating changes to billing and reporting systems." These issues explain why the Commission has no reliable estimates regarding how long providers will need to implement a new contribution mechanism, or the cost of such implementation. Nor has the Commission addressed the implications of adopting a new mechanism that may be cost-prohibitive to implement for a single state.

III. The Commission Should Defer Into Another Proceeding the Question of Expanding the NUSF

Q. Why should the Commission defer its proposed NUSF budget into a

different proceeding?

⁵⁴ Gillan Direct at 4-5.

⁵⁵ Gillan Direct at 13.

1	A. The Commission's Order initiating this proceeding explained that the
2	purpose was "to consider revisions to the contribution mechanism of the
3	Nebraska Universal Service Fund ("NUSF")." The subsequent decision to
4	propose a nearly \$30 million increase to the fund raises numerous
5	complicated issues that demand close investigation – issues that cannot be
6	given appropriate consideration in this proceeding. In a recent op-ed piece
7	recommending that broadband be included in any infrastructure plan
8	considered by Congress, the authors point to significant waste pursuant to
9	previous broadband efforts, describing how:
10 11 12 13 14 15	billions in stimulus money was wasted by the Department of Agriculture's Rural Utility Service. Its many sins included funding projects in population centers that already had broadband, poor project management and a failure to properly vet loan applicants, many of whom defaulted. RUS promised to connect 7 million rural Americans. The actual number may be as low as 200,000. ⁵⁶
17	The authors offer several areas for consideration by policymakers, including
18	the need to address "nonfinancial causes" of the digital divide. They point
19	out that "over half of consumers who don't have Internet service at home -
20	largely older and rural Americans and those with less education – say they
21	don't want or need it, even if it were free." The critical point here is that
22	infrastructure spending requires critical oversight, and funding, by itself, is
23	insufficient to ensure that consumers reap appropriate benefits.
24	Consideration of these and other critical issues demands a full exploration in

 $^{^{56}}$ See Attachment One. "Should broadband be included in the Trump infrastructure plan?" Op-ed piece in The Washington Post, April 5, 2017, authored by Blair Levin and Larry Downes.

1		a separate proceeding, one that will ensure the Commission's appropriate
2		oversight of NUSF contributions from Nebraskans.
3	Q.	Does the record support the massive NUSF expansion proposed in the
4		Commission's February 22 Order?
5	A.	No. My direct testimony explained the many reasons why the Commission
6		should not expand the NUSF, including legal/policy issues and the absence
7		of reasonable estimates of the amount of funding needed - indeed, the
8		absence of any record evidence supporting the Commission's proposals. My
9		concerns were echoed in the testimonies of the other witnesses. For
10		example, CenturyLink witness Lubeck states several times in the context of
11		the Commission's proposed NUSF budget that "no information is provided"
12		supporting elements of the proposal, and concludes:
13 14 15 16		With such a significant increase in NUSF funding available, more information should be provided for the proposed budget for each of the programs to ensure that the funds are being used appropriately. ⁵⁷
18		And Charter's witness Gillan stated unequivocally that issues surrounding
19		the size of the NUSF should be considered in a different proceeding. The
20		Commission should acknowledge that information in the record does not
21		support its proposal to massively expand the NUSF.
22		In addition, the statement by CenturyLink's Mr. Lubeck that "no
23		information is provided that explains how the Commission determined" the

⁵⁷ Lubeck Direct at 6.

proposed Fixed Broadband Fund⁵⁸ raises an important point. The Commission's proposal gives no explanation as to how it intends to safeguard against providers obtaining double-recovery from the state and federal programs. Unless the Commission defers the NUSF expansion to another proceeding where it can develop such safeguards, it would be patently unreasonable to substantially add -- by \$27 million - to the existing funding burden on Nebraskans.

Q. The RIC witnesses have provided additional information in their testimonies. Does that information support the proposed NUSF budget?

A. No. My direct testimony presented several arguments why the Commission should not adopt its proposed Fixed Broadband Fund.⁵⁹ Nothing in the RIC witnesses' testimony resolves the issues I described. Several aspects of federal broadband funding do not appear to have been evaluated by the

- The FCC's awards of CAF II model-based support to Nebraska price cap companies that, over the next several years, could exceed \$150 million.⁶⁰
- Similarly, the FCC is providing additional support for broadband development by rate-of-return companies –

Commission, including:

⁵⁸ Id., at 7.

 $^{^{59}}$ In his testimony, Mr. Pfister refers to the proposed Fixed Broadband Fund as the "High Cost Fund"

⁶⁰ See, FCC CAF - A-CAM 2.3.2, Authorization Report Version 2.0 (January 24, 2017). See also, funding disbursement information from the Universal Service Administrative Company, available at http://www.usac.org/hc/tools/disbursements.

1 2		perhaps more than \$20M annually – that this Commission has not taken account of. ⁶¹
3 4 5		The FCC's CAF II auctions will award nearly \$200 million per year for 10 years, for additional broadband deployment in price cap territories. ⁶²
6 7 8 9		The FCC is proceeding with Mobility Fund Phase II, which will make \$453M/year in support available to address areas unserved by 4G LTE. Support will total \$4.5B over the 10-year funding period. ⁶³
10 11 12		 The FCC has budgeted up to \$500 million per year for the Remote Areas Fund, to be awarded by reverse auction after the CAF II auction is conducted.⁶⁴
13		Internet access service is an interstate service, the revenues and
14		expenses for which are in the interstate jurisdiction, so the Commission
15		would need to determine how it will safeguard against providers
16		obtaining double-recovery from the state and federal programs.
17	Q.	Have you reviewed the analysis presented as RIC witness Kranner's
18		Attachment Three?
19	A.	Yes. Ms. Kranner's Attachment Three appears to summarize information
20		only from the "Nebraska State Model." She testifies to having worked with
21		the Alternative Connect America Cost Model ("A-CAM"), and recognizes the
22		FCC's use of the A-CAM "in connection with its analysis and decisions
23		relating to Federal USF support to be provided to rural rate-of-return
24		carriers."65 But she makes no further mention of the A-CAM, nor does she
25		explain how its results compare with data from the Nebraska State Model.

⁶¹ Id.

⁶² Id.

⁶³ *ld.*

⁶⁴ *Id*.

⁶⁵ Kranner Direct at 5-6.

Ţ	Q.	what is the significance of the A-LAM relative to Ms. Kranner's
2		Attachment Three?
3	A.	I have reviewed Nebraska-specific information from the FCC's A-CAM
4		Report Version 7.0, and provide that information as Attachment Two. As
5		illustrated, these data paint a very different picture than is seen in Kranner's
6		Attachment Three. Nebraska rate-of-return carriers taking advantage of the
7		federal funding "offer" of \$43.6 million would be positioned to extend
8		broadband ⁶⁶ to more than 22,000 households, or two thirds of all unserved
9		households in their service territories. While this data pertains only to
10		those rate-of-return carriers, it raises suspicion about any conclusions
11		drawn from Kranner's Attachment Three. As a result, the Commission
12		should not move forward with its proposed NUSF budget without giving
13		substantial attention to the numerous federal initiatives to fund broadband
14		deployment – matters that are better evaluated in a separate proceeding.
15		
16	IV.	Additional Issues
17		
18	Q.	Are there other issues raised by the witnesses that you wish to
19		address?
20	A.	Yes. RIC witness Pfister's testimony contains a discussion about network
21		usage that CTIA believes is one-sided and possibly misleading. Specifically,
22		Mr. Pfister states:

 $^{^{66}}$ At speeds of at least 10/1 Mbps, where 10 Mbps is download speed and 1 Mbps is upload speed.

Consumers and other service providers use the RIC companies' and other companies' networks to enable voice and data communications to be sent and received. Consumers use these networks to place and receive calls. Further, mobile telephone users also utilize these networks for the provision of Wi-Fi services that allow such users to receive data through their mobile devices, and in my experience, to do so without incurring usage charges.⁶⁷

Certainly, Wi-Fi usage is widespread. My wife and I have multiple mobile devices that we connect to broadband using the Wi-Fi network in our home. Visiting friends and relatives likewise use that Wi-Fi. Many commercial establishments provide Wi-Fi as a convenience for their customers. The portion of Mr. Pfister's discussion that is troubling is the phrase "without incurring usage charges." This implies that the RICs' networks are being used unfairly, and that is not true. First, my home Wi-Fi example is illustrative. I am the consumer in that case, and I am paying for the underlying service(s). In this example, I have a reasonable expectation to use my Wi-Fi in whatever legitimate manner I choose, consistent with the Terms of Service. And it simply is ludicrous to think that I would levy a "usage charge" on myself or my guests. The same generally applies for commercial Wi-Fi (although some establishments, including, for instance, hotel chains, do require payment for access to Wi-Fi).

Second, all interconnected providers derive a *mutual benefit* from connectivity. A requirement of interconnection has been the hallmark of U.S. telecommunications policy for one hundred years, and *every*

⁶⁷ Pfister Direct at 5 (emphasis added).

telecommunications provider has an interconnection obligation pursuant to the Communications Act. The end user customers of the RIC companies certainly place calls using their wireline phones to mobile customers, and mobile providers do not levy "usage charges" to wireline providers for use of their mobile networks.⁶⁸ These points explain why the referenced passage from Mr. Pfister's testimony is misleading.

A.

8 V. Summary

9 Q. Please summarize your testimony.

My testimony responded to numerous issues raised in the parties' testimonies filed in this proceeding on March 21, 2017. I explained that the record contains no historical NUSF data, no analysis of recent fund receipts, nor any other information demonstrating that the existing contribution mechanism represents a threat to the NUSF. Rather than moving forward with an obviously flawed, novel, and untested contribution mechanism that will cost Nebraska ratepayers an additional \$27M per year without justification, I recommended that the Commission work with the Federal State Joint Board on Universal Service to comprehensively address contribution reform in a manner that streamlines administration and facilitates – not complicates – compliance. I described the serious legal and policy concerns identified in the testimonies, including how the proposed

⁶⁸ Historically, there has been a significant imbalance in the intercarrier compensation regime whereby mobile providers were required to pay wireline providers usage charges for certain traffic, whereas mobile providers were prohibited from charging wireline providers in a reciprocal manner.

mechanism conflicts with federal and state statutory policies. I also recounted the several practical, administrative, and other implementation problems identified by the witnesses – problems that counsel against "going it alone" in the absence of guidance from the FCC and without working with other states, and adopting a novel contribution mechanism. My testimony presented analyses of the likely customer impact of the proposals on wireline residential customers and on wireless consumers. This information demonstrates that the Commission does not have sufficient information to conclude that any of the proposals before it meet the statutory requirement that NUSF contributions be assessed in a nondiscriminatory and competitively neutral manner.

Further, I noted the other witnesses' testimonies describing several ways in which adopting a new contribution mechanism would be a step backward. For example, the proposals would remove contribution obligations from some existing sources of NUSF contributions, including intrastate private lines and special access circuits, apparently tilting the competitive playing field in favor of those services. Further, the other witnesses explain numerous implementation issues that the Commission has not acknowledged – issues that, even if the Commission could overcome the numerous flaws that counsel against moving forward with a new contribution mechanism, add significant uncertainty as to whether, or when, such a new mechanism could be implemented. Collectively, the witnesses'

testimony overwhelmingly supports keeping the existing contribution mechanism.

Finally, my testimony discussed others' testimonies regarding the Commission's proposed NUSF budget, pointing out that the majority recommends deferring action on the much-expanded budget to a separate proceeding, providing an opportunity for the Commission to give proper consideration to the numerous unanswered questions and absence of evidence in this record. I explained why the testimonies of the RIC witnesses have not compensated for the substantial lack of record evidence for the proposed NUSF budget. Rather, as I explained, those witnesses raise issues – such as coordination of funding from the federal USF mechanism – that are appropriately considered in a separate proceeding.

- Q. Does this conclude your testimony at this time?
- 14 A. Yes.

The Washington Post

The Switch • Perspective

Should broadband be included in the Trump infrastructure plan?

By Blair Levin and Larry Downes April 5

A House Energy and Commerce Subcommittee recently reviewed options for completing America's impressive progress in deploying broadband infrastructure. Unlike other issues, there is bipartisan agreement on the importance of putting the 21st century's most valuable technology into the hands of all Americans, and especially those in rural and tribal areas who have the fewest, if any, options for getting online. There's even broad agreement on how to do it.

As the White House and Congress develop an infrastructure plan promised during the campaign, many, including senators, House members and mayors, are urging that broadband be included. While our crumbling 20th-century infrastructure of roads, bridges, water and mass transit clearly need more immediate attention and the bulk of the funding, we agree that broadband should be included, balancing fixes to the past with providing for the future.

As always, the devil will be in the details. On that score, there are valuable lessons from the last large federal infrastructure effort, the 2009 Recovery Act. One of the most valuable results of that effort was one that cost almost nothing — the creation of a National Broadband Plan, which one of us directed. The plan stimulated private providers and new entrants to accelerate investments in next-generation fiber and mobile networks, and raised alarm bells heeded by Congress and the Federal Communications

Commission to allocate much more radio spectrum for future technologies. Those well-timed decisions will now provide the foundation for 5G technologies that will jump-start the next wave of disruptive innovation over the next 10 years.

But while some of the direct investments in "shovel-ready" broadband build-out projects were successful, billions in stimulus money was wasted by the Department of Agriculture's Rural Utility Service. Its many sins included funding projects in population centers that already had broadband, poor project management and a failure to properly vet loan applicants, many of whom defaulted. RUS promised to connect 7 million rural Americans. The actual number may be as low as 200,000.

To avoid these and other costly mistakes, here are eight simple ground rules we hope Congress will follow in crafting broadband-related infrastructure incentives:

1. Limit and carefully control direct investment funds. Congress should consider setting aside a modest portion of any new infrastructure fund, say \$20 billion, for a one-time rural broadband acceleration program. Carriers would be offered subsidies to build out in rural areas currently without a broadband provider, with the requirement of implementing technologies with sufficient bandwidth to support future growth, perhaps up to 100 Mbps speeds. To avoid problems that plagued the Recovery Act's scattered broadband initiatives, the acceleration program should be managed entirely by one agency, with strict controls to help ensure troubled projects get attention (or cut off) sooner rather than later.

Calculation of specific subsidies should be made on a per-location basis, determining how much is needed to overcome otherwise prohibitive build-out costs.

2. Don't offer ongoing support. To date, efforts to provide universal access to rural broadband infrastructure has suffered from a structural flaw. The FCC provides payments in the form of small ongoing annual subsidies, even in areas when all that was needed was an initial capital investment. As a

result, it can take years for providers to recoup their own capital investments, creating incentives to build piecemeal in rural areas, and to make decisions based on what providers believe the government will fund rather than on what consumers want.

Future investments should avoid this error by offering carefully structured one-time subsidies, saving billions in ongoing costs. While some high-cost areas will continue to need both one-time capital and operating support, the emphasis should be on locations for which capital support alone can overcome the need for further government subsidy.

3. Use market mechanisms where possible. After establishing the perlocation subsidy needed, the government may find there are more providers willing to build in underserved rural and tribal areas than there are funds to support them. If so, the FCC should run a reverse auction among competing providers to bid down the per-location cost. Commission Chairman Ajit Pai has already proposed such a solution to improve the efficiency of existing universal service programs, with the goal of letting market forces deliver "the best deal available" to maximize limited funds.

4. Extend "Dig Once/Climb Once" policies on government

property. Lack of coordination between broadband and other infrastructure projects wastes time and resources. At least two bills circulating in Congress now would expand a "Dig Once" rule, requiring installation of broadband conduit whenever roads are being dug up for any reason, along with a "Climb Once" policy whenever new equipment is being added to existing utility poles. Dig Once alone can reduce the cost of deploying fiber under highways in urban areas up to 33 percent and up to 16 percent in rural areas, according to the Government Accountability Office. A coalition of public policy think tanks recommended at a recent hearing that the policy be expanded to state roads, and to all public rights of way adjoining roads. We agree.

5. Improve government processes that hinder private

investment. Direct expenditure of taxpayer or borrowed funds is not the only tool available to accelerate broadband investment. For providers, the

costs of dealing with slow and overly bureaucratic local governments can be significant and, at the margins, have already proven decisive in which cities get new private infrastructure investment and which ones do not. Simply providing a single point of contact within a local government can make a big difference in both speed and cost of deployment, along with access to city property and streamlined zoning processes. Best practices should be established at the federal level in the infrastructure bill.

- **6. Embrace emerging technologies.** For the most sparsely populated and geologically challenging parts of the United States, the economics of laying fiber-optic cable are unlikely to make sense any time soon, even with subsidies. So the question becomes not only what alternative broadband technologies are best suited to rural and mountainous regions, but how to encourage providers to deploy them. In many rural areas, for example, fixed wireless technologies have proven themselves capable of providing high-speed, last-mile connections to homes and businesses. Satellite-based solutions have also matured, as have hybrid fiber/copper technologies using existing telephone lines. No matter how the infrastructure bill provides for broadband in these locations, it should do so on a technology-neutral basis to encourage continued development of new options.
- 7. Address nonfinancial causes of the digital divide. Availability and even price are not the only things holding back broadband adoption. As we have noted, over half of consumers who don't have Internet service at home largely older and rural Americans and those with less education say they don't want or need it, even if it were free. Part of that resistance comes from the fact that unconnected Americans don't know how to use a computer or even a smartphone, let alone how to install and maintain networking equipment inside or outside their home. Whatever funding the infrastructure law provides for broadband will be wasted if some of that support isn't directed to providing hands-on education, perhaps through community groups and senior centers, as well as simple interfaces for basic technical service.
- **8.** Use the bully pulpit to encourage digital want-nots. Solving the training and support issues of the least tech-savvy users won't fully answer

the relevance problem. Digital want-nots also need to understand the value of getting online. These include the obvious benefits of connecting to family and friends and expanding entertainment options. But there are more fundamental ways emerging technologies, including the Internet of Things and smart homes and communities, can improve quality of life, especially for seniors hoping to age in place in their homes. Many of these benefits were detailed in the National Broadband Plan, but neither the FCC nor the White House used it to promote a vision of tomorrow that would make getting online today irresistible. Public education about why the infrastructure bill is spending money on broadband will be critical to getting value from our investment.

Overall, improving broadband infrastructure will require spending federal funds more wisely, but, more important, providing incentives for private investors to reallocate their own capital in ways that ultimately benefit everyone. In some cases, spending money isn't even required.

Following these basic steps will maximize the value of taxpayer money spent on broadband infrastructure. More to the point, they can multiply government spending through continued private investment, accelerating efforts to close the digital divide and bring the least-connected parts of the country into our growing digital conversation. That's truly a win-win-win.

Blair Levin is a nonresident senior fellow at the Brookings Institution. In 2009, he oversaw development of the National Broadband Plan. Larry Downes is project director at the Georgetown Center for Business and Public Policy and co-author of "Big Bang Disruption: Strategy in the Age of Devastating Innovation" (Portfolio 2014).

Downes is co-author with Paul Nunes of "Big Bang Disruption: Strategy in the Age of Devastating Innovation" (Portfolio 2014). He is a project director at the Georgetown Center for Business and Public Policy. Follow @larrydownes

Federal Communications Commission CAF - A-CAM 2.3 - Report Version 7.0

Report 7.2 - Broadband Obligations - Utilizes a Funding Benchmark of \$52.50, Extremely High Cost Threshold Not Applicable, Funding Cap Max \$200 per Location, Wired and Wireless equal True

Berlin Berlin Weiter aus eines Gebe		The state of the s			August 3, 20	16				
State	Rate of Return Carrier ROR Sub Total	Holding Company	State Level Density	Total Number of Rate of Return Locations in Census Blocks Receiving Model- Based Funding	Fally Funded Locations	Capped Locations	Number of Locations in Eligible Census Blocks with Obligation to Offer 25/3 Mbps	Number of Locations in Eligible Census Blocks with Obligation to Offer 10/1 Mbps	Number of Locations in Eligible Census Blocks with Obligation to Offer 4/1 Mbps	Number of Locations Remaining on Reasonable Reguest Standard
		ROR Sub Total ROR State Sub Total	ROR Sub Total	32,621	22,078	10,543	6,991	15,087	2,648	7,895
POR National	ROR SIME SUDI	KUK State Sub Jotal	ROR State Sub		22,078	10,543	6,991	15.087	2.648	7,895
NOR Nationwide	KOK Nationwide	ROR Nationwide Total	ROR Nationwie	1,217,130	1,049,830	167,300	592,869	456,961	46,965	120,335
NE NE	AMRC	American Broadband Communic		4,150	3,480	670	1.740	1.740	167	503
NE	CNSL2	Consolidated Communications, In	0.69	4,043	2,413	1.630	603	1,810	407	503 1,223
NE	CZDT	Cozad Telephone Company	13,08	517	441	76	330	111	38	
NE		Diller Telephone Company	3.16	954	644	310	161	483	77	38 233
NE		Great Plains Communications, In		15,765	10,257	5,508	2,564	7,693	1,377	
NE		Hemingford Cooperative Telepho		4		4			1,25//	4,331
NE NE		Hartington Telecommunications	7.66	36	29	7	!4	15		- 3
NE		K & M Telephone Company, Inc.	1.00	522	301	221	75	226	55	
		Plainview Telephone Co. Inc.	5.33	2		2	<u></u>		33	166
		Pinpoint Holdings, Inc.	3.06	34		33			<u> </u>	2
		Pierce Telecommunications, Inc.	6.07	854	639	215	319	320	8	25
		Sodtown Telephone Company	1.45	125	36	89	9,0	27	53	162
		Southeast Nebraska Communicat	8.90	5	3	2			22	67
		Stanton Telecom, Inc.	6.58	2	***************************************	2			··	2
	THNB	The Nebraska Central Telephone	2.65	4,235	2,866	1,369	716	2,150		2
		Three River Telco	1.15	9	1	7,302	710	2,130	342	1,027
	USCH	USConnect Holdings, Inc.	0.91	313	94	219	23	71	2	6
		West Iowa Telephone Company	6.41	1,051	873	178	436	437	54	165
NE	NE I	NE	NE	32.621	22,078	10,543	6,991	15,087	2,648	134 7,895

1

Respectfully submitted this 21st day of April, 2017.

Loel P. Brooks, #15352

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CERTIFICATE OF SERVICE

I certify that on the 21st day of April 2017, one original, five copies and an electronic copy of the foregoing Reply Testimony of Don Price on behalf of CTIA — the Wireless Association, in Application No. NUSF-100/PI-193, were delivered to:

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Loel P. Brooks

CERTIFICATE OF SERVICE

The undersigned hereby certifies that on this 21st day of April, 2017, an electronic copy of the foregoing Reply Testimony of Don Price on behalf of CTIA – the Wireless Association, in Application No. NUSF-100/PI-193, was delivered to:

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