

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Connect America Fund	)	WC Docket No. 10-90
)	
A National Broadband Plan for Our Future	)	GN Docket No. 09-51
)	
Establishing Just and Reasonable Rates for Local Exchange Carriers	)	WC Docket No. 07-135
)	
High-Cost Universal Service Support	)	WC Docket No. 05-337
)	
Developing a Unified Inter-carrier Compensation Regime	)	CC Docket No. 01-92
)	
Federal-State Joint Board on Universal Service	)	CC Docket No. 96-45
)	
Lifeline and Link Up	)	WC Docket No. 03-109
)	

**REPLY COMMENTS OF
THE NATIONAL ASSOCIATION OF STATE UTILITY CONSUMER
ADVOCATES**

David C. Bergmann
Assistant Consumers' Counsel
Chair, NASUCA Telecommunications
Committee
bergmann@occ.state.oh.us
Office of the Ohio Consumers' Counsel
10 West Broad Street, Suite 1800
Columbus, OH 43215-3485
Phone (614) 466-8574
Fax (614) 466-9475

NASUCA
8380 Colesville Road (Suite 101)
Silver Spring, MD 20910
Phone (301) 589-6313
Fax (301) 589-6380

May 23, 2011

TABLE OF CONTENTS

	Page
I. INTRODUCTION AND EXECUTIVE SUMMARY	1
II. THE STATE MEMBERS PLAN	4
A. NASUCA’S POSITION ON STATE MEMBERS COMMENTS	4
B. THE STATE MEMBERS’ (AND NECA, ET AL.’S) ANALYSIS OF THE IMPACTS OF ICC AND USF CHANGES	8
1. <i>The fundamental flaw in the State Members’ – and others’ – access revenue analyses</i>	8
2. <i>The even more fundamental flaws in the lost revenue replacement analyses</i>	12
3. <i>Conclusion on financial analyses</i>	16
III. THE COMMISSION SHOULD REJECT AT&T’S – AND OTHERS’ – ARGUMENTS ON THE “POTS DEATH SPIRAL” AND “OUTDATED” SERVICE OBLIGATIONS.	17
A. THE END OF THE LINE FOR COLR OBLIGATIONS?	17
B. ETC OBLIGATIONS	23
C. LIFELINE REVISIONS	24
D. AT&T’S “PROMPT TRANSITION” TO A “FREE-MARKET END STATE”	25
IV. THE LEGAL BARRIERS TO PROVIDING USF SUPPORT FOR BROADBAND	31
V. IMMEDIATE REFORMS FOR THE USF THAT WILL FREE UP FUNDS FOR THE CAF	32
A. THE COMMISSION’S PROPOSALS	32
1. <i>Phasing out Local Switching Support</i>	33
2. <i>Corporate operations expense</i>	36
3. <i>Reduce reimbursement rates for the High-Cost Loop program – capital and operating expenses</i>	38

4.	<i>Limiting the total support per line available to carriers</i>	41
5.	<i>Phasing out Interstate Access Support</i>	42
6.	<i>Eliminating the identical support rule</i>	45
B.	THE STATE MEMBERS PLAN	47
1.	<i>The State Members Plan for POLR Support</i>	47
2.	<i>Other Perspectives on the Role of Cost Models</i>	52
C.	USF PORTIONS OF THE NECA, ET AL. PROPOSAL	56
1.	<i>Step Two: Place Limits on Prospective RLEC Capital Expenditures</i>	57
2.	<i>Shifting Loops to the Interstate Jurisdiction</i>	59
3.	<i>NECA, et al. on the “Donut” and the “Hole”</i>	60
D.	OTHER SELECTED PROPOSALS	63
VI.	INITIATING THE CAF	64
A.	INTRODUCTION	64
1.	<i>The Business Case to Deploy Broadband</i>	64
2.	<i>CAF and Inflation</i>	68
B.	WHERE ARE THE UNSERVED AREAS?	70
C.	THE PROBLEMS WITH AUCTIONS	71
1.	<i>Introduction</i>	71
2.	<i>Many Other Parties Oppose or Doubt the Auction Approach</i>	74
3.	<i>Comments that that Express Support for Auctions are not Well-Supported.</i>	77
4.	<i>Variations on the Auction Theme</i>	81
5.	<i>Public Utility Commission Comments on Auctions</i>	85
6.	<i>NECA, et al. on Phase I CAF Project Ranking</i>	90
D.	THE COMMISSION MUST ESTABLISH PUBLIC INTEREST OBLIGATIONS FOR PHASE I CAF.	91

1.	<i>Broadband Speeds</i>	93
2.	<i>Other Parties on Broadband Speeds</i>	94
3.	<i>Midsize Carriers and Upstream Data Speeds</i>	97
4.	<i>Service Requirement vs. Coverage Requirement</i>	99
E.	THE STATE MEMBERS WIRELINE BROADBAND FUND.....	102
F.	NECA, ET AL.’S “STEP 4: AN ‘EVOLVED’ RLEC-SPECIFIC CAF MECHANISM”	103
G.	WHERE WILL SUPPORT GO?	105
1.	<i>Support Targeted Only at Wire Centers</i>	105
2.	<i>“Price Cap Areas First”</i>	106
3.	<i>Windstream and Targeted Areas</i>	107
H.	NASUCA’S PROPOSAL FOR A PROCUREMENT MECHANISM	109
1.	<i>If the Commission Pursues Competitive Bidding, it Should Use NASUCA’s Procurement Approach</i>	109
2.	<i>AT&T’s Procurement Model</i>	109
I.	MOBILITY	112
1.	<i>The importance of mobility</i>	112
2.	<i>The State Members Mobility Fund</i>	116
J.	CONCLUSION ON AUCTIONS AND THE CAF.....	117
VII.	INTERCARRIER COMPENSATION	118
A.	INTRODUCTION: THE COMMISSION SHOULD NOT ADOPT NON-COST-BASED “LOW” RATES AND/OR BILL-AND-KEEP.....	118
B.	COMMISSION AUTHORITY UNDER SECTION 251(B)(5).....	120
1.	<i>AT&T’s Arguments</i>	120
2.	<i>Verizon’s Interpretation of 251(b)(5)</i>	123
C.	PEERING ARRANGEMENTS ON THE INTERNET	126

D.	OTHER PARTIES’ SUPPORT FOR BILL-AND-KEEP ADDS LITTLE TO THE ARGUMENT.	128
E.	A UNIFIED “LOW” RATE FOR ICC IS NOT REASONABLE.....	134
F.	LEGAL AUTHORITY TO ESTABLISH A NON-COST-BASED “LOW” \$0.0007 RATE.....	138
G.	OTHER PARTIES OPPOSING THE UNIFORM \$0.0007 RATE OR BILL-AND-KEEP	140
H.	THE “BENEFIT OF A CALL” NOTION DOES NOT JUSTIFY BILL-AND-KEEP.	144
I.	AT&T’S LONG-TERM VISION FOR ICC	145
J.	STEP 2 OF THE STATE MEMBERS PLAN ON INTERCARRIER COMPENSATION REFORM.....	147
K.	CENTURYLINK’S INTERMEDIATE POSITION.....	149
L.	NECA, ET AL.’S POSITION	150
M.	CONCLUSION ON “REFORMS” TO INTERCARRIER COMPENSATION RATES	151
VIII.	RECOVERY OF LOST ICC REVENUES	152
A.	OPPOSITION TO REVENUE RECOVERY MECHANISMS.....	152
B.	AT&T’S PROPOSAL.....	155
C.	VERIZON’S TRANSITION FUND.....	158
D.	CENTURYLINK’S “RECOVERY MECHANISM”	159
E.	NECA, ET AL.’S “STEP THREE” REVENUE RECOVERY MECHANISM.....	160
F.	THE STATE MEMBERS ACCESS REVENUE RECOVERY MECHANISM	162
IX.	CONCLUSION.....	164

APPENDIX A: The NRIC Regression Model and Regression Modeling for USF Purposes

APPENDIX B: THE VANTAGE POINT STUDY

TABLE OF SHORT FORM REFERENCES

ACA – American Cable Association

ACS – Alaska Communications Systems

Ad Hoc Telecommunications Users Committee (“Ad Hoc”)

ADTRAN, Inc. (“ADTRAN”)

Alaska Communications Systems (“ACS”)

Alaska Telephone Association (“ATA”)

Albion Telephone Company (“Albion”)

Alexicon Telecommunications Consulting (“Alexicon”)

Allband Communications Cooperative (“Allband”)

American Cable Association (“ACA”)

ATA – Alaska Telephone Association

AT&T, Inc. (“AT&T”)

California Public Utilities Commission and the People of the State of California
 (“CPUC”)

Calaveras Telephone Company (“Calaveras”)

Cambridge Telephone Company (“Cambridge”)

Cascade Utilities, Inc. (“Cascade”)

Cellular South, Inc. (“Cellular South”)

Central Texas Telephone Cooperative (“Central Texas”)

CenturyLink

Corporation Commission of the State of Kansas (“KCC”)

Coalition for Rational Universal Service and Intercarrier Reform (“CRUSIR”)

Comcast Corporation (“Comcast”)

Communications Workers of America (“CWA”)

Connected Nation, Inc. (“Connected Nation”)

Core Communications, Inc. (“Core”)

CPUC – California Public Utilities Commission and the People of the State of California

CRUSIR – Coalition for Rational Universal Service and Intercarrier Reform

CTIA – The Wireless Association® (“CTIA”)

Custer Telephone Cooperative, Inc. (“Custer”)

CWA – Communications Workers of America

Delhi Telephone Company: OK; (“Delhi”)

DISH Network L.L.C., EchoStar Technologies L.L.C., Hughes Network Systems, LLC,
ViaSat, Inc., and WildBlue Communications, Inc. (“Satellite Broadband
Providers”)

Eastern Rural Telecom Association (“ERTA”)

FairPoint Communications, Inc. (“FairPoint”)

Fidelity Telephone Company (“Fidelity”)

Florida Public Service Commission (“FPSC”)

Frontier Communications Corporation (“Frontier”)

Global Crossing North America, Inc. (“Global Crossing”)

Google, Inc. (“Google”)

GVNW Consulting, Inc. (“GVNW”)

Hill Country Telephone Cooperative, Inc. (“Hill Country”)

ICORE, Inc. (“ICORE”)

InterBel Telephone Cooperative (“InterBel”)

Independent Telephone & Telecommunications Alliance (“ITTA”)

Indiana Utility Regulatory Commission (“IURC”)

ITTA – Independent Telephone & Telecommunications Alliance

IURC – Indiana Utility Regulatory Commission

John Staurulakis, Inc. (“JSI”)

KCC – Corporation Commission of the State of Kansas

LA SCC – Small Company Committee of the Louisiana Telecommunications Association

Level 3 Communications, LLC (“Level 3”)

Madison Telephone LLC (“Madison”)

Michigan Public Service Commission (“MPSC”)

Missouri Small Telephone Company Group (“MoSTCG”)

Molalla Telephone Company, Inc. (“Molalla”)

Moss Adams LLP (“Moss Adams”)

(“MoSTCG”) – Missouri Small Telephone Company Group

MPSC – Michigan Public Service Commission

MTPCS, LLC, d/b/a Cellular One (“MTPCS”)

MTPCS and N.E. Colorado Cellular, Inc., d/b/a Viaero Wireless (“MTPCS/Viaero”)

National Exchange Carrier Association, Inc., et al. (“NECA, et al.”)

Nebraska Public Service Commission (“NPSC”)

Nebraska Rural Independent Companies (“NRIC”)

NECA, et al. – National Exchange Carrier Association, Inc., et al.

New Jersey Board of Public Utilities (“NJBPU”)

New Jersey Division of Rate Counsel (“NJ Rate Counsel”)

New York Public Service Commission (“NYPSC”)

NJBPU – New Jersey Board of Public Utilities

NJ Rate Counsel – New Jersey Division of Rate Counsel

NPSC – Nebraska Public Service Commission

NRIC – Nebraska Rural Independent Companies

NYPSC – New York Public Service Commission

Pine Telephone System, Inc. (“Pine”)

Public Knowledge and Benton Foundation

Public Utilities Commission of Ohio (“PUCO”)

RBA – Rural Broadband Alliance

Regulatory Commission of Alaska (“RCA”)

RICA – Rural Independent Competitive Alliance

Rural Broadband Alliance (“RBA”)

Rural Cellular Association (“Rural Cellular”)

Rural Independent Competitive Alliance (“RICA”)

Rural Telecommunications Group, Inc. (“RTG”)

Satellite Broadband Providers – DISH Network L.L.C., EchoStar Technologies L.L.C.,
Hughes Network Systems, LLC, ViaSat, Inc., and WildBlue Communications,
Inc.

Small Company Committee of the Louisiana Telecommunications Association (“LA
SCC”)

Schools, Health and Libraries Broadband Coalition (“SHLB Coalition”)

Sprint Nextel Corporation (“Sprint”)

State Members of the Federal-State Joint Board on Universal Service (“State Members”)

SureWest Communications (“SureWest”)

TCA, Inc. (“TCA”)

Texas Statewide Telephone Cooperative, Inc. (“TSTC”)

Time Warner Cable Inc. (“TWC”)

T-Mobile USA, Inc. (“T-Mobile”)

TSTC – Texas Statewide Telephone Cooperative, Inc.

TWC – Time Warner Cable Inc.

Universal Service for America Coalition (“USA Coalition”)

United States Cellular Corporation (“US Cellular”)

URTA – Utah Rural Telecom Association

USA Coalition – Universal Service for America Coalition

Utah Rural Telecom Association (“URTA”)

Verizon and Verizon Wireless (“Verizon”)

ViaSat, Inc. (“ViaSat”)

Warinner, Gesinger & Associates, LLC (“WGA”)

Wheat State Telephone, Inc. (“Wheat State”)

Windstream Communications, Inc. (“Windstream”)

XO Communications, LLC (“XO”)

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Connect America Fund	)	WC Docket No. 10-90
)	
A National Broadband Plan for Our Future	)	GN Docket No. 09-51
)	
Establishing Just and Reasonable Rates for Local Exchange Carriers	)	WC Docket No. 07-135
)	
High-Cost Universal Service Support	)	WC Docket No. 05-337
)	
Developing a Unified Intercarrier Compensation Regime	)	CC Docket No. 01-92
)	
Federal-State Joint Board on Universal Service	)	CC Docket No. 96-45
)	
Lifeline and Link Up	)	WC Docket No. 03-109
)	

**REPLY COMMENTS OF
THE NATIONAL ASSOCIATION OF STATE UTILITY CONSUMER
ADVOCATES¹**

I. INTRODUCTION AND EXECUTIVE SUMMARY

In initial comments, NASUCA stated, “The NPRM ties the Universal Service Fund (‘USF’) and the Connect America Fund (‘CAF’) to intercarrier compensation (‘ICC’), and proposes to address all three. This is inappropriate and unnecessary.”² In

¹ Per the directions in the Notice of Proposed Rulemaking and Further Notice of Proposed Rulemaking (“NPRM”), FCC 11-13 (rel. February 9, 2011), these reply comments cover all but Section XV of the NPRM. The National Association of State Utility Consumer Advocates (“NASUCA”) previously submitted comments and reply comments on Section XV in conjunction with the New Jersey Division of Rate Counsel (“NJ Rate Counsel”), a NASUCA member.

² NASUCA Comments, pp. 1-2.

the initial comments, NASUCA objected to many of the proposals in the NPRM. NASUCA did support, however, the Federal Communications Commission's ("FCC's" or "Commission's") proposals on immediate reforms for ICC as set forth in Section XV of the NPRM; NASUCA's support was expressed in the separate initial and reply comments on Section XV. NASUCA also expressed support for the Commission's proposals on immediate reform for USF, as set forth in Section VI.A. through D. of the NPRM.³

With regard to the longer term, NASUCA questioned some of the fundamental premises of the NPRM, in particular the Commission's assumption that it has statutory authority to support broadband through the USF, given broadband's current classification as a Title I information service.⁴ And, however broadband is supported, NASUCA questioned many of the aspects and details of the Commission's proposal to use what was called a "reverse auction" process for the CAF, which as NASUCA explained was not really a reverse auction.⁵ NASUCA also questioned the Commission's other assumption that it has the authority to set all forms of ICC, including intrastate access charges and reciprocal compensation rates.⁶ Further, NASUCA challenged the Commission's presumption that intercarrier rates should be reduced to incremental cost or below – which absolves carriers of the responsibility to contribute to the substantial joint and common costs of the other carriers' networks they use – and the alternative to mandate a

³ Id., p. 41-47.

⁴ Id., pp. 27-35. NASUCA urged the Commission to reclassify at least part of the broadband service as a telecommunications service, which would allow support under the USF. Id., pp. 34-35.

⁵ Id., pp. 47-85. NASUCA proposed instead that the Commission use a more traditional procurement mechanism. Id., pp. 84-85.

⁶ Id., pp. 93-95.

“bill-and-keep” regime – which reduces ICC to zero.⁷ Finally, NASUCA questioned the proposals to give carriers recovery of lost ICC revenues, whether through the USF or the subscriber line charge (“SLC”), especially without consideration of the savings from the reduced ICC rates paid by those carriers.⁸

NASUCA will not repeat those arguments in these reply comments, although they will continually be referred to.⁹ There were over 150 sets of comments filed pursuant to the NPRM, in addition to dozens of comments from individual consumers.¹⁰ NASUCA will not attempt to respond to all of the comments; failure to do so, however, should not be construed as agreement to any unresponded-to comment, just as failure to reiterate a position from NASUCA’s initial comments should not be construed as abandonment of that position.

By and large, replies to comments fit into the structure that NASUCA used for the initial comments, which deviated significantly from the structure of the NPRM.¹¹ First, however, NASUCA will respond, with substantial approval, to the comments of the State Members of the Federal-State Joint Board on Universal Service” (“Joint Board”) that were filed on May 2, 2011. This support expands on NASUCA’s support for the “Omaha Plan” that was previously submitted to the Joint Board.¹²

⁷ Id., pp. 96-109.

⁸ Id., p. 116.

⁹ These reply comments could not have been completed without the substantial expert assistance of Dr. Trevor R. Roycroft.

¹⁰ Indeed, there have been numerous ex partes on these subjects filed by a large number of parties since the comment filing date of April 18, 2011. NASUCA may respond to some of those ex partes in an ex parte of its own after the reply comment date.

¹¹ See id., pp. 11-12.

¹² See NASUCA Comments, pp. 13-21, 26-27.

On the other hand, NASUCA must also oppose the self-serving position of AT&T, Inc. (“AT&T”) on what it calls the incumbent local exchange carrier “death spiral,” which goes hand-in-hand with AT&T’s vociferous attempts to avoid any traditional incumbent local exchange carrier (“ILEC”) obligations.¹³ Also included here is response to AT&T’s argument for a “prompt transition” to a “free-market end state.”

II. THE STATE MEMBERS PLAN

A. NASUCA’S POSITION ON STATE MEMBERS COMMENTS

The State Members Plan covers almost all the issues in the NPRM, and a few besides. The points below summarize NASUCA’s views on the State Members Plan; some of these issues are also discussed later in this section, or elsewhere in NASUCA’s reply comments.

On the USF side,

- NASUCA agrees that “the FCC should define both ‘broadband Internet access service’ and ‘mobility’ service as included in the list of services supported by the federal universal service program.”¹⁴ However, as discussed in NASUCA’s initial comments, there are legal barriers to defining broadband services as supported services.¹⁵ (The State Members Comments do not address these legal issues.¹⁶) Furthermore, the specifics of the State Members Plan regarding how support will be granted to broadband and mobility services raise some concerns.
- NASUCA strongly agrees that “the Commission should abandon its proposed reliance on auctions and instead distribute support based on three new mechanisms to support both broadband and mobility: a Provider of Last Resort (“POLR”) Fund, a Mobility Fund, and a Wireline Broadband Fund. Each of these

¹³ See AT&T Comments, pp. 12, 58, 65-81.

¹⁴ State Members Comments, p. iii.

¹⁵ NASUCA Comments, pp. 27-35.

¹⁶ See State Members Comments, pp. 22-25.

three funds should have separate purposes, mechanisms and budgets.” This proposal is an update of the Joint Board proposal made to the Commission In 2008, which NASUCA also supported.¹⁷

- As the State Members describe, “The POLR Fund should be a comprehensive cost-based support mechanism to provide sufficient support to carriers that accept provider-of-last-resort duties, adjusted for broadband services.”¹⁸ NASUCA does, however, oppose certain of the details of the POLR fund proposed by the State Members, as explained later in this reply.
- And “[t]he Mobility Fund would offer *grants* to finance the building of wireless towers in areas the FCC designates as under-served or unserved by wireless broadband.”¹⁹
- “Similarly, the Wireline Broadband Fund would award *grants* to finance broadband wireline facilities in areas the FCC designates as under-served or unserved by wireline broadband.”²⁰
- NASUCA agrees that the Mobility and Wireline Broadband Fund “should rely on an allocation of funds to the States, followed by State commission review and a decision on grant applications.”²¹ Yet great care must be exercise to avoid duplicative support, or the financing of duplicative networks.
- NASUCA also agrees that “[t]he Commission also needs to expand and modernize the public interest obligations of supported carriers”²² and generally agrees with the suggested POLR obligations of supported carriers set forth in Appendix A to the State Members Comments.
- On an issue not included in the NPRM, NASUCA agrees, consistent with previous comments,²³ with “expanding the base of contributions to universal service to include services like [digital subscriber line] DSL, cable modem and

¹⁷ *High Cost Universal Service Support*, WC Docket No, 05-337, Federal-State Joint Board on Universal Service, CC Docket No. 96-45 (“05-337/96-45”), NASUCA Comments (April 17, 2008), p. 2.

¹⁸ State Members Comments, p. iii.

¹⁹ *Id.* (emphasis in original).

²⁰ *Id.* (emphasis in original). NASUCA had recommended the use by the FCC of a procurement process (see NASUCA Comments at 84), and still sees merit in that process, but would not seek to automatically impose such a process on individual states.

²¹ State Members Comments, p. iv.

²² *Id.*, p. v.

²³ E.g., 05-337/96-45NASUCA Reply Comments (June 2, 2008), p. 15.

wireless broadband.”²⁴ But NASUCA believes there are legal impediments to both “broaden[ing] the federal base to intrastate services and ... clarify[ing] that States are similarly free to impose universal service surcharges on interstate services.”²⁵

- As for the bottom line, again consistent with NASUCA’s previous comments,²⁶ NASUCA agrees with “[o]n balance, ... maintaining the existing high-cost fund at \$4.2 billion per year, but the FCC should continue to evaluate whether that support level will be sufficient.”²⁷

NASUCA does have questions and concerns about the details of the State Members’ proposed “POLR Support Mechanism.” Those questions and concerns are expressed and explained in detail in Section VI. of these reply comments.

NASUCA, as an association of state officials, also strongly supports the State Members’ position that “States have strong interests in these proceedings.”²⁸ In particular, NASUCA and its members, like the State Members of the Joint Board, oppose federal preemption of state action in this area, including for the reasons cited by the State Members.²⁹

Another area where NASUCA, like the State Members, opposes federal preemption is ICC.³⁰ Other NASUCA reactions to the State Members Plan on ICC include:

²⁴ State Members Comments, p. v.

²⁵ Id., p. vi. The State Members legal arguments appear to consist principally of disagreeing with the decision in *Texas Office of Public Utilities Counsel v. FCC*, 183 F.3d 393 (5th Cir. 1999), which found that the Commission could not assess intrastate service for the federal fund.

²⁶ NASUCA Comments, p. 9.

²⁷ State Members Comments, p. vi.

²⁸ Id.

²⁹ Id. (“[N]o matter which layer of government has legal authority, citizens will continue to be concerned if universal service goals are not met, and State governments will continue to be the first to hear about such problems.”)

³⁰ Id., p. vii.

- NASUCA agrees that “it is desirable to achieve a single rate for functionally equivalent services and to reduce intercarrier rates consistent with other goals.”³¹
- But NASUCA even more strongly agrees with the State Members that there is no need for or requirement for “a nationally uniform rate,” especially not a “zero uniform rate.”³²
- NASUCA does question whether “low intercarrier compensation rates” will indeed yield net benefits to customers, especially given “the large financial demand that intercarrier compensation reform will necessarily place on universal service funding.”³³ Such demand will increase the burden on end-use customers, but that burden will be exacerbated by the rate increases – including for the SLC – that are proposed as a response to the loss of ICC revenues. Furthermore, “low” intercarrier compensation rates may not be cost based, and “low rates” may not provide a reasonable contribution to joint and common costs.
- NASUCA also agrees that “the FCC should immediately confirm that VoIP fits the definition of ‘telecommunications service’ in the Federal Telecommunications Act.”³⁴ Also, as the State Members note, “This will simplify several pending legal questions raised in the NPRM (and elsewhere), align the law with the public perception of the service, and eliminate artificial competitive advantages created by differential regulatory treatments.”³⁵

NASUCA generally supports the spirit of the “State Members proposed intercarrier compensation solution,” which NASUCA agrees “is substantially different from that described in the NPRM.”³⁶ But NASUCA does object to the State Members’ proposal for lost access revenue recovery to come first from SLC increases, and then from Step 2 of the POLR Support Mechanism.³⁷ The former is discussed in Section X., below, and the latter is discussed along with the other steps of the POLR Support Mechanism in Section VI.

³¹ Id.

³² Id.

³³ Id.

³⁴ Id., p. viii.

³⁵ Id.

³⁶ Id.; see also id., pp. 153-155.

³⁷ Id., p. 155.

B. THE STATE MEMBERS' (AND NECA, ET AL.'S) ANALYSIS OF THE IMPACTS OF ICC AND USF CHANGES

As the State Members state, their

comments include an analysis drawn from a combination of a very limited data collected directly from carriers and unaudited reports received from representatives of small and mid-sized ILECs. The analysis suggests that, as has been widely reported, current trends in the industry are generally downward. Lines and minutes of use are both declining, although the scope of non-regulated revenues was not fully explored in our analysis. The analysis also suggests that intercarrier compensation proposals under consideration would affect most small carriers and some mid-sized carriers by reducing revenues, decreasing earnings, and potentially impairing access to capital. As expected, the “bill and keep” proposal would have the most dramatic effects. When looking at a particular combination of three proposals from the NPRM, the analysis suggests that a significant portion of carriers in 32 States would have to raise rates by at least \$20.00 per month, and in 15 States a significant number of customers would see rate increases of at least \$50 per month.³⁸

The State Members also included in this “stress analysis”³⁹ discussion of the impacts of the USF proposals from the NPRM, again based on limited data.⁴⁰ The USF analysis was based on analyses by NECA, and by industry consultants. Clearly, more, and more consistent, data is needed for a reasoned decision on these issues.

1. THE FUNDAMENTAL FLAW IN THE STATE MEMBERS' – AND OTHERS' – ACCESS REVENUE ANALYSES

Despite the intensity and detail of the analyses of the loss of access revenues **supposedly as a result of anticipated reductions in ICC charges**, one key point appears to have been glossed over in the calculation of projected revenue losses. That is the fact that “current trends in the industry are generally downward” and “[l]ines and

³⁸ State Members Comments, pp. vi-vii.

³⁹ Id., p. 101.

⁴⁰ Id., pp. 105-108

minutes of use are both declining.”⁴¹ The access minute and line loss analyses all appear to assume that there will be a need to replace revenues as of a date certain due to the projected access rate changes, without recognizing that the revenues are already trending “generally downward” **in the absence of any rate reductions**. Great care must be taken, therefore, to ensure that access recovery mechanisms do not shelter ILECs from the declining trend that they face absent access charge reform.

The current trend with regard to access lines and access minutes is shown by Attachment A to AT&T’s comments. AT&T’s Attachment A, however, masks the true situation, as the information that is reported in the data points is each year’s “percentage change since 1999.” While these percentage change lines appear to be almost parallel, nonetheless the decrease in access minutes has been more dramatic than the decrease in access lines. This reflects the fact that while access lines have been declining, access minutes per line have been declining more rapidly, a fact that AT&T admits elsewhere.⁴² **Between 2000 and 2008, access minutes per line per month decreased by 14.1%.**⁴³ Thus while a substantial portion of the decrease in access minutes can be attributed to the loss of access lines, access minutes per line are declining more rapidly.

Figure 1, below, shows the relative trends between ILEC access lines and ILEC interstate access minutes.⁴⁴

⁴¹ State Members Comments, p. 116.

⁴² AT&T Comments, p. 12.

⁴³ Based on data in Data from *Trends in Telephone Service*, Industry Analysis and Technology Division, Wireline Competition Bureau, Federal Communications Commission, September 2010, Table 7.1 and Table 10.1.

⁴⁴ Data from *Trends in Telephone Service*, Industry Analysis and Technology Division, Wireline Competition Bureau, Federal Communications Commission, September 2010, Table 7.1 and Table 10.1.

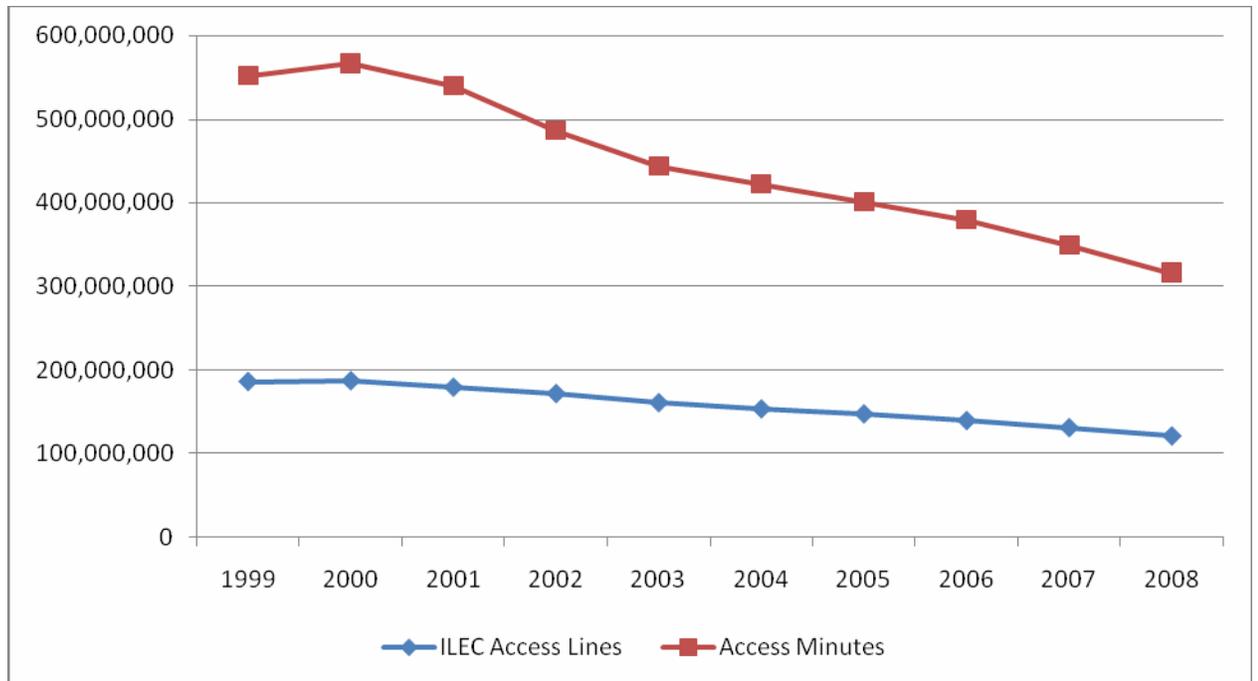


Figure 1: ILEC Access Lines and ILEC Interstate Access Minutes (Access Minutes in Thousands)

So even if one assumes that the ILECs have a right to recover the revenues lost as a result of ICC rate reductions – and here the discussion focuses on interstate access minutes – the lost revenues must be viewed as already being subject to substantial year-over-year decreases. This means that revenue replacement – **if any** – must also be reduced as time goes by.

These trends are almost universal, and, again, show access minutes declining more rapidly than access lines. For example, as stated in the State Members Comments:

For small carriers,

- NECA reported the trend in the number of lines for 702 carriers. Lines decreased by 8.7% percent decline over the two year period, from 3.40 million in 2007 to 3.10 million lines in 2009. Every State or group of States lost lines during this period.
- Minutes of use also decreased over this same period.
 - *Intrastate minutes*. Total intrastate minutes declined by 17.2% over the two year period.

- *Interstate minutes.* For interstate access minutes, the total minutes declined by 21.4% from 9.6 billion minutes in 2007 to 7.6 billion minutes in 2009.⁴⁵
- Likewise, in data supplied to the State Members' consultants directly by the small companies, all carriers lost access lines from 2007 to 2009. The average loss was 12%.
- In general, minutes decreased from 2007 to 2009.
 - *Interstate terminating minutes.* The average decrease was 15%, with four carriers reporting increases and 19 carriers reporting decreases.
 - *Interstate originating minutes.* The average decrease was 18%, with two carriers reporting increases and 16 carriers reporting decreases.
 - *Intrastate terminating minutes.* The average decrease was 16%, with 5 carriers reporting increases and 16 carriers reporting decreases.
 - *Intrastate originating minutes.* The average decrease was 24%, with 2 carriers reporting increases and 17 carriers reporting decreases.
 - *Reciprocal compensation minutes.* Terminating minutes decreased by 7%.⁴⁶

For mid-sized carriers, the data supplied by an industry consultant showed even greater line and minute losses:

- *Lines.* Lines decreased by 18.1% from 2008 to 2010, from 33.9 million lines to 27.8 million lines. Access lines decreased in every mid-sized carrier State or State group.
- *Minutes.* Traffic decreased significantly from 2008 to 2010.
 - *Interstate access.* Minutes decreased by 25.0%. Minutes also decreased in every reporting State and State group.
 - *Intrastate access.* Minutes decreased by 25.3%. Minutes also decreased in every reporting State and State group.
 - *Reciprocal compensation.* Minutes overall decreased by 17.3%.⁴⁷

There was no usable data timely provided to the State Members' consultants by AT&T or Verizon.⁴⁸ But these carriers have consistently complained about their losses in

⁴⁵ State Members Comments, p. 98.

⁴⁶ *Id.*, pp. 100-101.

⁴⁷ *Id.*, p 101. It should be noted that, with regard to reciprocal compensation (an indicator of local competition), there were some increases in individual states and state groups. *Id.*

⁴⁸ *Id.*, p. 97.

both lines and minutes.⁴⁹

Taking all this into account, and despite the fact that both the State Members and NECA, et al. recognize these trends, **it does not appear that the loss of lines and/or the loss of ICC minutes were figured into any of the analyses of the impacts of ICC changes.** This is a fundamental, if not fatal, flaw, making these analyses almost worthless as any reasonable gauge of even the short-term impacts, much less the long-term impacts, of the changes proposed in the NPRM.⁵⁰ NASUCA urges the Commission not to base its decision on these analyses; much more work is needed.⁵¹

2. THE EVEN MORE FUNDAMENTAL FLAWS IN THE LOST REVENUE REPLACEMENT ANALYSES

As consistently argued by NASUCA, the idea that basic service rates – even regulated local service rates – are the only source of replacement revenue for lost ICC revenues is totally absurd.⁵² This is true even if one has an accurate calculation of the revenues that are lost as a result of ICC rates reductions, rather than from other causes, as argued in the previous section. There also is no consideration of the savings from the lower access charges that carriers will be paying. A further flaw is the assumption that there must be, or should be, 100% replacement of those revenue losses.

Admittedly, the State Members Plan does not include such assumptions.⁵³ But the State Members' financial analyses – and the NECA, et al. analyses on which the State

⁴⁹ E.g., AT&T Comments, p. 8.

⁵⁰ The State Members' consultants are to be commended for their Herculean efforts, but, to put it mildly, there is still a lot of stuff left in the Augean stables.

⁵¹ To continue the metaphor from the previous footnote, far more analysis is needed to permit a clean decision.

⁵² See, e.g., NASUCA Comments, pp. 109-116.

⁵³ State Members Comments, pp. 33-40, 45-53, 56-58.

Members discussion is premised – are based on precisely those assumptions.

One example is NECA et al.’s estimates of the impact of just one of the Commission’s proposals:

RLEC [rural local exchange carrier] estimated losses from eliminating corporate operating expense recovery from HCLS, LSS, and ICLS. It produces an average 4.5% loss in revenue. As is typical with averages, they belie the range of effects across RLECs. Ten percent will experience a 14% or higher drop in revenue if this proposal goes into effect. **A 14% or higher drop in revenue translates into 10% of RLECs having to raise local service rates by \$27.35 or more per month.**⁵⁴

(Notably, there is no mention of reducing corporate operating expense.) This presumption is repeated for each of the NECA, et al. impact analyses.

Unfortunately, this presumption is repeated uncritically in the State Members’ recitation of the impacts of ICC and USF reductions.⁵⁵ As the State Members comments state, “We considered the impact of a proposal on ... [l]ocal rates if the revenue impact is offset by **an across-the-board local rate increase that fully replaces all lost revenue.**”⁵⁶

In this context, it is necessary to make further comment on the NECA, et al. analyses on which the State Members Comments are largely based. In their Appendix B, NECA, et al. address the specific proposals made in the NPRM associated with the changes for rural carriers in the HCLS reimbursement percentages; eliminating recovery of corporate operating expenses; elimination of Safety Net Additive Support; the elimination of local switching support; and the cap on annual per-line high-cost support.

Appendix B shows the results of a sensitivity analysis that is based on data from a

⁵⁴ NECA, et al. Comments, Appendix B, p. [3] (emphasis added).

⁵⁵ State Members Comments, pp. 101-111.

⁵⁶ Id, p. 102, emphasis added; see also id., p. 117.

“special data request and NECA/OPASTCO pool settlement data.”⁵⁷ The analysis divides the RLEC universe that is studied into “50th percentile (Median), 10th percentile (10% of RLECs have smaller effects) and 90th percentile (10% of RLECs have larger effects).”⁵⁸ In addition, the NECA, et al. study presents a “weighted mean effect,” with the weighting done by RLEC access lines, to compute an “overall financial effect.”⁵⁹

There are several important points to note with regard to the NECA, et al. Appendix B analysis. First, other than for the “weighted mean effect,” the percentile analysis does not reveal any information regarding the number of RLEC access lines at the various percentile levels. Thus, for example, the information shown in the Appendix B Table 1 indicates that the NPRM’s proposal to reduce the HCLS reimbursement percentages to 55% and 65% will result in a \$7.63 per line per month increase in local rates per month for the “90th percentile.” This does not convey any information regarding the number of customers that might be affected, and the size of this negative consequence is left unstated. The weighted mean, however, shows that when access lines are considered, the overall impact is an increase of \$0.60 increase in local rates per month, which suggests that the number of lines would experience rate increases of the magnitude of \$7.63 per month is very low.⁶⁰

The usefulness of the NECA, et al. Appendix B analysis is diminished even further by the following factors: First, the Appendix B analysis assumes that no RLEC is earning anything in excess of its cost of capital. The relationship of the actual earnings of

⁵⁷ NECA, et al. Comments, Appendix B, p. [1].

⁵⁸ Id., p. [2].

⁵⁹ Id.

⁶⁰ Id., p. [6].

RLECs to their authorized returns – both interstate and intrastate – is unknown, and whether their authorized returns have any relationship to the current cost of capital is also unknown. It may well be that the weighted average impact shown in Appendix B’s Table 1 would show a very different result if the issue of earnings was addressed. Second, the Appendix B analysis does not address potential “revenue shortfall” recovery from any service other than basic local service. As will be discussed elsewhere in these comments, revenues from all sources must be considered when reforming high-cost support programs. Given the strides that RLECs have made in broadband deployment, it is entirely reasonable to expect contributions from broadband and other non-basic services of the magnitude shown in the “weighted mean” revenue shortfall column in Appendix B Table 1.

In summary, the NECA, et al. Appendix B analysis does not present a reasonable representation of the impact of the changes proposed in the NPRM. It may well be that for some RLECs the proposed changes would have an unacceptable impact. But, as noted by NASUCA in opening Comments:

Before it awards one nickel more to an ILEC, the Commission must fully understand the ILEC’s business operations by auditing the operations of the ILEC, and gaining insight into both the regulated and unregulated services provided by the ILEC, as well the level of returns earned by the ILEC. Otherwise, the Commission could be creating a program that would reward those companies that have mismanaged universal service funds already received, by providing them with additional funds.⁶¹

The Commission should reject the NECA, et al. Appendix B analysis.

Finally, the State Members Plan focuses strongly on "targeted" support.⁶² To that

⁶¹ NASUCA Comments, p. 72.

⁶² Id., pp. 31-33.

extent, it is indeed disappointing that the financial analyses included in the State Members Comments are so general, and so untargeted.

3. CONCLUSION ON FINANCIAL ANALYSES

NASUCA submits that the financial analyses of the revenue impact of the changes proposed in the NPRM on both carriers and their customers are so fundamentally flawed as to make them totally inadequate as the basis for a reasoned Commission decision. This includes the flaws in the revenue loss analysis, which fail to include assessment of the continuing (and inter-related) losses in access lines and access minutes that have occurred **in the absence of rate changes**. And it includes the flaws in revenue loss replacement, which assume 100% replacement of losses, with the replacement coming only from local service (and perhaps even local basic service) rates.

NASUCA cannot help but agree, however, with

State Members ... concern[s] about whether current trends can continue indefinitely without witnessing an increasing number of incumbent carriers (at least the small and mid-sized carriers) losing money. They may find that they are unable to raise capital needed for broadband enhancements and to replace aging plant. They may find that they are forced to reduce costs, even by deferring maintenance and by degrading

service quality. They may find that they must consider exiting from unprofitable rural markets.⁶³

But these are trends that, again, are occurring **in the absence of** the changes to ICC and USF proposed in the NPRM. If anything, these trends are reasons for the Commission to proceed carefully, in order to ensure that the customers of these small and mid-sized carriers do not run the risk of losing their landline service or having their service and rates be no longer reasonably comparable to those available in urban areas.

What the Commission must **not** do is to act in the interest of the carriers such as AT&T, which are becoming more and more dominant in the markets they have determined are lucrative. AT&T's views are discussed in the next section.

III. THE COMMISSION SHOULD REJECT AT&T'S – AND OTHERS' – ARGUMENTS ON THE “POTS DEATH SPIRAL” AND “OUTDATED” SERVICE OBLIGATIONS.

A. The End of the Line for COLR Obligations?

AT&T, in part as a consequence of its arguments about the “[plain old telephone service] POTS model death spiral”) (discussed in Section VI.A., below), asserts that both state carrier of last resort (“COLR”) and federal eligible telecommunications carrier (“ETC”) obligations have outlived their usefulness.⁶⁴ Similarly, CTIA states that COLR obligations are “generally relics of monopoly-era ILEC regulation.”⁶⁵ In addition, AT&T points to a variety of technology characteristics, such as dual-tone multi-frequency (“DTMF”) signaling, single-party service, and Signaling System 7 (“SS7”) signaling

⁶³ State Members Comments, p. 116.

⁶⁴ AT&T Comments, p. 55.

⁶⁵ CTIA Comments, p. 32. Of course, CTIA's members have no such obligations.

associated with circuit switched technologies that supposedly stand in the way of the conversion to an all-Internet Protocol (“IP”) network.⁶⁶

With regard to state COLR obligations, this is an area into which the Commission cannot lawfully, and as a policy matter, must not intrude.⁶⁷ Nothing in the Act gives the Commission the power to preempt such state laws.⁶⁸ AT&T’s arguments to the contrary⁶⁹ consist of conjecture built upon speculation, and could not withstand court challenge. Likewise AT&T’s § 254(f) argument,⁷⁰ which essentially duplicates the rest of its preemption argument.

On the policy side, state commissions are in the best position to determine how service is offered in within their states. Some states have developed state high-cost service funds, and distribute monies to carriers who are required to offer service throughout their service areas.⁷¹

AT&T argues that “*all* carriers should be permitted to make their own business decisions regarding the services they provide and the customers they serve.”⁷² However, even given the transition to the CAF, it is important to that states be able to consider appropriate limits on a carrier’s ability to deny service to customers. While the final form of the CAF is yet to be decided on, it seems reasonable to conclude that regardless of the

⁶⁶ AT&T Comments, p. 56.

⁶⁷ RCA Comments, p. 24; KCC Comments, ¶19.

⁶⁸ E.g. Ohio Revised Code § 4927.11 (establishing a COLR obligation but allowing for waivers of that obligation).

⁶⁹ AT&T Comments, pp. 64-69.

⁷⁰ *Id.*, pp. 69-71.

⁷¹ Peter Bluhm, Phyllis Bernt, PhD, Jing Liu, “State High Cost Funds: Purposes, Design, and Evaluation,” January 19, 2010.

⁷² AT&T Comments, p. 59, emphasis in the original.

distribution mechanism for CAF funds, the recipient carrier should be required to agree to provide service in some specified area, at some level of service quality. But AT&T is proposing that recipients of CAF funds should be free to “make their own business decisions” regarding who they serve:

[T]he Commission should condition all CAF funding on the state’s agreement to eliminate COLR and other legacy service obligations that effectively require providers to continue offering POTS and long distance service and thereby inhibit the widespread availability and adoption of broadband services.⁷³

AT&T’s approach would completely undermine the fundamental goals of federal law and the CAF, which are to bring ubiquitous voice and broadband services to rural areas at rates that are reasonably comparable to those in urban areas.⁷⁴ The “inhibition” alleged by AT&T works only against providers that do not want to offer POTS and long-distance service as part of their broadband packages; the loss of these carriers as eligible for the CAF is entirely acceptable.⁷⁵

AT&T’s assessment of legacy service obligations is entirely unreasonable. AT&T asserts that those obligations are not only unfair to providers, but that they harm consumers, and offer no countervailing benefit.⁷⁶ If AT&T has a basis for its assertion that legacy service obligations harming consumers and offering no benefits, however, AT&T does not share that with the Commission.

Indeed, although never directly addressed by AT&T, its reform proposals hinge

⁷³ AT&T Comments, p. 61.

⁷⁴ NPRM, ¶137.

⁷⁵ AT&T also does not even remotely show how allowing such “public-disinterested” carriers will encourage broadband adoption.

⁷⁶ AT&T Comments, p. 59.

on an imminent transition from TDM to IP.⁷⁷ Apparently AT&T believes that within a relatively short period of time, all U.S. households can be transitioned to broadband service, and rely on VoIP services provided by either their broadband provider, or an over-the-top provider. To further this vision, as discussed above, AT&T proposes that the Commission should preempt states that maintain any COLR or “other legacy service” obligations.⁷⁸

As the Commission moves forward with its effort to reform universal service funding, it must ensure that the voice services of the future are offered in a manner consistent with the public interest. While AT&T apparently cannot think of a single benefit of legacy service obligations, NASUCA offers a few for the Commission’s consideration, and also points to important parallels between service obligations associated with the public switched telephone network (“PSTN”) and obligations that will be required in the broadband world:

- 1) Telecommunications networks are subject to “network effects” in that the value of the network grows for all consumers as more users are connected (and reachable) over the network. While a broadband network would extend the benefits of network effects to broadband, the pursuit of broadband network effects should not come at the expense of undermining voice network effects. COLR and ETC obligations continue to play a role in ensuring that the social value of the network is maximized.
- 2) While it is true that there are a myriad of new communications tools, such as e-mail, text messaging, and social-networking applications,⁷⁹ high-quality voice service on the PSTN continues to play a critical role. People do not post to Facebook to reach emergency services. Legacy service obligations, such as access to local 911 public safety answering points, will be as vital in the future

⁷⁷ For example, AT&T proposes that by January 1, 2017, the “regulatory superstructure” associated with TDM technology be abandoned. AT&T Comments, p. 32.

⁷⁸ Id., p. 64.

⁷⁹ Id., p. 54.

as it was in the pre-broadband era.⁸⁰

- 3) Functionalities of the PSTN have been incorporated into non-PSTN systems. AT&T suggests that it is not longer appropriate to mandate the provision of time division multiplexing (“TDM”) technologies, such as DTMF.⁸¹ While the purpose that DTMF served in the PSTN may no longer perform in the same way in the VoIP world, the reach of DTMF extends beyond the PSTN and the Internet. Countless computer systems that can be accessed over the PSTN can be remotely controlled by users through the DTMF signals produced by their telephones. Should the Commission, as AT&T suggests, be open to supporting voice services that are not based on DTMF, e.g., would the Commission consider a broadband connection and IP chat (a voice service provided over broadband) as consistent with its universal service objectives? With regard to the legacy characteristics of TDM and the PSTN, the Commission (and the states) must move with great caution to ensure that the transition to the voice services of tomorrow does not result in unnecessary technological obsolescence, service disruptions, or a diminution of network effects that are associated with voice services on the PSTN.
- 4) AT&T points to “single party service” as being an artifact of the ancient regulatory past that can now be discarded in the brave new broadband world.⁸² However, the underlying issue of the shared connection associated with multiparty lines in the narrowband world is just as valid in the broadband world. Broadband “shared networks,” while placing occasional constraints on usage, do not inevitably prevent simultaneous usage, as was the case with multiparty lines in the ante-Internet past. Thus, while the inconvenience and lack of privacy associated with a shared voice connection is not likely to be an issue over a broadband network, new service quality problems, such as insufficient bandwidth to make the advertised “up to” speeds a possibility in any peak usage hour, will continue to be valid policy considerations, and will continue to deserve regulatory oversight.
- 5) Carrier of last resort obligations play a critical economic development role. As the National Broadband Plan recognizes: “The benefits of broadband and its centrality to economic life make it an essential element of local and regional economic development in the 21st century.”⁸³

Elimination of COLR obligations will result in communities being disadvantaged by carrier decisions that take no account of the critical impact on a community of a lack

⁸⁰ NASUCA Comments, p. 39.

⁸¹ AT&T Comments, p. 56.

⁸² Id.

⁸³ National Broadband Plan, p. 273.

of availability of high-quality voice and broadband services. Ultimately, as the Commission (and the states) work to bring high-quality broadband to all Americans, the specifics of the COLR obligation must evolve with the technology, not be abandoned based on business expediency.

As also discussed above, AT&T offers an extensive – but unavailing – legal argument to justify the Commission preempting the states on this issue.⁸⁴ But the **logical** foundation of AT&T’s proposal is even more dubious. For example, without offering one scintilla of evidence, AT&T asserts that state COLR or other legacy service obligations make it *economically infeasible* for “some carriers” to roll out broadband service in high-cost areas.⁸⁵ As the Commission is well aware, broadband service has been rolled out by both rural and non-rural ILECs in high-cost areas, but to different degrees. It does not seem reasonable to conclude that the difference in the degree of broadband deployment has much to do with state COLR policies, because those policies apply equally to RLECs that have deployed broadband to 100% of their service area, and to non-rural ILECs that have extended broadband to perhaps 60% of their service area. Something other than COLR obligations must be driving this difference, such as non-rural ILECs’ dividend policies, or insufficient incentives provided by price-cap regulation, or internal capital allocation plans needed to address the impact of the iPhone on their affiliate’s wireless networks. AT&T’s program for the preemption of state COLR obligations would have the Commission eliminate critical public policy tools that have been appropriately applied by state commissions, and would not generate much

⁸⁴ Id., pp. 62-75.

⁸⁵ Id., p. 66.

movement on broadband deployment.

But returning to the timing issue with regard to the transition from TDM to IP networks for the provision of supported services, the solution to the “problem” is not to abolish COLR and other legacy services obligations. Rather, the Commission should work with the states (through the Joint Board) to develop a “platform neutral” set of service obligations that can be in effect now (and for at least the near future) when TDM technology continues to dominate supported services, during the transition to supported broadband networks, and at the “end state” when all networks will be broadband, and all voice services provided over VoIP.

B. ETC Obligations

AT&T also encourages the Commission to reinterpret §215(e)(1)(A) of the Act so that an ETC has an obligation to serve a given geographic area “*only* when the ETC receives high-cost support for that area.”⁸⁶ AT&T proposes that the Commission should direct the states to “redefine the ‘service areas’ of existing ETCs so that they include only those *locations* where the ETCs are receiving legacy support.”⁸⁷ This approach to defining service areas is unreasonable. Further, AT&T’s proposal would place the fulfillment of universal service objectives on shifting sands. Presumably, the reason why AT&T goes to such length with regard to both COLR and ETC obligations is that it desires the option of withdraw service from areas where it does not find sufficient profit opportunities. Granting AT&T’s request would open the door to undesirable gaming of universal service support. If the Commission (and the states) were to adopt AT&T’s

⁸⁶ Id., p. 76, emphasis in the original. Whether this is a mere “reinterpretation” or a wholesale revision is a separate issue.

⁸⁷ Id. p. 77, emphasis added.

approach, AT&T (or other ILECs) could threaten to withdraw services unless they were provided with additional support for additional areas. AT&T's proposal with regard to redefining ETC designations should be rejected by the Commission.

C. Lifeline Revisions

AT&T also proposes to revise the Lifeline program so that a Lifeline provider would no longer have to meet ETC qualifications.⁸⁸ AT&T states that such action would be desirable as it would allow consumers to obtain “voice service from interconnected VoIP providers and, eventually, broadband service.”⁸⁹ As discussed in NASUCA's initial comments⁹⁰ and elsewhere here,⁹¹ the use of any form of USF – high-cost, CAF, or Lifeline – explicitly for broadband is problematic.

AT&T's proposal also appears to place the cart somewhat before the horse. In order to use the services offered by an interconnected VoIP provider, a consumer would have to have a broadband connection. Given that low-income consumers continue to lag the general population in broadband adoption,⁹² it would appear that moving to an “all broadband” model would make the adoption of interconnected VoIP less likely, because the cost of a broadband connection will likely exceed the cost of the VoIP service that rides on that IP connection.

The Commission should move with great care regarding revisions to the Lifeline program. Lifeline voice services in a broadband world will have to address both the

⁸⁸ Id., p. 80.

⁸⁹ Id., p. 81.

⁹⁰ NASUCA Comments, pp. 27-34.

⁹¹ Section IV., below.

⁹² Pew Internet, “Home Broadband 2010,” August 11, 2010, accessible at <http://www.pewinternet.org/Reports/2010/Home-Broadband-2010.aspx>.

provision of a broadband connection and a VoIP account to the Lifeline customer. The Lifeline issue raised by AT&T does point to a critical issue that was not raised in the NPRM, namely, if the Commission's objective of an "all broadband" world is met, how will the large number of households who have not adopted broadband, some low-income, and some by their own personal preferences, be transitioned to this network? Will customers who only want voice services be saddled with bearing the full cost of an even more expensive broadband local loop?⁹³ How would customers take advantage of competition among interconnected VoIP providers if they are unwilling to purchase broadband in the first place?

D. AT&T's "Prompt Transition" to a "Free-Market End State"

AT&T proposes that a transformation should begin to end the current intercarrier compensation mechanism, and to replace that mechanism with what it refers to as the "market oriented framework that has always governed traffic exchanges on the Internet."⁹⁴ Before turning to the specifics of AT&T's proposed approach, it is important to correct AT&T's view of Internet history.

AT&T appears to forget many important aspects of Internet history, which has **not** always been the free-market nirvana that AT&T imagines. For example, the initial Internet backbone was provided as a government-supported service (the NSFNet provided through the National Science Foundation) until the privatization of the Internet backbone in 1995.⁹⁵ However, the privatization process did not introduce a market

⁹³ This is implied by the Commission's reference to a continually-increasing rate benchmark. NPRM, ¶ 577.

⁹⁴ AT&T Comments, p. 16.

⁹⁵ See, for example, http://www.livinginternet.com/i/i_nsfnet.htm.

oriented free-for-all: Regulation and public policy continued to influence how Internet services were provided.

AT&T apparently has no recollection of the prohibition that prevented the regional Bell Operating Companies (“RBOCs”) from becoming Internet backbone providers or even from offering regional data network services. Another important regulatory restriction imposed on the RBOCs was the inability to directly provide Internet service provider (“ISP”) services to end users. Due to restrictions that arose from the FCC’s Computer Inquiries, the RBOCs were required to treat ISPs as their customers, offering the necessary services on a tariffed basis.⁹⁶ This regulatory provision, which created “open access” to end-users over RBOC dial-up narrowband loops, was complemented by the prohibition of the RBOCs from providing enhanced services – like dial-up Internet access – directly, although they could offer such services through separate subsidiaries. The initial prohibition on RBOC provision of ISP services encouraged competition in the ISP market, with thousands of small ISPs emerging nationwide that owned no transmission facilities of their own, simply relying on tariffed RBOC local services to reach their customers, and relying on leased lines to reach facilities-based ISPs and the Internet. Thus, AT&T’s claim that a “market oriented framework has *always* governed traffic exchanges on the Internet” (emphasis added) overlooks the long period of Internet history, when due to their market power, the RBOCs were kept out of the Internet, and regulated transactions between ISPs and the RBOCs led to a vibrantly competitive ISP market in the dial-up period.

⁹⁶ Per the provisions of §272(f) of the 1996 Act, the FCC allowed these line of business restrictions to expire on February 8, 2000.

While it certainly is true that peering arrangements have dominated commercial relationships on the Internet, the peering/transit world described by AT&T has also not always generated the outcomes described by AT&T. It is simply not true that “a traffic imbalance between two providers, for example, does not result in blocking or disconnection....”⁹⁷ There is in fact ample evidence of blocking or disconnection resulting from disputes among Internet service providers. For example:

“On October 30 (2008) at 4:30 pm Sprint-Nextel severed its Internet connection to Cogent thereby partitioning the Internet,” Cogent states. “It is no longer possible for many Sprint customers and Cogent customers to directly communicate across the Internet. Sprint did so in violation of a contractual obligation to exchange Internet traffic with Cogent on a settlement free peering basis. Sprint and Cogent are engaged in litigation over this matter.”⁹⁸

Thus, peering disputes do occur, and have resulted in service disruptions.⁹⁹

The Internet is always evolving, however, and the relatively simple relationships between peering ISPs may become more complex. As the recent Comcast/Level 3 dispute shows, the relationship between content delivery networks (like Level 3 and Akamai) and network providers that have access to end-users is more complicated than backbone provider-to-backbone provider peering. Economic relationships on the Internet become more complex when some network providers control access to many end users (or “eyeballs” in industry parlance), and other network providers deliver content (being

⁹⁷ AT&T Comments, p. 18.

⁹⁸ “Peering Dispute Between Cogent, Sprint,” Data Center Knowledge, October 31st, 2008 <http://www.datacenterknowledge.com/archives/2008/10/31/peering-dispute-between-cogent-sprint/>.

⁹⁹ See also: “Cogent Unplugs Telia in Peering Dispute,” Data Center Knowledge, March 16th, 2008, <http://www.datacenterknowledge.com/archives/2008/03/16/cogent-unplugs-telia-in-peering-dispute/>; see also: “ISP spat blacks out Net connections,” InfoWorld, October 6, 2005, <http://www.infoworld.com/t/networking/isp-spat-blacks-out-net-connections-492>.

content delivery networks or “CDNs” in industry parlance).¹⁰⁰ Interconnection and traffic exchange between CDNs and eyeball networks is likely to be more contentious, especially if the “eyeball network” owner also provides competing content. The emerging tension in Internet peering is summarized as follows by scholars:

We observe in practice that most content-heavy networks are more open in their peering policies than are most eyeball-heavy networks. We can speculate on a number of reasons for this difference:

- As opposed to early access networks where switching costs for consumers were insignificant (because they could call any local modem bank ISP), modern broadband consumers may feel that switching costs are relatively higher, assuming they even have a choice of providers. Therefore eyeball networks may perceive that they have some increased bargaining power because they “own” the eyeballs.
- Eyeball networks believe that the “natural” direction of value flow is toward them, rather than away from them. The growth of Internet advertising suggests that content-providers place high value on reaching end-users on eyeball networks.
- The last-mile networks of the broadband eyeball networks are more capital intensive, often involving “lumpy” investments, than are the long-haul and backbone networks of content-providers. Consequently, the cost recovery challenge of the last-mile networks is greater (although as noted earlier, it is not clear that their incremental costs for delivery are higher).

For these sorts of reasons, we observe that even small eyeball-heavy networks might sometimes refuse to peer with a much larger content-heavy network, and this has fueled the move toward more complex forms of interconnection contracts.¹⁰¹

Given these observations, AT&T’s heavy emphasis on “market driven” solutions may simply favor those who “own the eyeballs,” such as AT&T.

But AT&T goes on to argue that “no Internet service provider has a ‘terminating access monopoly’ to its end users, and thus each has every incentive to reach

¹⁰⁰ “Level 3/Comcast Dispute Revives Eyeball vs. Content Debate,” Telecompetitor, November 30, 2010, <http://www.telecompetitor.com/level-3comcast-dispute-revives-eyeball-vs-content-debate/>.

¹⁰¹ Faratin, P., Clark, D., Bauer, S., Lehr, W., Gilmore, P., and Berger, A., “The Growing Complexity of Internet Interconnection,” *Communications & Strategies*, No. 72, 4th Quarter 2008, p. 59.

commercially reasonable agreements with other network operators.”¹⁰² This is simply not true. The terminating access monopoly recognized in the NPRM for voice service applies equally for broadband services – once a consumer selects a broadband provider, the consumer (and the traffic they receive) are tied to their broadband provider’s network. Furthermore, given the paucity of choice that most residential customers face for fixed broadband connections, and the limited ability of consumers to substitute mobility broadband for fixed broadband applications,¹⁰³ it is difficult to not to conclude that customer switching costs are likely high for residential broadband customers, which makes the “owning of eyeballs” possible. AT&T’s claim that no “monopoly” exists may be true for some consumers before they choose a service provider, but the presence of a duopoly does not eliminate market power, and leaving all interconnection matters to “market forces” is a recipe for abuse.

AT&T argues that it is impossible for a broadband ISP to have a terminating

¹⁰² AT&T Comments, p. 19.

¹⁰³ The National Broadband Plan concludes that fixed “Wireless broadband may not be an effective substitute in the foreseeable future for consumers seeking high-speed connections at prices competitive with wireline offers.” National Broadband Plan, p. 41. Consumer experience with wireless broadband indicates that mobile broadband is even worse. A recent survey conducted by Analysys Mason summarizes its finding on customer perceptions as follows:

Attempts to sell mobile broadband as a substitute to fixed are likely to fail as there is a strong perception among consumers that mobile broadband is not as fast, more unreliable and more pricey than fixed broadband. Over 70% of those expressing an opinion in our consumer survey agreed with statements that mobile broadband was slower, is less reliable and is more expensive than fixed. The differences between the two will become increasingly apparent as fixed operators deploy more fiber and double-digit megabit-per-second speeds (which most mobile networks will struggle to offer) become more common and more commonly used.

“Operators should position mobile broadband as a complement to fixed, not a substitute,” Analysys Mason, February 11, 2011, <http://www.analysysmason.com/About-Us/News/Newsletter/Operators-should-position-mobile-broadband-as-a-complement-to-fixed-not-a-substitute/>. Mobility broadband is discussed more extensively in Section VI.I. below.

monopoly, or to exercise market power.¹⁰⁴ Although AT&T's explanation of the lack of market power in the broadband ISP market diverts to an extended discussion of the CLEC terminating access monopoly,¹⁰⁵ AT&T's path leads to its proof for broadband ISPs' alleged lack of any market power potential:

Suppose, for example, that an IP network seeks a direct peering relationship with a broadband ISP in order to deliver data traffic to the latter's customers. If the traffic between the two networks is grossly imbalanced, the ISP may try to condition any direct peering arrangement on the payment of compensation. But if it demands too high a price, the IP network can simply balk, because it has many alternatives for delivering its traffic to the ISP's customers. For example, it could do what IP networks have done for two decades: it could reach end users by purchasing intermediate transit services from one of many third-party backbone providers.¹⁰⁶

Thus, AT&T's proof is no proof at all, because its solution assumes a non-existent situation, i.e., that third-party backbone providers have facilities in place that allow them to reach the broadband ISPs end-user customers. That is not the case. AT&T's attempts to shoehorn the backbone provider-to-backbone provider market onto the reality of broadband ISPs who "own eyeballs" simply fail.

AT&T also offers an alternative interpretation, that because an IP network that might be overcharged by a broadband ISP can pass through the overcharges to the content provider, who could then pass the overcharges on to the broadband ISPs own customers, paid peering rates are somehow disciplined, even in the absence of alternative transit arrangements.¹⁰⁷ However, this example only shows the leverage that the broadband provider must have, because if the content provider can pass through the

¹⁰⁴ AT&T Comment, pp. 20-21.

¹⁰⁵ Id.

¹⁰⁶ Id., p. 22.

¹⁰⁷ Id., p. 23.

overcharges to the end-users, the end-users cannot have the ability to choose alternatives. AT&T acknowledges that it must be the case that the overcharged end-users must “continue subscribing to that ISP,”¹⁰⁸ and the only way that a rational customer would pay the overcharge would be if the customer had no other choice, or that another choice offered the same overcharge “deal.”

As the discussion above illustrates, AT&T’s conclusion that as the “PSTN sunsets, so too will the need for interconnection and intercarrier compensation rules”¹⁰⁹ is not well supported. Internet interconnection issues have grown more complex, and the existence of highly concentrated last-mile broadband markets, if not outright broadband monopoly markets, will only add to that complexity.

IV. THE LEGAL BARRIERS TO PROVIDING USF SUPPORT FOR BROADBAND

Few of the commenters even bother to address the issue of whether the Commission has the statutory authority to provide USF or other support for broadband. AT&T does deal with the subject. AT&T indicates that the Commission has three sources of authority to support broadband deployment – (1) Section 254 of the Communications Act “interpreted in light of section 1 of the Act and section 706 of the Telecommunications Act of 1996”; (2) Section 706(b); and (3) ancillary authority.¹¹⁰ NASUCA finds nothing in AT&T’s arguments that changes NASUCA’s position, as stated in opening comments, that these components do not provide a reasonable

¹⁰⁸ Id.

¹⁰⁹ Id., p. 24.

¹¹⁰ Id., pp. 111-112.

foundation for the proposition that the Commission can support broadband deployment, given the current non-telecommunications status of broadband. NASUCA will not repeat those arguments here,¹¹¹ but reasserts that the Commission must reclassify broadband as a telecommunications service prior to supporting broadband in the universal service program. Cellular South offers an extensive analysis of the illegality of applying USF funds for broadband deployment, apparently meant to sway the Commission on eliminating CETC support.¹¹² But Cellular South's motivation does not diminish its legal arguments.

V. IMMEDIATE REFORMS FOR THE USF THAT WILL FREE UP FUNDS FOR THE CAF

A. The Commission's Proposals

As noted by NASUCA, over \$6 billion in USF funding can be freed up over a five-year period by eliminating all CETC support, LSS, and IAS.¹¹³ NASUCA's review of the comments does not reveal any compelling reason not to pursue this approach. The Commission proposed limits on local switching support, corporate operations expenses, operating and capital costs, and total per-line high-cost support. The Commission also proposes to eliminate IAS, and also to eliminate the identical support rule. NASUCA will respond to some of the comments on these issues. (NASUCA will not reply, however, on the Commission's items that will not yield savings for the HCF, being the

¹¹¹ NASUCA Comments, pp. 27-35.

¹¹² Cellular South Comments, pp. 2-31.

¹¹³ NASUCA Comments, p. 43.

“more equitable” distribution of high-cost loop support funds,¹¹⁴ the study area waiver process, and the parent trap rule.)

1. PHASING OUT LOCAL SWITCHING SUPPORT

With regard to LSS, the Commission notes that

LSS was originally created to help small telephone companies that lack economies of scale to afford large switches, but since then the industry has moved to software-based routers and switches which can be more easily scaled to a company’s size and even shared among companies. LSS now provides perverse incentives for companies not to realize efficiencies by combining service areas.¹¹⁵

The NPRM proposes to phase out LSS, and as noted by NASUCA, as long as this support for ILECs is not rolled into HCLS, there will be \$276 million per year freed up for broadband.¹¹⁶

Not surprisingly, many LECs oppose the elimination of LSS. But none of these commenters adequately addressed the underlying issues raised by the Commission, i.e., that technological change has reduced the need for this type of support, and the incentives deterring the realization of efficiencies. Ultimately, to support the proposition of continued receipt of switching support, the comments should have addressed both the direct issue of switching costs (i.e., offer proof that these costs are not declining), and the indirect issue of the “perverse incentives” inherent in LSS. This type of analysis is missing from the comments.

For example, FairPoint states that “if the Commission eliminates LSS, it will

¹¹⁴ NPRM, ¶175.

¹¹⁵ Id., ¶21.

¹¹⁶ NASUCA Comments, p. 43.

leave recipients with no opportunity to recover the costs.”¹¹⁷ The ICORE Companies state that “[d]rastic changes in ... LSS will make it much more difficult for small carriers to continue ... upgrading existing switching equipment, or investing in other advanced technologies to deploy broadband.”¹¹⁸ Like the discussion of IAS below, these comments either miss the mark, or point to the need for the elimination of LSS. As is the case with IAS, LSS should not be implicitly supporting broadband, as ICORE admits. While cost recovery is important, FairPoint fails to address the lower costs, and potential for consolidation, associated with softswitch technology.

Other commenters argue that LSS should not change, but admit that when it comes to switching, the environment has changed: “[T]he economics governing switch deployment and cost recovery in RLEC areas has changed since the DEM weighting rules (and LSS mechanism) were first implemented.”¹¹⁹ And “[d]ue to some technological changes, economies of scale in some respects may have improved...”¹²⁰ These admissions point to an outdated and inappropriate LSS mechanism.

InterBel and a number of other small rural carriers note that:

Part 69.306(d)(2) of the FCC’s rules requires a shift of the local switching revenue requirement (typically 30%), after the local switching revenue requirement has been reduced for LSS, to the common line revenue requirement. As a result, reductions in LSS will increase the local switching revenue requirement. This increased local switching revenue requirement is then shifted (30%) to the common line revenue requirement. The increase in the common line revenue requirement,

¹¹⁷ FairPoint Comments, p. 9.

¹¹⁸ ICORE Comments, p. 7.

¹¹⁹ NECA, et al. Comments, p. 45.

¹²⁰ ERTA Comments, p. 4.

increases the amount of ICLS necessary to recover the common line revenue requirement.¹²¹

This observation suggests the need to close this loophole. There is no reason to shift explicit support for switching to an implicit support mechanism through common line support. The Commission should be moving away from implicit support.

JSI states that

if the Commission were to make changes to Part 36 of its regulations, the switching costs currently assigned to the interstate jurisdiction would now be directed to the intrastate jurisdiction to be recovered, under rate-of-return regulation, from either an increase in intrastate local switching rates or local service rates.¹²²

This outcome would be preferable to rolling LSS into ICLS. For the rate increases that JSI describes to take effect, the rate-of-return carrier would have to come before its state commission – in those states that still regulate intrastate rates – to seek rate relief. This would at least allow for a review of the revenue requirement, including the cost of capital, associated with the LEC’s operations. In those states that have deregulated local rates – ostensibly because of the level of local competition – presumably that competition will constrain the rate increases.¹²³

Other parties support the elimination of LSS. The FPSC states that it “agrees with the FCC that LSS has become outdated and should be eliminated.”¹²⁴ With regard to LSS, Windstream, which received nearly \$9 million in LSS support in 2010 states, “The

¹²¹ InterBel Comments, p. 3; Albion Comments, p. 2; Calaveras Comments, p. 2; Cambridge Comments, p. 2; Central Texas Comments, p. 3; Custer Comments, p. 2; Delhi Comments, p. 3.

¹²² JSI Comments, pp. 12-13.

¹²³ If not, that is an issue regarding the wisdom – or lack thereof – of the state regulatory decision. Only if this results in rural rates that are not reasonably comparable to urban rates should the Commission – after or in conjunction with state USF efforts – should the Commission consider providing assistance from the federal HCF.

¹²⁴ FPSC Comments, p. 8.

program currently rewards small study areas without regard to average switch size and without any high-cost qualifying threshold, and thereby provides a disincentive for carriers to merge study areas within the same state.”¹²⁵ Finally, the PUCO states that it “agrees that the current LSS funding eligibility criteria lacks the cost calculations necessary to determine actual funding requirements. For this reason, the LSS should be reformed to include a new ‘high-cost qualifying threshold.’”¹²⁶ If the Commission decides to seek middle ground on the LSS issue, the PUCO’s suggestion may have some merit. The concept of a “high-cost qualifying threshold” may allow for a more appropriate level of switching support to be identified.

If a high-cost threshold is used, the measure of cost must be determined. Given information contained in the comments, many RLECs indicate that the transition to softswitches is either imminent or already complete.¹²⁷ Forward-looking costs are thus appropriate to use, and will not be substantially different from embedded costs for those carriers that have already made the transition. When formulating the cost threshold, the Commission should set the threshold so as to provide appropriate incentives for combining service areas.

2. CORPORATE OPERATIONS EXPENSE

The NPRM’s proposal to eliminate the inclusion of corporate operations expenses as costs eligible for the USF drew a substantial response. Many RLECs asserted a need

¹²⁵ Windstream Comments, p. 43.

¹²⁶ PUCO Comments, p. 17.

¹²⁷ “RLECs have made great strides in replacing older time-division multiplexing (“TDM”)-based switching equipment with new IP “softswitches” and increasingly offer IP interconnection. Approximately 19 percent of host switches in NECA’s TS pool have been replaced by softswitches.” NECA, et al. Comments, p. 25. See also, Fidelity Comments, p. 4; Hill Country Comments, p. 3; Madison Comments, p. 5; Wheat State Comments, p. 5.

for continuing support of corporate operations expenses at current levels.¹²⁸ Other parties, such as SureWest and NECA, et al., pointed to the need to cap, but not eliminate this support.¹²⁹ The KCC states that corporate operations expenses should be “capped or modeled.”¹³⁰ On the other hand, Ad Hoc states that “the Commission should prohibit the use of High Cost Fund and CAF subsidies for corporate overhead and administrative expenses.”¹³¹

NASUCA’s perspective on corporate operations reflects NASUCA’s general prescription for reform: The Commission must base support on the business case to provide the supported services, using a modeling approach that fully evaluates both revenues and costs. The current approach to those corporate operations expenses that are not even capped is not based on any reasonable interpretation of costs, and borders on writing supported carriers a blank check for their corporate operations expenses. NASUCA believes that the time is ripe for this approach to be stopped.

On the other hand, corporate operations expenses are in fact “real” expenses, but due to the managerial-level functions that are supported, corporate operations expenses will include expenses that are not limited to the regulated universal service offering. All of the discussion in this reply that addresses the shared nature of facilities, and the fact that supported carriers are providing voice and broadband services over those shared facilities applies equally to corporate operations expenses. As the Commission is well

¹²⁸ See, for example, JSI Comments, p. 9; ATA Comments, pp. 7-8; Wheat State Comments, p. 6; TSTC Comments, p. 7.

¹²⁹ SureWest Comments, p. 25; FairPoint Comments, p. 12; NECA, et al. Comments, p. 11.

¹³⁰ KCC Comments, p. 30.

¹³¹ Ad Hoc Comments, p. 20.

aware, absent structural separations, corporate functions cannot be easily be walled off at the regulated-service border.

If the Commission follows NASUCA’s advice, and develops a revenue and cost model to address the needed level of support, that model will include a reasonable estimate of the level of corporate operations expenses that are associated with the operations of an efficient provider of the supported services. The Commission’s existing cost model includes corporate operations expenses, and this should continue with future models.¹³² The application of a revenue/cost model will enable the Commission to evaluate the business case for providing supported services, and determine whether a specific carrier needs support. This approach, which will not continue specific “line item” recovery of corporate operations expenses, will certainly improve incentives for efficiency in this area. With the elimination of a specific entitlement to funding, the carrier will face a benchmark-based incentive program, which will encourage more efficient expenditures at all levels of the firm’s operations. Thus, in the transition to CAF funding, the explicit corporate operations expenses associated with the HCLS, ICLS, and LSS should be quickly phased out, with the recognition that CAF support will appropriately address corporate operations expenses as CAF support ramps up.

3. REDUCE REIMBURSEMENT RATES FOR THE HIGH-COST LOOP PROGRAM – CAPITAL AND OPERATING EXPENSES

The NPRM indicates that problems with the existing USF program require caps on capital expenses (“capex”) and operating expenses (“opex”). Two specific problems

¹³² See, for example, the documentation of the FCC’s HCPM: C. A. Bush, D. M. Kennet, J. Prisbrey and W. W. Sharkey, and Vaikunth Gupta, “Computer Modeling of the Local Telephone Network,” p. 3. Available at: <http://transition.fcc.gov/wcb/tapd/hcpm/welcome.html>.

are identified in the NPRM:

First, carriers with high costs may further increase their loop costs and recover the marginal amount entirely from USF, rather than from their customers. Second, carriers that take measures to cut their costs to operate more efficiently may actually lose support to carriers that increase their costs. These two effects may lessen incentives for some carriers to control costs and invest rationally. It also shifts the responsibility of supporting these high-cost carriers to the federal jurisdiction, and ultimately to consumers across the country.

We propose to address these shortcomings in our current rules by capping the amount of operating expenses (opex) and capital expenses (capex) that are reimbursable for universal service purposes at specified levels that will allow ongoing, reasonable investment consistent with section 254.¹³³

The NPRM goes on to propose capping the amount based on a regression model, and states that the regression study submitted by the Nebraska Rural Independent Companies (“NRIC”) has inspired its proposed approach.¹³⁴ Various positions were offered on the proposal. ICORE states that “the effects of capping operating expenses (opex) and capital expenses (capex) in HCLS and ICLS reimbursements are impossible to quantify, without knowing exactly what the caps will be, or exactly how the process will work.”¹³⁵ CenturyLink offers a similar negative assessment.¹³⁶

Windstream offers strong support for the use of regression analysis to cap opex and capex. Windstream states that the use of the regression approach “would result in distribution of support based on the reasonable network costs of an efficient carrier, rather on a carrier’s embedded costs.”¹³⁷ However, Windstream never identifies how the Commission will determine just how the “reasonable network costs of an efficient

¹³³ NPRM, ¶202-203.

¹³⁴ Id., ¶201, citing NRIC Study (dated January 7, 2011).

¹³⁵ ICORE Comments, p. 8.

¹³⁶ CenturyLink Comments, p. 43.

¹³⁷ Windstream Comments, p. 35.

carrier” will be determined. The closest Windstream comes to defining an “efficient carrier” is to indicate that “Windstream supports near-term reforms... that will bring rate-of-return carriers’ support in line with what they would receive under an incentive-based regime.”¹³⁸

NASUCA evaluates the details of the NRIC approach and their consequences for this analysis in Appendix A of this reply. This discussion clearly points to the problems of using regression analysis as a mechanism to cap reimbursable capex and opex costs. If the Commission follows the NE Rural approach, it would need to start with a cost model. On the other hand, if it relies on embedded cost data, the problems associated with the status quo are built into the process. Further, outcomes associated with the regression approach would be subject to legal challenge, either due to the lack of representativeness of regressions that are based on large data sets, or due to problems with statistical significance that might arise with the use of smaller, more targeted data analysis. Venturing down the path of regression analysis would not generate results that would be superior to a well-designed cost/revenue model, but would generate similar controversies.

The Commission should pursue a single approach to controlling the cost of the high-cost loop program – a high-quality cost/revenue model. The problems discussed regarding the NPRM’s regression proposal illustrate the fact that it is imperative that the Commission not insert another fork into the already labyrinthian road to reforming universal service funding. It seems likely that regression analysis will needlessly complicate the reform process.

¹³⁸ Id., p. 41.

4. LIMITING THE TOTAL SUPPORT PER LINE AVAILABLE TO CARRIERS

The Commission’s proposal to limit support to \$3,000 per year drew responses from many parties. Verizon indicates that the \$3,000 cap is too high, and states that many small RLECs will have “significant headroom in per-line support below \$3,000,” pointing out that “LECs with fewer than 500 lines receive an average of \$1,148 per line each year.”¹³⁹ CTIA also states that the proposed \$3,000 cap is too high,¹⁴⁰ a sentiment also expressed by T-Mobile, which adds that the cap should be set at the “cost of wireless service at the relevant location, as determined by the NBP cost model or some other reasonable, objective measure.”¹⁴¹ Although NASUCA does not agree that the cap on high-cost support should be set to “the cost of wireless service” – which in itself is likely to vary significantly based on local conditions – NASUCA does agree with the spirit of T-Mobile’s recommendation, that an objective measure must be used to establish maximum per-location costs for supporting voice and broadband. A well-developed cost/revenue model would enable the development of such an objective measure. Further, the limit of per-line support must be developed also in light of the capabilities of satellite broadband to serve the highest cost areas, as NASUCA believes that terrestrial solutions to the lowest-density and most insular locations may not make sense.

RLECs took issue with the \$3,000 cap. Allband indicates that a \$3,000 cap would force it, and other companies, out of business.¹⁴² WGA states that “a cap on total, annual per-line high-cost USF support should not be imposed on RLECs without considering

¹³⁹ Verizon Comments, pp. 54-55.

¹⁴⁰ CTIA Comments, p. 16.

¹⁴¹ T-Mobile Comments, p. 13.

¹⁴² Allband Comments, p. 10.

individual circumstances.”¹⁴³ NECA, et al. indicate that imposition of the \$3,000 cap would “have severe impacts on a small number of subscribers with very little impact on the fund or savings in contribution rates.”¹⁴⁴ While NASUCA has not tested the claims of the RLECs, such outcomes certainly appear to be possible. But this is not a matter to leave to a “guessing game” regarding the correct level of the cap. Ad Hoc summarizes the matter nicely:

Ad Hoc supports replacement of the interim \$3,000 cap with a cap based upon examination of what it should cost to provide the universal service. Determining what it should cost to provide service in rural areas requires a forward-looking economic cost study – a relatively routine economic exercise that has been branded with overtones of voodoo-like evil by some in the industry. A forward-looking cost study is akin to getting bids from multiple contractors for a home improvement project. Without data regarding what it should cost to provide service in a particular study area (i.e., the forward-looking economic cost) imposing a cap is like picking a contractor and implementing the home improvement without regard to specifications or cost.¹⁴⁵

The application of a \$3,000 per year cap appears to provide the Commission little traction in reducing the overall size of the fund, or to free up much for redistribution to broadband. As discussed elsewhere in this reply, until the Commission develops a systematic and cost-based approach to evaluating both revenues and costs associated with meeting universal service objectives, reform efforts will be hamstrung.

5. PHASING OUT INTERSTATE ACCESS SUPPORT

CenturyLink states that IAS should be continued, because it is “necessary to provide good-quality *voice* services at affordable and reasonably comparable rates in the

¹⁴³ WGA Comments, p. 15.

¹⁴⁴ NECA, et al. Comments, pp. 45-46.

¹⁴⁵ Ad Hoc Comments, pp. 24-25.

vast majority of areas in which CenturyLink receives that support.”¹⁴⁶ Windstream indicates that for mid-sized carriers, IAS should be retained while the CAF is being reformulated.¹⁴⁷ ITTA states that “IAS should not be phased out until the permanent CAF mechanism is established and implemented.”¹⁴⁸

CenturyLink indicates that elimination of this support will further exacerbate the “rural/rural” divide.¹⁴⁹ CenturyLink goes on to explain: “Indirectly, IAS also promotes broadband deployment.... CenturyLink has made significant progress in deploying broadband service including in the wire centers for which it receives IAS.”¹⁵⁰ Windstream, ITTA, FairPoint, and Frontier make similar statements.¹⁵¹

These carriers’ logic on the IAS is faulty. Both CenturyLink and Windstream elsewhere state that when it comes to supporting broadband, “targeting” is the key.¹⁵² Although IAS is targeted at higher-cost UNE zones, IAS is still “targeted” at supporting voice services.¹⁵³ But CenturyLink, Windstream, ITTA, FairPoint, and Frontier all admit that IAS is also supporting broadband.¹⁵⁴ Thus, IAS provides implicit broadband support that must be transitioned away from, so that explicit broadband support can be established.

¹⁴⁶ CenturyLink Comments, p. 27, emphasis added.

¹⁴⁷ Windstream Comments, p. 55.

¹⁴⁸ ITTA Comments, p. 9.

¹⁴⁹ CenturyLink Comments, p. 27.

¹⁵⁰ *Id.*, p. 28.

¹⁵¹ Windstream Comments, p. 55; ITTA Comments, p. 11; FairPoint Comments, p. 15; Frontier Comments, p. 12.

¹⁵² CenturyLink Comments, p. ii; Windstream Comments, p. 4.

¹⁵³ NPRM, ¶229.

¹⁵⁴ CenturyLink Comments, p. 28; Windstream Comments, p. 55.

While CenturyLink argues that the broadband deployment enabled by IAS reflects the “quintessential public-private partnership... (that) enables investment to extend broadband service where a business case can be made,”¹⁵⁵ this “public-private” partnership is completely untethered from any public policy objectives. The amount and/or quality of broadband enabled by implicit IAS support may or may not comport with the Commission’s broadband standards, and thus the so-call “public-private partnership” can at best be characterized as a misdirection of universal service funds.

CenturyLink goes on to make the argument that a “flash cut” of IAS would be contrary to the objectives of the National Broadband Plan, and that new rules should be phased in over a reasonable time period.¹⁵⁶ Windstream and FairPoint indicate that IAS was “factored into” determinations associated with stimulus awards.¹⁵⁷ As noted in the NPRM, however, carriers have been aware that IAS was a transitional program from the start; carriers have now enjoyed IAS for a period of six years beyond the end of the initial transition period; and carriers received an additional reminder of the fleeting nature of IAS during this period due to the imposition of a cap on IAS support.¹⁵⁸ Eliminating IAS is no “flash cut.” It is time for the Commission to eliminate IAS.

Although CenturyLink also argues that it is unfair that the Commission phase out IAS more quickly than CETC support, CenturyLink ignores the extended cushion of time that CenturyLink and other price-cap ILECs have enjoyed with regard to IAS. However, should the Commission decide to grant CenturyLink’s wishes with regard to equity with

¹⁵⁵ CenturyLink Comments, p. 28.

¹⁵⁶ Id., p. 29.

¹⁵⁷ Windstream Comments, p. 55; FairPoint Comments, p. 13.

¹⁵⁸ NPRM, ¶¶ 230, 231.

CETCs, the Commission should unify the IAS and CETC phase-out to match the Commission's proposed IAS phase-out time-line.

6. ELIMINATING THE IDENTICAL SUPPORT RULE

Not surprisingly, recipients of support under the current identical support rule are not in favor of the phase-out proposed in the NPRM. For example, Rural Cellular states “There is no sound basis for concluding that CETC support is any less necessary or beneficial for consumers than support provided to incumbent LECs.”¹⁵⁹ CTIA states that “the Commission could more effectively achieve national goals and priorities by explicitly permitting CETCs to use existing funding for mobile broadband deployments while it develops new high-cost mechanisms.”¹⁶⁰ CRUSIR states “a total phase-out of CETC support is not only inadvisable because of its impact on competition in general, but also seems to flout the spirit of the Telecom Act.”¹⁶¹ ACS states “the Commission's ‘identical support rule’ can be improved and financial impacts mitigated by freezing per-line support.”¹⁶²

These comments provide no compelling reason to retain existing CETC support, or to transition to a strictly cost-based CETC support methodology.¹⁶³ CETC support has proved to be a failed experiment, and NASUCA believes that there is no need to continue funding CETCs.¹⁶⁴

¹⁵⁹ Rural Cellular Comments, p. 15.

¹⁶⁰ CTIA Comments, p. 20.

¹⁶¹ CRUSIR Comments, p. 9.

¹⁶² ACS Comments, p. 21.

¹⁶³ RICA Comments, p. 12.

¹⁶⁴ NASUCA Comments, p. 42; see also 10-90, NASUCA Comments (July 22, 2010).

Other parties point to the problems created by the continuing existence of the identical support rule and CETC support. Ad Hoc states: “From its inception, the identical support rule has inefficiently allocated High Cost Fund dollars... All of this support is provided without regard to actual costs, taking an already problem-riddled funding mechanism, and aggravating the economic waste it causes.”¹⁶⁵ ACA states that “the identical support rule should be eliminated, and the funding should be redirected over a five year period to the CAF.”¹⁶⁶ ITTA states “the current system exacerbates the problem through the Identical Support rule, which gives new entrants support based on the incumbent’s costs.”¹⁶⁷ Moss Adams states “the identical support rule is an ill-conceived concept that originally distributed the same amount of universal service funds to a CETC as it did to an Eligible Telecommunications Carrier (ETC), regardless of the CETC’s costs in relation to the ETC’s costs.”¹⁶⁸ NECA, et al. state:

Different network technologies provide different service functionalities and entail different construction, operating and maintenance costs. In addition, the Commission has recognized that the identical support rule has led to an inefficient use of funds, as it has incited CETCs to maximize their “line” counts in the lower-cost portions of RLECs’ study areas, rather than build-out their networks to serve high-cost customers.¹⁶⁹

NASUCA agrees that the identical support rule makes no sense and that CETC support must be eliminated. It is also refreshing to see these representatives of RLECs highlighting the problems that emerge when support is given without an evaluation of a carrier’s own specific costs. As will be discussed elsewhere in this reply, some of these

¹⁶⁵ Ad Hoc Comments, p. 38.

¹⁶⁶ ACA Comments, p. iii.

¹⁶⁷ ITTA Comments, p. 5.

¹⁶⁸ Moss Adams Comments, p. 14.

¹⁶⁹ NECA, et al. Comments, p. 57.

same commenters hold a very different point of view when it comes to cost-based reforms that might impact their own receipt of support.

B. THE STATE MEMBERS PLAN

1. THE STATE MEMBERS PLAN FOR POLR SUPPORT

The State Members Plan identifies a nine-step process to address POLR support. NASUCA finds that many aspects of the POLR support mechanism are likely to improve the status quo, however, there are certain areas that require further clarification, or have room for improvement. Overall, the State Members Plan represents a significant advance in solving the USF reform puzzle.

a. Step 1 – Targeted Support

The State Members Plan directs its targeted support at the high-cost sector (or the “donut” area) in each exchange.¹⁷⁰ The State Members Plan proposes to cover the ETC’s “financial gap,” defined as the difference between the supported carriers “cost” and “revenue.”¹⁷¹ Correctly, the State Members Plan takes a total company view of costs and revenues, and proposes to address revenues and costs from all regulated operations, and unregulated operations, excluding video and/or non-telecommunications ventures.¹⁷² NASUCA generally agrees with the logic of the State Members Plan with regard to the exclusion of incremental video service costs and revenues, but believes that the policy approach to the video side of operations should remain flexible. NASUCA has not seen convincing data regarding the impact of video delivery on a carrier’s bottom line, but

¹⁷⁰ For more discussion on the “donut” and the “hole,” see Section V.C.3. below.

¹⁷¹ State Members Comments, p. 33.

¹⁷² *Id.*, pp. 34-35.

because video may be delivered over the same facilities as supported services, it certainly makes sense to require contribution from video services to offset joint and common costs, and thus the need for support. On the other hand, if video is in fact a “loss leader,” the carrier’s draw from the POLR fund should not be allowed to increase as a result.

Finally, the delivery of content over broadband networks could be on the cusp of dramatic changes, with content coming “over-the-top,” rather in the typical cable model of a “channel lineup.” As a result, it is conceivable that the wholesale video market may undergo significant changes that would enable supported carriers to turn video services into a more reliable profit center, if that is not the case today.

The State Members Plan Step 1 will define costs so that:

Cost should cover all capital costs, including depreciation, a reasonable return on net investment, and operating costs, including “middle mile” broadband transmission costs from the end user to the Internet backbone.¹⁷³

The State Members Plan proposes to continue to apply a dual-cost standard, with non-rural carriers using a cost model, and rural carriers having the opportunity to opt out of the cost model approach and stay with embedded costs.¹⁷⁴

For non-rural carriers the State Members Plan proposes to modify the FCC’s existing cost model.¹⁷⁵ Some of these changes raise questions, including specifically that “[c]osts should reflect the usage and longer-range communications of modern networks, including the costs of current toll calling usage (including intra [local access and transport area] LATA and inter LATA toll) and [extended area service] EAS, as well as

¹⁷³ *Id.*, p. 36, emphasis in original.

¹⁷⁴ *Id.*

¹⁷⁵ While it is not entirely clear from the State Members Plan, NASUCA believes that the State Members Plan intends to use the FCC synthesis model, as opposed to the Broadband Assessment Model introduced by the FCC in the April 21, 2010, combined Notice of Inquiry and NPRM, FCC 10-58.

middle mile transport costs for Internet data.”¹⁷⁶

NASUCA is concerned regarding the apparent scope of the cost-based support extending to all costs of “longer-range” communications. Given that the State Members Plan appears to intend to target support at the high-cost “donut” areas, this implies that there will be a “low-cost” hole for at least some supported carriers. As a result, the carrier will have “long-distance” facilities in place to address capacity needed for the low-cost area. While the State Members Plan addresses the allocation of costs between the donut and hole areas, it is not clear that the State Members Plan reasonably allocates long-distance facilities between the two areas, and expanding costs to include long-distance networks would open the door to substantial cost increases. The “length” of the long-distance networks that are supported should be carefully limited, and emphasis should be placed on the capacity needed in the middle-mile to support broadband, because the volume of voice traffic relative to data traffic is likely to be heavily weighted on the data side.

NASUCA also has concern over what the State Members Plan does not say regarding the cost modeling approach. The State Members Plan also not address whether or how the FCC’s existing model must be modified to provide broadband services that are consistent with the 4/1 speed objectives. The State Members Plan states that “to receive the full amount of POLR support in year five, the carrier must provide broadband service at 4 Mbps, and that service must be available to 98 percent of the residential locations in its study area.”¹⁷⁷ Thus, while it is clear that the State Members Plan expects

¹⁷⁶ Id.

¹⁷⁷ Id., p. 63.

that carriers supported from the POLR fund will be required to meet the 4/1 objective over time, it is also clear that the FCC's existing cost model was not designed to deliver this objective. Thus, steps will need to be taken to model the costs of the 4/1 standard.

b. Defining the High-Cost Sector

The State Members Plan proposes to define the high-cost sector through an approach that combines a density-based evaluation with an evaluation of the existence of unsubsidized facilities-based competitors, including 4G wireless providers.¹⁷⁸ As discussed elsewhere in these comments, NASUCA is concerned that 4G wireless mobility services not be designated as the only supported service in an area. While 4G services will undoubtedly raise mobile broadband to a new level, the limitations on those services may lead them to be inferior to wireline broadband, even if 4G has a higher advertised “up to” speed. Furthermore, with regard to the State Members Plan proposal, NASUCA also has concerns regarding potential overlap with the proposed mobility fund, which will be discussed further below.

c. The State Members Plan and the Revenue Benchmark

Although the State Members Plan mentions the objectives of affordable voice and broadband services,¹⁷⁹ the State Members Plan's discussion of revenue constraints does not address either affordability benchmarks for voice and broadband, or how an affordability benchmark will be established. NASUCA is fully in agreement that revenues must be modeled and included in determining the level of support for broadband. The circumstances in specific states, or even regions within states must be

¹⁷⁸ Id., pp. 42-43.

¹⁷⁹ Id., p. 7.

addressed in determining both the affordability and the ultimate revenue modeling. When discussing the revenue modeling process, the State Members Plan identifies three “subscriber revenue groups.” (State Members Plan, p. 51.) The group “Broadband Bundle Subscribers” proposes to include “triple play” subscribers, but to exclude video revenues. It is not clear how a bundle price would be decomposed to accommodate this proposal.

d. Step 2—Intercarrier Compensation Reform and Support

The State Members Plan proposes to recover revenue changes arising from ICC reform from the new CAF.¹⁸⁰ The details of the State Members Plan on ICC levels are discussed in Section V.I., below. And the recovery mechanism is discussed in Section VIII.F..

e. Step 3—Overall Earnings Ceiling

The State Members Plan proposes a rate-of-return approach to calculate maximum allowable support.¹⁸¹ Step 3 would potentially limit Step 1 and/or Step 2 support if certain conditions emerged. The State Members Plan indicates that “excessive earnings” may result in Step 2 support being limited,¹⁸² which assuages some of NASUCA’s Step 2 concerns discussed elsewhere. However, just how this process would work is left unstated. For example, would Step 3 require annual evaluations, and who has the responsibility for monitoring earnings? Further, given that Step 2 support phases out over a five-year period under the State Members Plan, it is not clear whether Step 3 of the

¹⁸⁰ Id., pp. 56-57.

¹⁸¹ Id., p. 56.

¹⁸² Id., p. 57.

State Members Plan would prevent the carrier from receiving CAF support as a replacement for those lost revenues, given that the State Members Plan also states that a “minimum earnings calculation” could be appropriate if the carrier were placed “at risk without support.”¹⁸³

NASUCA is also concerned about the impact of the difference in cost standards between Step 1 and Step 3. Step 1 is based, for non-rural carriers and others that opt in, on a cost model. Step 3 is based on embedded costs. This approach could have the result of grossing up cost-model-based support levels to those based on rate-of-return and embedded cost principles, which would appear to defeat the purpose of using a cost model in the first place. As the State Members Plan notes, “To the extent that a carrier allows its plant to become highly depreciated, its rate base decreases, and support also decreases. Using embedded costs thus encourages carriers to maintain a quality network that is capable of providing good voice and broadband services.”¹⁸⁴ But the converse is true, as noted in the NPRM’s discussion of the “race to the top” problem.¹⁸⁵ Thus, the State Members Plan’s suggestion that the “Commission should investigate whether the rate-of-return support calculation should include expense and investment caps”¹⁸⁶ would appear to be too weak—such caps would be essential.

2. OTHER PERSPECTIVES ON THE ROLE OF COST MODELS

As discussed above, the State Members Plan proposes to utilize a revised version of the Commission’s cost model in the reform process. Numerous parties provided

¹⁸³ Id.

¹⁸⁴ Id., p. 58.

¹⁸⁵ NPRM, ¶179.

¹⁸⁶ State Members Comments, p. 58.

comment on the appropriateness of using cost models. Ad Hoc states that for RLEC service areas:

A model capable of properly estimating what it should cost an efficient provider to provide service in High Cost Fund study areas may, or may not, need to be somewhat more complicated than the High Cost Model used to develop price cap carrier costs. It may require some additional variables, the input costs may vary some (labor rates, for example, are likely lower in rural Montana than in Manhattan), but overall the process should be about the same.¹⁸⁷

NASUCA observes that there are numerous RLEC naysayers when it comes to cost models.¹⁸⁸ NASUCA does not find their arguments to be persuasive. As discussed by NASUCA in opening comments, whether the Commission directly develops revised support levels using a model, or uses a model to develop guidance for evaluating competitive bids, cost modeling can and should play a pivotal role in reforming universal service support.

Some commenters lend support for cost modeling. AT&T's procurement proposal is based on the identification of high-cost areas by census blocks using a Commission model.¹⁸⁹ AT&T indicates that a "cost only" cutoff should be utilized to identify the eligible areas. AT&T's proposal thus ignores the revenue side of the equation, and will result in a higher absolute number of eligible areas. The Commission should rely on a model that addresses both costs and revenues, and determines eligible areas based on a test that considers the impact of the full spectrum of service revenues associated with a broadband connection. AT&T's approach will inflate the level of funds that are needed to ensure that a reasonable business case can be made to deploy

¹⁸⁷ Ad Hoc Comments, p. 25.

¹⁸⁸ See, e.g., WGA Comments, p. 43; TCA, p. 11; LA SCC Comments, p. 6.

¹⁸⁹ AT&T Comments, p. 89.

broadband.

FairPoint, like AT&T also favors the use of a cost model that does not address revenues. FairPoint points to the NPRM to justify its opposition to including revenue in the model, noting that the NPRM states, “Despite the advantages of including demand-side metrics in the determination of which areas are truly uneconomic to serve, we recognize that there could be difficulties in accurately estimating and modeling revenues.”¹⁹⁰ Actually, if anything, developing revenue benchmarks should be much easier to develop than developing costs. While carriers may do their best to keep information on their costs from public view, information on service prices and quantities are much more readily available, thus making the development of appropriate benchmarks less controversial. The Commission must break out of the “cost-only” mindset and evaluate the complete “business case” for broadband. As the NPRM notes, “We recognize that in some geographic areas there may be no private sector business case for offering voice and broadband services.”¹⁹¹ This recognition cannot be turned into reasonable policy solutions unless the Commission evaluates expected costs **and** revenues.

a. CenturyLink’s Modeling Approach

CenturyLink’s view of modeling contains some reasonable suggestions, but is ultimately less than clear. CenturyLink begins its discussion by stating that “support must be based on real world network operations, rather than hypothetical cost models that theorize away the actual conditions a provider faces in extending and maintaining

¹⁹⁰ FairPoint Comments, p. 23, citing NPRM, ¶439.

¹⁹¹ NPRM, ¶10.

broadband and voice services in a particular area.”¹⁹²

However, CenturyLink goes on to recommend (1) the application of a “uniform model” that will apply to all carriers; (2) that an engineering cost model should be utilized rather than a regression model; (3) that a scorched node approach be utilized for the modeling of costs for broadband expansion, and that a modeling of total network costs be utilized to evaluate ongoing support where broadband is already deployed; (4) that the model utilized include cost estimates for middle-mile and second-mile transport; (5) that the process of adopting the cost model should be open and efficient; (6) that the model should incorporate accurate mapping, and should include a process to allow providers to provide updates or corrections to the data; and (7) that the modeling process, including model inputs, should be kept up-to-date.¹⁹³ While the devil remains in the details, CenturyLink’s proposals are generally consistent with a reasonable approach to developing a model. CenturyLink is correct that regression analysis, rather than an engineering cost model, is highly dependent on the data on which the regressions are run. As the saying goes, “garbage in, garbage out.” Likewise, relying on an open process to determine model inputs, and which keeps the model up-to-date, is critical when developing a reasonable modeling approach. CenturyLink does not mention, however, the revenue side of the business case associated with broadband deployment, and the Commission must include a revenue model as well as a cost model.

b. Conclusion on cost models

NASUCA is convinced that reform of the universal service program and

¹⁹² CenturyLink Comments, p. 42.

¹⁹³ Id., pp. 42-46.

intercarrier compensation will benefit from the application of a forward-looking cost model, which can be combined with a revenue model to project the business case for the supported services. Absent a cost model, the Commission will be pursuing the complex process of reform completely untethered from any objective basis for determining which policy actions make sense. There is no question that cost modeling is “doable,” however, there is also no question that many parties perceive, perhaps correctly, that cost modeling will finally provide an incentive structure that will derail the gravy train. As noted by Ad Hoc:

Determining what it should cost to provide service in rural areas requires a forward-looking economic cost study – a relatively routine economic exercise that has been branded with overtones of voodoo-like evil by some in the industry. A forward-looking cost study is akin to getting bids from multiple contractors for a home improvement project. Without data regarding what it should cost to provide service in a particular study area (i.e., the forward-looking economic cost) imposing a cap is like picking a contractor and implementing the home improvement without regard to specifications or cost.¹⁹⁴

Certainly, the “universal service improvement” project that the Commission is undertaking must clearly identify the specifications and cultivate a deep understanding of the costs of delivering supported services in high-cost areas.

C. USF PORTIONS OF THE NECA, ET AL. PROPOSAL

NECA, et al. propose a five-step program to reform ICC and universal service support. NASUCA finds room for general agreement with NECA, et al.’s “Step One,” which addresses near-term ICC reform, and “Step Five,” which calls for monitoring and periodic recalibration of reformed ICC and USF mechanisms. Beyond that, NASUCA generally does not agree with the specifics of the other steps. NASUCA will address the

¹⁹⁴ Ad Hoc Comments, pp. 24-25.

Step Two component of the NECA, et al. plan below, in addition to other USF-related issues. Step Three (long-term ICC issues) will be addressed in Section VII.K.) and Step Four (an RLEC-specific CAF) will be addressed in Section VI.F.

1. STEP TWO: PLACE LIMITS ON PROSPECTIVE RLEC CAPITAL EXPENDITURES

NECA, et al. offer a reasonable-sounding proposal to address the “race to the top” problem¹⁹⁵ – limiting RLEC prospective capital expenditures. Unfortunately, the ultimate structure of the solution leaves much to be desired, and it is clear that the NECA, et al. proposal would distort high-cost support, rather than fixing the “race to the top” problem.

NECA, et al. present a proposal prepared by Vantage Point that offers an alternative approach to redefining the distribution of high-cost support. The Vantage Point Study is focused only on future local loop investments.¹⁹⁶ The Vantage Point Study focuses on local loop investment because of the high percentage of total investment associated with loop plant and because a significant portion of high-cost support is associated with loop plant.¹⁹⁷ The Vantage Point Study contains its own separate “three step” process. Step 1 begins with the estimation of loop investment for each supported carrier based on the LEC’s financials, i.e., booked investment.¹⁹⁸ Vantage Point argues that because this data represents historical experience over a number of years, the loop

¹⁹⁵ See NPRM, ¶202.

¹⁹⁶ NECA, et al. Comments, Appendix A, “ Proposal for Allowed Loop Plant Capital Expenditures For High Cost Funding of Future Loop Plant Investments (“Vantage Point Study”).

¹⁹⁷ Vantage Point also indicates that there differences in loop design criteria can result in “large variability between one design and another.” Vantage Point Study, p. 4.

¹⁹⁸ Id., p. 6.

investment will need to be adjusted by an “established index such as the Consumer Price Index or the Producer Price Index or a Telephone Plant Index.”¹⁹⁹ In other words, booked investments will be grossed up to a higher level to account for “inflation.” Thus, Vantage Point’s methodology is akin to the estimation of “reproduction cost new” that has been associated with “fair value” ratemaking, and has been pretty much abandoned in utility regulation.²⁰⁰ More detail on the Vantage Point Study is presented by NASUCA in Appendix B of this reply.

To describe the Vantage Point approach as inappropriate would be extremely generous. If the Commission were to go down the Vantage Point path that is advocated by NECA, et al., it would distort the high-cost program in a manner that only Lewis Carroll could have imagined. The outcome of universal service funding could only become “curiouser and curiouser,”²⁰¹ as ILECs would be awarded funds not based on reasonable projections of the economic costs of providing state-of-the-art broadband. Instead, the Vantage Point approach advocated by NECA, et al. would arrive at permissible investment levels by grossing up historical investments in non-broadband technologies, using a price index like the CPI that has no direct connection to telecommunications technology, all adjusted by an inconsistent and unauditible ratio. The Commission should reject the NECA, et al./Vantage Point proposal.

¹⁹⁹ Id. Appendix 1 of the Vantage Point Study shows an example where a company’s financials show \$87.6 million in total loop plant investment and \$55.2 million in loop plant accumulated depreciation. The Vantage Point method results in total loop investment of \$100 million, based on use of the “Consumer Price Index, or other index, to allow for inflation.”

²⁰⁰ For a discussion of fair value ratemaking, see, Bonbright, J. et al., *Principles of Public Utility Rates*, Public Utility Reports, Inc. Arlington, VA, 1988, pp. 215-222.

²⁰¹ Lewis Carroll, *Alice's Adventures in Wonderland*, Chapter II. Available at: <http://www.cs.cmu.edu/~rgs/alice-table.html>

2. SHIFTING LOOPS TO THE INTERSTATE JURISDICTION

NECA, et al. propose to revise separations to allocate “last mile” Category 1.3 and COE 4.13 loop costs to the interstate jurisdiction, based on an individual RLEC’s broadband adoption rates.²⁰² This proposal is in the spirit of NASUCA’s recommendations in CC Docket 80-286.²⁰³ The design of the NASUCA alternative is, however, superior, as it reflects the fact that there is a portion of some types of loop usage that should remain with the intrastate jurisdiction. While it may be the Commission’s objective to bring broadband to all households, there is no guarantee that all households will use broadband. The NASUCA approach reasonably scales the allocation of intrastate portion of the local loop between state and interstate jurisdictions based on whether the loop is used for voice alone, or in combination with other services.

NECA, et al. state that the jurisdictional transition of local loops that would shift support to the CAF, will continue with a parallel and ongoing set of payments from legacy USF support such as the HCLS and ICLS.²⁰⁴ NECA, et al. do not propose any sunset date for these legacy support mechanisms, thus they apparently envision an extended period where CAF and legacy support mechanisms exist side-by-side. The continuation of legacy and CAF support for an extended period will likely generate problems and result in excessive payment.

²⁰² NECA, et al. Comments, p. 32.

²⁰³ *In the Matter of Jurisdictional Separations and Referral to the Federal-State Joint Board*, CC Docket No. 80-286, Comments of the National Association of State Utility Consumer Advocates and the New Jersey Division of Rate Counsel on the Interim Proposals of the State Joint Board Members, April 29, 2010, pp. 14-15.

²⁰⁴ NECA, et al. Comments, pp. 32-33.

When a LEC updates plant for broadband there are some costs, such as those associated with driving fiber deeper into the local network, that result in an automatic upgrade in the capabilities of serving all end-users, regardless of whether the customer takes broadband service. Thus, if an RLEC were to receive CAF support to pursue this type of upgrade, and then also receive legacy support for the percentage of customers that had yet to adopt broadband, double compensation becomes a real possibility. To the extent that some level of legacy support continues while CAF funding expands, legacy support amounts should be scaled to reflect the growing reach of broadband in the network, so that the level of support does not result in duplicative compensation for the LEC.

3. NECA, ET AL. ON THE “DONUT” AND THE “HOLE”

NECA, et al. offer an approach to address the NPRM’s questions regarding the desirability of limiting or eliminating support where an unsubsidized competitor serves a portion of the study area.²⁰⁵ As noted by NECA, et al., this issue has come to be characterized as a “donut” and “hole” problem, where the “hole” is the relatively low cost area where “competition” exists, and the “donut” is the high-cost area where there is no competition.²⁰⁶

NECA, et al. indicate that if the Commission addresses this issue, it will find that the costs of supporting the high cost area will *increase* because “the benefits of averaging associated with the lower-cost “hole” are eliminated and the higher costs of serving the

²⁰⁵ NPRM, ¶391.

²⁰⁶ NECA, et al. Comments, p. 51. LA SCC offers (at p. 14 of their comments) a similar, if shorter, discussion of the “donut/hole” issue.

“donut” must be taken fully into account on a stand-alone basis.”²⁰⁷ NECA, et al. are incorrect on the use of a “stand-alone” approach to determine the level of funding needed to serve the high-cost “donut.” When considering the business case for network deployment, areas with higher density and lower costs can be served without support, as indicated by the fact that some high-cost study areas have more than one facilities-based provider. Thus, the appropriate question then becomes how much will it cost to extend service into the higher cost “donut” area, given that the carrier has already made the decision to serve the “hole.” The costs associated with serving the “donut” are not the stand-alone costs of serving that area, they are the *incremental costs*.²⁰⁸ When considering the design of the network in the “donut,” an economically rational carrier would take account of, and utilize, existing network facilities in the “hole,” and thus leverage economies of scale associated with the network that was deployed without the need for universal service support. As noted by NASUCA in opening comments,²⁰⁹ the Consultants’ Plan submitted to the State Members provides some ways to develop cost allocations between the “donut” and “hole” areas that would develop a reasonable approximation of the incremental costs of serving the high-cost area.²¹⁰

NECA, et al. also raise the issue of making the determination that an area is a true competitive “hole.”²¹¹ They suggest that the following information be provided by the

²⁰⁷ NECA, et al. Comments, p. 51.

²⁰⁸ With this analysis, the *incremental costs* would address all costs needed to serve the high-cost “donut” area. Thus, these costs would include all joint and common costs of facilities associated with serving the high-cost area.

²⁰⁹ NASUCA Comments, p. 16.

²¹⁰ Peter Bluhm and Dr. Robert Loube, “Consultants’ Plan For Universal Service,” A White Paper To The State Members Of The Federal-State Joint Board On Universal Service, February 7, 2011, pp. 7-8.

²¹¹ NECA, et al. Comments, p. 52.

competitive carrier:

- (a) It is a state-certified carrier or eligible telecommunications carrier (“ETC”);
- (b) It can deliver both broadband and quality voice services to at least 95 percent of the households in the specific area through use of its own facilities (or in combination with the resale of another carrier’s services) and in a manner comparable to the relevant USF/CAF recipient (i.e., fixed or mobile service, as applicable);
- (c) It offers each of those broadband and voice services on a stand-alone basis at rates that are reasonably comparable to those offered by the ILEC (to ensure affordability of rates for consumers); and,
- (d) It neither receives high-cost support of any kind nor cross-subsidizes its operations in the specific, affected census block.²¹²

While NECA, et al. set the bar at a high level with these requirements, there is an element of reasonableness in this position.²¹³ That is, given what we know about the distribution of facilities-based competition, which may be spotty and gerrymandered even in low-cost urban areas, it will be important to make a well-supported finding that facilities-based competition does in fact exist, and that the competition should provide consumers with the ability to acquire reasonably priced voice and broadband alternatives from the competitor. While NECA, et al. do not identify a preferred venue for the making of the necessary findings, NASUCA believes that the states can provide a better review on this matter than can the FCC.

NECA, et al. also indicate that should the Commission identify any competitive areas for which support will be curtailed, the Commission must allow RLECs to “recover

²¹² Id., pp. 52-53.

²¹³ NASUCA is not clear why NECA, et al. indicate in requirement (b) that it would be acceptable for an area to be found competitive based on *resale*. Given the objective of identifying areas with unsubsidized competitors, it does not make sense to rely on resale-based provision as a gauge. The reliance on resale is an indicator of entry barriers, as it reveals that an entrant finds the business case provided through the resale alternative is superior to deploying facilities.

existing investments made under current rules.”²¹⁴ As was discussed earlier, the application of an incremental cost approach to determining the appropriate level of support with the “donut” and “hole” areas will likely lead to reduced levels of support. The emergence of unsubsidized facilities-based alternative providers is an indicator that the RLEC has been **overcompensated** for service provision in some areas. The Commission is under no obligation to continue to provide support for past investments in the competitive areas that were made with funds not needed to induce private sector investment.

D. OTHER SELECTED PROPOSALS

Several parties call for adjustments to be made to basic rates, if these rates are “too low.”²¹⁵ Ad Hoc also addresses the issue and offers the following proposal:

Ad Hoc recommends making an adjustment to the per line High Cost Fund payments in those cases in which the average price for service is below the nationwide average. Such an adjustment would still recognize a carrier’s higher costs but would not provide subsidies at such a level that carriers are able to offer service to their “high cost” customers at rates that are lower than the average paid by users throughout the rest of the country.²¹⁶

Other parties offer similar recommendations, either with regard to access charge reductions, or universal service support.²¹⁷

Although NASUCA is not opposed to rate adjustments following state ratemaking policy in order to protect ratepayers of other companies and in other states from

²¹⁴ NECA, et al. Comments, p. 56.

²¹⁵ AT&T Comments, p. 32; CenturyLink Comments, p. 64; Frontier Comments, p. 10.

²¹⁶ Ad Hoc Comments, p. 29.

²¹⁷ See, for example, NECA, et al. Comments, p. 16; AT&T Comments, p. 33; CenturyLink, p. 65; Windstream Comments, p. 47.

supporting local rates that are set “too low,” NASUCA encourages the Commission to not lose sight of the trees due to the forest surrounding this issue. Ultimately, the level of high-cost support should be based on a full evaluation of *all* revenue sources available to the candidate support recipient. Before the Commission conditions the receipt of support on increased basic rates, the Commission should have a full accounting of the revenues that the carrier earns from toll, vertical features, voice mail, broadband, etc. These revenue sources are likely to contribute significant revenue that will offset the need for high-cost support. Once this accounting has taken place, then the Commission can also consider whether basic rates are “too low.”

NASUCA also believes, however, that in some cases, the ostensibly “low” rate may not accurately reflect what the consumer pays for basic local service. Separate billing line items that reflect extended area service arrangements and high local toll calling due to limited local calling areas should also be factored in when determining the difference between the residential rate and the rate benchmark.²¹⁸ NASUCA also believes that the benchmark should be established so that both the affordable “average” rate target, and the specific carrier’s rate level, include SLCs and typical “local service” costs.

VI. INITIATING THE CAF

A. Introduction

1. THE BUSINESS CASE TO DEPLOY BROADBAND

As the Commission considers the appropriate path to address both ICC and

²¹⁸ See, e.g., 05-337/96-45, NASUCA Reply Comments (May 26, 2006), pp. 58-59.

universal service reform, it must fully understand the implications of the impact of evolving technology that has enabled the provision of a wide array of services over the PSTN. Unfortunately, there is some very bad advice offered to the Commission on this matter. For example, AT&T describes the ILEC world in the following terms:

With an outdated product, falling revenues, and rising costs, incumbent wireline telephone companies face a “death spiral” that makes their POTS business model increasingly unsustainable.²¹⁹

It is not clear, however, which, if any, ILECs are currently operating under a “POTS business model.” AT&T certainly does not identify them, and, clearly, AT&T itself has moved beyond that model. As AT&T notes in its most recent SEC Form 10-K:

The services and products that we offer vary by market, and include: wireless communications, local exchange services, long-distance services, data/broadband and Internet services, video services, telecommunications equipment, managed networking, wholesale services and directory advertising and publishing.²²⁰

Other ILECs, large and small, display characteristics similar to those described by AT&T. For example, Wheat State, which serves six rural exchanges in Kansas, tells the Commission,

Wheat State offers wireline voice services, cable television, and broadband services using a combination of fiber and copper facilities. We use ADSL technology and provide speed up to 6.0 Mbps to 95% of our customers.²²¹

Likewise, CenturyLink, a nationwide provider, principally in rural areas, describes its operations as follows:

CenturyLink, together with its subsidiaries, is an integrated communications company engaged primarily in providing a broad array of communications services, including voice, Internet, data and video

²¹⁹ AT&T Comments, p. 12 and p. 58.

²²⁰ AT&T Inc., Form 10-K for the Year Ended December 31, 2010, p. 1.

²²¹ Wheat State Comments, p. 1.

services.²²²

Thus, AT&T's problematic ILEC environment no longer really exists. ILECs and other carriers do not now make business decisions based on the "POTS business model," as that business model has evolved.

On the other hand, if the ILEC industry is in fact in decline, AT&T's prescribed course of action for those companies (i.e., removing constraints on residential rates),²²³ will only exacerbate the "death spiral," because increasing rates will drive customers off the ILEC networks even faster.²²⁴ Either AT&T fails to see the folly of its recommendation, or recognizes that large numbers of residential customers continue to require reliable basic voice services, and have no choice but to pay those rate increases, thus increasing AT&T revenues and profits. In either case, abandoning rate regulation is not the answer.

The National Broadband Plan states, regarding the broadband deployment problem:

Because service providers in these areas cannot earn enough revenue to cover the costs of deploying and operating broadband networks, including expected returns on capital, there is no business case to offer broadband services in these areas.²²⁵

CenturyLink, like many other commenters, raises the issue of an "insufficient business

²²² CenturyLink Form 10-K for the Year Ended December 31, 2010, p. 4

²²³ AT&T Comments, p. 32.

²²⁴ Indeed, it can be argued that ILEC rate increases have already driven many customers off the ILECs' networks. For example, regarding rate increases through 2009 in California, see John Adkisson, John Hill, Dorothy Korber, Nancy Vogel. "California Public Utilities Commission: Gaps Emerge in Telephone Consumer Protections," A report prepared for the Rules Committee of the California State Senate. California Senate Office of Oversight and Outcomes July 16, 2010. <http://www3.senate.ca.gov/deployedfiles/vcm2007/senoversight/docs/Gaps%20Emerge%20Report%20pdf> For the 2011 rate increase see AT&T's California tariff Schedule Cal. P.U.C. NO. A5, 11th Revised Sheet 215.

²²⁵ National Broadband Plan, p. 136.

case” to deploy broadband.²²⁶ While the term “business case” is used by many, few explain what they mean. Given the importance of this “business case” concept, it is critical that the Commission clearly address this issue.

Ultimately, the Commission must identify the costs and expected revenues, and, as mentioned in the National Broadband Plan, reasonable returns on capital,²²⁷ for the various served and unserved areas of the nation that will vie for broadband support. Carriers cannot be allowed to individually define what constitutes a reasonable business case for broadband deployment.

The Commission must develop a deep understanding of the costs of deploying broadband. Use of a cost model can assist the Commission in developing the needed understanding. In addition, the Commission must develop a reasonable set of expectations with regard to revenues that can be expected from broadband deployment. This analysis must also address the issue of affordable rates for basic voice and broadband services, reasonable expectations for prices for add-on services and more advanced features, and projections of take rates for these services. Finally, the Commission must also develop a benchmark rate of return that it can build into its benchmark business case.²²⁸

This exercise is absolutely critical, given that the objective of the USF is to provide only as much support as is necessary to tip an “unfavorable” business case to the category of “favorable” business case. The Commission’s expertise on this issue will be

²²⁶ CenturyLink Comments, p. 14. See also, among many others, Alexicon Comments, p. 41; AT&T Comments, p. 76; Connected Nation Comments, p. 19; FairPoint Comments, p. 2; Verizon Comments, p. 16.

²²⁷ National Broadband Plan, p. 136.

²²⁸ State Members Comments, p. 36; see also Ad Hoc Comments, pp. 27-28.

necessary regardless of the approach that the Commission ultimately employs to distribute support. Whether it is a “right of first refusal,” a procurement process, or some type of auction mechanism, the Commission cannot let the distribution mechanism allow any USF recipient to reap any more support than is justified by a reasonable business case.

CenturyLink points to other factors that will require that the Commission have detailed knowledge regarding the costs of broadband deployment. For example, CenturyLink states that the Commission

should not mandate a certain level of broadband speed in a given area unless it makes sufficient CAF support available to make that deployment economically feasible. Where broadband deployment is justified through expected subscriber revenues, then such deployment can generally be funded through private investment. But remote areas of the country that cannot economically sustain broadband service should receive sufficient CAF support to make it economically sustainable.²²⁹

Here again, as CenturyLink correctly indicates, the Commission must not only be able match prescribed data speeds with CAF support, but must be able to recognize the line between a broadband deployment that will generate sufficient subscriber revenues to be supported by private investment, and cases where broadband cannot be economically sustained.

2. CAF AND INFLATION

CenturyLink indicates that the CAF should be adjusted for inflation, because the lack of such an adjustment would result in support being “ratcheted down over time.”²³⁰ NASUCA encourages the Commission to establish the level of CAF support based on a

²²⁹ CenturyLink Comments, p. 20.

²³⁰ *Id.*, p. 37.

cost model, which will be kept up-to-date in terms of input costs, technological change, and other factors, so that CAF funds are kept in line with changes in costs and technology. Price “inflation” has a very different profile in the telecommunications industry, as opposed to general measures on inflation. For example, Table 1 shows the price index and inflation rate calculated by the Bureau of Economic Analysis for communications equipment.

Year	BEA Communication equipment price index	Inflation rate
2000	127.316	
2001	120.358	-5.5%
2002	113.672	-5.6%
2003	107.977	-5.0%
2004	102.034	-5.5%
2005	100.000	-2.0%
2006	98.944	-1.1%
2007	93.197	-5.8%
2008	83.146	-10.8%
2009	74.27	-10.7%

Table 1 shows a price trend that is starkly different from the CPI. While there are other components that make up an ILEC costs, the trend shown illustrates that ILECs face cost trends that are not reasonably captured by general inflation indices like the CPI.

Furthermore, the level of CAF funding must also take account the level of revenues from all sources that can reasonably be associated with the broadband plant. The Commission should not, as CenturyLink suggests, simply link the level of CAF funding to “inflation”

²³¹ National Income and Product Accounts Table 5.5.4. “Price Indexes for Private Fixed Investment in Equipment and Software by Type,” Line 7, “Communication Equipment.” <http://www.bea.gov/national/nipaweb/SelectTable.asp>

alone, especially to a general inflation index like the CPI.²³² The appropriate level of CAF funding will likely change over time, however, it will not necessarily be the upward trend that might be predicted by a general inflation index.

B. Where are the Unserved Areas?

The NPRM indicates that the Commission will use the National Broadband Map to determine where funds will be awarded through an auction process, or other competitive bidding mechanism.²³³ As will be discussed in greater detail below, NASUCA has grave concerns regarding the use of an auction or competitive bidding.²³⁴ NASUCA is also concerned regarding the Commission's ability to accurately identify areas that are unserved or underserved per the Commission's yet-to-be-determined definitions of unserved and underserved. As the NPRM acknowledges, the data in the National Broadband Map has its limits: "NTIA defines 'broadband' for the purposes of the National Broadband Map to be two-way data transmission to and from the Internet with advertised speeds of at least 768 kbps downstream and 200 kbps upstream."²³⁵ Thus, the areas that are identified by NTIA as being served are not necessarily receiving service at a level that is anywhere near the Commission's tentative 4 Mbps/1 Mbps standard.

The comments do not reveal significant support for the proposition that the National Broadband Map is reliable. FairPoint indicates that when it comes to areas that

²³² CenturyLink does not specify how the Commission should inflate CAF distributions. CenturyLink Comments, pp. 36-37.

²³³ NPRM, ¶24.

²³⁴ NASUCA does recommend that if the Commission believes that it must go down the competitive bidding path, NASUCA's procurement approach is superior to the NPRM's Phase I CAF bidding process, or the longer term auction process to which the NPRM describes. NASUCA Comments, p. 84.

²³⁵ NPRM, ¶291, footnote 450.

lack basic broadband, that FairPoint is “is not convinced that the National Broadband Map and FCC Form 477 adequately identify such areas.”²³⁶ NECA, et al. state “the map only shows availability within a census block or road segment, and does not indicate the specific percentage of households actually able to take service in those areas.”²³⁷ American Cable Association indicates that for both the Commission and other agencies that gather data there are “gaps in their maps.”²³⁸

C. The problems with auctions

1. INTRODUCTION

As the Commission reviews the comments on the use of auctions as a component of universal service reform, it should carefully consider what is lacking in any party’s filing – any example of a successful reverse auction for broadband services, especially one where existing incumbents may already offers either voice services alone, or voice and low-grade broadband services. Two parties allege that universal service auctions that have been held abroad have been successful.²³⁹ The basis for both parties’ position, however, is a study that was conducted by Scott Wallsten,²⁴⁰ which was previously addressed by NASUCA.²⁴¹

²³⁶ FairPoint Comments, p. 15.

²³⁷ NECA, et al. Comments, p. 53.

²³⁸ ACA Comments, p. 23.

²³⁹ XO Comments, p. 43 and Viasat Comments, p. 12.

²⁴⁰ Both XO and Viasat cite to a 2008 version of the Wallsten paper, rather than the 2009 final version that was published in the *Federal Communications Law Journal*. The citations in these reply comments are to the 2009 version. Both versions are substantially identical. See, “Reverse Auctions and Universal Telecommunications Service: Lessons from Global Experience.” *Federal Communications Law Journal*, Volume 61, No. 2, March 2009. <http://www.law.indiana.edu/fclj/pubs/v61/no2/9-WALLSTENFINAL.pdf> ; and the 2008 paper available at: http://works.bepress.com/cgi/viewcontent.cgi?article=1000&context=scott_wallsten

²⁴¹ WC Docket No. 10-90, Affidavit of Trevor R. Roycroft, Ph.D. on Behalf of The National Association of

Given that this is the only example of “success” in the comments, a careful review of the Wallsten study is appropriate. It is notable that the Wallsten study actually documents a *mixed* performance record with regard to auctions. Many of the auctions documented by Wallsten failed, or are reported to have generated results that did not meet expectations.²⁴² The success of some international auctions also may not be relevant given the simplicity of the project, as compared to the issues facing this Commission.

For example, some auctions identified in the Wallsten paper were for deployments that are not comparable to broadband, such as the deployment of pay telephones in low-income urban and rural areas.²⁴³ Alternatively, gauging the success of the international experience with auctions is very difficult, as the metric available to Wallsten was the difference between what the relevant regulatory agency believed it might have to spend versus the final auction outcome. Specifically, the Wallsten article references the experience in Peru, where the regulator had allocated \$150 million to the project in question, while being able to complete the project for \$50 million. Wallsten does not discuss the source of the Peruvian regulator’s estimate, but the outcome sheds as much light on the inability of the regulator to correctly estimate the ultimate amount that was expended on the project as on the efficacy of an auction process.

State Utility Consumer Advocates, The Maine Office of Public Advocate, Office of the Ohio Consumers’ Counsel, Pennsylvania Office of Consumer Advocate, and The Utility Reform Network (July 12, 2010) (“Roycroft Affidavit”), pp. 38-39.

²⁴² For example, Wallsten reports that a pilot auction in Australia failed to generate any bidders due to incumbency, and auctions in Chile decreased in efficiency over time (initial auctions commanding about 40% of the maximum subsidy, with later auctions commanding close to 100% of the available subsidy). Wallsten, pp. 381, 384.

²⁴³ *Id.*, p. 383.

Wallsten describes a similar outcome for auctions conducted in Colombia, where the amount “available” (\$71 million) exceeded the amount that was awarded through bidding (\$32 million).²⁴⁴ It is not clear how the amounts that were “available” to fund these projects were determined, so the efficacy of the auction cannot be fully evaluated.

Wallsten also identifies a number of other auction failures. For example, the presence of incumbents led to auction failure (no entry into the auction) in an Australian auction pilot.²⁴⁵ A December 2000 Colombian auction was declared invalid due to problems with the information supplied by the sole bidding company.²⁴⁶ In two Indian auctions, weak bidding resulted in no competition.²⁴⁷

Alternatively, Wallsten also describes a “successful” Indian auction to provide services on a network that was constructed by a third party. However, as Wallsten notes, “[b]ecause these appeared to be bids to operate on a network being built by someone else, it is unclear why subsidies would be offered in the first place.”²⁴⁸

In addition to these specific examples, a key takeaway from Wallsten’s article is the importance of the level of entry for the success of auctions. As noted by NASUCA in opening comments, this Commission must carefully consider the prospects for auction entry (or lack thereof).²⁴⁹

An auction with many bidders is likely to exhibit fundamentally different

²⁴⁴ *Id.*, p. 385.

²⁴⁵ *Id.*, p. 381.

²⁴⁶ *Id.*, p. 386.

²⁴⁷ *Id.*, p. 387.

²⁴⁸ *Id.*, p. 390.

²⁴⁹ NASUCA Comments, p. 67.

outcomes than an auction with few bidders. There is ample reason to believe that auctions to provide broadband service in currently unserved and underserved areas will not attract large numbers of bidders. And this point is implicitly acknowledged in the April 18 comments by auction supporter XO:

[R]everse auctions are the most economically efficient means of determining both the minimally required subsidy amount and the identity of the most deserving recipient. *If carriers compete against each other for support in a given area*, the resulting “market” can be expected to identify the provider that will support the program at the lowest cost.²⁵⁰

Thus, XO acknowledges the very big “if” with regard to projections of auction performance. As NASUCA has noted, auctions that do not attract sufficient entry will not yield efficient outcomes.²⁵¹

2. MANY OTHER PARTIES OPPOSE OR DOUBT THE AUCTION APPROACH.

The general sentiments expressed by NASUCA regarding the pitfalls of auctions are voiced by other commenters. Ad Hoc states “the reverse auctions may not attract enough participants to make them sufficiently competitive to effectively govern the levels of CAF subsidies.”²⁵² Alaska Communications Systems Group observes that “reverse auctions pose other threats to universal service and realizing the goals of the Communications Act.”²⁵³ CWA states, “[U]sing reverse auctions to spur broadband deployment during the interim period would only serve to delay the transition to a unified Connect America Fund.”²⁵⁴ Alexicon Telecommunications Consulting points to

²⁵⁰ XO Comments, pp. 43-44, emphasis added.

²⁵¹ Roycroft Affidavit, p. 49

²⁵² Ad Hoc Comments, p. iii.

²⁵³ ACS Comments, p. 8.

²⁵⁴ CWA Comments, p. 4.

problems previously raised by NASUCA²⁵⁵ regarding defining bidding areas: “Within the proposed structure of the auctions remains the difficulty of aligning the proposed ‘auction areas’ with existing service areas, as various licensing, franchising, and certifications are needed for the various types of service providers that may compete.”²⁵⁶

The IURC states that the complexity of the combinatorial auctions proposed in the NPRM²⁵⁷ may deter entry, pointing to research on this subject where combinatorial auctions were identified as a process that taxes even the most skilled and well-funded participants:

[The researcher] joined forces with economists and computer scientists who study “combinatorial auctions,” bidding wars that bear almost no resemblance to the eBay version. Bidders consider a dizzying number of items that can be bought either alone or bundled, such as airport landing slots. The challenge is to buy the combination you want at the lowest price – a diabolical puzzle if you’re considering, say, 100 landing slots at LAX. As the number of items and combinations explodes, so does the quantity of information bidders must juggle: passenger load, weather, connecting flights. Even experts become anxious and mentally exhausted. In fact, the more information they try to absorb, the fewer of the desired items they get and the more they overpay or make critical errors.²⁵⁸

Certainly, the complexity of combinatorial auctions for USF funding, which might involved thousands of targeted geographic areas, could erect another entry barrier.

RTG opposes the use of auctions, but suggests that if the Commission pursues the auction approach that it should target auctions only at unserved areas, and should prevent Tier I wireless carriers from participating in the auctions.²⁵⁹ JSI states that it does not

²⁵⁵ NASUCA Comments, pp. 66-67.

²⁵⁶ Alexicon Comments, p. 41.

²⁵⁷ The NPRM indicates that the auctions will allow “package bidding.” NPRM, ¶293.

²⁵⁸ IURC Comments, p. 5, quoting “I Can’t Think,” *Newsweek*, February 27, 2011, <http://www.newsweek.com/2011/02/27/i-can-t-think.html>

²⁵⁹ RTG Comments, p. 15.

expect that rural areas will not attract sufficient bidding.²⁶⁰ U.S. Cellular also opposes auctions, noting that the Commission and consumers “would be better served by Fund disbursement mechanisms that rely on a forward-looking economic cost model.”²⁶¹

TSTC urges the Commission to reject the use of auctions, and notes that “while a reverse auction may effectively minimize total costs, it may also be done at the expense of the quality of the service provided and the expense of replacing the current provider who has made years of capital commitments to the areas.”²⁶² This “race to the bottom” theme associated with the potential impact of auctions on service quality is repeated by many other parties.²⁶³ NASUCA agrees that auctions, in and of themselves, do not ensure service quality. It must be emphasized that **if** the Commission pursues an auction approach, it must establish service quality standards, and see that those standards are enforced. Otherwise the “race to the bottom” prediction has a good chance of becoming reality.

USA Coalition also opposes auctions, principally because of the elimination of the potential for “competition” in the unserved areas.²⁶⁴ Public Knowledge and Benton Foundation expresses similar concerns, as well as concerns that some areas will remain unserved.²⁶⁵ USA Coalition argues that the monopoly outcome of the Commission’s approach “would require the Commission to extensively regulate the auction process and

²⁶⁰ JSI Comments, pp. 4-5.

²⁶¹ U.S. Cellular Comments, p. 29.

²⁶² TSTC Comments, p. 11.

²⁶³ See, for example, Cascade Comments, p. 3; MTPCS/Viaero Comments, pp. 33-34; GVNW Consulting, p. 21; MO STC Comments, p. 5; Molalla Comments, p. 2; URTA Comments, p. 5; TCA, Comments, p. 9; NECA, et al. Comments, p. 76; and Pine Comments, p. 3.

²⁶⁴ USA Coalition Comments, p. iii.

²⁶⁵ Public Knowledge and Benton Foundation Comments, p. 11.

the subsequent levels of services and pricing offered by the winning monopolist in order to ensure that an acceptable baseline level of service is provided by the winning bidder.”²⁶⁶ NASUCA agrees that if the Commission pursues the reverse auction path, or any path that is associated with the distribution of ratepayer funds to supported carriers, service quality standards must be enforced, and the prices of the supported services must be regulated. Without accountability there will be little market incentive for supported carriers to maintain high-quality services at affordable rates.

3. COMMENTS THAT THAT EXPRESS SUPPORT FOR AUCTIONS ARE NOT WELL-SUPPORTED.

a. **Verizon’s High-Cost USF Distribution Advice**

Verizon supports the prospect of competitive bidding or reverse auctions to distribute universal service support.²⁶⁷ Verizon states that only one universal service provider should be supported in each supported area, and that USF support should only be extended to areas where there is no unsubsidized provider. Verizon offers few details as to how the competitive bidding process would work, however. Verizon makes passing reference to its 2007 Comments in WC Docket No. 05-337 as providing guidance on the creation of an auction. Verizon’s 2007 Comments contained the proposal for Verizon’s “clock proxy” auction, which utilizes a two-stage approach to the determination of winning bids for universal service support.²⁶⁸ Verizon also states that an alternative competitive bidding process can be successful and points to the experience of government procurement auctions:

²⁶⁶ USA Coalition Comments, pp. 10-11.

²⁶⁷ Verizon Comments, p. 58.

²⁶⁸ 05-337/96-45, Comments of Verizon and Verizon Wireless, Appendix: Modernizing Universal Service, A Design for Competitive Bidding, p. 8 (May 31, 2007).

[M]any important goods and services, such as critical product development work for military equipment and repair work for bridges and roads, are purchased by government entities based on competitive bid contracts. Competitive bidding is the standard way that government procures goods and services for the best price, and there is no reason a properly structured competitive bidding mechanism cannot work well to produce better results in the universal service context.²⁶⁹

This procurement approach is very different from Verizon's 2007 proposal for auction format, and in fact appears to be similar to the procurement approach proposed by NASUCA.²⁷⁰

Verizon also provides more general support for a less-well-defined competitive bidding process.²⁷¹ It is not clear whether this component of Verizon's discussion is limited to the procurement process that Verizon elsewhere supports, or toward other bidding structures, such as reverse auctions. Verizon recognizes, however, that "[m]ore than anything, successful auctions require a sufficient number of bidders," and NASUCA has provided extensive comments on the problems of reverse auctions related to the likelihood of little bidding competition, i.e., no or few bidders.²⁷² NASUCA urges the Commission to refrain from experimenting with such an uncertain method of support distribution.

Verizon also states that there is no reason for the Commission to develop a theoretical cost model "when the Commission can rely on providers' own critical evaluations of the amount of support needed to take on a universal service obligation in a

²⁶⁹ Verizon Comments, p. 59.

²⁷⁰ See Section V.K., below.

²⁷¹ Verizon Comments, p. 64-65.

²⁷² NASUCA Comments, pp. 57-70; see also, Roycroft Affidavit, p. 49.

particular area.”²⁷³ But by Verizon’s own admission, as discussed above, the difference between a carrier’s “critical evaluation,” and the candor with which the carrier is willing to share that information with the Commission through a bidding process, will depend on the number of bidders. If the number of bidders is low, then the information conveyed in bids is unlikely to reflect the carrier’s true “critical evaluation” of costs.²⁷⁴ For that reason, the use of a cost model will provide the Commission with valuable information that it can use to evaluate bids, should the Commission pursue any competitive bidding approach.²⁷⁵

b. Other Parties that Support Auctions in Whole or in Part

Other parties voice support for auctions. For example, Time Warner Cable believes that auctions will “harness market forces to determine efficient levels of support in a competitively and technologically neutral manner.”²⁷⁶ While Time Warner’s comments are long on optimism regarding the auction process, they are short on detail, and as NASUCA has explained, that is where the devil resides.²⁷⁷ Time Warner does not address the key issue of the impact of the degree of auction entry on the efficiency of auction bid.

Comcast supports the idea of “well-designed” auctions that do not prevent “the use of satellite or other technologies to expand broadband service to areas where

²⁷³ Verizon Comments, p. 65.

²⁷⁴ Klemperer, Paul, “Using and Abusing Economic Theory,” 2002 Alfred Marshall Lecture to the European Economic Association, pp. 13-15.
<http://www.nuff.ox.ac.uk/economics/papers/2003/W2/usingandabusing.pdf>.

²⁷⁵ NASUCA Comments, p. 60.

²⁷⁶ TWC Comments, p. 26.

²⁷⁷ NASUCA Comments, pp. 57-58; see also Roycroft Affidavit, pp. 37-49.

marketplace forces would not foster new entry.”²⁷⁸ Both ViaSat and Satellite Broadband Providers also favor allowing satellite providers to participate directly in a reverse auction process.²⁷⁹ The NPRM proposes to prevent satellite providers from participating in auctions, but would allow them to partner with other bidders.²⁸⁰ NASUCA shares the Commission’s concerns regarding the appropriateness of using satellite broadband for widespread broadband coverage. In addition to problems with data speed and download caps,²⁸¹ satellite service reliability – which may be adversely affected by signal fade associated with weather conditions – is also a significant issue with satellite-based services. The partnership approach described in the NPRM,²⁸² that allows terrestrial carriers to partner with satellite providers to “fill in gaps in coverage” is more likely to target satellite services at the areas that truly uneconomical for terrestrial services.

Windstream is generally supportive of a competitive bidding process, but notes that “the competitive bidding process must target support to very granular areas and must include measures to prevent providers from receiving support for areas where deployment could occur without government help.”²⁸³ ACA supports the idea of using reverse auctions, but notes that targeting unserved areas in the service areas of RLECs may be problematic:

²⁷⁸ Comcast Comments, p. 17.

²⁷⁹ ViaSat Comments, p. 22; Satellite Broadband Providers Comments, p. 7.

²⁸⁰ NPRM, ¶272.

²⁸¹ Hughes offers download speeds of no more than 2 Mbps; WildBlue offers speeds of no more than 1.5 Mbps. These companies impose download caps on their basic broadband offering of 6.1 GB per month for Hughes, and 7.5 GB per month for WildBlue. <http://consumer.hughesnet.com/plans.cfm>, <http://www.wildblue.com/getWildblue/doServiceAvailabilitySearchAction.do>

²⁸² NPRM, ¶271.

²⁸³ Windstream Comments, p. 4.

[I]f unserved areas within these (RLEC) territories are included in the earlier rounds of auctions, because there may be so many of them (potentially thousands), it may prove administratively burdensome for the Commission. ACA believes these concerns and goals can be best balanced by permitting smaller telephone companies to elect to continue to receive High-Cost support so long as they agree to rapidly upgrade their networks to provide the same broadband performance required of auction winners.²⁸⁴

NASUCA believes that this observation is also consistent with the problem previously raised by NASUCA regarding the potential for auction entry.²⁸⁵ The transaction costs associated with multiple (potentially thousands) of small unserved areas would likely deter entry, and limit the efficiency of auction outcomes. This is consistent with the problems of combinatorial auctions discussed above.

4. VARIATIONS ON THE AUCTION THEME

Still other parties are in favor of auctions, but not necessarily the approach advanced in the NPRM. For example, MTPCS and MTCPS/Viaero indicates that a single winner auction will result in an undesirable monopoly outcome.²⁸⁶ To support the proposition that there should be multiple winner auctions, these parties quote from the Scott Wallsten paper discussed above, but focusing on a different theme in that paper, which states, in part:

“The existing evidence shows that reverse auctions can effectively reduce expenditures by promoting competition *for* the market rather than competition *in* the market. Reducing expenditures on universal service may not be consistent, at least in the short run, with increasing competition in a given geographic market.”²⁸⁷

²⁸⁴ ACA Comments, p. 7.

²⁸⁵ NASUCA Comments, p. 67.

²⁸⁶ MTPCS Comments, p. 8; MTCPS'/Viaero Comments, p. 7.

²⁸⁷ Quote appears in MTPCS Comments, p. 8 and MTPCS/ Viaero Comments, p. 14, emphasis in the original.

However MTPCS and the others apparently misunderstand Wallsten’s point.

“Competition **for** the market” results in a single winner, and potentially eliminates “competition **in** the market.” According to Wallsten, “competition for the market” reduces the costs of universal service support. As discussed further below, multiple winners will increase the costs of support. To address the problem of a single-winner auction resulting in a retail monopoly, Wallsten, in the same paper, proposes the following solution:

The question of how to proceed after the auctions may be especially important if only one firm wins. In that case, firms compete *for* the market rather than *in* the market, meaning that there must be some future competition for the market.²⁸⁸

In other words, Wallsten recommends that single winner auctions be subject to periodic re-auctions to ensure that the competitive pressure for the market will continue to influence funding levels. But repeated auctions still are no guarantee of efficiency. As discussed above and in NASUCA’s opening comments, weak bidding competition will result in inefficient levels of support, no matter how many times the auction is repeated. Reliance on reverse auctions will not likely succeed in fulfilling the Commission’s broadband deployment and high-cost-support-reform objectives. Absent robust bidding competition, auction outcomes are unlikely to deliver supported broadband service with an efficient level of support.²⁸⁹

Rural Cellular expresses sentiment similar to MTPCS – i.e., there should be multiple recipients of support in each area, with two modifications. First, Rural Cellular indicates that a cost model should also play a role: “The better approach would be to

²⁸⁸ Wallsten, p. 393, emphasis in the original.

²⁸⁹ NASUCA Comments, p. 58.

establish a cost model to determine efficient support levels for all carriers, and then to enable eligible carriers to compete for customers along with any associated per-line support.”²⁹⁰

Second, Rural Cellular advocates for an approach that “ties funding to the subscriber rather than to the carrier.”²⁹¹ The approach advocated by Rural Cellular would, even with the benefit of a cost model, result in excessive compensation and inefficiency. The Commission should support only one provider per service area.

CTIA also takes issue with the “single winner” outcome that would result from an auction that would allow only one supported carrier in each geographic area. CTIA instead encourages the Commission to “experiment”: “CTIA believes that the FCC should conduct trials of different types of market-based mechanisms, including at minimum a ‘winner-takes-more’ approach whereby competitive ETCs would only receive subsidies for the consumers they win in the marketplace.”²⁹²

The “winner-takes-more” approach advocated by CTIA is a variation of multiple-winner or “everybody wins” auction structures, and the winner-takes-more approach faces the same incentive problems as those associated with any multiple winner auction. Advocates of the winner-takes-more approach acknowledge that the standard “winner-take-all” auction “creates strong incentives to submit low bids.”²⁹³ They also acknowledge that an “everybody wins” format, where every bidder is able to receive the same “winning” level of subsidy support as long as it meets the qualifications for

²⁹⁰ Rural Cellular Comments, p. 5.

²⁹¹ Id.

²⁹² CTIA Comments, p. 14.

²⁹³ 05-337/96-45, Stegeman, J., Parsons, S., Frieden, R., and Wilson, M. “Controlling Universal Service Funding and Promoting Competition Through Reverse Auctions,” p. 20, (November 6, 2006). Available at: http://cqamobile.com/cqamobile/docs/Reverse_Auctions_Paper_Attachment_110806.pdf

bidding, results in “virtually no auction-related incentive for firms to bid low.”²⁹⁴

The problems of multiple winners for universal service auctions have been studied by academic researchers. As noted by Lafont and Tirole in their study of auctions for carrier of last resort obligations, if there are multiple auction winners, the outcome is an excessive level of subsidy. The higher level of support in multiple winner auctions arises because auction participants recognize that if they must share the market, they will need higher levels of support. This recognition is then built into the (higher) bids:

The first key insight of this analysis is that *in-market competition is a mixed blessing*, for a reason that was analyzed earlier: *Competition lowers profits on the complementary segment, and therefore raises the equilibrium subsidy that is demanded by the bidders*. In a sense there is no free lunch.²⁹⁵

The winner-takes-more approach does not correct the incentive structure identified by Lafont and Tirole that indicates that bidders in a multiple winner auction will submit higher bids than bidders in a single winner auction. There is every reason to expect that bidders aware that they will be required to share the level of subsidy with other service providers will simply build this fact into their expectations, and the level of subsidy will be higher than if there were a single winner.

CenturyLink indicates that an auction process might be tried for the Phase I CAF, but not for recurring support.²⁹⁶ CenturyLink states that rather than using a reverse auction to award ongoing CAF funding, the “right-of-first-refusal” approach should be

²⁹⁴ Id., p. 22.

²⁹⁵ Laffont, J. and Tirole, J. *Competition in Telecommunications*, MIT Press, 2000, p. 254, emphasis in the original.

²⁹⁶ CenturyLink Comments, p. 32.

pursued.²⁹⁷ Given that the right-of-first-refusal gives ILECs an advantage in the funding distribution process, CenturyLink’s view is not surprising. CenturyLink makes a further recommendation that in areas that are unserved, ILECs should be able to preempt the distribution of Phase I CAF support to parties other than ILECs by allowing an ILEC to “intervene to demonstrate that it intends to deploy broadband without CAF support in the designated bidding area.”²⁹⁸ Although it certainly would be desirable for the Commission to prevent the distribution of either Phase I or Phase II CAF funds to areas that face impending broadband deployment, the Commission must take care not to provide ILECs with the ability to erect barriers to entry in unserved or underserved areas. The process of vetting an area that is a candidate for CAF funding should include providing an opportunity for the ILEC to reveal its near-term plans for broadband deployment, but the ILEC must also be required to put its money where its mouth is. The Commission must require that the “near term” deployment plans will meet both the Commission’s broadband objectives, and must meet them on the same timeline by which any CAF recipient would be required to abide.

5. PUBLIC UTILITY COMMISSION COMMENTS ON AUCTIONS

State regulators offer various advice on the auction process. For example, the NPSC states that “[c]onsistent with prior comments, the NPSC does not believe reverse auctions or large scale competitive bidding should be used for recurring high-cost support.”²⁹⁹

²⁹⁷ Id.

²⁹⁸ Id., p. 33.

²⁹⁹ NPSC Comments, p. 23.

It is notable that the CPUC, which has conducted an extensive exploration of the application of reverse auctions to pursue high-cost funding,³⁰⁰ and which has even created a fund that is somewhat similar to the Commission's proposed Phase I CAF, supports only a bidding process similar to the Phase I CAF proposal: "We strongly agree with the FCC that broadband fund distribution should maximize the number of households and businesses passed, such as through a competitive bidding process which ranks bids by dollars per households passed from lowest to highest."³⁰¹ The KCC also offers guarded support for an auction trial for the Phase I CAF:

The KCC supports a trial of reverse auctions in this first round of CAF disbursements. However, before continuing with reverse auctions for future CAF support, the FCC should comprehensively evaluate the effects of reverse auctions on universal service and the sustainability of network infrastructure. The KCC has concerns about reverse auctions on a longer term basis, since they may not be the best way of ensuring long term sustainability of broadband networks.³⁰²

As discussed by NASUCA, however, the Phase I CAF proposal (like the CPUC's proposed approach), is not a real auction process, because it does not require multiple competing bidders in each geographic area.³⁰³ It is also important to note that the CPUC believes that cost models are also important in the context of competitive bidding:

California generally supports the FCC's market-based approach to determining high cost support distributions from the proposed CAF. We also generally support the concept of a forward-looking cost-revenue model to determine which unserved areas are truly uneconomic to serve without public support, and to set a benchmark price for the lowest-net-cost technology capable of providing the target level of service in those

³⁰⁰ See, CPUC Decision 07-09-020 in Order Instituting Rulemaking into the Review of the California High Cost Fund B Program. Rulemaking 06-06-028 (filed June 29, 2006), Interim Opinion Adopting Reforms To The High Cost Fund-B Mechanism, September, 13, 2007, p. 113.

³⁰¹ CPUC Comments, p. 5.

³⁰² KCC Comments, p. 35

³⁰³ NASUCA Comments, p. 66-67.

areas.³⁰⁴

The CPUC's position is also consistent with NASUCA's regarding the potential complementary nature of cost modeling and competitive bidding.³⁰⁵ While NASUCA does not believe that competitive bidding should be pursued, if bidding is pursued, cost modeling must also be performed. If the Commission needs to go through the process of developing a cost model to conduct an auction, it might as well develop a robust cost and revenue model to be used to establish funding levels.

The PUCO indicates that it favors reverse auctions.³⁰⁶ But the PUCO also states that it believes that auctions should be conducted prior to qualifying bidders as ETCs, because it believes that limiting auctions to ETCs would "limit the number of bidders to one" and "render reverse auctions ineffective."³⁰⁷ The PUCO's approach is ill-advised. An auction process must include only bidders that are qualified to provide the supported services. If an auction winner were to fail to receive ETC designation after winning the auction, the outcome of the auction would be negated, and delays would be introduced. If the support is not granted on a conditional basis, it is possible that the winning bidder could tie up its "right" to the support in court, as the Commission faced with the Nextwave debacle.³⁰⁸ Furthermore, the lack of ETC designation prior to bidding could result in non-ETC bidders incorrectly formulating their bids, as they might not fully understand the implications of ETC status. The MPSC also expresses concern regarding

³⁰⁴ CPUC Comments, p. 3.

³⁰⁵ NASUCA Comments, p. 60.

³⁰⁶ PUCO Comments, p. 32.

³⁰⁷ *Id.*, pp. 35-36.

³⁰⁸ NASUCA Comments, pp. 82-83.

the lack of ETC status for potential bidders, noting that ETC status must be for high-cost fund reimbursement, not those who only hold ETC status for Lifeline/Link-Up. The MPSC observes that the Lifeline/Link-Up-only category of ETC rarely have facilities of

their own.³⁰⁹

The NYPSC expresses support for reverse auctions, and states, “We also urge flexibility in designing the competitive bidding programs to allow bidders to construct their bids to maximize revenues from end users and, thereby, take full advantage of external funding.”³¹⁰ NASUCA notes, however, that NYPSC appears to misunderstand what is being auctioned off. Rather than “maximize” revenues, the Commission must “cap” revenues associated with supported services. After all, the auction process should be designed to promote affordable voice and broadband services, a fact recognized by auction proponent ViaSat, as well as the auction-agnostic SHLB Coalition.³¹¹ If the Commission does not establish maximum prices for the supported service, interpreting the auction results will be virtually impossible as bidders that plan on charging high rates will always be able to undercut bidders that plan on offering affordable rates.³¹²

The NJBPU also expresses support for reverse auctions, indicating that the auction process will eliminate the problems associated with cost models.³¹³ However, as noted by NASUCA, given the likelihood of limited bidding competition, absent a cost model, evaluation of auction outcomes may be difficult.³¹⁴ The Commission’s request for comment on the usefulness of cost models in the auction process also suggests that

³⁰⁹ MPSC Comments, pp. 5-6. Even Sprint, which otherwise supports the use of auctions, states that ETC status should be conditional prior to winning the auction bid. Sprint Comments, pp. 43-44. Sprint thus favors establishing ETC qualification prior to the bidding, and Sprint only seeks to hold bidders harmless from ETC obligations prior to the auction bid being won.

³¹⁰ NYPSC Comments, p. 7.

³¹¹ ViaSat Comments, p. 29; SHLB Coalition Comments, p. 14.

³¹² NASUCA Comments, pp. 64-65.

³¹³ NJBPU Comments, p. 3.

³¹⁴ NASUCA Comments, p. 60.

cost models can reduce information asymmetry when bidding competition is weak.³¹⁵

6. NECA, ET AL. ON PHASE I CAF PROJECT RANKING

NECA, et al. state that the Phase I CAF will unfairly favor large carriers due to the “ranking bids by price per unit covered.”³¹⁶ NECA, et al. argue that the larger national and regional carriers have the “size and purchasing power to negotiate the most favorable and least expensive per-unit terms possible for construction contracts and bulk equipment purchases.”³¹⁷ As discussed by NASUCA in detail in opening comments, the Phase I CAF is a poorly designed mechanism for distributing support, as it will target the “low hanging fruit” and be more likely to provide support to areas that would eventually attract private sector investment.³¹⁸ Thus, NASUCA finds the NECA, et al. opposition to the Phase I CAF to be reasonable, but NASUCA also finds cause for concern from the apparent solution envisioned by NECA, et al. – to create a mechanism that “levels the playing field for RLECs.”

The Commission should ultimately seek out the least-cost method of meeting broadband objectives. NECA, et al. would appear to favor supporting inefficient small-scale operations simply for the sake of preserving the “mom and pop” LEC model.³¹⁹ The Commission certainly should not craft universal service policy that would preclude the elimination or consolidation of small scale operations into larger and more efficient operations. Similarly, while NASUCA does not favor the reverse auction approach,

³¹⁵ 10-90, Notice of Inquiry and Notice of Proposed Rulemaking (April 21, 2010), ¶20.

³¹⁶ NECA, et al. Comments, p. 87.

³¹⁷ Id.

³¹⁸ NASUCA Comments, p. 66.

³¹⁹ NECA, et al. Comments, pp. 88-89.

should the Commission go down that path, it should not pursue auction design approaches that would be designed to prop up small scale operations.

D. The Commission Must Establish Public Interest Obligations For Phase I CAF.

NASUCA argued that the Commission should establish public interest obligations for the Phase I CAF.³²⁰ These should include:

- Minimum coverage requirements;
- “Scalable” minimum actual speed requirements, with base level actual upload and download speeds of at least 4 mbps and 1 mbps respectively; and
- Other service quality standards, including service availability, latency, packet loss, and jitter.

The duration of these commitments will vary by commitment, with some based on the engineering design specified in the bidding requirements, and others requiring ongoing benchmarking. NASUCA also urged the Commission to continue to require that all USF recipients, for broadband and voice services (whether fixed or mobile), continue to be ETCs, with the full range of § 214 obligations.

Other parties had different views. For example, AT&T proposes that the Commission, when defining the supported broadband service, should not “fixate” on speed, but should also address latency, jitter, packet loss, security, and reliability.³²¹ Unfortunately, AT&T never offers any guidance on a set of performance standards in these areas. Sprint also notes that these non-speed characteristics are important, but also

³²⁰ NASUCA Comments, pp. 75-83.

³²¹ AT&T Comments, p. 83.

does not suggest any standards.³²² Frontier, on the other hand, suggests that no action be taken on non-speed metrics at this time.³²³

AdTran identifies a number of broad quality of service (“QoS”) guidelines, and makes a specific recommendation that one-way latency not exceed 50 ms.³²⁴ This seems reasonable. CRUSIR points to the problems associated with jitter and delay, in that they may impact over-the-top VoIP services that might run on a broadband connection. CRUSIR suggest that QoS-assured channels be made available on a wholesale basis to third-party service providers.³²⁵ NASUCA finds this suggestion to be intriguing, but wonders whether it would be sufficient to ensure the continued provision of high-quality voice services. A more straight-forward approach might be to identify QoS standards that would apply to all supported broadband.

Public Knowledge and Benton Foundation point to the importance of non-speed measures such as jitter, but also point to the issue of usage restrictions that may be imposed by carriers, including download caps and policies that exclude or limit certain applications.³²⁶ NASUCA is also in agreement with the general principle expressed by Public Knowledge and Benton Foundation that the Commission must also address usage policies, including download limitations and/or restrictions on certain applications for supported broadband services.

³²² Sprint Comments, pp. 39-40.

³²³ Frontier Comments, p. 23.

³²⁴ AdTran Comments, p. 2.

³²⁵ CRUSIR Comments, p. 6.

³²⁶ Public Knowledge and Benton Foundation Comments, p. iii.

1. BROADBAND SPEEDS

Raising the issue of the potential trade-off between broadband speed and the number of households to which broadband services can be deployed, AT&T proposes that the Commission should adopt a “consumer- and application-focused definition that encompasses all of the service characteristics necessary to support the applications that consumers *actually use* today and are likely to use in the near future.”³²⁷ While this goal sounds lofty, AT&T’s proposal boils down to a speed requirement of 3 Mbps downstream, and 768 kbps upstream,³²⁸ which is below the NPRM’s (and National Broadband Plan’s) 4 Mbps downstream/1 Mbps upstream benchmark.³²⁹ AT&T also makes no mention of a dynamic associated with increasing broadband speeds over time,³³⁰ or the National Broadband Plan’s 100 Mbps to 100 million households objective.

AT&T then goes on to water down its diminished 3 Mbps/768 kbps speed standard. AT&T states that with whatever speed standard is adopted by the Commission, the carrier should only be held to the “advertised” or “up to” speed, as opposed to the “actual” speed.³³¹ AT&T goes on to assert that “no definition of ‘actual’ speed exists.”³³² To support this proposition AT&T repeats a chestnut from a 2009 Time Warner filing that, among other things, argues that broadband speed will vary from “website to website

³²⁷ AT&T Comments, p. 88, emphasis in original.

³²⁸ *Id.*, p. 94.

³²⁹ AT&T offers more tepid support for the 4 Mbps downstream standard if it is linked to a 768 kbps upstream standard. *Id.*

³³⁰ As included in NASUCA’s proposal that networks built with CAF funds be scalable, i.e., easily upgraded. NASUCA Comments, p. 77.

³³¹ AT&T Comments, p. 94.

³³² *Id.*

and from hour to hour.”³³³ AT&T goes on to add that other factors, such as “customer owned inside wiring” also make actual speed an unreliable measure.³³⁴ And in case the bucket of red herrings is not yet full, AT&T adds that many other factors can impact broadband speeds:

Other such factors include “the presence of viruses, automatic updating, low memory capacity, processor capabilities, the type and capabilities of the operating system, the version and configuration of the web browser software used,” as well as “factors specific to a subscriber’s household network,” including “the presence and capabilities of a router, whether several computers or other devices are accessing the Internet simultaneously, ... whether other devices, such as cordless phones ... are in use which may cause interference with WiFi devices, the distance from the consumer’s computer to the WiFi access point, [and] whether and what type of WiFi encryption is used.”³³⁵

The Commission should ignore this nonsense. Determining actual broadband speed simply requires the definition of broadband pathway to be measured, with a beginning point (the customers network interface unit) and an end point (the closest point of interconnection to the Internet on the carrier’s network), and a metric to address the testing parameters (e.g., a performance probability during a sample of hours, including a busy or peak hour).³³⁶ AT&T’s attempt to muddy the water on actual speed should be rejected by the Commission.

2. OTHER PARTIES ON BROADBAND SPEEDS

ACA indicates that the Commission should establish “national forward-looking broadband speeds that initially should be at a minimum level of 16 Mbps downstream

³³³ Id., citing Time Warner Reply Comments in CG Docket 09-158, filed October 28, 2009.

³³⁴ AT&T Comments, p. 95, quoting in part NCTA Comments on NBP Public Notice #24 in GN Docket Nos. 09-137, 09-47, 09-51, at 8 (filed Dec. 14, 2009).

³³⁵ AT&T Comments, p. 95.

³³⁶ NASUCA Comments, pp. 76-77.

and 4 Mbps upstream.”³³⁷ On the other hand, Cox indicates that the proposed 4/1 standard is “reasonable,” but also indicates that the Commission should “be flexible in areas where it is not cost-effective to provide full broadband service.”³³⁸ NCTA supports using the 4/1 standard, and proposes to limit initial funding to areas where that speed level is not available.³³⁹

While the RBA is generally supportive of the initial 4/1 benchmark, they assert that “it is vital that the definition of broadband universal service evolve quickly to match the pace required to meet the requirements of economic development and consumer expectations in rural America.”³⁴⁰ Likewise, FairPoint advises the Commission that “today, 1.5 Mbps is a minimum standard for broadband in most areas, and soon 4 Mbps or even 10 Mbps will be expected.”³⁴¹ FairPoint adds that “the Commission should not adopt a subpar broadband standard such as 768 kbps for areas that have no access to broadband today, while promoting higher-capacity broadband deployment in more robustly served areas.”³⁴² Frontier indicates that the 4/1 standard is “aligned with Frontier’s own broadband deployment commitments.”³⁴³

TDS states:

The initial target for high-cost areas must be no less than the 4/1 Mbps standard articulated by the National Broadband Plan. Yet that target already may be out of date as the Internet continues to evolve and

³³⁷ ACA Comments, p. 29.

³³⁸ Cox Comments, p. i.

³³⁹ NCTA Comments, p. 8.

³⁴⁰ RBA Comments, p. 4.

³⁴¹ FairPoint Comments, p. 17, note 43.

³⁴² *Id.*, p. 17.

³⁴³ Frontier Comments, p. 23.

consumers' reliance upon and expectations about broadband service continue to expand. In addition, longer range planning must consider the role of fiber networks.³⁴⁴

NASUCA agrees with TDS regarding longer-range planning. Given the objectives stated in the National Broadband Plan, it is difficult to understand why the NPRM is devoid of any discussion of the longer term perspective on the deployment of supported broadband networks. As NASUCA pointed out in opening comments, the NPRM clings to the 4/1 standard through at least 2014, just six years shy of the 2020 milestone for 100 Mbps to 100 million households.³⁴⁵ Unless the Commission's objective is to establish an even more pronounced urban/rural divide, the Commission must start working now on the "glide path" away from low-grade DSL networks.

As for wireless carriers, Rural Cellular states that the Commission's 4/1 standard should be "reduced slightly to avoid excluding the significant number of wireless providers that will rely on 3G technology for the foreseeable future."³⁴⁶ As discussed elsewhere in this reply, the Commission should be moving slowly regarding mobility broadband support as private investment is in the process of building out 4G networks, and there is no need to reduce the target 4/1 objective to accommodate 3G services.

Level 3 points to the importance of sufficient capacity in middle mile networks: "Just as water will flow only as fast as it can get through the thinnest part of the pipe, rural consumers will not have actual wireless throughput of 4 Mbps download and 1 Mbps upload if there is inadequate capacity between the last-mile network and the

³⁴⁴ TDS Comments, p. ii.

³⁴⁵ NASUCA Comments, p. 77.

³⁴⁶ Rural Cellular, p. 19.

connection to the Internet backbone.”³⁴⁷ NASUCA’s speed assessment approach, which measures data speeds from network interface unit (“NIU”) located at the end-user’s premises and the service provider Internet gateway that is the shortest administrative distance from that NIU,³⁴⁸ would address Level 3’s concern.

3. MIDSIZE CARRIERS AND UPSTREAM DATA SPEEDS

CenturyLink asserts that most broadband networks are not configured today to deliver 1 Mbps upstream for residential services “because consumers largely have not demanded such capabilities to-date.”³⁴⁹ CenturyLink offers no supporting references for its statement. Windstream, on the other hand, indicates that 768 kbps upload speeds would be “responsive to consumer demand” because the Commission’s statistics show that 63 percent of reported broadband connections have upload speeds of less than 768 kbps.³⁵⁰

Windstream’s approach of pointing to situations that reflect the problem that needs to be solved as the solution is not the way to define policy objectives. While it is clear that certain DSL-based networks are not capable of delivering 1 Mbps upstream data speeds, consumer demand certainly has reached a level where upstream data speed is of vital importance. CenturyLink and Windstream may not be aware of the growing role of both upstream and downstream bandwidth in consumer’s use of the Internet, but other

³⁴⁷ Level 3 Comments, p. 21.

³⁴⁸ NASUCA Comments, p. 76.

³⁴⁹ CenturyLink Comments, p. 21.

³⁵⁰ Windstream Comments, p. 18.

providers, including ILECs and cable companies, certainly are.³⁵¹ YouTube may be last year's "new phenomenon" on the Internet, but it is still growing rapidly, with over 35 hours of video *per minute* uploaded to the site.³⁵² Pew Internet reports that one-in-five adults who have watched a video online have also posted a video to the Internet.³⁵³ Social media sites such as Facebook have redefined how individuals are using the Internet. Facebook users (who now number 150 million in the United States), generate more than 30 billion pieces of content (web links, news stories, blog posts, notes, photo albums, etc.) for sharing each month.³⁵⁴ Given consumers' exhibited demand for uploading photos and video, CenturyLink's and Windstream's claims that consumers do not demand upload speeds above 1 Mbps strains credulity. The fact that consumers have accepted lower upstream speeds at current prices is no reason for the Commission to accept such limitations imposed by the carriers.

Presumably, the objective of the Commission's USF reform efforts is not to simply ensure that ILECs continue to enjoy the cash flow that the USF fund has provided. Rather, it is imperative that "consumers in all regions of the Nation, including low-income consumers and those in rural, insular, and high-cost areas, should have access to telecommunications and information services, including ... advanced telecommunications and information services, that are reasonably comparable to those

³⁵¹ Comcast now offers products with upload speeds as high as 10 Mbps; Charter offers upload speeds of up to 5 Mbps; Verizon offers FiOS products with upload speeds of 25 Mbps.

³⁵² YouTube Trends. <http://youtube-global.blogspot.com/2010/12/introducing-youtube-trends.html>.

³⁵³ "The State of Online Video," Pew Internet, June 2010. <http://www.pewinternet.org/Reports/2010/State-of-Online-Video/Part-2/Who-is-Posting-Video-Online.aspx?r=1>.

³⁵⁴ <http://www.facebook.com/press/info.php?statistics>.

services provided in urban areas.’’³⁵⁵ Limiting support to 768 kbps upload speeds, as suggested by CenturyLink and Windstream, will not only perpetuate the growing urban/rural divide, but will also continue to grow the rural/rural divide, because many smaller ILECs are upgrading their plant to deliver state-of-the-art broadband.³⁵⁶

CenturyLink also states that if, over time, the Commission modifies the performance requirements that service providers must meet to qualify for CAF support, the Commission must then provide additional CAF support to pay for the upgrades necessary to meet the new performance requirements.³⁵⁷ Here too, costs matter. It is clear that telecommunications technology changes rapidly, with performance improvements constantly emerging. The Commission should be well aware of the fact that technology costs are dynamic, and that the general trend shows that technology costs, as experienced in the telecommunications industry, have declined over time.³⁵⁸ Thus, unless the Commission has an independent means of tracking cost trends, it will be unable to be sure that the dynamic of costs in the industry are correctly accounted for. Because it can incorporate current data on input prices, a cost model is one mechanism that can allow the Commission to achieve the needed information on the dynamics of industry costs.

4. SERVICE REQUIREMENT VS. COVERAGE REQUIREMENT

CenturyLink addresses the request for comment in the NPRM on the issue of whether the Commission should adopt a service requirement or a coverage requirement

³⁵⁵ NPRM, ¶56, quoting 47 U.S.C. §254(b).

³⁵⁶ See, for example, Wheat State Comments, p. 1.

³⁵⁷ CenturyLink Comments, p. 23.

³⁵⁸ See Table 1 and associated discussion in Section V.A.2. above.

as a condition of CAF funding.³⁵⁹ CenturyLink states that as a condition of CAF support, the Commission should require CAF recipients to provide service on request, “in a reasonable period of time” throughout the area where they receive CAF support.

According to CenturyLink, even if a carrier is receiving CAF support, the customer may still be on the hook for significant expenses:

If a customer requests broadband service in a location where the provider lacks broadband facilities, the provider would bear the cost of construction up to a predefined threshold that approximates the limits of market-based economic investment, with the customer sharing the cost above the threshold.³⁶⁰

This proposal raises some important issues. While it is true that legacy support for universal service has worked with a model where carriers certify “that they will satisfy reasonable and timely requests for voice service where facilities are already available or can be provided at a reasonable cost, where facilities are not available,”³⁶¹ most of the ongoing support is targeted at services provided over voice-grade facilities that are provided on a network that is already in existence, and is essentially “standing ready” to provide voice service to all households in the ILEC’s service area.

The transition to the CAF will take place in a different context, as CAF will either result in the extension of entirely new facilities into areas that are unserved, or result in incremental upgrades to facilities that provide voice services or low-grade broadband services. Thus, when CenturyLink indicates that the provider will “bear the costs of construction up to a predefined threshold” when it receives a request for broadband service, this threshold must be carefully defined **by the Commission** when it specifies

³⁵⁹ CenturyLink Comments, p. 23.

³⁶⁰ Id., p. 24.

³⁶¹ Id., p. 23, citing 47 CFR §54.202(a).

the requirements for CAF eligibility. The threshold cannot be defined by the CAF recipient, as this would open the door to all sorts of mischief regarding the potential contribution that a customer might be required to produce to receive the supported broadband service.

For example, as Windstream notes, it installs broadband ports based on forecasts of how many customers will subscribe to broadband in the “reasonably foreseeable” future.³⁶² Windstream goes on to note that if it were required to supply broadband ports to all voice customers in its service area, its costs might be increased by “hundreds of millions of dollars.”³⁶³

Thus, the size of the CAF will depend on projections of broadband uptake, and the levels of investment that will be required to meet the projected demand. It will be incumbent upon the Commission to address these projections if it intends to have a manageably-sized fund. Furthermore, the very notion that the carrier might be able to define the period of time between a customer request and the subsequent delivery of service is also an issue that must be addressed by the Commission. CAF funding should only be delivered if the CAF recipient produces a business plan that will be reviewed by the Commission regarding the specific investments needed to meet the Commission’s objectives. This business plan should project customer take-rates over time. If there are certain costs that will only arise when a customer makes a request for service, the CAF funds should not provide the entirety of these costs up front, but should scale the support in accordance with the projected take rates.

³⁶² Windstream Comments, p. 19.

³⁶³ *Id.*, p. 20.

If CAF recipients receive excessive funds up front during a period of time when the carrier will not actually be serving large numbers of broadband customers, these funds will provide a windfall to the carrier, which could result in CAF funds being inappropriately channeled to services that are not eligible for the CAF program (e.g., upgrading broadband facilities that already meet the Commission’s basic broadband definition to higher levels of service), or other uses (e.g., paying shareholder dividends). The business plan that will map out the carrier’s objectives associated with the Commission’s requirements could be designed to include both an initial level of investment needed to prepare an area for broadband deployment, and milestones that will determine the expected level of funding needed to meet growth in customer take rates over time. CenturyLink’s comment clearly illustrate the need not only to model the cost of broadband deployment, but also to model the expected adoption of, and revenues from, broadband services, which may, as CenturyLink suggests, come with their own identifiable costs.

E. The State Members Wireline Broadband Fund

The State Members Plan proposes to include a “wireline broadband fund” that would provide grants in areas that the FCC designates as unserved or under-served.³⁶⁴ NASUCA is unclear why this fund is necessary under the State Members Plan, and is concerned that the fund will be used to fund duplicate networks. According to the State Members Plan, under the POLR fund, recipients are required to build out their service

³⁶⁴ State Members Comments, p. 73.

area, with increasing levels of coverage, by 2016.³⁶⁵ Thus, it is entirely possible that either a POLR could request funds from the wireline broadband fund, or apparently, non-ILEC entrants could also draw funds.³⁶⁶ Either way, the Wireline Broadband Fund would result in duplicative support, with the latter case potentially funding multiple networks. The State Members Plan indicates that because it has limited the size of the fund to \$500 million, that “external costs” from competition between two supported broadband providers are limited.³⁶⁷ NASUCA believes that given the objectives of the State Members POLR fund, a separate broadband fund is unnecessary. The Commission should design a support mechanism that limits the potential for duplicative support, or which supports competition to the detriment of the cost of the fund.

F. NECA, et al.’s “Step 4: An ‘Evolved’ RLEC-Specific CAF Mechanism”

NECA, et al. indicate that the RLEC plan starts with current regulated interstate costs, and that the RLECs would continue to keep books of account in accordance with the Commission’s Part 32 rules, which would “promote accountability.”³⁶⁸ As was discussed, earlier, while starting with booked investment, the RLEC plan then proposes to apply a price index such as the CPI to gross up plant accounts to determine the level of high-cost loop support. It is difficult to see how this approach promotes accountability, because adjusting plant balances based on the CPI or some other price index will result in plant values that are substantially different than the booked amounts.

³⁶⁵ Id., p. 63.

³⁶⁶ Id., p. 74.

³⁶⁷ Id.

³⁶⁸ NECA, et al. Comments, p. 29.

NECA, et al. also propose to introduce a new “middle mile” cost recovery component. Under this proposal, RLECs could “opt in” to treating middle mile costs as part of their regulated rate base.³⁶⁹ The RLEC would also tariff a regulated middle-mile transport service as a “telecommunications offering,” and cost recovery would be constrained to costs associated with the middle-mile capacity per subscriber to meet “actual broadband demands of customers.”³⁷⁰ NASUCA believes that middle-mile costs are important to consider when pursuing broadband policy objectives. Ultimately, if broadband is correctly classified as a telecommunications service, the scope of the potential for support should range from the end user’s premises to the first point of interconnection with the Internet. With regard to broadband support outside of the local distribution network, the Commission must move with care, as the design of middle-mile facilities must be efficient, and must not result in the subsidization of networks that could otherwise generate an acceptable business case. NECA, et al. mention that their proposal for the RLEC middle mile support includes the tariffing of “a distinct regulated middle mile transport service.”³⁷¹ This suggests that the middle mile facilities might be generating revenues from other sources other than transporting the end-user’s broadband traffic. The level of support for middle mile facilities should consider all sources of revenues with these facilities, and support should be reduced to reflect revenues that are associated with other non-supported services that are provided over the shared middle mile plant.

³⁶⁹ Id., p. 30.

³⁷⁰ Id.

³⁷¹ NECA, et al. Comments, p. 30.

G. Where will support go?

1. SUPPORT TARGETED ONLY AT WIRE CENTERS

CenturyLink indicates that whether the Commission adopts a “competitive bidding everywhere” or a “right-of-first-refusal” approach that it should rely on wire centers as the geographic area targeted by the process. Windstream makes a similar proposal.³⁷² As NASUCA pointed out in comments, the reconciliation of Census Blocks with the territories of existing service providers is one of the potential problems with the distribution of funds through competitive mechanisms such as auctions, a sentiment echoed by Alexicon and ITTA.³⁷³ The NPSC, while pointing to some advantages of Census Blocks, also notes some potential problems in rural areas:

[T]here are certain issues associated with using census blocks as well. Providers’ service boundaries don’t follow census block attributes. In rural states where census blocks can make up a larger geographic territory, the availability of broadband can be significantly underrepresented.³⁷⁴

The PUCO favors the use of ILEC study areas, and states “the Ohio Commission believes that disaggregation into smaller areas, such as census blocks, in many instances, will only add cost and delays and increase the opportunity for bidders to engage in ‘cream skimming.’”³⁷⁵

While NASUCA does not favor an auction approach, and only recommends competitive bidding through a procurement process as a fallback, if the Commission goes down either path, there will be a need to define the unserved area. It is likely that

³⁷² Windstream Comments, p. 9.

³⁷³ Alexicon Comments, p. 41; ITTA Comments, p. 33.

³⁷⁴ NPSC Comments, p. 20.

³⁷⁵ PUCO Comments, p. 32.

unserved or underserved areas will generally be subsets of ILEC service areas. The best approach on this matter may be one of flexibility. If bidding is pursued and the bidding area extends outside of an ILEC's service area, the Commission may lose the ILEC as a bidder, which would be an undesirable outcome given the likelihood of a low number of bidders. It may make sense in some cases to rely on the ILEC's existing service area. While CenturyLink is correct that Census Blocks in rural areas are likely to be larger than urban areas, in other cases it may be appropriate to rely on a geographic area associated with Census classifications. The key point, however, is to ensure that some households do not fall through the cracks and remain unserved.

NECA, et al. argue that the definition of the service area associated with universal service funding lies completely with the states, pointing to Section 214(e)(5) of the Act.³⁷⁶ While NECA, et al. has a valid point, the referenced section is not quite as inflexible as NECA, et al. indicates:

The term "service area" means a geographic area established by a State commission for the purpose of determining universal service obligations and support mechanisms. In the case of an area served by a rural telephone company, "service area" means such company's "study area" unless and until the Commission and the States, after taking into account recommendations of a Federal-State Joint Board instituted under section 410(c), establish a different definition of service area for such company.³⁷⁷

This language indicates that rural carrier study areas may be modified by the Commission and the states following Joint Board recommendations.

2. "PRICE CAP AREAS FIRST"

Windstream proposes to target support at price cap areas first, and rejects the

³⁷⁶ NECA, et al. Comments, p. 86.

³⁷⁷ 47 U.S.C. §215(e)(5).

right-of-first-refusal approach, replacing that approach with a continued ILEC entitlement, subject to challenge. Under Windstream’s proposal, the COLR ILEC will have the presumptive right to “newly targeted High-Cost Model support,” with the possibility that a CETC challenging the ILEC if it can assume COLR obligations for less High-Cost Model support.³⁷⁸ Windstream’s approach would create a fund based on all current high-cost loop supported received by price cap carriers and non-price cap carriers, and redistribute this support based on regression analysis targeted at the wire-center level.³⁷⁹ Windstream argues that this approach will not increase the size of the fund.³⁸⁰ Windstream, however, provides few details as to how its approach will work. Windstream also does not address revenue benchmarking, thus ignoring the fact that when considering a business case for broadband, carriers evaluate both the cost and revenue side of the equation. While it is likely that capping the size of the fund to the existing level will keep the fund size constant, it is not clear whether the Commission’s broadband objectives can be achieved with this level of funding, or whether the capped level of funding is excessive. As NASUCA emphasized in its opening comments, the Commission has no idea of the magnitude of the support needed for either voice or broadband services.³⁸¹ Thus, just what is reasonable to expect from Windstream’s proposal is not clear.

3. WINDSTREAM AND TARGETED AREAS

Windstream also states that the Commission should develop a program to

³⁷⁸ Windstream Comments, p. 9.

³⁷⁹ Id., p. 5 & 36.

³⁸⁰ Id., p. 4.

³⁸¹ NASUCA Comments, p. 9.

complement its long-term reform proposal that targets unserved households that are located in areas that do not have “consistently high costs.”³⁸² As an example of the types of areas that Windstream is considering, Windstream describes its Ashland, Kentucky exchange, where Windstream states that it cannot develop a “rational economic case” to deploy broadband to the five percent of customers who reside in isolated pockets of the exchange that have low population densities.³⁸³ As Windstream notes, any such approach should not allow providers to receive support should not be awarded to areas that may be on the brink of receiving broadband without support, such as would arise with the deployment of new technologies, or through the logical expansion of ILEC broadband deployment down the pecking order of ILEC investment options.³⁸⁴ While Windstream’s proposed remedy of requiring minimum carrier investment prior to the receipt of support may have some merit, it is not clear how bidding on a Census Block basis, which is suggested by Windstream as a means of managing opportunistic behavior,³⁸⁵ would work to sort out customers who might be served by the ILEC anyway from those who truly will not. Given that the type of customer that Windstream describes is likely to be at the end of the longest loops, or in isolated pockets in rural areas, the areas in question might be much smaller than a Census Block. It would appear that requiring bidding on a Census Block basis might actually deter alternative technologies, as this would require competing with existing ILEC broadband deployments. It may be that the type of customer that Windstream is describing would best be served through satellite; satellite services are

³⁸² Windstream Comments, p. 12.

³⁸³ Id.

³⁸⁴ Id., pp. 13-14.

³⁸⁵ Id., p. 14.

well suited for bringing broadband to areas that have a geographic profile that does not favor wireline solutions.

H. NASUCA’S Proposal For A Procurement Mechanism

1. IF THE COMMISSION PURSUES COMPETITIVE BIDDING, IT SHOULD USE NASUCA’S PROCUREMENT APPROACH

Following an approach initially advocated by the New Jersey Division of Rate Counsel,³⁸⁶ NASUCA proposed a procurement process for the distribution of support.³⁸⁷ Other parties, including AT&T (discussed further below) and Cox,³⁸⁸ also advance non-auction bidding processes similar to NASUCA’s approach. On the matter of the procurement approach, RICA states:

The former (i.e., the procurement process) enables selection to be made based on rational consideration of all relevant factors, including a demonstrated commitment to the area, competence in providing quality service and a sound business plan. Selection on the (auction’s) basis of lowest bidder will ensure that subscribers obtain only the lowest quality, performance and reliability.³⁸⁹

NASUCA continues to believe that a procurement approach, as described in NASUCA’s opening comments, offers a superior alternative to reverse auctions.³⁹⁰

2. AT&T’S PROCUREMENT MODEL

AT&T proposes to dispense with the Phase I CAF.³⁹¹ NASUCA has also pointed

³⁸⁶ NJ Rate Counsel continues to support this approach. See, NJ Rate Counsel Comments, third unnumbered page.

³⁸⁷ NASUCA Comments, p. 84.

³⁸⁸ Cox Comments, p. i.

³⁸⁹ RICA Comments, p. v.

³⁹⁰ NASUCA Comments, p. 84.

³⁹¹ AT&T Comments, p. 6.

to problems with the Phase I CAF.³⁹² Thus, NASUCA is agreement with AT&T on the point of dispensing with the Phase I CAF, and moving to a final CAF. NASUCA also finds common ground with AT&T regarding the size of, and ultimate source of monies for, the fund: “We anticipate that the CAF eventually will be financed by contributions from consumers of broadband and other communications services.... To promote both access to and adoption of broadband services, the Commission should take steps to ensure that the CAF is only as large as necessary to effect ubiquitous broadband deployment.”³⁹³

On other points, NASUCA finds far less room for agreement. AT&T states that a broadband mobility fund should be a priority.³⁹⁴ Given that market forces by themselves appear to be pushing mobility broadband services to a large portion of the U.S. population, placing the mobility fund on a slow, rather than fast, track may be advisable.³⁹⁵

AT&T Procurement Specifics

AT&T’s procurement proposal is based on the identification of high-cost areas by census blocks using a Commission model.³⁹⁶ AT&T indicates that a “cost only” cutoff should be utilized to identify the eligible areas. AT&T’s proposal thus ignores the revenue side of the equation, and will result in a **higher** number of eligible areas. The

³⁹² NASUCA Comments, p. 65.

³⁹³ AT&T Comments, p. 85-86.

³⁹⁴ *Id.*, p. 87.

³⁹⁵ As AT&T notes (*id.*, p. 109), AT&T has committed to deploy LTE service to 95% of the U.S. population as a condition of the proposed T-Mobile merger. Verizon states that it plans on deploying LTE to its entire 3G footprint by the end of 2013. Verizon Form 10-K for the Year Ending December 31, 2010, p. 3.

³⁹⁶ AT&T Comments, p. 89.

Commission should rely on a model that addresses both costs and revenues, and determines eligible areas based on a test that considers the impact of the full spectrum of service revenues associated with a broadband connection. AT&T's approach will inflate the level of funds that are needed to ensure that a reasonable business case can be made to deploy broadband.

AT&T also proposes to support a single fixed broadband provider, and to use wire centers to define areas eligible for support.³⁹⁷ AT&T's plan includes offering the existing ETC that provides some level of broadband in the wire centers to be given the right of first refusal to the CAF support determined by the Commission's model.³⁹⁸ If the ETC refuses the Commission's offer, AT&T proposes that an application-based approach be utilized to provide service in the unserved area, and the "Commission, in concert with the states, should evaluate these applications and select one fixed provider in each area to receive CAF funding."³⁹⁹ AT&T leaves the specific details of the application and selection process to be determined.⁴⁰⁰ NASUCA believes that AT&T's approach has some similarity to the procurement process described in NASUCA's opening Comments,⁴⁰¹ however, NASUCA, unlike AT&T has provided a more specific framework for the procurement process.

³⁹⁷ AT&T also proposes that a broadband mobility fund be implemented. *Id.*, p. 108. As discussed earlier, given carrier statements regarding planned 4G deployments, the best policy is to leave mobility broadband support to a later date. Once market deployments become more clear, the Commission will be in a better position to size a mobility broadband fund.

³⁹⁸ *Id.*, p. 89.

³⁹⁹ *Id.*, p. 99.

⁴⁰⁰ AT&T indicates that under the CAF, the Commission should "prioritize the applications based on the price proposed per housing unit." *Id.*, p. 100. This approach may indicate that AT&T does not believe there will be sufficient CAF funds to meet all deployment objectives.

⁴⁰¹ NASUCA Comments, p. 84.

I. Mobility

1. THE IMPORTANCE OF MOBILITY

During the April 27, 2011 Intercarrier Compensation/Universal Service Fund Reform Workshop, Dr. Mark Cooper of the Consumer Federation of America stated that wireless computing and mobile computing represent “the greatest communications revolution in human history.”⁴⁰² Dr. Cooper also stated the “mobile computing is infinitely more valuable than fixed computing,” and that “in the long term, mobile computing will be at the center of 21st century communications. In the short term, it provides more than adequate functionality for the communications uses that constitute the vast bulk of daily communications activity.”⁴⁰³ Dr. Cooper went on to state that as a matter of broadband policy, “Focusing on mobile broadband will advance broadband penetration farther and faster than focusing on wireline.”⁴⁰⁴

Although NASUCA is certain that mobile computing and communications will continue to grow in importance, NASUCA is less certain that the “biggest bang” for the USF dollar can be delivered by supporting broadband mobility services exclusively. Focusing on mobility alone would reduce or eliminate the Commission’s ability to leverage economies of scope in pursuing universal broadband objectives. The incremental investments needed to meet the Commission current 4/1 threshold can utilize existing wireline networks, and rationalize existing explicit support for voice and implicit support for broadband services.

⁴⁰² Statement of Mark Cooper, p. 1, available at: <http://beta.fcc.gov/event/intercarrier-compensationuniversal-service-fund-reform-workshop>.

⁴⁰³ Id.

⁴⁰⁴ Id.

There are at least six significant issues that deserve careful evaluation before the Commission should consider hitching the universal service wagon exclusively to the mobility broadband star. **First**, at this time there is significant consumer demand for fixed broadband service. It does not seem reasonable for the Commission to ignore this demand. This demand is being fueled by conventional computer usage of broadband connections, but also by broadband-ready television sets, which enable the use of video-on-demand services like NetFlix, Hulu, and Amazon. While mobility broadband services are still relatively new, the availability of mobility broadband has not led most consumers to abandon fixed broadband services.⁴⁰⁵ Thus, a shift to mobility support alone could create a new urban/rural divide.

Second, the market structure for mobility services is becoming increasingly concentrated, as evidenced by the recently-proposed AT&T/T-Mobile consolidation, with Sprint's continued independent status likely placed at greater risk. The performance of a highly concentrated mobile broadband market does not bode well for consumer sovereignty, or for the distribution of USF support.

Third, even if there were to be no further consolidation in the wireless market, wireless carriers currently impose much more restrictive usage policies on their wireless broadband products. The ultimate outcome of these restrictions is to make wireless broadband less functional and more expensive. It is no accident that virtually all mobile computing devices, should they be usable on a carrier broadband network, are dual band (i.e., either 3G/4G or Wi-Fi) capable. Consumer demand for Wi-Fi reflects the

⁴⁰⁵ As discussed in NASUCA's opening comments, there is some evidence that low income consumers are using mobile broadband alone. NASUCA Comments, p. 69.

limitations of mobile broadband services, and it is difficult to imagine the transition to 4G, which in theory would fully satisfy the Commission's 4/1 standard, will kill Wi-Fi. As long as consumers continue to seek out Wi-Fi,⁴⁰⁶ fixed broadband connections continue to be a critical component of broadband infrastructure. It is also notable that the usage and application restrictions placed on mobility broadband users are less conducive to innovation.

Fourth, going down the mobility path will place the Commission in a situation similar to that associated with mobility voice services, i.e., mobility broadband is a personal communications (and computing) service. As a result, the number of supported entities has the potential to grow substantially based on the number of individuals in a household, rather than the number of households that would be associated with fixed broadband. While supporting mobility alone would likely eliminate the problem of supporting both mobile and fixed broadband networks (at least in part, see below), supporting mobility over fixed could still lead to many more supported end users, and higher costs.

Fifth, while the very last mile in mobility broadband networks is wireless, middle mile facilities will remain wireline. If mobility services alone are supported, then more wireless towers will need to be connected to more middle-mile facilities. Thus, support for mobility will require continued support for wireline middle mile facilities in areas where existing middle mile facilities are inadequate.

Finally, while the situation could change in the future, mobility broadband is

⁴⁰⁶ U.S. Wi-Fi household penetration is projected to reach 71% by 2015. See "Wi-Fi enabled mobile phone handsets in the US, 2010-2015," Telecoms Market Research, February 2010. <http://www.telecomsmarketresearch.com/research/TMAAAVMT-Wi-Fi-enabled-mobile-phone-handsets-US-2010-2015.shtml>.

much more dependent on bundled CPE than is fixed broadband. How would USF support be affected by the needs of a consumer to purchase a bundled mobile computing unit? Would the Commission need to “qualify” supported mobility CPE?

All of these reasons point to issues with mobility broadband that make a “mobility only” policy risky. And the facts show that mobility broadband may not need support.

Verizon indicates that it plans on having LTE coverage in its entire current 3G footprint by the end of 2013, and that this will supply download speeds of 5-12 Mbps, and upload speeds of 2-5 Mbps.⁴⁰⁷ AT&T states that it will provide LTE service to 95% of the U.S. population if its transaction with T-Mobile is consummated.⁴⁰⁸

The National Broadband Plan indicates that “if [4G] buildouts occur as announced, about five million of the seven million unserved housing units will have 4G coverage.”⁴⁰⁹ Given the apparently rapid deployment of 4G services without universal service support, the Commission should move with great caution on the use of CAF monies for mobility broadband services, and should delay the introduction of mobility broadband support. The four major wireless carriers are in the process of deploying 4G services that will reach wide areas of the nation, and these private investment dollars should be encouraged to extend that reach to the fullest capability. Only when these 4G networks have been fully deployed can the Commission evaluate remaining areas that are unserved by mobility broadband services, and develop a mechanism to provide support

⁴⁰⁷ Verizon Comments, p. 60.

⁴⁰⁸ While NASUCA appreciates the drama of a party placing a gun against its own head as a threat, AT&T’s “commitment” on LTE deployment being dependent on the approval of the T-Mobile transaction strains credulity. AT&T is already on the path to LTE rollout. Further, absent the merger with T-Mobile, AT&T would face more market pressure to upgrade its network facilities to 4G, not less.

⁴⁰⁹ National Broadband Plan, p. 137.

for their incremental extension, or consider the role that satellite services can play in filling in the gaps of mobility coverage.⁴¹⁰ Furthermore, the President’s “Win the Future” initiative associated with wireless deployment calls for 98% of all Americans to have access to 4G networks. The President’s budget contains \$5 billion to support 4G deployment in rural areas.⁴¹¹

Verizon indicates that the Commission’s Phase I CAF may provide benefits, especially if the Commission structures the Phase I CAF “to be as similar as possible” to the Mobility Fund that will be used to “bring 3G or better wireless service to those few areas that still lack access.”⁴¹² It should be noted, however, that Verizon told the Commission in its Comments on the Mobility Fund that “with the nationwide deployment of LTE or 4G services now in full swing, in a few isolated areas where the 3G (or better) market has not yet reached wireless service can—and should—improve.”⁴¹³ In other words, private investment associated with 4G is likely to fix some of the perceived problems with 3G, and points to further support for the proposition that moving quickly on mobility issues is ill advised.

2. THE STATE MEMBERS MOBILITY FUND

The State Members Plan proposes to create a mobility fund, sized at \$500 million per year, that will offer grants to finance the building of wireless telecommunications

⁴¹⁰ According to ViaSat, “ViaSat’s Ka band networks will support the provision of mobile services to airplanes, watercraft, and motor vehicles. The satellite networks of certain MSS providers are optimized to provide service to small, handheld devices as well.” ViaSat Comments, p. 32.

⁴¹¹ See, White House Press Release, February 10, 2011, accessible at <http://www.whitehouse.gov/the-press-office/2011/02/10/president-obama-details-plan-win-future-through-expanded-wireless-access>.

⁴¹² Verizon Comments, p. 63.

⁴¹³ *Universal Service Reform; Mobility Fund*, WT Docket No. 10-208, Comments of Verizon and Verizon Wireless, (Dec. 16, 2010), p. 4.

towers. Those receiving grants would be required to meet standards, including a minimum availability standard of 99% of the household locations in the service area, with 4/1 service available 99% of the time, and network reliability of 99%.⁴¹⁴

The State Members Plan adds the additional caveat that to be considered “served,” the customer should be able to receive “a strong and reliable wireless signal at his or her residence that is capable of meeting the speed standard set forth in the definition of universal service.”⁴¹⁵ But if the “mobility” wireless network is engineered to deliver high-quality broadband within a customer’s residence, the costs of the wireless network will be increased. More importantly, however, such a standard would effectively be supporting two residential broadband networks – one wireless and one wireline. This can only raise the costs of supporting both networks, as some consumers will find substitution for the high-quality wireless service to be an attractive option. This will reduce take-rates and revenues for the supported ILEC, and raise the cost of supporting the ILEC as well.

As NASUCA has discussed elsewhere in this reply, the more prudent path with regard to mobility broadband services is to allow this market to develop without the aid of support for a reasonable period of time – three to five years would be a reasonable benchmark. At that point the Commission will have a much better perspective regarding the scope of the private-sector-financed wireless broadband buildout, and would be better able to target support at those areas that remain unserved.

J. Conclusion on Auctions and the CAF

⁴¹⁴ State Members Comments, p. 73.

⁴¹⁵ Id., pp. 68-69.

In all of the thousands of pages of comments provided to the Commission, there is no substantial support for the proposition that auctions provide a promising approach to reforming universal service funding, or to even bringing broadband to currently-unserved areas. No party can show the Commission an example of a successful auction outcome that bears any similarity to the complex problem facing the Commission. The granular nature of the problem, with thousands of non-contiguous unserved areas, likely small and sparsely populated, weighs against the potential success of auctions. This factor will contribute to the overarching concern that NASUCA has found itself repeating, namely, that the success of any auction process will depend on vigorous auction entry and robust bidding competition. Large numbers of entrants appear unlikely however, thus auction outcomes that reflect a competitive process that forces bidders to reveal their true costs also appears unlikely.

In addition, the Phase I CAF process proposed by the Commission should not be confused with an auction process, because there will be virtually no chance of multiple competing bids in any of the geographic areas that are under consideration. Finally, if the Commission pursues a competitive bidding approach, the NASUCA procurement proposal is superior. The Commission is also likely to find that a robust cost/revenue model could be of some assistance in evaluating a competitive bidding process, and also provides the advantage of being able to determine support directly.

VII. INTERCARRIER COMPENSATION

A. Introduction: The Commission Should Not Adopt Non-Cost-Based “Low” Rates and/or Bill-and-Keep.

NASUCA addressed many of the issues raised in the NPRM relating to

intercarrier compensation and bill-and-keep. NASUCA's review of the comments has not swayed NASUCA's position that intercarrier compensation reform must be achieved by establishing cost-based rates for interconnection and the transport and termination of traffic. These cost-based rates must address joint and common costs.⁴¹⁶

As discussed below, bill-and-keep gets a lot of attention in the comments. Here too, NASUCA finds nothing in the comments that alters NASUCA's position that bill-and-keep will result in interconnection rates that are unjust and unreasonable. Bill-and-keep seems like a simple solution, and it is, as long as the arrangement is voluntary, which would be expected when carriers have similar cost structures and exchange similar traffic volumes. However, the bill-and-keep that is now under consideration is nothing like the peering arrangements that have arisen with the exchange of Internet traffic. Rather, as proposed by various parties, bill-and-keep results in an unfair shifting of cost recovery.

Under a bill-and-keep arrangement, interexchange carriers ("IXCs") that have no end user facilities get a terrific deal as they are freed from contributing to last mile facilities on either end of their customers' calls. Similarly, wireless carriers also benefit, as they can avoid any contribution to the costs of terminating traffic on wireline networks. Wireless carriers do not provide ubiquitous service, especially in high cost areas, but wireless callers receive the benefits of being able to reach wireline subscribers served by ILECs in high-cost areas. Likewise, VoIP providers avoid any responsibility to pay for the ability reach subscribers of wireline networks; the avoidance of access charges has to date been one of the keys to the cost advantages of these services.

⁴¹⁶ NASUCA Comments, p. 10.

Mandated bill-and-keep will only cement these cost-avoidance strategies into law.

As discussed in the NPRM,⁴¹⁷ bill-and-keep will ultimately result in a solution that unfairly shifts all joint and common cost recovery to end-users of wireline networks, especially where there is an imbalance of traffic. This is not a reasonable policy outcome, and it is not what would be expected in a competitive market.

The Commission must establish cost-based interconnection rates that address joint and common costs. Such an approach is superior to either the “low” but non-cost-based \$0.0007 rate or bill-and-keep.⁴¹⁸ In the discussion that follows, NASUCA will address the proposals of some major parties in detail, and offer a brief review of other parties’ comments, who generally express opinions that are similar to one or the other of the major parties. But first we must address the key legal issue of whether the Commission has the authority to mandate a unified ICC rate for interstate access charges, intrastate access charges, and reciprocal compensation, especially where that rate is the zero bill-and-keep rate or the \$0.0007 rate.

B. Commission Authority Under Section 251(b)(5)

1. AT&T’S ARGUMENTS

AT&T, like the Commission in the NPRM,⁴¹⁹ argues that the Commission has the authority to impose the access charge reform regime, including the reform of *intrastate* access charges, due to provisions of the 1996 Act, specifically, §251(b)(5) and §251(g).⁴²⁰ Section 251(b)(5) of the 1996 identifies the reciprocal compensation

⁴¹⁷ NPRM, ¶530.

⁴¹⁸ *Id.*, p. 104.

⁴¹⁹ E.g., NPRM, ¶ 42.

⁴²⁰ AT&T Comments, pp. 37-41.

obligations on ILECs. However, the implementation of reciprocal compensation is outlined in the §252(d) pricing standards, which are clearly described as being the responsibility of state commissions.

AT&T attempts to circumvent the provisions of the 1996 Act that place the states in the driver's seat on reciprocal compensation rate-setting by advocating a "methodology as rate" approach to intercarrier compensation. AT&T indicates that the line drawn by the Supreme Court in the *Iowa Utilities Board*, which limits the FCC's role to defining a cost methodology, and leaves it to the states to set the actual rates, would not be crossed.⁴²¹ AT&T argues that "bill and keep" is methodology, not a rate. "The end-user recovery approach does not amount to a rate prescription simply because the charge to a carrier under that scheme is zero."⁴²² Thus, under AT&T's approach, in effect, the "methodology is the rate," bill-and-keep can only result in zero interconnection rates, with no other possibilities available.⁴²³

While AT&T points to the *Iowa Utilities Board* decision in support of its theory, it is not at all clear that that decision is consistent with AT&T's "methodology is the rate" proposal. The *Iowa Utilities Board* decision describes a process where the application of the FCC's methodology results in outcomes that fit the specific circumstances present in the states:

The FCC's prescription, through rulemaking, of a requisite pricing methodology no more prevents the States from establishing rates than do

⁴²¹ Id., p. 50, citing *AT&T Corp. v. Iowa Utilities Bd.*, 525 U.S. 366, 385 (1999) ("*Iowa Utilities Board*").

⁴²² AT&T Comments, p. 50.

⁴²³ In addition, AT&T also states that the Commission has the authority to set interim rates, so that a "glide path" can be established from the existing regime to a bill-and-keep "end state." Id. But interim rates to reach a Commission-dictated unlawful end-result would not become lawful because of the interim rate power.

the statutory “Pricing standards” set forth in §252(d). It is the States that will apply those standards and implement that methodology, determining the concrete result in particular circumstances. That is enough to constitute the establishment of rates.⁴²⁴

Thus, *Iowa Utilities Board* leaves it to the states to determine the “concrete results” in the “particular circumstances” of the state. AT&T’s “methodology is the rate” approach leaves no room for “particular circumstances,” because the “concrete result” is a zero rate for all types of traffic, in all jurisdictions.

AT&T’s “methodology is the rate” approach also precludes the state commission from making any findings under 252(d)(2)(A)(i) and (ii):

For the purposes of compliance by an incumbent local exchange carrier with section 251(b)(5), a State commission shall not consider the terms and conditions for reciprocal compensation to be just and reasonable unless—

(i) such terms and conditions provide for the mutual and reciprocal recovery by each carrier of costs associated with the transport and termination on each carrier’s network facilities of calls that originate on the network facilities of the other carrier; and,

(ii) such terms and conditions determine such costs on the basis of a reasonable approximation of the additional costs of terminating such calls.

Here too, the “methodology is the rate” approach advocated by AT&T would not allow state commission to evaluate the “mutual and reciprocal recovery by each carrier of costs associated with the transport and termination” of traffic, nor would the “methodology is the rate” approach allow the state commission to evaluate “a reasonable approximation of the additional costs of terminating such calls.” Thus *Iowa Utilities Board* and the 1996 Act show that AT&T’s bill-and-keep proposal does not stand on firm legal footing.

AT&T also argues that the Commission can forbear from §252 under 47 U.S.C. §160(a). This section identifies a three prong test, of which the first prong states:

⁴²⁴ *Iowa Utilities Board*, 525 U.S. at 384.

enforcement of such regulation or provision is not necessary to ensure that the charges, practices, classifications, or regulations by, for, or in connection with that telecommunications carrier or telecommunications service are just and reasonable and are not unjustly or unreasonably discriminatory.

As will be discussed below, a mandatory bill-and-keep regime will inexorably lead to unjust, unreasonable, and discriminatory interconnection rates, thus the first prong of the statute is not met. Thus forbearing from §252 to impose AT&T's bill-and-keep regime is not well-advised. And, as discussed in NASUCA's initial comments, forbearance from § 252 will create a void that cannot be filled by bill-and-keep.⁴²⁵

2. VERIZON'S INTERPRETATION OF 251(B)(5)

Verizon (and other parties) also raise the §251(b)(5) provision of the 1996 Act when expressing support for bill-and-keep.⁴²⁶ Turning to the provisions of the 1996 Act, it is important to consider the full context in which the words "bill and keep" are placed. First as noted above, §252(d)(2)(A) states that to achieve compliance with §251(b)(5):

[A] State commission shall not consider the terms and conditions for reciprocal compensation to be just and reasonable **unless**—

(i) such terms and conditions provide for the mutual and reciprocal recovery by each carrier of costs associated with the transport and termination on each carrier's network facilities of calls that originate on the network facilities of the other carrier; and

(ii) such terms and conditions determine such costs on the basis of a reasonable approximation of the additional costs of terminating such calls.⁴²⁷

Thus, §252(d)(2)(A) describes a ratemaking approach associated with the reciprocal compensation required by §251(b)(5) where the "mutual and reciprocal recovery" of the costs of transport and termination must be reflected in the reciprocal compensation

⁴²⁵ NASUCA Comments, pp. 33, 93-95.

⁴²⁶ See, for example, CTIA Comments, pp. 36 and 40; Global Crossing Comments, pp. 11 and 14.

⁴²⁷ 47 U.S.C. §252(d)(2)(A), emphasis added.

charges. Clearly, §251(b)(5) does not say that reciprocal compensation should result in end-users paying costs that are imposed by an interconnecting carrier.

Further, §252(d)(2)(B), which describes the “rules of construction” for the reciprocal compensation states that §252(d)(2) should not be construed “to preclude arrangements that afford the mutual recovery of costs through the offsetting of reciprocal obligations, including arrangements that waive mutual recovery (such as bill-and-keep arrangements). . . .” The key statement in §252(d)(2)(B) is that the arrangement must “afford the mutual recovery of costs through the offsetting of reciprocal obligations.” Thus, bill-and-keep would be permitted only if this first requirement is met. In other words, a state commission could not find a bill-and-keep arrangement to be consistent with the provisions of the 1996 Act if one of the parties (say a rural ILEC) was not afforded the ability to recover its costs through the offsetting reciprocal obligation. This section of the 1996 Act also says nothing about recovering those costs from end-users so that a third-party carrier can use the network for free. Thus, the provisions of the 1996 Act do not create a framework where one carrier shifts its costs for the use of another carrier’s network to the end-users of that network.

Verizon recognizes that unless termination charges apply, there will be incentives for carriers to dump “potentially large amounts of traffic onto the networks of Verizon and other carriers without a corresponding flow of traffic in the other direction—a result which would cause the receiving carriers *to incur significant costs* simply from the large volume of one-way traffic.”⁴²⁸ In this assessment, the “cost causer” clearly is the carrier that terminates the large amount of traffic, thus causing the receiving carrier to incur

⁴²⁸ Verizon Comments, p. 13, emphasis added.

significant costs. In this interpretation, Verizon does not state that recovering these rising costs from ender users is acceptable, apparently recognizing that it would be ludicrous for the carrier to “stick it to” captive customers rather than to the carrier that is causing the costs:

Where the traffic ratios are significantly asymmetrical, it is common for one provider to pay for the exchange of traffic, either through paid peering or transit, or some other exchange of value. There is good reason for this, and such arrangements have been crucial to the development and continuing expansion of the Internet. ...[T]hese voluntary arrangements have allowed providers to continue to expand capacity as traffic volumes increase.⁴²⁹

Thus, here Verizon correctly recognizes the principles of “cost causer, cost payer.” Both equity and economic efficiency require that cost-based payments for access be allowed for the termination of traffic. Bill-and-keep, or Verizon’s “almost” bill-and-keep approach (i.e., its \$0.0007 rate proposal), can only lead to an economically inefficient outcome, and would unfairly require end-user customers to underwrite the grant of free (or near-free) access to ILEC networks. This violates the central tenet of §252(d)(2)(B).

Like AT&T, Verizon advocates a “methodology as rate” proposal.⁴³⁰ In this case, rather than the bill-and-keep methodology and rate proposed by AT&T and others, Verizon proposes that the Commission cap rates at \$0.0007 per minute and instruct ILECs to “look to their customers to recover any additional compensation for the work they perform.”⁴³¹ Verizon states that such a plan would be consistent with §252(d)(2)(A), which it says expressly precludes the Commission and state commissions from determining carriers’ costs “with particularity.” This Verizon proposal will be discussed

⁴²⁹ Id., pp. 14-15.

⁴³⁰ Id., p. 44.

⁴³¹ Id., p. 44.

further below.

As an apparent fallback position, Verizon also offers back-door support for bill-and-keep, and provides its take on the Commission’s 47 U.S.C. § 251(b)(5) analysis, claiming that the statute expressly provides for the “bill and keep” solution.⁴³² Verizon also goes on to argue that the D.C. Circuit has recognized that under a bill-and-keep arrangement “each carrier recovers its costs from its own end-users’ rather than the other carrier.”⁴³³ Verizon argues that the permissibility of bill-and-keep (which Verizon characterizes as a regime where *all costs* are recovered from a carrier’s customers and *none* from other carriers) makes its \$0.0007 proposal all the more reasonable, because the \$0.0007 approach results in a carrier recovering “some costs from the originating carriers and some from its customers.”⁴³⁴ As discussed in the next section, recovery of all costs from end-users is not, however, the result of bill-and-keep in commercial agreements associated with peering on the Internet, nor is recovery of all costs from end users what §252(d)(2)(B) says bill-and-keep does, and recovery of all costs from end users is also not what Verizon says bill-and-keep does elsewhere in its comments.

C. Peering arrangements on the Internet

Peering arrangements on the Internet do not result in carriers “recovering all of their costs from their own end-users.” Rather, if traffic is balanced, it simply makes no sense for interconnecting carriers to render and receive bills that are equal in value. And the term “value” is key here. As Verizon notes elsewhere in its comments:

⁴³² Id., p. 45.

⁴³³ Id., citing *WorldCom, Inc. v. FCC*, 288 F.3d 429, 431 (D.C. Cir. 2002).

⁴³⁴ Verizon Comments, p. 45.

All else being equal, networks generally enter into settlement-free arrangements for Internet traffic only where the traffic flows between the networks are roughly in balance. Where the traffic ratios are significantly asymmetrical, it is common for one provider to pay for the exchange of traffic, either through paid peering or transit, or some other exchange of value.⁴³⁵

Peering is premised on the fact that an interconnecting carrier **is paid for** the other carrier's usage of its network through **implicit payments** received when it uses the other carrier's network. There is nothing "magical" happening here; the transaction could be boiled down to standard bookkeeping entries that cancel each other out, as each carrier receives something of value for allowing the other carrier to use its network. Neither is the carrier simply recovering its costs from its "own end-users"; rather, some of its costs are offset by a credit received from the carrier's peering partner. If traffic is unbalanced, then the differential in value between the interconnecting networks is made up from the carrier that comes up short. In the world of Internet peering, if Carrier A finds that Carrier B is terminating more than its fair share of traffic on Carrier A's network, Carrier A asks Carrier B to settle up, "through paid peering or transit, or some other exchange of value," as Verizon describes.⁴³⁶ Verizon would have the Commission believe, however, that the correct solution to unbalanced traffic would be for Carrier A to raise prices to its end-user customers rather than collect what it is owed from Carrier B. As discussed earlier, this does not happen in the real world. Rather, if peering carriers do not come to agreement, the disadvantaged party will terminate the interconnection.⁴³⁷

⁴³⁵ Id., p. 14.

⁴³⁶ Id., pp. 14-15.

⁴³⁷ It must be kept in mind that the needed "balance" also extends to network infrastructure costs. If Carrier A and Carrier B have identical traffic flows, and Carrier A has high network infrastructure costs relative to Carrier B, Carrier A negotiation in a competitive market would support Carrier A receiving additional payment from Carrier B.

AT&T also holds the Internet interconnection model up as the nirvana to be sought by the Commission. Yet as AT&T admits, interconnection on the Internet is not all bill-and-keep:

Direct interconnection, or “peering” arrangements, occur only when the direct exchange of traffic is mutually beneficial to both IP networks. Under these arrangements, each network interconnects for the purpose of exchanging packets to be delivered to the other network’s end users. *Where such direct exchanges of traffic are not mutually beneficial, the parties may enter into a paid peering arrangement. Under paid peering, the networks still exchange traffic through high-capacity peering links, but the “non-compliant” network makes payments to the other network.*⁴³⁸

The outcome described is very different than AT&T’s bill-and-keep proposal. Under AT&T’s approach, even if direct exchanges of traffic are not “mutually beneficial,” the rate will still be zero. This will impose an economically inefficient outcome, and as always is the case when something of value is offered at an artificially low price (zero in the case of AT&T’s bill-and-keep), will encourage over-use of the “free” resource, and discourage efficient investment.⁴³⁹ Thus, the outcome of AT&T’s bill-and-keep approach will be unjust, unreasonable, and discriminatory interconnection rates.

D. Other Parties’ Support for Bill-and-Keep Adds Little to the Argument.

Other parties express support for bill-and-keep.⁴⁴⁰ CTIA reasserts its “METE” plan, which has a bill-and-keep core.⁴⁴¹ MetroPCS proposes a two-year transition to a

⁴³⁸ AT&T Comments, p. 18, reference omitted, emphasis added.

⁴³⁹ CenturyLink Comments, p. 8; Verizon Comments, p. 8; ITTA Comments, pp. 40-41; MoSTCG Comments, p. 8.

⁴⁴⁰ Ad Hoc Comments, p. 43; AT&T Comments, p. 31; Level 3 Comments, p. 8; T-Mobile Comments, p. 3; Sprint Comments, p. 5;

⁴⁴¹ In its comments in this proceeding, CTIA references its comments in CC Docket No. 01-92 (filed May 23, 2005) as providing the details of its METE proposal. In those 2005 Comments, CTIA stated that its “unified compensation mechanism” is also known as “bill-and-keep.” 01-92, CTIA Comments (May 23,

unified \$0.0007 rate, followed by a 2-year “glide path” to bill-and-keep.⁴⁴² T-Mobile offers a similar transition period, with unified state/intrastate access rates in year one, followed by transitional steps leading to bill-and-keep in year four.⁴⁴³ Google states that “FCC should clarify that bill-and-keep will serve as the default for IP traffic and that each network provider should seek to recover its costs directly from its users.”⁴⁴⁴ These comments do not add much to the arguments.

Ad Hoc provides an extensive discussion of bill-and-keep.⁴⁴⁵ Although Ad Hoc appears to generally support bill-and-keep, Ad Hoc also indicates that there are many potential problems with a bill-and-keep regime. Ad Hoc’s discussion of bill-and-keep begins by pointing out that the Commission’s conception of bill-and-keep does not match the conventional interpretation:

Seen in the context of “sender-pays” pricing at the retail level, the traditional understanding of “bill-and-keep” is that the originating carrier (Carrier A) retains all of the revenue it collects from its customer who originates the call, and makes no cash payment to the terminating carrier (Carrier B), the latter being compensated “in kind” when the two carriers’ respective roles are reversed (i.e., when Carrier B sends originating traffic to Carrier A for termination at no cost to Carrier B). The system presumes that Carrier A’s end user charges recover only its cost for outbound traffic while its costs for terminating Carrier B’s inbound traffic would be “paid” in the form of reciprocal treatment by Carrier B when it terminates Carrier A’s outbound traffic. This reciprocity element also presumes a balance of traffic between the two providers.⁴⁴⁶

As was discussed earlier in this reply, the NPRM describes bill-and-keep as a process

2005), p. 10.

⁴⁴² MetroPCS Comments, p. 7.

⁴⁴³ T-Mobile Comments, p. 27.

⁴⁴⁴ Google Comments, p. 9.

⁴⁴⁵ Ad Hoc Comments, pp. 43-48.

⁴⁴⁶ *Id.*, p. 43.

where carriers “would recover such (originating and terminating) costs from their own end users.” This interpretation does not reflect the value-based transaction that occurs with private peering arrangements. Rather, the NPRM proposes to enforce an outcome (all costs recovered from end users), which would never arise between carriers that recognize that the transport and termination of traffic imposes costs for which the cost causer (i.e., the other interconnecting network) must be held accountable. Only under certain conditions (balanced traffic and similar network costs) can settlement-free peering can emerge. Ad Hoc is absolutely correct that the NPRM mischaracterizes bill-and-keep.

Ad Hoc goes on to state:

At a conceptual level, the approach suggested in the Notice has considerable merit. If it were implemented uniformly and comprehensively across all services, technologies, carriers, and jurisdictions, all carrier-level exchanges of traffic would be on a fee-free basis, there would no longer be any issue associated with out-of-balance traffic, and the terminating monopoly problem would be eliminated along with perverse “traffic pumping” and harmful “arbitrage.”⁴⁴⁷

Ad Hoc’s rosy view of bill-and-keep is difficult to understand. As pointed out in the previous quote from Ad Hoc, traffic balance is a necessary condition for settlement-free interconnection to be successful, and there is no reason to believe that this outcome will be achieved. Furthermore, as discussed throughout this Section, rather than eliminating problems with arbitrage and traffic pumping, bill-and-keep would create an entirely new set of incentives for carriers to seek out arbitrage opportunities and to create unbalanced traffic flows. Ad Hoc is absolutely correct that with bill-and-keep “the path from concept to implementation is anything but simple or straightforward,”⁴⁴⁸ and disparate network

⁴⁴⁷ Id., p. 44.

⁴⁴⁸ Id.

costs will only make that path more difficult to travel.

Ad Hoc discusses two segments of the industry where it alleges that bill-and-keep have taken root – Internet backbone providers and wireless carriers.⁴⁴⁹ Ad Hoc’s interpretation of the relationship between wholesale and retail pricing in wireless and IP markets is not quite correct. Ad Hoc argues that for bill-and-keep to work, retail and wholesale billing structures must be aligned:

The problem, however, is that fee-free exchanges can only be successful if the Commission requires the retail pricing regime to conform to the wholesale intercarrier pricing regime, to ensure that retail rate structures and rate levels are consistent with recovery of originating and terminating costs from the end user, regardless of the carrier’s balance of traffic.⁴⁵⁰

Ad Hoc’s conclusion is based on a selective interpretation of transactions in the wholesale market. Wholesale traffic exchanges on IP networks or on wireless networks are not all settlement-free. They are only settlement-free if the interconnecting carriers believe that the transaction is fair, as indicated by the balance of traffic, and by evaluations of their own network costs. Thus, the relationship between retail and wholesale rate structures is not the cut-and-dried consistency of wholesale and retail pricing suggested by Ad Hoc. Further, Ad Hoc’s assessment of the relationship of the impact of the rate scheme facing end users and network interconnection pricing arrangements is dead wrong:

[W]hile NetFlix, for example, receives very little inbound traffic, it sends out large quantities of outbound traffic and must pay its content delivery network or other provider for that bandwidth. At the other end, most consumer end users receive far more traffic (e.g., from NetFlix) than they send into the cloud. Consumers must similarly specify and pay for the bandwidth that is sufficient to carry the streaming video or other downlink

⁴⁴⁹ Id.

⁴⁵⁰ Id., pp. 45-46.

traffic being sent to them. When each party pays for the bandwidth it needs, *it no longer matter [sic] whether the respective exchanges of traffic are in or out of balance.*⁴⁵¹

Here Ad Hoc changes positions and states that traffic balance is not needed if end-users that originate and receive traffic on a broadband networks are paying for the bandwidth they need. This is simply not true. The bandwidth-payment arrangements for content sources like NetFlix and consumers who buy broadband connections described by Ad Hoc are in fact in place today, but as Ad Hoc also acknowledges, “while individual IBP [Internet Backbone Provider] policies differ slightly, in general all require ... that traffic be roughly (although not precisely) in-balance....”⁴⁵² The reason for the need for traffic balance was discussed earlier in these comments – traffic imbalances matter, even in the all-IP world. Unbalanced traffic (or disparate carrier network costs) will result in inequitable cost recovery in a pure bill-and-keep world.

Although Ad Hoc sporadically acknowledges the importance of balanced traffic for settlement-free interconnection, Ad Hoc ignores another aspect of the transaction that results in successful settlement-free interconnection, namely, that the interconnecting carriers’ network costs are similar. Once last-mile broadband networks become more prevalent, the similarity of cost experienced by long-distance IP backbone networks will diminish, and so will the feasibility of settlement-free interconnection. Ad Hoc only implicitly acknowledges the problems of last-mile network costs:

Moreover, bill-and-keep would still produce “arbitrage” incentives, though on the part of the originating carrier rather than the terminating carrier, because the originating carrier who collects and retains all of the revenues from its own customers would have a powerful incentive to

⁴⁵¹ Id., p. 48, emphasis added.

⁴⁵² Id., p. 44.

minimize its network investment and hand-off the calls to other carriers as soon as possible in the call path.⁴⁵³

While this incentive structure is certainly true for originating carriers, it is also true for traffic termination. “Free” traffic termination under bill-and-keep would provide a similar set of incentives for interconnecting carriers to seek out a “free lunch” on the terminating side. Costs of last-mile networks (even if they are IP networks) will still vary depending on the characteristics of the last-mile network associated with density, terrain, and weather that cause some areas to face high costs, while other areas experience low costs. Thus, at the wholesale level, unless interconnecting carriers are allowed to charge rates other than bill-and-keep, the outcome will be economically inefficient and subject to arbitrage and a whole new set of incentives to create unbalanced traffic flows, or otherwise seek out the bill-and-keep “free lunch.” If the Commission eliminates all wholesale rate options other than bill-and-keep, it will open a Pandora’s box of perverse incentives.

Fundamentally, none of the commenters that prefer bill-and-keep offers support sufficient to undermine NASUCA’s view that bill-and-keep just will not work as a mandated solution. And none of the bill-and-keep supporters refutes NASUCA’s analysis of the impermissibility of mandated bill-and-keep under the provisions of the 1996 Act.

Public Knowledge and Benton Foundation provide some evidence that although current IP peering arrangements are becoming more difficult to maintain, “it appears that while there is the potential for the market to resolve issues without regulatory intervention, there is also the potential for substantial anti-consumer outcomes in the

⁴⁵³ Id., p. 46.

absence of regulation.”⁴⁵⁴ But Public Knowledge and Benton Foundation miss a key point in their assessment of the role of bill-and-keep in an intercarrier compensation regime.

Networks that voluntarily exchange traffic settlement-free are not operating in a “bill-and-keep” environment, as Commenters understand it. A bill-and-keep regime is one of mandated interconnection, where traffic is exchanged settlement-free regardless of mutual benefit. For example, traffic will rarely be “balanced” when a network that carries Internet content interconnects with a last-mile broadband network, whose users tend to consume that content. *But it may be that both networks benefit from this unequal traffic flow.*⁴⁵⁵

While acknowledging that bill-and-keep operates “regardless of mutual benefit,” Public Knowledge and Benton Foundation dismiss the potential impact of that lack of mutual benefit.

Of course, it is conceivable that both the last-mile and long-distance broadband networks get some level of benefit from the unbalanced traffic flow. The question that Public Knowledge and Benton Foundation overlook is the key issue of whether these benefits reasonably compensate both parties for the costs that they incur. Absent such an analysis, the Public Knowledge and Benton Foundation perspective is a recipe for an unjust and unreasonable outcome, where one set of actors (the long-distance broadband networks, and/or the parties for which they move traffic) gets something for nothing, and another set of parties (the end-users) get something, but are required to pick up a portion of the tab that, when considering economic facts, are caused by the other party.

E. A Unified “Low” Rate for ICC is Not Reasonable

⁴⁵⁴ “The Economics of Internet Interconnection: Insights from the Comcast-Level3 Peering Dispute,” Gregory Rose, p. 1, included with Public Knowledge and Benton Foundation Comments.

⁴⁵⁵ Public Knowledge and Benton Foundation Comments, p. 31, emphasis added.

Verizon states that the Commission should “immediately establish a single low rate of \$0.0007 for all VoIP traffic that connects with the PSTN.”⁴⁵⁶ Following this action, Verizon recommends that the Commission begin “rapidly transitioning all intercarrier compensation rates down to that VoIP rate, “regardless of the terminating carrier’s legacy regulatory status or the jurisdictional end points of the call.”⁴⁵⁷ Verizon recommends that this process be completed over a three-year period.⁴⁵⁸ Finally, Verizon proposes that a short-term “transition mechanism” be funded through “the USF to allow carriers time to update their business plans.”⁴⁵⁹ The transitional period would allow carriers the time to rebalance their own end-user rates.⁴⁶⁰ Verizon also specifies that the new rate regime should be a default regime, and that carriers would be free to negotiate commercial agreements that differ from the default regime.⁴⁶¹

To support its proposal, Verizon points to the fact that settlement-free peering arrangements require balanced traffic flows, and when these flows are unbalanced, that payment between carriers is commonplace.⁴⁶² NASUCA agrees with this point, as discussed above. Verizon also states its primary position that that it is opposed to the bill-and-keep approach:

Requiring some level of terminating compensation will deter other carriers from “dumping” potentially large amounts of traffic onto the networks of Verizon and other carriers without a corresponding flow of traffic in the

⁴⁵⁶ Verizon Comments, p. 3.

⁴⁵⁷ Id., p. 3.

⁴⁵⁸ Id., p. 18.

⁴⁵⁹ Id., p. 5.

⁴⁶⁰ Id.

⁴⁶¹ Id.

⁴⁶² Id., p. 14.

other direction—a result which would cause the receiving carriers to *incur significant costs* simply from the large volume of one-way traffic. The increase of traffic on the receiving party’s network could also cause congestion and negatively impact the quality of the services provided by the terminating carrier to its customers. History and economics teach that any regulatory regime that places *unbalanced regulatory burdens on different parties can create economic distortions and incentives to engage in arbitrage*.⁴⁶³

Verizon thus recognizes what other parties’ bill-and-keep proposal ignores – unbalanced traffic flows will result in unreasonable costs being imposed on some interconnected carriers.

Verizon’s critique of bill-and-keep applies equally, however, to non-cost-based interconnection charges in general, such as its own proposal. Verizon’s uniform \$0.0007 proposal will not alter the fact that receiving carriers may be caused to “incur significant costs” where there is unbalanced traffic. Verizon’s \$0.0007 rate is not cost-based, and will fail to reasonably contribute to the joint and common costs of carriers that operate in high-cost areas. A uniform \$0.0007 terminating rate is also likely to result in “unbalanced regulatory burdens” being placed on various parties. Some carriers have high-cost network facilities associated with low-density areas. Under the approach envisioned by Verizon, the end-user customers of these carriers who face Verizon’s “rate rebalancing” will face a much greater burden than customers of carriers that serve high-density, low-cost areas. In either case, the lifting of the regulatory burden on carriers that terminate traffic for the non-cost-based rate will unfairly shift the regulatory burden to end-users, while the terminating traffic in Verizon’s plan rides for (almost) free. As noted by NASUCA in the initial comments, unless interconnection rates are cost-based and address the recovery of joint and common costs, the economic distortions identified

⁴⁶³ Id., p. 13, emphasis added.

by Verizon will arise.⁴⁶⁴

The other problems with bill-and-keep that are described by Verizon also apply to the non-cost-based \$0.0007 rate. For example, Verizon correctly notes that bill-and-keep will remove “incentives for other carriers to manage the flow of traffic efficiently and inviting potential abuse.”⁴⁶⁵ Verizon also states that bill-and-keep would result in

new arbitrage schemes [that] would be expected to emerge because a single party would have the ability to send large amounts of traffic to another party – thereby causing the receiving party to incur costs and obligations for which the sending party bears no responsibility. And there will always be ways to abuse a free service.⁴⁶⁶

The same potential applies to the non-cost-based \$0.0007 rate, as the Verizon rate proposal simply shifts the rate slightly north of “free.” If rates are cost-based, and properly address joint and common costs, then market participants will make decisions based on information that allows them to correctly calculate the economic costs of their decisions. Verizon’s arbitrary \$0.0007 rate will generate new distortions in the marketplace.

Verizon also correctly notes that bill-and-keep will have a potentially negative impact on last-mile broadband networks:

[I]f receiving networks were not compensated in some form to carry disproportionately larger volumes of traffic for others, it would undermine continued investment by those networks to enhance their capacity to handle the growing traffic volumes that would result. The result would be less overall investment and lower quality service for all Internet users as networks became more congested and capacity expansion failed to keep pace with demand.⁴⁶⁷

⁴⁶⁴ NASUCA Comments, pp. 101-106.

⁴⁶⁵ Verizon Comments, p. 14.

⁴⁶⁶ Id.

⁴⁶⁷ Id., p. 15.

But the same issue applies to a \$0.0007 rate that is not based on the receiving network's costs. As discussed by NASUCA in the initial comments, these last-mile costs are avoidable costs to all those bringing terminating traffic, and inefficient investment decisions will be made unless termination rates are cost-based.⁴⁶⁸

Verizon goes on to assert that the solution to the arbitrage problem is to require a “low” rate for the termination of voice traffic, and points to commercial agreements that specify “\$0.0007 or \$0.0004” be paid to the recipient of the traffic.⁴⁶⁹ It is most notable that these commercial agreements appear to recognize cost differences. There is a 1.75/1 ratio implicit in the differential between the low and high rate identified by Verizon. This indicates that costs **do** matter and are recognized in the arm's length negotiations between interconnecting parties. Verizon's proposal to the Commission, however, would apparently prohibit similar outcomes among carriers who terminate traffic for other carriers and cannot or will not agree to such low rates. Under Verizon's proposal, the \$0.0007 rate will serve as an effective rate cap in any negotiation process – a lower negotiated rate to reflect lower costs might result, but a higher negotiated rate that reflects legitimate access costs that are higher than the \$0.0007 level will be prohibited. This “uniform” outcome will result in economic distortion.

F. Legal Authority to Establish a Non-Cost-Based “Low” \$0.0007 Rate

Verizon states that the Commission should find that *all* traffic routed over the PSTN is inseverable, and therefore, interstate.⁴⁷⁰ Verizon argues that “technological and

⁴⁶⁸ NASUCA Comments, p. 90.

⁴⁶⁹ Verizon Comments, p. 15.

⁴⁷⁰ *Id.*, p. 23.

marketplace changes are making it increasingly difficult” to jurisdictionalize TDM traffic.⁴⁷¹ Verizon states that carriers can no longer separate various and sundry types of traffic that they receive based on “archaic jurisdictional distinctions.”⁴⁷² Although Verizon does not produce any data to indicate the extent of its difficulty in jurisdictionalizing traffic, NASUCA generally agrees that, economically speaking, “a call is a call.”⁴⁷³ Thus, all other things being equal, there would be no need for a carrier to maintain different rates for different jurisdictions or technologies associated with the traffic that is terminated on its network. Of course, all things are not equal; as discussed elsewhere in these reply comments and in NASUCA’s initial comments, there are legal requirements that govern such rates that do not necessarily respect simple economics.

Regardless of the alleged inseverability of traffic for **billing** purposes, the technical and geographic distinctions and characteristics of individual carrier operations make **each carrier’s specific costs of transport and termination inseverable from each carrier’s operations**. As a result, it is economically necessary, and entirely appropriate from a regulatory perspective, that different carriers maintain transport and termination charges based on the carriers’ own costs. Some carriers serve high-density areas where network costs are low. Other carriers serve low-density areas, with harsh terrain and weather, yielding high network costs. Thus, while Verizon spends a great deal of effort to support its argument that traffic is jurisdictionally inseverable,⁴⁷⁴ Verizon completely ignores the “more inseverable” relationship between a carrier’s rates and its

⁴⁷¹ Id., p. 24.

⁴⁷² Id., p. 25.

⁴⁷³ NASUCA Comments, p. 10.

⁴⁷⁴ Verizon Comments, pp. 23-42.

own cost of service. Verizon recognizes that differences in cost exist, and are accounted for in non-regulated commercial agreements (e.g., Verizon identifies interconnection rates associated with commercial agreements of \$0.0007 or \$0.0004).⁴⁷⁵ Thus, there is nothing inconsistent about different carriers charging access rates that differ between carriers, but which are uniform for all traffic terminated on the carrier's network. This is the only way that economically efficient interconnection and termination can be achieved. As discussed above, however, legal requirements may not be in synch with economic efficiency.

G. Other Parties Opposing the Uniform \$0.0007 Rate or Bill-and-Keep

Among the parties that oppose the Commission's proposals on ICC, Core notes that when it comes to determining how costs associated with transactions are shared in competitive markets, that market forces do not simply shift all costs to end users, but rather allow for a wide array of recovery arrangements:

Contrast this array of options in an open, competitive industry with the Commission's prescription of the \$0.0007 per MOU termination rate for ISP-bound intercarrier calling, or the NPRM's proposed adoption of bill-and-keep in lieu of any cash ICC mechanism. In both of these cases, the Commission requires the terminating carrier to look to its own customer for payment, rather than letting the market determine how such recovery will take place.⁴⁷⁶

Contrary to Core's simplistic vision, although market forces certainly do have a role to play in determining the arrangements that carriers may be able to reach on their own without regulatory oversight, the Commission must also be prepared to address situations where negotiation does not result in agreement, where transaction costs are high, or when

⁴⁷⁵ Id., p. 15.

⁴⁷⁶ Core Comments, pp. 6-7.

carriers attempt to exercise market power. Furthermore, with regard to last-mile networks, carriers will continue to maintain monopoly power with regard to the ability to reach customers connected to the last-mile network. As a result it makes sense to tariff transport and termination rates or compensation arrangements.

Many parties express reservations regarding the bill-and-keep approach, and raise doubts about the legality of the Commission's ability to mandate a bill-and-keep regime. CenturyLink correctly notes that negotiated bill-and-keep arrangements emerge when the arrangement makes sense for both parties. But CenturyLink also notes that:

When things of value are given away for free, it creates incentives to engage in gaming, which in this case likely would involve free riding on transport and transit networks. Terminating carriers must pay for transport just like any other user of the local transport network for transit services.⁴⁷⁷

CenturyLink explains that mandatory bill-and-keep could provide incentives for carriers to drive efficiency out of the local network, for example, by encouraging traffic routing through tandem switching (which would be "free" under bill-and-keep), as opposed to through dedicated trunks.⁴⁷⁸

Cbeyond asserts that the Commission lacks the authority to impose bill-and-keep when traffic is not balanced.⁴⁷⁹ COMPTTEL agrees, stating that "[t]he Commission, however, is without statutory authority to set an intercarrier compensation rate of \$0."⁴⁸⁰ XO states that "mandatory use of a bill-and-keep system when traffic is imbalanced would deny terminating Local Exchange Carriers ('LECs') the ability to recover their reasonable cost of service in contravention of the requirements of Section 252 of the

⁴⁷⁷ CenturyLink Comments, p. 8.

⁴⁷⁸ Id.

⁴⁷⁹ Cbeyond Comments, p. 14.

⁴⁸⁰ COMPTTEL Comments, p. 33.

Communications Act (the “Act”).”⁴⁸¹ Core states, “The Commission lacks the legal authority to implement bill-and-keep at the retail level. Such a fundamental revision to telecommunications policy must include state commissions, since local retail rates are generally subject to state regulation.”⁴⁸²

From the state commission side, the PUCO states, “[A]s a threshold matter, the Ohio Commission believes, as it has expressed in prior comments, that a bill-and-keep arrangement is, in fact, a rate setting process. As the FCC is well aware, responsibility for establishing rates is reserved to states under the Act.”⁴⁸³ The KCC states that “rather than moving to a bill-and-keep regime, the FCC should set a goal of reaching a uniform cost-based compensation rate, regardless of traffic type. However, the FCC should acknowledge that because costs vary by carrier and thus, the ICC rate may vary by carrier.”⁴⁸⁴ And the NSC states:

Section 252(d)(2)(B)(i) of the Act, appropriately allows for bill and keep arrangements where a mutual agreement occurs. However, the Act does not direct the Commission to require or even endorse bill and keep arrangements. It is clear that in some instances, carriers may prefer to negotiate and implement bill and keep arrangements; however, a one-size fits all mechanism for intercarrier compensation is not appropriate. In a number of cases, a bill and keep regime would not fairly compensate providers.⁴⁸⁵

ITTA states that bill-and-keep would introduce new arbitrage opportunities, and raise LEC costs:

The likely result of implementing bill-and-keep would be a substantial

⁴⁸¹ XO Comments, p. 3.

⁴⁸² Core Comments, p. 16.

⁴⁸³ PUCO Comments, p. 46.

⁴⁸⁴ KCC Comments, p. 5.

⁴⁸⁵ NPSC Comments, p. 27.

increase in traffic sent to ILEC tandems because this would be least expensive for originating providers. Such increases in tandem traffic would require expensive increases in network capacity for ILECs and undermine the transiting compensation mechanism. Thus, without other regulatory changes, a bill-and-keep scheme would increase the overall costs of terminating traffic for ILECs.⁴⁸⁶

Similar sentiments are expressed by MoSTG: “Imposing bill-and-keep or a \$0.0007 rate would be confiscatory and would discourage network investment.”⁴⁸⁷ NRIC notes, “Migrating to bill-and-keep will simply create more pressures for USF recovery.”⁴⁸⁸ And NECA, et al. point to the need to address costs in any regime that addresses the exchange of traffic, whether the traffic is IP based or otherwise:

A service provider’s use of an all-IP network will still impose costs. Those costs of usage may just be incurred in a different manner than they are incurred on a circuit-switched network, and network operators should continue to have the ability to charge other service providers some form of just and reasonable, cost-based rates for the use of those networks.⁴⁸⁹

Other RLECs also voiced opposition to the \$0.0007 rate and/or bill-and-keep. Albion predicts substantial revenue loss (98.7% of intrastate access revenues) and harms from a \$0.0007 rate.⁴⁹⁰ GVNW states, “If rural carriers were not permitted to charge other carriers that use their network, it is unlikely that the rates to end-user customers will continue to meet the comparability standard.”⁴⁹¹ TSTC states that bill-and-keep will simply increase the profits of companies that will be able to originate and terminate

⁴⁸⁶ ITTA Comments, p. 41.

⁴⁸⁷ MoSTG Comments, p. 8. As explained in NASUCA’s initial comments (pp. 109-110) “confiscation” does not necessarily come into play here.

⁴⁸⁸ NRIC Comments, p. 5.

⁴⁸⁹ NECA, et al. Comments, p. 26.

⁴⁹⁰ Albion Comments, p.

⁴⁹¹ GVNW Comments, p. 24.

traffic for free, while burdening end-users and the USF.⁴⁹² The comments of these parties all support NASUCA's position that mandatory bill-and-keep is not an appropriate mechanism for intercarrier compensation reform.

Even Ad Hoc, which otherwise favors bill-and-keep, notes that the Commission's conception of bill-and-keep – where all costs are recovered from end-users⁴⁹³ – differs substantially from typical practice:

Seen in the context of “sender-pays” pricing at the retail level, the traditional understanding of “bill-and-keep” is that the originating carrier (Carrier A) retains all of the revenue it collects from its customer who originates the call, and makes no cash payment to the terminating carrier (Carrier B), the latter being compensated “in kind” when the two carriers' respective roles are reversed (i.e., when Carrier B sends originating traffic to Carrier A for termination at no cost to Carrier B). The system presumes that Carrier A's end user charges recover only its cost for outbound traffic while its costs for terminating Carrier B's inbound traffic would be “paid” in the form of reciprocal treatment by Carrier B when it terminates Carrier A's outbound traffic. This reciprocity element also presumes a balance of traffic between the two providers.⁴⁹⁴

As was discussed earlier in these comments, the NPRM's bill-and-keep approach would result in distorted outcomes. Carriers that interconnect with LECs to originate and terminate traffic face an avoidable cost. If the carrier rides for free on the last-mile networks, a distorted price signal is sent, and the carriers that originate and terminate traffic on last-mile networks will make uneconomic decisions.⁴⁹⁵

H. The “Benefit of a Call” Notion Does Not Justify Bill-And-Keep.

In initial comments, NASUCA provided a refutation of the Commission's notion

⁴⁹² TSTC Comments, p. 23.

⁴⁹³ NPRM, ¶530.

⁴⁹⁴ Ad Hoc Comments, p. 43.

⁴⁹⁵ NASUCA Comments, pp. 89-90.

that because “both parties generally benefit from participating in a call ... both parties should share the cost of the call.”⁴⁹⁶ AT&T argues that the “calling party’s network pays” (“CPNP”) principle has outlived its usefulness.⁴⁹⁷ AT&T indicates that under current interconnection arrangements and CPNP, “the calling party is solely responsible for causing 100% of the costs of all calls and derives 100% of the benefits,” which fails to recognize that the parties share the benefits.⁴⁹⁸ NASUCA addressed the issue of cost causation in the initial comments, and will only reiterate that regardless of the benefits of a call, the originating party does **cause** the call.⁴⁹⁹ However, AT&T’s assertion that the calling party is now “solely responsible for the recovery of 100% of the costs of all calls” is simply absurd. AT&T continues to ignore the fact that joint and common costs are appropriately recovered from all services (and customers) that utilize the network. End-users now pay a disproportionate share of joint and common costs through local rates and the SLC. Presumably this is not enough for AT&T, and end-users would be asked to pay still more so that AT&T’s long-distance operation and possibly its long-distance customers can pay even less.

I. AT&T’s Long-Term Vision for ICC

AT&T proposes that inter- and intrastate access charges should be “unified and then phased down in equal steps over a period of four years.” These charges should also be “harmonized” with other intercarrier charges, and then eliminated entirely once the

⁴⁹⁶ Id., pp. 104-105, citing NPRM, ¶ 525.

⁴⁹⁷ AT&T Comments, p. 14.

⁴⁹⁸ Id., p. 15.

⁴⁹⁹ NASUCA Comments, pp. 104-105.

CAF is implemented.⁵⁰⁰ The target of the phase-down is a target intercarrier compensation rate of \$0.0007, to be effective in 2016. Under the AT&T plan, however, even this rate is short-lived and will be eliminated on January 1, 2017. At that point, according to AT&T, “all government-mandated intercarrier compensation obligations will be eliminated”⁵⁰¹ ...other than, of course, the fact that the government will mandate that the form of intercarrier compensation on the PSTN will be “bill and keep.” Modestly, AT&T also indicates that on January 1, 2017, the entire regulatory structure associated with the PSTN, “including interconnection obligations, service obligations, tariffing, and unbundling” will be eliminated.⁵⁰²

AT&T’s over-reaching arguments on the virtual elimination of all regulation were discussed in Section III., above. The aspects of AT&T’s arguments pertaining to ICC are part-and-parcel of AT&T’s continuing search for market dominance.

Ironically, AT&T takes umbrage with the notion that there should be a requirement for ILECs with wireless and long-distance affiliates to flow-through access charge reductions to end-users:

It makes no sense to require a company to redirect cost savings from one group of customers to a second group of customers, when they subscribe to entirely different services.... Essentially, such an off-set would amount to a subsidy running from long distance and wireless customers scattered across the country, to local exchange customers concentrated in those areas where the ILEC provides local exchange service. But such subsidies are directly contrary to the market-disciplined regime that the Commission is attempting to create, and, indeed, would simply replicate the implicit subsidies in access charges that are no longer tenable....⁵⁰³

⁵⁰⁰ AT&T Comments, p. 31.

⁵⁰¹ Id.

⁵⁰² Id., p. 32.

⁵⁰³ Id., p. 36.

The spirit of AT&T's objection to requiring the pass-through of access charge reductions to end users is entirely similar to the cross-subsidy that AT&T proposes to create with its "access-recovery regime," discussed in Section VIII. This is even more contrary to the regime that the Commission is attempting to create.

AT&T also indicates that a mandated reduction to wireless or long-distance rates is not necessary, as "elementary principles of economics"⁵⁰⁴ dictate that these savings will benefit consumers. The problem with AT&T's perspective arises from the fact that the application of "elementary" economic principles appears to ignore the reality that local exchange markets, which in the best case might offer consumers two alternatives for facilities-based wireline voice services, are still far less than perfectly competitive markets. AT&T would have the Commission believe that competition is so intense in the markets where AT&T operates that AT&T could not, for example, transfer any of these savings to its shareholders, its upper management, or its foreign ventures. As mentioned above, where granted rate relief in California, AT&T has found the forces of "competition" so intense that it could raise basic rates by 87% over a four-year period.

J. Step 2 of the State Members Plan on Intercarrier Compensation Reform

The ICC reform proposed by the State Members Plan is at times described as "cost based."⁵⁰⁵ However, the ultimate resolution is anything but cost-based:

The State would require carrier intrastate access rates to meet a standard. That standard would be that each telecommunications carrier in that State would establish a maximum intercarrier per-minute termination rate that is no higher

⁵⁰⁴ Id., p. 35.

⁵⁰⁵ "Moreover, cost-based rates can be established that would not require either increases in SLCs or increases in universal service funding." State Members Comments, p. 153.

than the lower of its own current per-minute interstate termination rate and its average intercarrier compensation terminating rate. The single rate would be available to interstate and intrastate traffic, to traffic delivered by both wireline and wireless carriers, and to toll traffic, and local traffic and ESP traffic.⁵⁰⁶

Thus, the State Members Plan does not propose to remedy the ICC problem through use of a cost-based approach, but instead establishes alternative benchmarks that derive from the existing dysfunctional ICC regime.

The State Members Plan indicates that lost access revenue recovery should be built into the CAF.⁵⁰⁷ NASUCA does not believe that is wise for the Commission to entangle CAF with any access recovery mechanism. The CAF should serve one purpose – to develop a mechanism that supports high-quality voice and broadband services. The end of this process should not be a universal service fund that becomes a Trojan horse for another set of implicit subsidies. The Commission should not add to the convoluted wreckage of the current USF program by deploying new implicit subsidies that can only subvert any reasonable attempt to answer the basic questions of “what is the business case for a service provider to provide voice and broadband services?” And “what is the minimum level of support that is needed to ensure that the business case can be carried out by operators of some reasonable level of competence?”

Given that the State Members Plan proposes a uniform rate, their approach would solve arbitrage problems. However, when viewed in the context of the “Step 2” revenue recovery mechanism, NASUCA has strong reservations regarding the State Members Plan’s approach. While there is no question that ILEC ICC revenues would likely change

⁵⁰⁶ Id., p. 154.

⁵⁰⁷ Id., p. 56.

(either up or down according to the State Members Plan),⁵⁰⁸ the remedy for the impact of the revenue loss should not be the State Members Plan's automatic make-whole approach. As discussed elsewhere in this reply, it is also appropriate to examine whether an ILEC's basic rates are in line with affordable rate standards. If basic rates are unreasonably low, then the ILEC should pursue the needed rate increases before the state commission to minimize its need for an offset from the fund. In addition, while at times addressing the importance of earnings and the impact of non-regulated services on ILEC revenues, the State Members Plan does not provide sufficient safeguards regarding compensation of the ILEC.

K. CenturyLink's Intermediate Position

CenturyLink indicates that ICC rates must be reformed to reduce arbitrage, and states that a two- to four-year transition period should be allowed "to move intrastate rates to interstate levels."⁵⁰⁹ The CenturyLink approach would move both intrastate access and reciprocal compensation rates that are "currently above interstate access rates" to the interstate access level.⁵¹⁰ CenturyLink also states that it is initially appropriate for different carriers to have different interconnection rates, but that in the long run it may be appropriate to have a uniform ICC rate.⁵¹¹ CenturyLink also asserts that it is certain that the uniform rate should not be a zero or near-zero rate.⁵¹² Thus, at least in the near term, CenturyLink proposes to allow each carrier to continue to charge different

⁵⁰⁸ Id., p. 153.

⁵⁰⁹ CenturyLink Comments, p. 8.

⁵¹⁰ Id., p. 58.

⁵¹¹ Id.

⁵¹² Id., pp. 8, 58.

interconnection rates for different services. To the extent that different rates exist for a single carrier, the potential for arbitrage continues. NASUCA's recommendation for there to be uniform interconnection rates for each carrier which vary across carriers based on differences in the carrier's economic costs would avoid this problem.⁵¹³

L. NECA, ET AL.'S Position

NECA, et al. propose that intrastate and interstate switched access rates be unified "at the discretion of the state commissions."⁵¹⁴ This approach appears to be generally consistent with NASUCA's "a call is a call" philosophy and recognition of state authority over intrastate access charges. But NECA, et al. also propose to create a "restructure mechanism" ("RM") to provide RLECs with recovery for revenues lost as a result of the access charge reductions, which is discussed in Section VIII.E.

NECA, et al. also state that with regard to the process of unifying interstate and intrastate access rates, neither a uniform national rate, nor a uniform transition period should be utilized.⁵¹⁵ As discussed elsewhere in NASUCA's opening comments and this reply, access rates must be cost-based, and the cost focus must be on the economic costs of access, and must also provide a contribution to the joint and common costs of the firm.⁵¹⁶

With regard to the transition period, it is not clear why RLECs would require a

⁵¹³ NASUCA Comments, pp. 10-11.

⁵¹⁴ NECA, et al. Comments, p. iii.

⁵¹⁵ *Id.*, p. 20.

⁵¹⁶ NASUCA Comments, p. 10.

long period of time, as suggested by NECA, et al.⁵¹⁷ NECA, et al. indicate that the access rates charged by RLECs are indispensable “for loan repayments, maintenance of existing plant, **and** continued deployment and upgrades of broadband service.”⁵¹⁸ If access revenues are in fact being used to assist with “upgrades of broadband service,” this clearly suggests that current access rates are recovering more than is necessary to address even the RLEC’s embedded costs. Elimination of this implicit support for broadband, if it exists, and replacing it with explicit support if needed, is an objective worthy of pursuit. It appears that many RLECs are likely to have a cushion built into their current access revenues. An additional cushion for ICC reform results from the fact that many RLECs have updated their local plant to provide broadband services, and thus have a new cash flow that will help mitigate the impact of mirroring interstate rates. The bottom line is, however, that there is no a priori reason to believe that RLECs will require a significantly longer transition period than larger carriers.

**M. CONCLUSION ON “REFORMS” TO INTERCARRIER
COMPENSATION RATES**

The Commission lacks the authority to impose its wrong-headed version of ICC on all forms of traffic exchange. A bill-and-keep regime like that proposed by the Commission and supported by AT&T and others – and opposed by NASUCA, Verizon and others – will unfairly disadvantage basic service customers and other end-users, who would be asked to pay a growing share of the joint and common costs of last-mile facilities. Similarly, the unified low rate supported by Verizon causes the same market

⁵¹⁷ NECA, et al. Comments, pp. 21-22.

⁵¹⁸ Id., p. 21, emphasis added.

distortions as does bill-and-keep. As noted in NASUCA’s opening Comments, the Commission’s goal should be to move to a single cost-based ICC rate.⁵¹⁹ To achieve this objective, the Commission should move gradually to a cost-based rate for interstate access charges, and should encourage the states to bring their intrastate access charges to cost-based interstate levels.⁵²⁰ Based on the statutory limitations of 47 U.S.C. § 252(d)(2), the FCC’s current ratemaking methodology for reciprocal compensation – based on TELRIC – should remain, with states retaining their statutory responsibility for setting those rates. While reciprocal compensation and access charges may continue to be different, over time, reciprocal compensation rates should transition to the common cost-based level of access rates. As these changes are made, however, whether as a result of the transition to IP networks or otherwise, the end result should require all calls to contribute to those joint and common costs of networks.

VIII. RECOVERY OF LOST ICC REVENUES

A. OPPOSITION TO REVENUE RECOVERY MECHANISMS

As discussed by NASUCA in opening comments, cost-based access rates will obviate the need for access recovery mechanisms.⁵²¹ Setting a uniform access rate for all types of traffic, and ensuring that that rate covers both direct costs, and provides a reasonable contribution to joint and common costs, is the most efficient approach to

⁵¹⁹ NASUCA Comments, p. 10.

⁵²⁰ As NASUCA has noted (NASUCA Comments, pp. 5-6), current interstate access charges are **not** cost-based. Truly cost-based interstate access charges might well be higher than the current rates.

⁵²¹ *Id.*, p. 10.

solving the ICC problem.⁵²² If access rates were to be set in this fashion, then there should be little need for an access recovery mechanism. Ad Hoc presents an alternative approach to the issue of revenue recovery: “Instead of guaranteeing revenue neutrality as part of ICC reform, the Commission should establish a rebuttable presumption that carriers do not need to raise other rates when ICC charges are reduced or eliminated.”⁵²³ Ad Hoc then goes on to specify a number of factors that the carrier would need to address with regard to carrying their burden of proof.⁵²⁴ NASUCA believes that Ad Hoc’s proposal is reasonable **if** the Commission pursues – as it should not – the non-cost-based approach to reforming ICC, such as imposing a uniform nationwide rate, or bill-and-keep.

When discussing the potential for revenue recovery mechanisms, Ad Hoc raises some other points with which NASUCA agrees. Ad Hoc states that when considering the “revenue recovery” issue that the Commission must consider both regulated and non-regulated revenues.⁵²⁵ Ad Hoc’s observation that “the substantial amount of joint costs and joint infrastructure investment that is required to support both regulated and non-regulated services compels the conclusion that revenues and earnings be evaluated on a combined basis across both sectors”⁵²⁶ is entirely consistent with NASUCA’s view that until the Commission addresses both regulated and unregulated aspects of supported

⁵²² Id., pp. 96-105. As also discussed, statutory principles (both state and federal) may prevent this most efficient result.

⁵²³ Ad Hoc Comments, p. 50.

⁵²⁴ Id.

⁵²⁵ Id., pp. 51-53.

⁵²⁶ Id., p. 53.

carrier operations, that support will continue to be misdirected.⁵²⁷

Ad Hoc also states that the Commission should develop local rate benchmarks and impute benchmark revenues for carriers seeking eligibility for a revenue recovery mechanism.⁵²⁸ As NASUCA discussed earlier in these comments, it may be reasonable for the Commission to make adjustments to USF support levels, in order to protect other consumers from having to support “unreasonably low” basic rates. The same caveats raised with that discussion also apply here. Before basic rates are raised to offset ICC revenue losses, the full operations of the carrier must be evaluated, and basic rates should be last in line for rate increases to offset ICC changes. Ad Hoc points to the need to transition the benchmark to include both voice and broadband revenues.⁵²⁹ NASUCA agrees that both voice and broadband revenues must be addressed when considering the business case for service deployment, and ultimately the level of support that is needed, however, such a benchmark must take into account take-rates, not simply the various service prices.⁵³⁰

Ad Hoc also provides an extended discussion of the SLC, and the potential that SLCs be increased to offset revenue reductions associated with ICC reform.⁵³¹ Ad Hoc’s discussion provides a good dose of reason in light of proposals to use the SLC to make ILECs whole if ICC revenues are reduced.⁵³² NASUCA agrees that targeting the SLC for

⁵²⁷ NASUCA Comments, p. 72.

⁵²⁸ Ad Hoc Comments, p. 54.

⁵²⁹ Id., p. 55.

⁵³⁰ NASUCA Comments, pp. 113-114.

⁵³¹ Ad Hoc Comments, p. 56-62.

⁵³² See, for example, CenturyLink Comments, p. 67; Frontier Comments, p. 11; AT&T Comments, p. 32.

rate increases is not appropriate, especially if such an increase is pursued outside of a full evaluation of the regulated and non-regulated operations of the LEC.⁵³³ NASUCA also agrees with Ad Hoc, as discussed below,⁵³⁴ that the Commission must not use the CAF to address revenue neutrality.

B. AT&T'S PROPOSAL

In contrast to its deregulatory position on the transition away from ICC, AT&T is careful to note that the ICC transition should hold carriers harmless, as compensation for lost access revenues must be made, through one of several regulatory mechanisms. The first layer in AT&T's ILEC regulatory protection plan proposes that the Commission set an initial benchmark rate for local service of \$27, to be increased to \$30.⁵³⁵ Lost carrier access revenues would be offset by basic rate increases up to those levels. The Commission should reject AT&T's back-door approach to intrastate rate making. Furthermore, no mention is made by AT&T of the revenues that ILECs earn from non-basic telephone and non-regulated services, which also provide a source of funds to offset access revenue reductions.

Making basic service customers solely responsible for keeping ILECs whole, while giving IXCs' and wireless carriers' bottom lines a boost through reduction of their access costs, is not the only problem with AT&T's proposal. Given the "dramatic decline" in access minutes year-over-year that is elsewhere described by AT&T,⁵³⁶ it

⁵³³ Ad Hoc Comments, pp. 56-62.

⁵³⁴ See Section VIII.F. below regarding the State Members Plan.

⁵³⁵ As will be discussed further below in Sections VIII.D. and E., other parties also propose a benchmark, typically \$25, including the SLC. AT&T is not clear on whether the SLC should be included in its benchmark, but AT&T's separate discussion of the SLC implies that it is not included in the benchmark..

⁵³⁶ AT&T Comments, p. 12. See also Section II.B., supra.

would appear that AT&T's mechanism will also compensate ILECs for declining access minutes, in addition to declining access charges.⁵³⁷ This would also apparently compensate ILECs for declining access lines, as so graphically shown by AT&T itself.⁵³⁸ Thus, AT&T's approach to access reform will provide a windfall to ILECs that will unfairly burden basic rate customers.

AT&T notes, however, that the basic rate increases may not be sufficient to make ILECs whole for the access rate reductions, and as a result, AT&T separately proposes that the caps on interstate SLCs should also be increased to offset reductions in intercarrier compensation.⁵³⁹ AT&T argues that increasing the SLC caps on such charges does not guarantee that carriers could successfully implement the SLC rate increases, because competition would prevent rate increases.

It is notable that, given basic rate pricing flexibility in California, **adopted as a result of supposed competition**, AT&T has increased basic rates by 87% overall since 2006, with a year-to-year increase of 21% on January 3, 2011.⁵⁴⁰ Thus, the competitive juggernaut that AT&T alleges that it is facing is not sufficient to constrain AT&T's rate increase strategy in California, and there is little reason to believe that competition will

⁵³⁷ To calculate the permissible basic rate increases under AT&T's plan, some level of access usage must be specified, given the declining trend in access minutes, once the benchmark usage is identified, the ILEC would receive a windfall, even if the access minute baseline were reset every year.

⁵³⁸ See *id.*, Attachment A., and discussion in Section II.B., *supra*.

⁵³⁹ AT&T Comments, p. 32.

⁵⁴⁰ For a discussion of rate increases through 2009, see John Adkisson, John Hill, Dorothy Korber, Nancy Vogel. "California Public Utilities Commission: Gaps Emerge in Telephone Consumer Protections," A report prepared for the Rules Committee of the California State Senate. California Senate Office of Oversight and Outcomes July 16, 2010. <http://www3.senate.ca.gov/deployedfiles/vcm2007/senoversight/docs/Gaps%20Emerge%20Report%20pdf> For the 2011 rate increase see AT&T's California tariff Schedule Cal. P.U.C. NO. A5, 11th Revised Sheet 215.

constrain basic rate increases elsewhere. Furthermore, AT&T's plan provides carriers an incentive to fully increase SLC and basic rates, as the third prong of AT&T's make-whole mechanism, its "Access Recovery Mechanism" (or "ARM," discussed below) is offset by the SLC caps, whether or not the carrier has actually increased the SLC.⁵⁴¹

AT&T also notes that the caps that it proposes on basic rates and interstate SLCs may still not offer sufficient protection to certain ILECs. As a result, AT&T proposes that an ARM be funded to offer additional support to ILECs.⁵⁴² These ILECs would be able to draw their "entitlement"⁵⁴³ from the ARM to "recover all of [their] remaining access-charge losses."⁵⁴⁴ AT&T does not explain from where the funding for the ARM will come.

An equally troubling aspect of AT&T's "access-recovery regime"⁵⁴⁵ is the fact that it is overlaid on a system that continues to use basic service charges to provide implicit support for broadband deployment. AT&T states that its overall approach will provide carriers with a "reasonable opportunity to recover sufficient revenues to enable them to continue serving their customers, and to deploy broadband and IP-enabled services."⁵⁴⁶ AT&T's plan thus not only subverts the Commission's objective of transitioning all universal service support to the explicit CAF,⁵⁴⁷ but is also at odds with Section 254(k) of the 1996 Act, which explicitly prohibits no more than a reasonable

⁵⁴¹ AT&T Comments, p. 34.

⁵⁴² *Id.*, p. 33.

⁵⁴³ *Id.*, p. 34.

⁵⁴⁴ *Id.*

⁵⁴⁵ *Id.*

⁵⁴⁶ *Id.*

⁵⁴⁷ NPRM, ¶540.

share of joint and common costs being recovered from the universal service product. Namely, under AT&T's plan, ILEC customers, who pay rising basic rates and rising SLCs and will presumably fund the ARM, will offset the contribution previously made by access payers, and will see those funds be used as implicit subsidies to support broadband.

As the Commission considers how to address issues associated with intercarrier compensation, it should keep in mind perspectives offered by AT&T regarding the relative costs associated with broadband applications, including voice services. AT&T states that growth in IP voice will require attention from carriers regarding latency, but “the marginal demands on carriers from an increase in such traffic would not be substantial. To the contrary, the evidence demonstrates that the rapid rise of streaming video services has posed (and is posing) a much greater challenge....”⁵⁴⁸ Thus, it is puzzling to find that along with AT&T advocating that in this transition to “end state” where voice services will present a marginal role in the volume of network traffic,⁵⁴⁹ AT&T's policy proposal is to impose dramatic increase rates for voice services.⁵⁵⁰

C. Verizon's Transition Fund

Verizon states that carriers should be allowed to draw from a transition fund during the transition to a unified \$0.0007 rate. The fund would be structured to “bring

⁵⁴⁸ AT&T Comments, p. 24.

⁵⁴⁹ This point was made by NASUCA in its July 12, 2010 Comments. “For example, as noted in the Staff report, the typical data usage for a fixed broadband user is about 10 Gigabytes per month. It is reasonable to expect that a fixed voice customer will generate voice usage that would not exceed 340 Megabytes per month. Thus, in terms of overall data usage, the typical voice user transmits about 3% as much data as the typical broadband data user. Given the staff's projected doubling of data usage every three years, the typical voice user's share would fall to about 1% of the typical data user's share by 2015.” Roycroft Affidavit, p. 25.

⁵⁵⁰ AT&T Comments, p. 32.

equity” to retail voice service rates.⁵⁵¹ Carriers that do not set end-user rates “in line with a reasonable nationwide benchmark” would not be allowed to recover from the fund.⁵⁵² Verizon does not identify the retail benchmark that it has in mind. Verizon also states that a carrier’s draw from the fund should not be on a “dollar-for-dollar” basis, that the declining nature of access revenues should also be taken into account, and then proposes a sunset for the fund after three years.⁵⁵³ Verizon’s proposal takes the Commission in the wrong direction. Raising retail voice rates is not a reasonable path to address non-cost-based access rates. Because access costs are likely to vary by carrier, a fact which Verizon tacitly admits,⁵⁵⁴ access rates should be based on the cost structure of the carrier, and should address joint and common costs.⁵⁵⁵

D. CenturyLink’s “Recovery Mechanism”

CenturyLink also indicates that displaced ICC revenues must be “recoverable from retail rates and explicit USF.”⁵⁵⁶ This statement is apparently based on the assumption that the carrier’s ICC rates are not cost-based. If the Commission implements ICC reform in a manner which correctly addresses the carrier’s costs, then there is no need to engage in retail “rebalancing” or to create additional burdens on the USF.

CenturyLink states that ILECs must be allowed to recover any lost access revenues through an access “recovery mechanism” (“RM”). Like AT&T’s proposal, the

⁵⁵¹ Verizon Comments, p. 20.

⁵⁵² Id.

⁵⁵³ Id.

⁵⁵⁴ Id., p. 15.

⁵⁵⁵ NASUCA Comments, p. 10.

⁵⁵⁶ CenturyLink Comments, p. 9.

RM would require that ILECs first increase basic rates (including the SLC) up to a benchmark level of \$25 per line per month, subject to annual \$1 increases.⁵⁵⁷ If sufficient revenues to restore all the lost revenues do not result from these basic rate increases, CenturyLink proposes that ILECs be allowed to draw from a fund to replace all ICC revenues lost. There would be no offset to access rate reductions as a result of expense savings of long-distance and/or wireless affiliates of the ILECs.⁵⁵⁸

As was discussed earlier, these types of make-whole plans should be rejected by the Commission. ILECs like CenturyLink have revenue sources other than basic local service. The Commission must not require basic service customers alone to shoulder the burden of keeping ILECs whole. Absent an evaluation of the ILECs operations, including revenues earned from all services that share facilities with basic service, there is no reason to create a new subsidy fund, regardless of whether the Commission has the authority to create one.⁵⁵⁹

E. NECA, et al.’s “Step Three” Revenue Recovery Mechanism

As noted above, NECA, et al. propose that intrastate and interstate switched access rates be unified “at the discretion of the state commissions.” While this approach appears to be generally consistent with NASUCA’s “a call is a call” philosophy and recognition of state authority over intrastate access charges, NECA, et al. also propose to create a “restructure mechanism” (“RM”) to provide RLECs with recovery for revenues lost as a result of the access charge reductions.

⁵⁵⁷ Id., p. 65.

⁵⁵⁸ Id., p. 66.

⁵⁵⁹ Id., pp. 68-70.

In addition, like CenturyLink's and Windstream's proposal, NECA, et al. propose that basic rates, which include weighted average rates, SLCs, and state USF contribution increase up to a capped amount of \$25 before additional compensation is granted.⁵⁶⁰ Once that threshold is reached, the RLECs in the state where reform has occurred will be eligible to receive funds from the new RM component of the CAF equal to the reduction in revenues associated with implementing mirroring.⁵⁶¹ With the \$25 benchmark, NECA, et al. estimate that the size of the RM would be \$215 million per year.⁵⁶² NECA, et al. propose that the RM would be resized on an annual basis to reflect a new interstate switched access revenue requirement.⁵⁶³

For the same reasons that NASUCA has already discussed regarding similar make-whole proposals, the Commission should also reject NECA, et al.'s approach. Here too there is no mention made by NECA, et al. of the impact of revenues other than basic service on the ability of RLECs to continue their operations. NECA, et al. state elsewhere that over 92% of RLEC customers now have access to broadband.⁵⁶⁴ Because many RLECs have upgraded their plant to provide the full range of voice services, as well as high quality broadband, and possibly, video services, these revenue sources must also be considered prior to imposing residential rate increases.

NECA, et al. indicate that the Commission should not consider revenues from non-regulated services, because this would represent a reversal of FCC policy that has

⁵⁶⁰ NECA, et al. Comments, p. 16.

⁵⁶¹ Id.

⁵⁶² Id., p. 17.

⁵⁶³ Id.

⁵⁶⁴ Id., p. 64.

“for more than forty years emphasized the importance of keeping regulated and non-regulated costs and revenues separate.”⁵⁶⁵ NECA, et al. suggest that while the Commission is free to change its mind, a reviewing court would be “bound to question why, after insisting for years carriers keep costs of non-regulated services out of regulated accounts, the Commission suddenly has developed an interest in counting non-regulated revenues as an offset to federal funding.”⁵⁶⁶ While it is difficult to predict with particularity what a reviewing court might question, the fact that the non-regulated services in question (broadband and video) are being provided over shared facilities which have been receiving support out of a program designed to advance voice telephone service might instead lead a reviewing court to question what has taken the Commission so long to consider these revenues.

NECA, et al. go on to state that if the Commission considers revenues from non-regulated services, the Commission should do so on a net basis, “i.e., after accounting fully for the *costs* of such activities.”⁵⁶⁷ As discussed above, if the universal service program is to be correctly reformed, the Commission must gain a full understanding of the business case associated with broadband deployment. This will include both the costs and revenues associated with all services that are provided over shared broadband facilities.

F. THE STATE MEMBERS ACCESS REVENUE RECOVERY MECHANISM

The State Members Plan indicates that access recovery should be built into the

⁵⁶⁵ Id., p. 18.

⁵⁶⁶ Id., p. 19.

⁵⁶⁷ Id., emphasis in the original.

CAF. Thus the access revenue recovery mechanism is subject to the other limitations embodied in the State Members Plan. But the State Members Plan grants carriers the **higher** of their access revenue recovery and cost-based support.⁵⁶⁸ This comes dangerously close to a revenue guarantee, which is wrong for the many reasons explained in NASUCA's initial comments.⁵⁶⁹ While there is no question that ILEC ICC revenues would likely change (either up or down according to the State Members Plan),⁵⁷⁰ the remedy for the impact of the revenue loss should not be the State Members Plan's approach.

As discussed elsewhere in this reply, it is also appropriate to examine all revenue sources, both regulated and unregulated, in addition to whether an ILEC's basic rates are in line with affordable rate standards. If a carrier is receiving sufficient revenues from its services other than access, there is no need for an access revenue recovery process. Alternatively, if basic rates are unreasonably low, then the ILEC should pursue the needed rate increases before the state commission to minimize its need for an offset from the fund, which is paid by customers of other companies and other states. In addition, while at times addressing the importance of earnings and the impact of non-regulated services on ILEC revenues, the State Members Plan does not provide sufficient safeguards regarding compensation of the ILEC.

⁵⁶⁸ State Members Comments, p. 59.

⁵⁶⁹ NASUCA Comments, pp. 109-116.

⁵⁷⁰ State Members Comments, p. 153.

IX. CONCLUSION

The Commission should abandon its ill-advised attempt to adopt a comprehensive solution for issues regarding the USF, broadband deployment, and ICC. Instead, the Commission should undertake the short-term reforms for the USF and ICC discussed in Section XV of the NPRM and here, and then address the longer-term issues. In the long (or the short) term, the Commission should not have as its goal the reduction or elimination of ICC. In addition, the Commission should not adopt the so-called “reverse auction” process for bringing broadband to unserved areas.

Respectfully submitted,

/s/ David C. Bergmann

David C. Bergmann
Assistant Consumers’ Counsel
Chair, NASUCA Telecommunications
Committee
Office of the Ohio Consumers’ Counsel
10 West Broad Street, Suite 1800
Columbus, OH 43215-3485
Phone (614) 466-8574
Fax (614) 466-9475
bergmann@occ.state.oh.us

NASUCA
8380 Colesville Road, Suite 101
Silver Spring, MD 20910
Phone (301) 589-6313
Fax (301) 589-6380

APPENDIX A

The NRIC Regression Model and Regression Modeling for USF Purposes

Given that the NPRM's proposal appears to be based on the regression analysis conducted by NRIC, some discussion of NRIC's methodology is in order. NASUCA's ability to fully comment on NRIC's approach is limited, both because of time constraints and the fact NRIC did not provide detailed regression results, either with its filed comments, or in the material supplied to the Commission through an ex parte on January 7, 2011.⁵⁷¹ NRIC did file an ex parte on May 10, 2011 providing additional detail, but it does not appear that this addresses the concerns set forth here.⁵⁷²

The first thing to note about the NRIC study is that the approach was subject to substantial sample bias.

The original engineering data included approximately 430 projects, but approximately 60% of the data points were eliminated through a "gating process," which compared known engineering data to an analogous publicly-available Geographic Information System ("GIS") variable. Unfortunately, this process resulted in the elimination of some valid data and required a few states originally represented in the sample to be omitted.⁵⁷³

Thus, NRIC's approach is not based on anything like a random sample. In developing regression analysis, sampling must not be biased, and whether NRIC's approach can be improved, or whether data limitations will be a persistent problem, is not clear to NASUCA.

The second point regarding NRIC's approach is that it induces a strong sensation

⁵⁷¹ Letter from Thomas Moorman, Counsel to Nebraska Rural Independent Companies, to Marlene H. Dortch, FCC, WC Docket Nos. 10-90, 05-337, GN Docket No. 09-51, Attachment (dated Jan. 7, 2011) ("NRIC Study").

⁵⁷² See footnote 10, above.

⁵⁷³ NRIC Comments, p. 18.

of déjà vu regarding the issues that arise with its implementation. The sense of having seen this somewhere before arises as the NRIC “regression” analysis begins with an *engineering cost model*, and thus reflects the types of issues that the Commission has addressed in the past when developing its own engineering cost model:

The primary resource was a set of cost estimates produced by Vantage Point Solutions, Inc. (VPS), an engineering company located in Mitchell, South Dakota. These data reflected the engineering estimates of Fiber-To-The-Premises (FTTP) construction by incumbent local exchange carriers.⁵⁷⁴

Costs included labor, materials and engineering. For each cost record, VPS provided the following data:

- Central office FTTP electronics, optical network terminals (ONTs), spares, miscellaneous materials, and Central Office (CO) and ONT installation costs.
- Outside plant costs, including mainline optical cables, drops and fiber management equipment, with labor included.
- Engineering costs.
- Route miles for mainline cables and for drops.
- Number of locations served.
- Land area.⁵⁷⁵

Given this engineering cost foundation, NRIC’s consultants had to address some familiar-sounding issues:

In some remote rural areas, the GIS-produced road miles do not accurately reflect cable route miles. The GIS road miles were calculated by summing road mileages in census blocks with a population greater than zero. In extremely remote areas, such as Montana, some of the distance between subscriber locations may traverse census blocks without population. Consequently, summing the road mileage within populated census blocks understates the actual route miles needed to connect to customers’ locations.⁵⁷⁶

Analysts discovered that census households are not always a reasonable proxy for actual subscriber locations, especially in areas with a large number of seasonal homes. When constructing outside plant, cable must be sized to serve seasonal

⁵⁷⁴ “Nebraska Rural Independent Companies’ Capital Expenditure Study, Predicting the Cost of Fiber to the Premise, January 2011,” p. 1, filed with the NRIC Study.

⁵⁷⁵ *Id.*, p. 3

⁵⁷⁶ NRIC Comments, p. 20.

homes and vacant locations where a customer may request service.⁵⁷⁷

In addition to the area served, number of locations and cable miles, other variables such as terrain, climate, and the number of obstructions were thought to be related to construction cost. For each engineering project, GIS data from public sources was obtained that reflected these variables. Specifically, the supplemental GIS data included Soils Texture, Bedrock Percentage, Road Intersections Frequency, Stream Crossings Frequency, Wetlands Percentage, Frost Index, and Rain Frequency. The GIS data was weighted to reflect the area under study.⁵⁷⁸

Certainly, the Commission has considered issues of this variety before, when developing its cost model. While NASUCA's evaluation is preliminary, and might benefit from more information provided by NRIC, many questions remain. If one must start with an engineering cost model to develop the regression analysis, how does this solve the problems of using an engineering cost model? In the NRIC approach, the engineering cost model remains as the "man behind the curtain," and the outcome of the regression analysis would appear to hinge on the many assumptions associated with the cost model. It appears that with NRIC's approach all of the "controversy" of a cost model remains, and the regression approach will only introduce another layer of controversy, which will be discussed further below.

It is not clear from the NPRM, however, whether the regression approach envisioned is intended to be based on data developed through an engineering cost model, or from embedded costs. Regression analysis requires reliable data, and this data requirement will likely be its undoing if the Commission attempts to reform high cost support based on regression analysis using embedded cost data. When conducting regression analysis, two factors are key – the accuracy of the data set and the size of the

⁵⁷⁷ Id., p. 19.

⁵⁷⁸ Id., pp. 49-50.

data set. If the data set does not contain accurate data, then the adage of “garbage in, garbage out” will apply. What data set the Commission is considering is not clear:

Specifically, we propose to use regression analyses to estimate appropriate levels of opex and capex for each incumbent study area. Drivers of capex likely include factors such as density (area density, e.g., homes per square mile; or linear density, e.g., homes per linear road mile), topography, and soil type. Drivers of opex could include such line items as *staff salaries, rent, and power costs*. From a modeling perspective, we could parameterize these costs in terms of quantities more easily modeled or captured in data, such as *plant investment* (more plant investment being indicative of, for example, more employees to operate and maintain operations) or the number of subscribers (e.g., as an indicator of billing and customer care costs).⁵⁷⁹

It is not clear from this discussion whether the NPRM is targeting engineering costs or historical, embedded cost data. If the NPRM is considering embedded cost data, such an approach would represent a giant step backward from the Commission’s long-standing commitment to utilize a forward-looking economic cost methodology.⁵⁸⁰ Data for the proposed regression approach will be historic, and based on historic ILEC technology and business models. Thus, while the regression process might be capable of telling the Commission something about the current state of the world based on this backward-looking historical information, it will tell the Commission little or nothing about the **efficient** operations of an ILEC, which is the only outcome that will allow the Commission to effectively reform high cost support.

There are other reasons to reject the regression approach. In the first place, use of regression analysis as proposed in the NPRM would be limited to ILEC technology, and

⁵⁷⁹ Id., emphasis added.

⁵⁸⁰ See, for example, *In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996 Interconnection between Local Exchange Carriers and Commercial Mobile Radio Service Providers*, CC Docket Nos. 96-98 & 95-185, First Report and Order, FCC 96-325, August 8, 1996, ¶621.

would be based on ILEC data.⁵⁸¹ Thus, alternative technologies would have no impact on the Commission’s ability to determine the costs of an “efficient carrier.” This significantly limits the usefulness of regression analysis, as opposed to a well-developed cost model.

Second, even if the regression analysis can be performed without the benefit of an engineering cost model, it is not clear why that analysis would be any less contentious than the use of a cost model. Regression analysis will be controversial, and, as will be discussed further below, there is an inherent tension in using regression analysis associated with sample sizes that make that approach problematic for use in benchmarking cost levels.

A third and critical problem with regression analysis is that the quality of the analysis will depend on the sample size that the Commission uses. If the Commission performed the regression analysis on all supported ILECs, the analysis would generate regression results that reflect a line of best fit for the overall population. This measure of central tendency might generate problems, because the coefficient estimates for the entire population may not reasonably reflect the operations of the ILECs that are either much larger or much smaller than the average values associated with the line of best fit associated with the regression outcome.⁵⁸² If the Commission were to generate a regression equation to project capex and opex, and attempted to utilize the coefficient values produced by the regression to predict the specific capex and opex levels associated with an ILEC, it could be assured of the fact that unless a specific ILEC had

⁵⁸¹ WGA, p. 24.

⁵⁸² The regression line will pass through the mean of the dependent and independent variables.

characteristics that were very similar to the average data values, the cost projection would be meaningless for other ILECs. The cost estimation process will likely generate “winners” and “losers.” The regression approach will likely unduly reward some companies, and punish others, as regression-based support could over- or under-compensate certain carriers due to the carrier’s specific relationship to the data values in the overall regression.

On the other hand, if the Commission produces many regressions based on ILECs with similar identifiable characteristics (e.g., number of access lines),⁵⁸³ other problems emerge due to smaller sample sizes associated with numerous regressions. Smaller sample sizes will undermine the strength of the estimators. CenturyLink notes this problem that is inherent with regression analysis:

A regression-based model will fail to produce accurate cost data that reflects the original source data. Normalizing and averaging data points to fit a regression equation to estimate costs at a discrete geographic level will necessarily contain an unacceptably large level of error because the regression equation cannot consider all of the variables that ultimately determine cost in a particular area.⁵⁸⁴

To overcome these difficulties, the Commission might look just at the specific historical costs of each ILEC, and then grant support based on those costs. Of course, this is simply what rate-of-return regulation attempts to do, and the Commission has been on the record as wanting to move away from that approach, even within the NPRM.⁵⁸⁵

⁵⁸³ “Given sufficient source data, we could potentially create different regressions for operators of different size to capture scale effects.” NPRM, ¶203.

⁵⁸⁴ CenturyLink Comments, p. 43.

⁵⁸⁵ NPRM, ¶397.

APPENDIX B THE VANTAGE POINT STUDY

The problems with applying indices to historic plant accounts are many, especially if the Commission is attempting to encourage the efficient provision of broadband to meet universal service objectives. By beginning with booked investment and the LEC's continuing property records,⁵⁸⁶ the Vantage Point approach will essentially lock-in the prospective payments to the level of, and associated technology of, past investments. Such an approach will not be able to contribute to an estimate of an efficient level of forward-looking investment needed to achieve broadband goals. Further compounding the problem associated with the use of booked investment values, the Vantage Point approach then proposes to "gross up" booked investments based on a price index like the CPI.⁵⁸⁷

As the Commission is well aware, current ILEC loop plant design is not the only path forward with regard to broadband deployment, thus the Vantage Point approach may exclude more efficient technologies. Even if ILEC loop plant is the best path forward, grossing up booked investments by a price index like the CPI will not result in values that have any relationship to the forward-looking investment needed to satisfy the Commission's broadband objectives.⁵⁸⁸ The Vantage Point approach thus fails to provide a reasonable foundation for fixing the problem. While the ultimate magnitude of the amount of capital expenditures allowed by the Vantage Point method is difficult to predict, the Commission can be certain that whatever the level, it will have no

⁵⁸⁶ Vantage Point Study, p. 6.

⁵⁸⁷ Id.

⁵⁸⁸ See Table 1 and associated discussion in Section VI.A.2. of these reply comments regarding cost trends for telephone plant.

relationship to the efficient level of capital expenditures that will promote the Commission's broadband objectives.

Step 2 of the Vantage Point approach determines the "Future Allowable Investment." The Vantage Point Study indicates that LECs should be allowed to "replace plant that has reached the end of its Economic Life."⁵⁸⁹ While Vantage Point never specifically defines "Economic Life," the commonly accepted meaning of that term is the period of time that assets are expected to be usable, thus corresponding to the period of depreciation. Economic life may be shorter than the physical life of the asset.⁵⁹⁰

A voice-grade local loop is a multi-product input, and can provide voice and data services. Other loops may be able to provide voice and low-quality broadband. It may well be the case that a loop that has reached the end of its economic life with regard to broadband (or never even had the chance to begin that life) has many years of useful life remaining for the provision of local and long distance services, vertical features, and even dial-up data services. While Vantage Point does not address this issue, the Vantage Point approach would "zero-out" the economic value associated with the remaining useful life for the non-broadband services that can still be associated with narrowband loops, thus claiming the full replacement cost of the loop.

Vantage Point proposes to "estimate the amount of loop investment that has reached the end of its Economic Life" by taking the "ratio of accumulated depreciation to gross plant for local loop investment from a company's financial records."⁵⁹¹ This ratio

⁵⁸⁹ Id.

⁵⁹⁰ NECA, et al. describe the "economic life" concept used by Vantage Point as "useful life." NECA, et al. Comments, p. iii.

⁵⁹¹ Vantage Point Study, p. 6.

would then be multiplied by the index-inflated loop investment from Vantage Point's Step 1, to yield the "Future Allowable Investment."⁵⁹² Vantage Point also proposes that if a LEC's investment level exceeds the Future Allowable Investment, that the company should be able to carry forward that investment, to be included in the next year's calculation of Future Allowable Investment.

The Vantage Point approach hinges on depreciation rates, but Vantage Point reveals another problem with implementing its approach, namely that "there is no standard for depreciation rates among companies."⁵⁹³ Vantage Point suggests that FCC depreciation ranges adopted in CC Docket No. 98-137 be used.⁵⁹⁴ Vantage Point also acknowledges that the success of its method depends on "the accuracy of the investment and depreciation amounts of loop plant in the company financials,"⁵⁹⁵ but concludes that because the errors will show up in both the numerator and denominator of its ratio, the errors will cancel out.⁵⁹⁶ If Vantage Point has a proof of the accuracy of this cancellation process, it does not offer it, and an exact cancellation of multiple errors seems highly unlikely. Given that Vantage Point also admits that these companies have not even been applying similar depreciation rates, there will be widespread variation in company practices with regard to booking investments, retirements, and accumulated depreciation.⁵⁹⁷ As a result, it seems highly doubtful that any sort of a consistent

⁵⁹² Id.

⁵⁹³ Id., p. 7.

⁵⁹⁴ Id.

⁵⁹⁵ Id.

⁵⁹⁶ Id.

⁵⁹⁷ Id.

outcome would be produced (ignoring the fact that Vantage Point is proposing to apply this ratio to booked investments that have been grossed-up by a price index like the CPI).

Vantage Point’s Step 3 involves spreading Future Allowable Investment over an investment period. Vantage Point states that allowing companies to invest the entire Future Allowable Investment over a short period for purposes of USF recovery may put “too much demand on the universal service fund.”⁵⁹⁸ Vantage Point states that companies should be allowed to replace over a 5-year period plant that has reached the end of its Economic Life. This implies that the LEC would be allowed to invest up to 20% of its Investment Amount from Step 1 in any given year for purposes of USF recovery, but cannot exceed the Future Allowable Investment from Step 2.⁵⁹⁹ Vantage Point’s approach allows carry-forward amounts to be eligible for recovery, unless the carry forward is greater than the Future Allowable Investment.⁶⁰⁰

While Vantage Point’s Step 3 contains provisions to prevent excessive payment in a short period, this safety valve does nothing to fix the underlying problems associated with generating the “Future Allowable Investment.” Vantage Point’s methodology, when viewed as a whole, can only lead to the continuation non-cost-based support, and all of the distortions that accompany such an approach.

⁵⁹⁸ Id.

⁵⁹⁹ Id.

⁶⁰⁰ Id., p. 8