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
High-Cost Universal Service Support	)	WC Docket No. 05-337

REPLY COMMENTS OF THE NATIONAL ASSOCIATION OF 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 ON NOTICE OF INQUIRY

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SUMMARY

The July 12, 2010 comments filed in response to questions raised in the Notice of Inquiry provide the Commission with a range of perspectives. These reply comments will address several key issues raised in the opening comments.

With regard to the use of a cost model, NASUCA, the Maine Office of Public Advocate, Office of the Ohio Consumers' Counsel, Pennsylvania Office of Consumer Advocate, and The Utility Reform Network respond to the many parties, mainly rural ILECs, who argue that cost models cannot be utilized for their operations, because of the unique characteristics of their constituents' service areas that prevent modeling from accurately predicting needs in their region. NASUCA noted in opening comments that the Commission must develop a robust and flexible cost modeling approach. If the Commission develops a "good" cost model, then it will have the ability to address both the typical and atypical issues associated with satisfying the National Broadband Plan's objectives.

Various parties also addressed the issue of whether to include revenues in the broadband model. Some parties offer the Commission a red herring, stating that including revenues in the modeling process will destroy the incentive to invest. However, the solution is not to rely on costs only, but to utilize a revenue **benchmark**. Use of a revenue benchmark would provide all necessary incentives for a carrier to maximize revenues, but will also **reduce the amount of support needed**. The use of a revenue benchmark would also have the advantage of promoting best practices, i.e., encouraging firms to deploy new services (e.g., video) on their broadband networks.

Many parties addressed the 4 Mpbs download/1 Mbps upload speed standard discussed in the NoI. Most of these parties agreed with NASUCA's position that the 4/1 standard would disadvantage rural America, in light of the NBP's long-term goal of delivering 100 Mbps service to 100 million households. However, a few among those filing comments stated that the 4/1 speed standard is too high. The Commission should not open a race to the bottom when it comes to upload or download broadband speeds, and should reject requests to degrade the NBP's standard.

Parties addressed satellite broadband. NASUCA continues to believe that satellite broadband should be considered as an option for the most difficult-to-serve cases. However, the claims that satellite broadband is the panacea for the nation's broadband problems are questionable. Current satellite broadband is relatively slow, very expensive, and has usage limitations that would be viewed as draconian by a wireline broadband user. NASUCA, while supporting a potential role for satellite broadband, does not believe that this Commission should rely exclusively on this platform, as current and envisioned satellite deployments will not provide reasonably comparable data speeds to rural areas. Should the Commission rely on satellite technology, it must address pricing and download restrictions so as to not disadvantage rural areas.

Some parties indicate that the Connect America Fund should be used to build out facilities to anchor institutions. NASUCA certainly is in favor of anchor institutions having the ability to obtain the bandwidth that they need, but NASUCA is concerned regarding proposals to fund this buildout through the CAF. NASUCA does not believe that CAF, which should be focused on support for broadband for residential and small business consumers, should be expanded to also fund broadband buildouts to anchor institutions. Buildouts to anchor institutions should be addressed separately by the Commission.

There are many, mainly rural, ILECs who advocate for the status quo of implicit support for broadband through rate-of-return regulation and existing universal service support mechanisms. NASUCA does not dispute that ROR regulation provides the regulated firm "incentives." However, there is little evidence that ROR regulation provides a uniform or reasonable incentive structure with regard to the deployment of high-quality and affordable broadband. Thus, regardless of the ultimate disposition of the issue of ROR regulation, the Commission should recognize that, among rural LECs, ROR regulation has led to widely varying results – with many areas served by only the lowest quality broadband services. By creating an incentive structure to deliver broadband, the Commission can improve outcomes and meet the objectives in the NBP. It is clear that "ROR regulation" as administered by the Commission and by the states does not inherently contain the incentive structure that is needed to satisfy the NBP's goals.

The comments supply the Commission with ample, if questionable, information to consider regarding the issue of reverse auctions. In opening comments, NASUCA advised the Commission that reverse auctions are fraught with problems and are not likely to provide a reasonable means to distribute support in high-cost areas. Many other parties expressed opposition to the use of reverse auctions. The comments do contain proposals for reverse auctions and other bidding approaches, designed to either replace or supplement the existing universal service program. NASUCA responds in detail to these various proposals. However, regardless of the details associated with any specific auction device, two fundamental problems plague the potential workability of the auction process: (1) Auctions, if they are to deliver the benefits of competition, must attract numerous entrants – bidders who will earnestly compete against one another for the right to receive the support that will be provided by the universal service program. No party filing comments provided a scintilla of evidence that auctions for broadband will generate robust bidding competition, especially in currently-unserved areas. NASUCA believes this to be the case simply because there is **no** reasonable basis to expect robust bidding competition. (2) The second intractable issue associated with auctions is the definition of bidding areas. Given the presence of incumbents, mainly RLECs that already receive universal service support, establishing a "competitively neutral" bidding area is virtually impossible. Use of ILEC-based geography (e.g., wire centers) will disadvantage any bidding rival, and thus discourage entry. Using "neutral" geographies creates alternative problems. Census block groups are much more numerous than wire centers, arbitrary in shape, and often do not correlate well with any company's business plan. Moreover, they often cut across

geographic barriers, such as mountains and rivers, and ignore clustering of customers that would be relevant to any prospective provider of universal service. Given the potential importance of the ILEC in any bidding process, creating bidding areas that extended beyond those companies' home turf would likely deter entry and lead to failed auctions. NASUCA wishes that there was a "magic pill" to fix the existing universal service mess. However, at this point it should be clear that adding reverse auctions to the current mix will only make matters worse.

NASUCA encourages the Commission to carefully consider the information that NASUCA has supplied in both the opening and reply round of comments in the NoI. Reforming universal service programs, and expanding those programs to address the NBP's objectives with regard to broadband, will require much hard work. However, the Commission's labors will be much lighter if it ignores the often self-serving advice of many of those parties filing comments in this proceeding. A common theme in the opening comments is that changing the status quo is impossible. Change is never easy, but changes must occur. The revolution in technology associated with broadband must be reconciled with the policy objectives identified in the Telecommunications Act and in the NBP. By making tough decisions, the Commission can minimize disruptions, and deliver support to a new integrated communications platform that will deliver both high quality and affordable voice and broadband services.

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NOTICE OF INQUIRY

I. INTRODUCTION

On April 21, 2010, the Federal Communications Commission ("FCC" or "Commission") released a combined Notice of Inquiry ("NoI") and Notice of Proposed Rulemaking ("NPRM").[1] The NoI sought "comment on whether the Commission should use a model to help determine universal service support levels in areas where there is no private sector business case to provide broadband and voice services" and sought "comment on the best way [for the Commission] to create an accelerated process to target funding toward new deployment of broadband networks in unserved areas, while[it is] considering final rules to implement fully a new CAF funding mechanism that efficiently ensures universal access to broadband and voice services."[2] The

[1] FCC 10-58 ("NoI/NPRM").

[2] Id., ¶ 2.

accompanying NPRM sought "comment on specific common-sense reforms to cap growth and cut inefficient funding in the legacy high-cost support mechanisms and to shift the savings toward broadband communications."[3]

Given the significantly different focuses and purposes of the two requests for comment, the National Association of 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 (collectively, "NASUCA") filed separate comments on the two requests. It does not appear that any of the other commenters did the same.[4] And, like NASUCA, many of the other commenters felt the necessity to submit comments that went beyond the four corners of the NoI (and the NPRM). These reply comments, however, focus on the issues set forth in the NoI.[5]

There were more than 90 comments filed on the NOI (and the NPRM). These reply comments will not pretend to address all of those comments, or even all of the NoI issues raised by any single commenter.[6]

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[3] Id.

[4] Some of the comments – despite mentioning both the NoI and the NPRM – focused exclusively on the subjects in the NPRM.

[5] Responses to some of the "off-topic" issues are contained in NASUCA's separate reply comments on the NPRM.

[6] Comments responded to here include those from ADTRAN, Inc. ("ADTRAN"); Alaska Communications Systems ("AK CS"); Alaska Telephone Association ("AK TA"); Alexicon Telecommunications Consulting ("Alexicon"); Arginbright & Kirkpatrick Attorneys at Law ("Arginbright"); AT&T Inc. ("AT&T"); Blooston Rural Carriers ("Blooston"); CenturyLink; Comcast Corporation ("Comcast"); Communications Workers of America ("CWA"); CTIA – The Wireless Association® ("CTIA"); Farmers Telecommunications Cooperative, Inc. ("Farmers"); Fidelity Telephone Company ("Fidelity"); Five MACRUC States ("MACRUC"); Fred Williamson and Associates ("Williamson"); George Mason University's Mercatus Center ("Mercatus"); GTA Telecom, LLC ("GTA"); Home Telephone Company ("Home"); Hughes Network Systems, LLC ("Hughes"); ICORE Companies ("ICORE"); Independent Telephone & Telecommunications Alliance ("ITTA"); Indiana Utility Regulatory Commission ("In URC"); Internet2; John Staurulakis, Inc. ("Staurulakis"); Kentucky Telephone Association ("KY TA"); Massachusetts Department of Telecommunications and Cable ("MDTC"); Missouri Small Telephone Company Group ("MO STG"); National Association of Telecommunications Officers and Advisors and the New America Foundation's Open Technology Initiative ("NATOA"); National Cable & Telecommunications Association ("NCTA"); National Exchange Carrier Association, Inc., et al. ("Rural Associations"); National LambdaRail, Inc. ("LambdaRail); Nebraska Public Service Commission and North Dakota Public Service Commission ("Neb/ND

In the comments, there was some support for the idea of a broadband model, in part depending on the purposes to which the model is to be put. NASUCA was in that group. Based on the information in the NoI, of course, there was little certainty as to that purpose. There was very little specific support for the FCC staff-developed National Broadband Plan ("NBP") model itself, with much criticism of various pieces of the model.[7] NASUCA was also in that group. One of the most frequent criticisms, which also gave rise to most of the questions, was the lack of transparency (so far) in the model. It is clear that if any progress is to be made in evaluating the model, commenters must be able to examine the model more closely, and actually operate it.

These reply comments will address various issues that NASUCA raised to the model, and identify the commenters who agree with NASUCA on these objections. And the reply comments will also assess objection additional to those raised by NASUCA, where the objections are valid.

In response to the Commission's request for comment on an accelerated process for disseminating support while a model is being finalized, there was much discussion of the use of auctions to determine support for broadband networks, both pro and con. These reply comments

PSCs"); Pennsylvania Public Utility Commission ("PA PUC"); Public Utilities Commission of Ohio ("PUCO"); Public Service Commission of the State of Missouri ("MO PSC); Qwest Communications International Inc. ("Qwest"); Regulatory Commission of Alaska ("AK RC"); Rural Cellular Association ("RCA"); Rural Independent Competitive Alliance ("RICA"); Schools, Health and Libraries Broadband Coalition ("SHLB"); Small Company Committee of the Louisiana Telecommunications Association ("LA STA"); South Dakota Telecommunications Association ("SD TA"); Sprint Nextel Corporation ("Sprint"); TCA; TechAmerica; Texas and Oklahoma Small Company Group ("TX/OK SCG"); Texas Statewide Telephone Cooperative, Inc. ("TSTCI"); The Border Companies ("Border"); Time Warner Cable, Inc. ("TWC"); T-Mobile USA, Inc. ("T-Mobile"); United States Cellular ("US Cellular"); USA Coalition ("USACo"); United States Telecom Association ("USTelecom"); Utah Rural Telecom Association, ("UT RTA"); Verizon and Verizon Wireless ("Verizon"); ViaSat, Inc. and WildBlue Communications, Inc. ("ViaSat and WildBlue"); Warriner, Gesinger & Associates ("Warriner"); Washington Utilities and Transportation Commission ("WUTC"); Windstream Communications Inc. ("Windstream"); Wyoming Public Service Commission ("WyPSC").

[7] The NoI refers to the staff's model as the "National Broadband Plan model." However, the staff documentation identifies the model alternatively as the "Broadband Availability Gap model" or the "Broadband Assessment Model (BAM)." As with the initial comments, for consistency, these comments use the "NBP model" designation to refer to the staff's model, although direct quotations from documents may contain any of these designations.

will address those issues. The reply comments will also address other commenters' discussion of the auction process, in an attempt to arrive at a process that will be efficient and effective in achieving our national goal of broadband deployment. NASUCA made such proposals.

In addition, these reply comments will address other issues raised by commenting parties, including the 4/1 speed standard, the role of satellite broadband, buildouts to anchor institutions, and whether rate-of-return ("ROR") regulation has delivered high quality and affordable broadband consistent with the NBP's goals.

What these reply comments will **not** do, however, is to repeat much of the discussion contained in NASUCA's initial comments. NASUCA supports that discussion, and it should be deemed to be incorporated here in full.

NASUCA's initial comments were supported by and relied on the work of Dr. Trevor R. Roycroft, who supplied an extensive affidavit regarding many of the issues.[8] These reply comments rely on Dr. Roycroft's work even more heavily.

II. USE OF A COST MODEL

The NoI requested comment on the usefulness of a cost model.[9] NASUCA reiterates its position that a well-designed model might provide benefits, but that the model must be a good model.[10] NASUCA did not find any party that was supportive of the NBP model as released.

AT&T and USTA also expressed concern regarding the development of a model without a clear indication of how the model might be utilized, or how the Connect America Fund

[8] Dr. Roycroft's engagement was supported by the Maine Office of Public Advocate, Office of the Ohio Consumers' Counsel, Pennsylvania Office of Consumer Advocate, and The Utility Reform Network.

[9] NOI, ¶ 13.

[10] NASUCA Comments, p. 8;

("CAF") might be structured.[11] Comcast stated that a properly constructed cost model could make the funding process more transparent.[12] Qwest stated that a model may be used to distribute support in high cost areas, and also may be useful for setting reserve prices.[13] Like NASUCA, Qwest pointed to the Commission's ten cost modeling criteria from FCC 97-157 as providing a reasonable framework for the modeling process.[14] Windstream, while generally advocating for the use of a bidding mechanism, states that a model may be useful to evaluate bids.[15] US Cellular, T-Mobile, CTIA, and RCA all supported the idea of a model.[16]

Many parties ruled out the use of a model under any circumstances, however. Problems with models due to unique geographies were addressed by AK CS, AK RC, and the WyPSC.[17] NASUCA believes that the concerns expressed by these entities fall under the "good model" concern expressed by NASUCA. If a robust model is to be developed, it must be flexible enough to address the diversity of geography in the United States. The Commission cannot develop a "one-size-fits all model" as there are unique circumstances facing rural and insular areas. However, the Commission should not allow the exceptions to disprove the rule. There is enough commonality in rural areas across the country to make the construction of a model a practical and beneficial exercise.

Other parties indicated that using a model is just too difficult. NCTA's comments are representative:

[11] AT&T Comments, p. 14; USTA Comments, pp. 20-22.

[12] Comcast Comments, p. 15.

[13] Qwest Comments, p. 5.

[14] Id., p. 15.

[15] Windstream Comments, p. 16.

[16] US Cellular Comments, p. 19; T-Mobile Comments, p. 13; CTIA Comments, p. 21; RCA Comments, p. iii.

[17] AK CS Comments, p. 5; AK RC Comments, pp. 3-4; WyPSC Comments, p. 10.

> If the Commission were to use the cost model developed for the Plan, for example, it would have to devote considerable time and resources to improving and refining that model so that it can efficiently and reliably complete three critical tasks: (1) accurately identifying unserved areas and determining how close existing facilities come to these areas; (2) developing algorithms to determine how these existing facilities could be extended to reach the unserved areas; and (3) deciding on the hundreds of inputs that would enable the model to calculate the costs of building these new facilities.[18]

There is no question that developing a model will take work. The Commission can draw on its experience in developing the Hybrid Cost Proxy Model ("HCPM") to make the process as efficient as possible. Furthermore, the impact of the Commission proceeding without the use of a model will be measured in wasted dollars: Without an economic cost foundation, reforming universal service programs will cost more, and will likely deliver less than would be possible if the Commission had the information produced by a cost model. The primary alternative to a model, as discussed in Section VIII. and IX. below, is some type of competitive bidding mechanism such as a reverse auction. These bidding mechanisms are unlikely to generate much competition, however, thus leading to higher-than-needed support payments. Such an outcome can only result in less-than-optimal broadband buildouts. (Even in an auction situation, a model can be useful for setting the reserve price.)

In general, the rural incumbent local exchange carriers ("RLECs") were entirely opposed to the use of a model.[19] As will be discussed further, below, the general rationale provided by the RLECs is that ROR regulation is a "tried and true"[20] approach that has yielded beneficial outcomes. As NASUCA discussed in its opening comments, modeling and the development of a

[18] NCTA Comments, p. 19.

[19] Fidelity Comments, p. 4; Home Comments, p. iii; Missouri STG, p. 3; Rural Associations Comments, pp. 52-53; UT RTA Comments, pp. 2-3; TSTCI Comments, p. 3; Warriner Comments, p. 14.

[20] Staurulakis Comments, p. 7.

new incentive regulation regime to promote broadband deployment are related issues.[21] If the Commission is content to be bogged down with the status quo universal service funding regime, then it can abandon modeling, as suggested by the RLECs, and continue to support a system of implicit funding for broadband through its existing voice service program – an approach that has yielded questionable results. However, the RLECs' suggested course of action is not consistent with the NPB, or with the public interest. As will be discussed in Section VII. below, ROR regulation, while perhaps performing better than price cap regulation with regard to the deployment of broadband, has not yielded anything like a uniform outcome for the customers of RLECs, and it certainly has not resulted in the consistent deployment of broadband facilities that are capable of meeting the objectives of the NBP.

NASUCA continues to believe that the Commission should pursue the development of a sound economic cost model. The Commission needs accurate information to ensure that the NBP's objectives are satisfied, and the use of a model can assist the Commission with the tasks that it will need to undertake, including reforming the universal service mechanism. A model will go a long way in informing the Commission of the "size of the pie" associated with the satisfaction of the NBP's objectives. In addition, a properly designed model can also assist the Commission with the distribution of support (who gets what slice of the pie), regardless of whether the Commission utilizes direct support payments, a procurement auction, a reverse auction, or negotiation, to distribute the funds needed to deliver high-quality and affordable broadband.

[21] NASUCA Comments, p. 13.

A. Incremental or Total Costs?

NASUCA identified total forward-looking economic costs as the appropriate cost benchmark to be modeled.[22] While many RLECs urged the Commission to shun economic costs entirely and to rely only on embedded costs,[23] there appears to be some confusion (or an attempt to confuse) on the part of several parties regarding the distinction between total economic costs and embedded costs. For example, CenturyLink states:

> [T]he FCC must consider the total costs of existing networks in order to accurately predict the incremental costs associated with upgrading the network to provide broadband at the mandated speed. Without considering these *actual costs*, the Commission is not truly defining incremental costs of bringing broadband at the mandated speeds to an area.[24]

Similarly, ITTA states that "total costs should be used, since ongoing costs implicate total *actual costs* that are not revealed by incremental costs alone."[25] The fact that CenturyLink and ITTA link "actual costs" and "total costs" leads NASUCA to suspect that CenturyLink and ITTA are in reality advocating for the use of embedded costs. If this is the case, then NASUCA strongly disagrees with their position.

The MO PSC voices concern about the NBP model's failure to address existing support, and the fact that the NBP model assumes that existing networks will be available on an ongoing basis.[26] However, the MO PSC also states that the model should be based on incremental costs

[22] Id., p. 16.

[23] See, for example, Williamson Comments, p. 6; Rural Associations Comments, p. 61.

[24] CenturyLink Comments, p. 44 (emphasis added).

[25] ITTA Comments, p. 17.

[26] MO PSC Comments, pp. 4-5.

rather than total costs.[27] These statements are contradictory: The only way to address existing support is to structure the cost model to calculate the total incremental costs.[28]

On the other hand, Comcast correctly discusses total economic costs:

> Comcast supports additional efforts by the Commission staff to expand the Broadband Model to analyze the total forward-looking economic costs of a modern broadband network. A total cost model has the potential for testing whether all of the explicit subsidies built into current federal and state universal service funds, plus the implicit subsidies built into intercarrier compensation rates, are truly necessary to extend the reach of broadband networks to unserved areas.[29]

The Neb/ND PSCs, also correctly advocate for the use of total costs.[30] The Commission should evaluate total forward-looking economic costs as advocated by NASUCA.

B. Should Revenues be Included in the Model?

The NoI requested comment on whether or not to include revenues in the modeling process.[31] NASUCA asserted indicated that revenues, indeed all revenues from services provided over the broadband facilities, should be included.[32] NASUCA also pointed out problems with the revenue modeling included in the NBP model.[33] Other parties offered various perspectives on the inclusion of revenues. In general, those parties that supported the idea of a modeling approach favored the inclusion of revenues in the calculation of the level of support needed.[34]

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[27] I., p. 3.

[28] Roycroft Affidavit, pp. 11-30.

[29] Comcast Comments, pp. 14-15.

[30] Neb/ND PSCs Comments, p. 8.

[31] NOI, ¶ 35.

[32] Roycroft Affidavit, p. 6.

[33] Id., p. 30.

[34] MO PSC Comments, p. 1; Sprint Comments, p. 3; Qwest Comments, p. 14; TWC Comments, p. 14; WUTC Comments; pp. 4-5.

ITTA, while generally criticizing the idea of any model, raises the issue of whether revenues should be actual revenues or modeled revenues.[35] Alternatively, CenturyLink, while generally favoring the inclusion of revenues in the modeling process, raises the issue of whether to include revenues from services that cannot be provided over the network.[36] These two points raise a valid issue that this Commission must address. When developing its modeling approach the Commission should rely on modeled revenues, and should incorporate modeled revenues into the incentive regulation framework that will govern the distribution of broadband support. As noted by Qwest:

> Revenues used to determine "net-gap" support should be forward-looking potential revenues, that also take into account reasonable take rates for the supported services. Reasonable take rates will need to be based on accumulated experience such as surveys, census data and other information gathering regarding consumer broadband service subscriptions.[37]

While Qwest's focus is only on broadband, a similar logic would apply to revenues from voice services (and potentially video services) on an integrated broadband network. The use of benchmark revenue levels can be used to encourage companies to deploy more services over their broadband facilities.[38] As the Commission's ultimate objective of 100 Mbps downstream service is approached, the network infrastructure will be capable of delivering video services, and other advanced services yet to be developed. To the extent that the provision of these new services can be provided over the supported facilities, increasing network revenues should offset some of the support that is needed.

[35] ITTA Comments, p. 18.

[36] CenturyLink Comments, p. 52.

[37] Qwest Comments, p. 18.

[38] Price constraints for supported voice and broadband services must be in place to avoid incentives to increase revenues simply by exercising market power.

ICORE offers an example that purports to show that there is no incentive for a company to invest if revenues are counted in a "net gap" approach.[39] ICORE's conclusion is flawed. The ICORE example assumes that the distribution of the CAF is based on the CAF recipient's revenues. Such an approach is problematic in the same way that structuring a price cap plan that relied on a specific regulated company's own productivity growth would be inappropriate. As the Commission is well aware, with price cap regulation, the use of a productivity benchmark provides the regulated firm with a target against which to compete. If the firm beats the productivity target, its profits will improve. In a similar vein, by benchmarking revenue performance, the regulated company will face a target against which to compete, and will face incentives to invest, so as to increase revenue streams from its broadband plant.[40]

PUCO also points to the desirability of a cost benchmarking approach, while excluding revenues.[41] However, PUCO's logic on this issue is also flawed:

> Since increased revenue would actually reduce the amount of support a carrier receives, there may be an incentive to actually keep revenue down so as not to jeopardize the carrier's support level. This result runs counter to the NBP's goal of keeping high-cost support in check.[42]

Like ICORE, PUCO proposes to award support based on actual carrier revenues rather than a revenue benchmark. PUCO proposes to award support strictly on the basis of the difference between a national forward-looking cost benchmark and the carrier's forward-looking incremental costs. PUCO is absolutely correct that use of actual carrier revenues would result in disincentives. However, the solution is not to rely only on costs, but to utilize a revenue

[39] ICORE Comments, pp. 8-9.

[40] In addition to the need to constrain prices, it is also important to have in place network discrimination rules. A supported carrier that deploys broadband and offers its own video services should not be allowed to increase its revenues by blocking access to independently sourced video.

[41] PUCO Comments, p. 10.

[42] Id.

benchmark. Use of a revenue benchmark will provide all necessary incentives for a carrier to maximize revenues, but will also *reduce the amount of support needed*. The use of a revenue benchmark also has the advantage of promoting best practices, i.e., encouraging firms to deploy new services (e.g., video) on their broadband networks.

C. A Test of the NBP Model Shows Its Flaws – and Shows the Importance of Incremental Costs

NRIC presents the results of an evaluation of the NBP model. The NRIC test compares the projected costs developed by the NBP model and an engineering cost estimate prepared by NRIC's consultant Vantage Point. Predictably, these evaluations find that NBP model results do not match up with granular evaluations conducted by NRIC.[43] As NASUCA discussed in the opening comments, the NBP model does not claim to be capable of developing granular analysis.[44] Thus, the efforts of NRIC to "prove" that NBP model is incapable of delivering accurate granular information is something of an exercise in tautology – the FCC staff openly admits that the model was directed at projecting the size of a national gap, not granular estimates.[45]

However, it is notable that NRIC, while criticizing the NBP model, presents the result of an alternative incremental cost study, stating that "[i]n each exchange, Vantage Point created an engineering estimate of the incremental costs of providing service to unserved areas within the exchange at the 4/1 Mbps standard."[46] Thus NRIC provides the results of an alternative cost modeling study which these small rural companies indicate contain accurate assessments of the incremental costs of service.

[43] NRIC Comments, pp. 3-37; Rural Associations Comments, p. 53.

[44] Roycroft Affidavit, p. 29.

[45] "Broadband Assessment Model (BAM)," p. 7.

[46] NRIC Comments, p. 12.

NRIC states that in its opinion, Vantage Point's results are right, and that the NBP model is wrong:

> Vantage Point did not discern a consistent pattern of error – the ratios range from 0.7 to 3.7. In one county, the Model's estimates were significantly too high, while in the other three cases the estimates were significantly too low.[47]

NRIC thus argues that Vantage Point's study has produced the proper benchmark for evaluation of the incremental cost of providing service in the rural exchanges studied. Of course, as noted above, Vantage Point's methodology simply verifies what was already known about the NBP model, i.e., it is based on weak data and is not designed to yield granular results.

But the NRIC analysis, sponsored by RLECs, provides a sound refutation to the claims of numerous other RLECs that cost modeling for RLECs is impossible. NASUCA has not studied the Vantage Point analysis in any detail, but the Vantage Point study clearly projects the incremental costs of alternative technology deployments to serve rural areas in Nebraska, i.e., it is not an embedded cost approach. Thus, the Commission should take to heart NRIC's message – cost modeling for RLECs is possible, and good cost modeling will improve upon the results produced by the NBP model.

III. STRUCTURE OF THE SUPPORT MECHANISM – ONE-TIME GRANTS OR CONTINUING SUPPORT?

Parties presented a variety of proposals regarding the structure of the broadband support mechanism. As will be discussed below in more detail, RLECs and their consultants favored continuation of ROR regulation, while price caps ILECs generally favored moving RLECs to an incentive regulation framework. Many parties pointed to the need of any broadband support

[47] Id., p. 13.

mechanism to support operations expenses (opex) as well as capital expenditures (capex).[48] Other parties advocate for a support mechanism based only on one-time grants for capital construction.[49]

Based on the results of the NBP model, FCC staff concluded that while support for operating expenditures are likely to be required in some areas, other areas display only the need for capital expenditures.[50] Thus, it is conceivable that the Commission could separate the support mechanism into components that provided only capital grants, and those which funded both capital expenditures and operating expenses. However, absent a robust model, determining which areas should be eligible for capital grants, and which need ongoing support, may be difficult, and may result in inefficient support (e.g., granting ongoing support where none is needed). Going forward, the Commission should build enough flexibility into the process to allow for fine tuning of support distribution mechanisms. With more reliable information regarding the costs and revenues associated with the integrated provision of voice and broadband services, the Commission will be better able to determine the allocation of funds between mechanisms that provide only capital grants and those that may require both capital grants and ongoing support.

IV. THE 4/1 SPEED STANDARD

NASUCA pointed out that the 4/1 speed standard identified in the NBP and the NoI, given the backdrop of the NBP's 100 Mbps to 100 million household objective, would leave

[48] CenturyLink Comments, p. 26; CTIA Comments, p. 30; Rural Associations Comments, p. 54; USACo Comments, p. 54.

[49] Blooston Comments, p. 25; TWC Comments, p. 12.

[50] "The Broadband Availability Gap," pp. 9-10.

rural areas at a significant disadvantage.[51] This point of view is shared by numerous other parties.[52] NASUCA also pointed out that this speed standard is obsolete, and will distort any modeling process.[53] Other parties also pointed out that this speed standard would result in the building of an obsolete network.[54]

CenturyLink and Windstream, however, argue that the 4/1 standard is too high a hurdle, specifically pointing to the upload speed:

> Broadband networks of all technologies generally are not configured today to deliver as much as 1 Mbps upstream for residential services because consumers largely have not demanded such capabilities for residential use.[55]
>
> Though the 4 Mbps download speed threshold is appropriate, the Commission should reassess whether the incremental benefit of a ubiquitous 1 Mbps upload speed threshold outweighs the incremental additional deployment cost over a more universally accepted upload speed of 768 Kbps.[56]

While NASUCA does not dispute the fact that carriers such as CenturyLink and Windstream do not currently **offer** upload speeds as high as 1 Mbps, CenturyLink and Windstream confuse their broadband deployment business plan with consumer demand. CenturyLink and Windstream must become aware of web sites such as "YouTube," "FaceBook," and "FlickR" to expand their awareness of how residential consumers are using the Internet for applications that require the uploading of information. A recent survey by the Pew Internet and American Life project found that the number of individuals who uploaded video to the Internet

[51] Roycroft Affidavit, pp. 7-8.

[52] AK TA Comments, pp. 1-2; Alexicon Comments, p. 22; LA STA Comments, p. 7; Blooston Comments, p. ii; Fidelity Comments, p. 5; Home Comments, p. 2; IURC Comments, p. 5; KY TA Comments, pp. 7-8; MO STG Comments, p. 14; NRIC Comments, p. 52; Neb/ND PSCs Comments, p. 3; Rural Associations Comments, p. 17; Staurulakis Comments, p. 3; TCA Comments, p. 4; TX/OK STG Comments, p. 11.

[53] Roycroft Affidavit, p. 9.

[54] Warriner Comments, p. 17; TCA Comments, p. 17.

[55] CenturyLink Comments, p. 19.

[56] Windstream Comments, p. 10.

doubled between 2007 and 2010.[57] The NBP calls for increasing upload speed availability to 20 Mbps in 2015 and 50 Mbps in 2020 for 100 million U.S. households.[58] If the Commission is to achieve these objectives, it must reject CenturyLink and Windstream's perspective on the level of upload speed that should be supported by the Commission. As discussed above, even the 1 Mbps upload speed is an antiquated measure by today's standards, and certainly is not forward-looking.

Qwest also states that "the "target upload speed of 1 Mbps may not be well aligned with current broadband technology used in the industry," and that lower minimum upstream and downstream speeds "may be a more practical target."[59] CenturyLink voices a similar sentiment, stating that "broadband networks of all technologies generally are not configured to day to deliver as much as 1 Mbps upstream...." Qwest and CenturyLink appear to exclude from their evaluation the cable broadband and FTTP components of "the industry" when making these statements. Broadband speeds well above 1 Mbps are already available in many urban areas. The Commission should not open a race to the bottom when it comes to upload or download broadband speeds, and should reject Qwest and CenturyLink's request to degrade the NBP's standard.

V. SATELLITE BROADBAND

NASUCA noted that satellite broadband may have a role to play in achieving broadband universal service objectives, by potentially providing a source of broadband to the most costly

[57] "The State of Online Video," Pew Internet and American Life Project, June 5, 2010. http://www.pewinternet.org/Reports/2010/State-of-Online-Video.aspx

[58] NBP, p. 9.

[59] Qwest Comments, pp. 3 & 9.

locations.[60] However, some parties advocate for a reliance on satellite that would likely perpetuate disparities between urban and rural areas, leaving rural areas disadvantaged. For example, Mercatus suggests that the broadband gap problem could be solved through satellite technology by lowering the broadband speed objective from 4 Mbps to 1 Mbps.[61]

As has been discussed in detail above, the 4/1 standard perpetuates a digital divide, so Mercatus' proposed solution only exacerbates the problem. Rural areas should not be relegated to inferior broadband.

Satellite providers ViaSat and WildBlue state that satellite broadband can solve the entire unserved population with speeds of 4 Mbps "or higher."[62] Hughes also states that with just three additional satellites that it could serve all unserved homes.[63] However, these parties acknowledge that the next-generation satellites needed to serve one-half of the unserved households are not expected to be launched until 2014.[64] Thus, these proposals would have the Commission rely on untested technology after the wait for its deployment.

Another aspect of the reliance on satellite broadband that is not addressed by ViaSat and WildBlue, or by Hughes is the cost of current satellite services, which are substantially above terrestrial alternatives. Table 1 on the next page reports the service prices offered by Hughes.[65]

[60] NASUCA Comments, p. 17.

[61] Mercatus Comments, p. 7.

[62] ViaSat and WildBlue Comments, p. 4.

[63] Hughes Comments, p. 9.

[64] ViaSat and WildBlue Comments, p. 4.

[65] http://consumer.hughesnet.com/plans.cfm. WildBlue's web site does not report prices.

Table 1: Hughes Satellite Internet Prices	
Service (Download/Upload)	Price
768 kbps/128 kbps	$49.99
1.0 Mbps/128 kbps	$59.99
1.2 Mbps/200 kbps	$69.99
1.6 Mbps/250 kbps	$79.99
2.0 Mbps/300 kbps	$119.99
3.0 Mbps/300 kbps	$189.99
5.0 Mbps/300 kbps	$349.99

Compared to typical DSL and Cable modem service prices, the Hughes prices are very high, and certainly do not represent affordable broadband.

Furthermore, satellite services come with download caps. WildBlue's download cap varies by service package, ranging from 2.3 GB to 5 GB per month. Hughes, on the other hand, imposes a *daily* download allowance that ranges between 200 MB and 500 MB per 24 hour period, depending on the service plan purchased.[66] Compared to Comcast's 250 GB cap (not to mention most DSL providers' current "unlimited use" policies), these satellite policies are highly restrictive. It is not clear from Hughes' and ViaSat and WildBlue's comments whether the upgraded services will enable these providers to eliminate the download caps that they currently impose.

The comments provided by satellite firms do not address the Commission's 100 Mbps service objective. As such, it is likely that future satellite services, while possibly providing improved data speeds, will continue to lag the performance of terrestrial systems. Thus NASUCA, while supporting a potential role for satellite broadband, does not believe that this

[66] http://get.wildblue.com/how-it-works.html http://consumer.hughesnet.com/plans.cfm

Commission should rely exclusively on this platform as current and envisioned satellite deployments will not provide reasonably comparable data speeds to rural areas. Should the Commission rely on satellite technology, it must address pricing and download restrictions so as to not disadvantage rural areas.

VI. BUILDOUTS TO ANCHOR INSTITUTIONS

The NBP identifies an additional long-term goal of delivering 1 Gbps access to anchor institutions such as schools, libraries, and government offices.[67] Because anchor institutions typically aggregate traffic from many users simultaneously, anchor institutions need very high-capacity connections – the type of connections often used by businesses. It may be the case that these anchor institutions, because of their non-profit nature, cannot afford to pay business rates for the bandwidth they need.

NASUCA certainly is in favor of anchor institutions having the ability to obtain the bandwidth that they need, but NASUCA is concerned regarding proposals to fund this buildout through the CAF. LambdaRail,[68] Internet2,[69] SHLB,[70] TechAmerica,[71] and CWA[72] all recommend that the CAF address support for anchor institutions. NASUCA does not believe that CAF, which should be focused on support for broadband for residential and small business consumers, should be expanded to also fund broadband buildouts to anchor institutions. Buildouts to anchor institutions should be addressed separately by the Commission.

[67] National Broadband Plan, p. xiv.

[68] LambdaRail Comments, p. 2.

[69] Internet2 Comments, p. 1.

[70] SHLB Comments, p. 2.

[71] TechAmerica, un-numbered 3rd page.

[72] CWA Comments, p. 3.

The NBP identifies a separate "Unified Community Anchor Network" as the appropriate mechanism to address connectivity to anchor institutions.[73] Given the NBP's approach, it makes the most sense to create a separate fund, following the expenditure of all ARRA funds directed at anchor institutions, that will address further support needs for anchor institutions.

VII. HAS ROR REGULATION DELIVERED HIGH QUALITY AND AFFORDABLE BROADBAND?

Most RLECs filing comments point to the benefits of ROR regulation with regard to the expansion of broadband services in rural areas.[74] In addition, as discussed earlier, RLECs also shun the use of cost models and incentive regulation, and advocate for the continuation of ROR regulation. It is not surprising to hear that Br'er Rabbit likes the briar patch of ROR regulation.

On the other hand, it does appear that ROR-regulated ILECs have exceeded price-cap ILECs in rural broadband deployment, although more information on this point would certainly be welcome.[75] Further, it does not appear that the broadband deployment of the ROR-regulated ILECs is of high enough quality to meet the NBP goals.[76] The Commission must carefully consider what ROR regulation has to offer. The PA PUC correctly notes that ROR regulation is actually a form of incentive regulation.[77] However, NASUCA believes that this Commission does not have sufficient information to judge whether ROR regulation is in fact providing the

[73] NBP, p. 154.

[74] Alexicon Comments, p. 31; LA STA Comments, pp. 12-13; Argenbright Comments, p. 2; Blooston Comments, p. iii; Border Comments, p. 8; Williamson Comments, p. 10; Farmers Comments, p. 8; GTA Comments, p. 6; Rural Associations Comments, p. 6; TSTCI Comments, p. 2; TX/OK STG Comments, p. 14.

[75] NBP, p. 114.

[76] RICA asserts that 97% of NECA Traffic Sensitive Pool members offer digital subscriber line ("DSL") service. RICA Comments at 14, n.34. But the Rural Associations also note that 54% of the RLECs that offer DSL under the NECA tariff offer service with speeds below the Commission's 4Mbps target. Rural Association Comments at 35, n.82; see also TSTCI Comments at 9.

[77] PA PUC Comments, p. 4.

proper incentives for broadband deployment and outcomes that are consistent with the NBP's objectives.

NASUCA does not dispute that ROR regulation has long been alleged to encourage investment in rate base, i.e., the "Averch-Johnson" hypothesis.[78] However, there is little evidence that ROR regulation provides a uniform or reasonable incentive structure with regard to the deployment of high-quality and affordable broadband. Some RLECs have deployed fiber,[79] others have not. Some RLECs have deployed Internet protocol ("IP") video services,[80] others have not. Some RLECs have deployed cable systems,[81] others have not. Thus, regardless of the ultimate disposition of the issue of ROR regulation, the Commission should recognize that in terms of outcomes among RLECs, ROR regulation has led to widely varying results – with many areas served by only the lowest quality broadband services.

By creating an incentive structure to deliver broadband, the Commission can improve outcomes and meet the objectives in the NBP. It is clear, however, that "ROR regulation" as administered by the Commission and by the states does not inherently contain the incentive structure that is needed to satisfy the NBP's goals. But it is also clear that the price cap "incentive" regulation administered by the Commission **also does not contain the appropriate incentive structure to achieve the NBP's goals**.

[78] Averch, Harvey; Johnson, Leland L. (1962). "Behavior of the Firm Under Regulatory Constraint," *American Economic Review*, 52 (5): 1052–1069.

[79] For example, Bloomer Telephone Company offers Gigabit broadband service. http://www.bloomer.net/internet-services-2/internet-services/

[80] For example, Farmers Telephone Cooperative offers IP video. http://www.farmerstel.com/digitaltv/index.html

[81] For example, Fidelity Telephone offers cable-based video. http://www.fidelitycommunications.com/cabletv/contentServer.php?cid=1197553514

Some parties, such as AT&T,[82] Windstream,[83] and Verizon,[84] state that RLECs should be moved to "incentive regulation." The Commission should be sure that any shift to "incentive regulation" provides the appropriate incentives to achieve the NBP's objectives.[85]

It is also important to note that ROR regulation appears to do little to constrain the prices of broadband services offered in rural areas. Table 2 provides a summary of entry-level RLEC DSL products and prices.[86]

Table 2: RLEC Entry-Level DSL Prices

Company	**Number of Access Lines**	**Plan Price (Download Speed)**	**Price per Mbps Download**
Lake Livingston Telephone Company	915	$27.95 (256 kbps)	$109.18
Tatum Telephone	1,000	$39.00 (384 kbps)	$101.56
Canadian Valley Telephone	1,288	$35.95 (384 kbps)	$93.62
Union River Telephone	1,359	$44.95 (1 Mbps)	$44.95
Inter-Community Telephone	2,400	$39.95 (512 kbps)	$78.03
Germantown Telephone	2,759	$24.99 (256 kbps)	$97.62
Darian Telephone	6,100	$42.95 (6 Mbps)	$7.16
Five Area Telephone Company	6,241	$29.95 (128 kbps)	$233.98
All West Communications	6,700	$29.95 (1.5 Mbps)	$19.97
LaFourche Telephone	12,600	$54.99 (5 Mbps)	$11.00
Fidelity Telephone	13,756	$34.95 (512 kbps)	$68.26
Emery Telecom	14,700	$19.95 ("½ Mbps")	$39.90
Farmers Telephone Cooperative	15,000	$34.95 (512 kbps)	$68.26
North Dakota Telephone Company	16,400	$21.95 (512 kbps)	$42.87
Home Telephone Company	23,000	$22.95 (768 kbps)	$29.88
Eastex Telephone Cooperative	29,800	$19.95 (256 kbps)	$77.93

[82] AT&T Comments, p. 21.

[83] Windstream Comments, p. 33.

[84] Verizon Comments, p. 18.

[85] See discussion in NASUCA reply comments on the NPRM.

[86] Information regarding service offering and price from each carrier's web site. Information on line count from carrier's comments in this proceeding, or from Table 3.31 of the December 2009 Federal-State Joint Board Monitoring Report.

The prices evaluated focused on the entry-level (lowest speed) offering, which ranged in speed from 128 kbps to 5 Mbps of download speed for these RLECs. The prices shown in Table 2 are also stated in dollars per Mbps of download speed to present a common denominator across entry-level plan prices. Table 2 also shows the number of access lines associated with the carrier, to provide an operating scale benchmark.

While a more comprehensive study could lead to a statistical analysis of RLEC broadband pricing practices, the limited snapshot provided in Table 2 suggests that RLEC broadband pricing is not strongly related to the operating scale of the company. To the extent that ROR regulation has led these companies to deploy "broadband" more rapidly, it certainly has not resulted in comparable broadband products or prices, even when considering the size differences of the companies involved. Table 2 also provides support for the proposition that this Commission, if it is to support broadband, must establish pricing constraints that will result in affordable and high quality broadband.

Thus, while it may be the case that ROR provides a general underlying incentive to invest in rate base, the incentive is not sufficiently strong with regard to broadband deployment to result in predictable outcomes. The bottom line is that whatever incentive structure offered by ROR regulation needs to be improved to ensure that the objectives of the NBP are achieved.

VIII. REVERSE AUCTIONS

In opening comments, NASUCA advised the Commission that reverse auctions are fraught with problems and are not likely to provide a reasonable means to distribute support in

high-cost areas.[87] Many other parties expressed opposition to the use of reverse auctions.[88] Other parties expressed conditional support for some type of an auction mechanism. TWC offers support for the auction approach, but appears to direct that support at auctions for one-time broadband construction grants.[89] Alternatively, the PUCO suggests a selective approach to the use of auctions:

> In those areas where one carrier or provider is undoubtedly dominant possessing significant advantages of scale and scope, the FCC should takes steps to ensure that the costs of conducting a reverse auction do not outweigh its benefits since the outcome of the auction would not likely be in doubt.[90]

Thus, the PUCO recognizes the importance of the auction entry issue. If firms are intimidated by an incumbent, then the auction is likely to fail.

Other parties who are supportive of reverse auctions offer more detailed advice regarding how those auctions should be structured. These alternatives are discussed below.

A. Verizon's Reverse Auction Proposal

Given Verizon's flight from providing wireline service in rural areas,[91] NASUCA finds Verizon's proposal intriguing – apparently Verizon will not be taking the medicine that it prescribes. Nonetheless, Verizon assert that reverse auctions as the best method to distribute

[87] Roycroft Affidavit, pp. 36-49.

[88] See, for example, LA STA Comments, p. 14; ITTA Comments, p. 11; Alexicon Comments, p. 32; ICORE Comments, p. 10; MO STG Comments, p. 8; Rural Associations Comments, p. 7; RCA Comments, p. 14; UT RTA Comments, p. 3; SD TA Comments, p. v.

[89] TWC Comments, p. 12.

[90] PUCO Comments, p. 13.

[91] Including the divestiture of its Hawaiian and northern New England territories and the recently-accomplished divestiture of territories in 14 mostly rural states.

support.[92] Verizon states that the Commission should utilize the reverse auction mechanism described by Verizon in a 2008 filing.[93]

As NASUCA discussed in its comments, in general, the use of reverse auctions is highly problematic.[94] Verizon's proposal does nothing to assuage NASUCA's concerns, and Verizon's proposal clearly illustrates the pitfalls of using auctions. For example, the definition of a bidding area is one of the key pitfalls of auction design. Verizon's April 2008 auction proposal defined the geographic bidding areas as the wire center.[95] Use of the incumbent's wire center will likely tilt the process in favor of the ILEC. Alternative providers may not view an ILEC wire center as a reasonable geographic area on which to base a business plan. On the other hand, given the importance of ILEC facilities in any bidding process, defining areas that extended beyond, or overlapped ILEC territory would also complicate the bidding process, and potentially force ILECs to extend facilities outside of their service areas. "Neutral" geographies may not help matters. As noted by Verizon:

> Counties are too large. Census block groups, which are used for a high cost fund in California, are perhaps the closest alternative. But they are much more numerous than wire centers, arbitrary in shape, and often do not correlate well with any company's business plan. Moreover, they often cut across geographic barriers, such as mountains and rivers, and ignore clustering of customers that would be relevant to any prospective provider of universal service.[96]

Thus, the geographic area on which to base bidding is a stumbling block to the auction process,

[92] Verizon Comments, p. 27.

[93] Id., p. 28, referencing Comments of Verizon and Verizon Wireless, *Federal-State Joint Board on Universal Service*; *High-Cost Universal Service Support*, CC Docket No. 96-45, WC Docket No. 05-337, App. 1, n.1 (April 17, 2008) ("Verizon's April 2008 auction proposal").

[94] NASUCA Comments, pp. 12-13; Roycroft Affidavit, pp. 36-49.

[95] Verizon's April 2008 auction proposal, p. 4.

[96] Id.

and Verizon's proposal to use ILEC wire centers as the geographic bidding area does nothing to solve this problem.

Verizon's April 2008 auction proposal also addressed the issue of the reserve price, which Verizon states should be "based on the level of the support provided immediately prior to the auction."[97] Given the low level of bidding competition that is likely, use of existing support is a recipe for maintaining the status quo. As was noted by NASUCA[98] and other parties,[99] should the Commission take the auction route, use of a cost model to set reserve prices makes more sense.

Verizon's April 2008 auction proposal also states that the best way to design an auction is through a "clock-proxy hybrid" auction. Under the clock-proxy approach, the Commission would announce prices to which bidders would respond in a multiple-round outcry format. Verizon states that this "design allows the auction itself to generate information useful to bidders."[100] There is no question that the use of a multiple-round outcry format would generate information that could be utilized by bidders. However, given the likelihood that there will be a small number of bidders associated with the reverse auction, and the lack of "common values" associated with a universal service auction,[101] the use of the information by bidders would be more likely to result in collusion and high bids, rather than robust bidding competition. For this reason, NASUCA believes that should the Commission proceed down the auction path, it must use a sealed bid approach.[102]

[97] Id., p. 7.

[98] Roycroft Affidavit, p. 45.

[99] Qwest Comments, p. 5; TWC Comments, p. 13.

[100] Verizon's April 2008 auction proposal, p. 18.

[101] Roycroft Affidavit, p. 47.

[102] Id., pp. 46-47.

Verizon is critical of the use of a cost model, arguing that cost models have been subject to litigation.[103] While it certainly is true that cost models have generated litigation, so have auctions.[104] It is difficult to believe that replacing the existing universal service structure with a reverse auction proposal, such as that offered by Verizon, would not result in extensive litigation.[105]

Verizon also argues that cost models would generate "winners and losers."[106] Given Verizon's advocacy for auctions, this is puzzling criticism. Verizon's April 2008 auction proposal advocated for a "single winner" approach. Thus, the only way that auctions could not generate losers would be if there was only one bidder per auction. Given the likelihood that auctions will not generate much entry, perhaps Verizon has a point: Under Verizon's auction approach the "single winner," likely the ILEC, will take all, and there may be no auction "losers." However, weak bidding competition still generates losers, as an inefficient level of support will be established due to auction failure. The Commission should reject Verizon's renewed attempt to implement the flawed clock-proxy auction approach.

B. The Use of a Model to Set the Reserve Price Does Not Cure the Problems with Auctions.

NASUCA advised the Commission that if it decides to pursue a reverse auction that a cost model should be utilized to set the reserve price.[107] Other parties also supported the model-

[103] Verizon Comments, pp. 28-29.

[104] See, for example, *FCC v. NextWave*, 537 U.S. 293 (2003)..

[105] In comments filed in this proceeding, RLECs are uniformly opposed to the use of reverse auctions. See, for example, LA STA Comments, p. 14; Fidelity Comments, p. 4; ICORE Comments, p. 10; ITTA Comments, p. 11; MO STG Comments, p. 8; Rural Associations Comments, p. 21; RICA Comments, p. 19; UT RTA Comments, p. 3.

[106] Verizon Comments, p. 28.

[107] NASUCA Comments, p. 11.

based reserve price, should an auction mechanism be utilized.[108] Some parties, such as AT&T, argued that their proposal (discussed below) negated the need for a reserve price.[109] NASUCA reiterates that the anticipated lack of auction entry and bidding competition requires the use of a reserve price. Using a properly-developed cost model to establish the reserve would decrease the likelihood that bidders could win the auction with inappropriate bids.

However, use of a model to set the reserve, while potentially improving on the expected outcome of an auction, does not provide a sufficient remedy to the problems of auctions where few bidders are expected. In opening comments, NASUCA pointed out that one of the problems with reverse auctions relates to the information structure that is created when setting a reserve price: If a model is used to set the reserve price, then the bidding parties might focus their bidding strategies on the model's results, rather than on their own costs of service.[110] Windstream[111] and PUCO[112] note that the existence of this information may distort the bidding process. PUCO suggests that the Commission should keep the cost-model-based reserve price secret from bidders.[113] Whether the Commission can create a cost model that is fully and publicly vetted, and also keep the public from knowing what that model predicts, would seem to make a difficult process even more difficult. NASUCA believes that the best way to avoid this apparent difficultly is to forgo the use of reverse auctions.

[108] ADTRAN Comments, p. 1; ITTA Comments, p. 12; TWC Comments, p. 13; Verizon Comments, p. 6; PUCO Comments, p. 14.

[109] AT&T Comments, p. 6.

[110] Roycroft Affidavit, p. 45.

[111] Windstream Comments, pp. 18-19.

[112] PUCO Comments, p. 14.

[113] Id.

C. Auctions with Multiple Winners are Inefficient.

USACo states:

> The FCC should ensure that rural consumers have the ability to choose among service providers in a competitive marketplace. The Commission must guarantee that the benchmark it establishes for competition in rural areas is "reasonably comparable" to the competition existing in urban areas in order to ensure that rural consumers can benefit from competition in the same manner as urban consumers.[114]

Similarly, ViaSat and WildBlue state that any support mechanism must "facilitate competition and consumer choice."[115] CTIA states that support determined by a cost model that identifies "support that is portable to all market participants who choose to enter" is desirable.[116]

NASUCA urges the Commission to reject these general calls to use the universal service program to support "competition." In the first place, the FCC is now trying to extricate itself from the mess caused by allowing wireless ETCs to "compete" for customers alongside wireline ETCs. As the Commission learned the hard way, "competition" did not perform as expected due to differences in consumer's perceptions about the function of mobility voice services – consumers purchased both mobile and fixed voice:

> These wireless competitive ETCs do not capture lines from the incumbent LEC to become a customer's sole service provider, except in a small portion of households. Thus, rather than providing a complete substitute for traditional wireline service, these wireless competitive ETCs largely provide mobile wireless telephony service in addition to a customer's existing wireline service.[117]

In the second place, the benchmark suggested by USACo – "urban competition" – has proved to be a chimera for residential customers, especially in the broadband market.

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[114] USACo Comments, p. 18.

[115] ViaSat and WildBlue Comments, p. 13.

[116] CTIA Comments, pp. 18-19.

[117] *In the Matter of 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"), Notice of Proposed Rulemaking, FCC 08-4 (January 29, 2008), ¶9. The FCC reiterated this conclusion in 05-337/96-45, Order (May 1, 2008), ¶29.

"Competition" for broadband for residential consumers boils down to the choice between DSL and cable, where choice exists at all. Mobility data services do not offer speeds sufficient to compete with terrestrial broadband, not to mention the restriction of applications, metered usage, and download caps associated with mobility broadband services. The Commission must not backtrack into supporting mobility services that are poor substitutes for wired broadband.[118] The Commission must reject outright any calls to use the universal service program to "fund," "create," or otherwise conjure broadband "competition" in high-cost areas.

In a similar, though less direct, vein CTIA, US Cellular, and Sprint each argue against single-winner auctions and in favor of auctions that support multiple winners.[119] The issue of "multiple winners" in an auction process advanced by CTIA, US Cellular, and Sprint spins the "promote competition" argument advanced by the USACo in a slightly different direction. However, the conclusion is exactly the same – subsidizing competition in high-cost areas is inefficient and will lead to an unnecessary expansion of the fund.

The issue of whether auctions should have single or multiple winners is one that has been considered by academic researchers. An auction process will, in theory, create competition "for the market." If competition for the market is robust, then, in theory, the auction will generate efficiency benefits. It has been noted by researchers, however, that the use of an auction to try to promote competition *after the auction*, through the support of multiple subsidy recipients ("in-market competition") can be problematic:

> The policy discussions of auctions for universal service often take the benefits of in-market competition for granted. The environments in which these auctions will possibly be implemented, however, are not traditional environments, since they are substantially regulated. One should, therefore, not rely on the economist's gut

[118] The recommendation in the NBP to create a separate mobility fund correctly directs resources at the separate mobility market.

[119] CTIA Comments, p. 18; United States Cellular Corporation Comments, p. 18; Sprint Comments, p. 8.

> feeling that competition is *a priori* good for the consumer, and one should rather investigate the nature of the benefits in this specific environment. It is useful in this respect to distinguish between two types of services: supported services, and non-supported or complementary services.[120]

These researchers apply a theoretical model to explore the potential benefits of in-market competition. The key element of their modeling is that auction participants will offer both the basic supported service and complementary services (e.g., broadband data vs. e-mail, web hosting, portal, or video). If there are multiple auction winners, the fact that they will face competition for both the supported and non-supported services due to supporting multiple auction winners has negative consequences:

> 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. In-market competition is desirable if the deadweight loss associated with the absence of competition in the complementary segment exceeds the increase (associated with the increase in the subsidy) in the deadweight loss on other telecommunications segments financing the universal service plan.[121]

Thus, in-market competition does not necessarily lead to a superior outcome for consumers, and the promotion of in-market competition through allowing multiple auction winners may lead to higher subsidy payments. Other researchers have also analyzed the impact of in-market competition and reached unfavorable conclusions for an alternative reason – pointing to the increased likelihood of collusion associated with auctions that support in-market competition:

> COLR (carrier of last resort) auctions for per-subscriber subsidies are more vulnerable to collusion than standard procurement auctions and COLR auctions for lump-sum subsidies. Moreover, the problem is exacerbated if the auction appoints more than one COLR. *The source of the problem is precisely in the added scope for competition "in the market"*: Defectors from collusive agreement in COLR auctions for per-subscriber subsidies can be punished by

[120] Laffont, J. and Tirole, J. *Competition in Telecommunications*, MIT Press, 2000, p. 251.

[121] Id., p. 254 (emphasis in the original).

> charging low prices in the market immediately after the auction where a defection occurred….[122]

This conclusion, like the previous observation regarding the natural increase in support if multiple providers are supported, suggests that using auctions to support competition is undesirable.

Another purported benefit associated with supporting multiple providers is the potential positive impact of competition on service quality.[123] However, because given that the level of service quality following the auction period must be monitored to ensure that the winning bidder is providing a service consistent with the policymaker's definition,[124] the gains from competition on service quality, should they result in a service level higher than the service quality standards established by the policymaker, are likely to be small. Thus, given the nature of the service areas likely to be up for bid (i.e., rural and high-costs areas where evidence shows very little competitive activity in the first place), increasing subsidy levels to support in-market competition is not a reasonable outcome.

In summary, as NASUCA has discussed in detail, reverse auctions will not solve the problems facing this Commission. Reverse auctions with multiple winners will create a host of new problems and derail the objectives of the NBP.

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[122] Sorana, V. "Auctions for Universal Service Subsidies," *mimeo*, November 24, 1998, p. 18 (emphasis in the original).

[123] See, for example, Milgrom, P. "Auctions for Universal Service," Presentation at the Universal Service Conference sponsored by the Progress & Freedom Foundation, March 1, 2007, accessible at http://www.pff.org/events/eventpowerpoints/030107usfreverseauction/Auctions%20for%20Universal%20Service.pdf.

[124] Rural Associations Comments, p. 24.

IX. ALTERNATIVE BIDDING MECHANISMS

In addition to the auction proposals discussed above, other parties provided recommendations that advocated for the use of bidding mechanisms that were not "formal" auctions. These problems with these mechanisms are discussed below.

A. AT&T's Competitive Application Process

AT&T proposes that the Commission should utilize a competitive application process to bring broadband into unserved areas.[125] AT&T stresses that its proposal is not a "pilot program" to accelerate broadband deployment, but should be used to distribute all high-cost support targeted at broadband.[126] Under AT&T's proposal, the service provider would identify the unserved area, and the amount of support that it requires to meet the Commission's objectives.[127] AT&T also recommends that the Commission (or relevant state commission) score the application based on well-defined criteria, with the amount of support requested per housing unit being the most heavily weighted.[128] AT&T claims that its approach would "encourage competition among bidders [and applicants] offering diverse services in different areas."[129]

NASUCA does not believe that AT&T's proposal provides a reasonable approach to reforming the universal service system, and the proposal would ultimately complicate meaningful reform. First and foremost, AT&T's approach leaves the existing support mechanism untouched, and will result in a new explicit support mechanism on top of the current implicit broadband support mechanism. AT&T, while acknowledging that ongoing support is an issue that this Commission must address, punts on the issue of ongoing support:

[125] AT&T Comments, p. 5.

[126] Id., p. 11.

[127] Id., p. 6.

[128] Id.

[129] Id., p. 10.

> To answer the basic questions of which carriers should continue receiving support and at what levels in order to maintain broadband service in areas that are at risk of becoming "unserved," the Commission will have to: establish some methodology to identify the carriers and the high-cost areas that require continued support, and another methodology to determine how such support should be calculated; and decide how to transition funding from the legacy high-cost support mechanisms to the CAF.[130]

AT&T's insight might be greatly appreciated if it were not for the fact that these are the very issues that the Commission laid out in the NOI and NPRM. In other words, AT&T chooses not to address the heavy lifting that awaits the Commission, and simply asks for more funding in a manner that would add to the lack of accountability for broadband support in the current universal service program.

In addition, AT&T's "competitive application" proposal does not supply the claimed benefit of encouraging competition. This is because AT&T recommends that the proposals be submitted "under seal,"[131] with only the bidder and the Commission knowing which areas are being considered for the receipt of support. With AT&T's approach the sealed proposal would not enable competing bidders to respond, and also would leave the question of the verification of unserved areas unaddressed.

AT&T also argues that its approach, will deliver the "biggest bang for the buck,"[132] by targeting projects that deliver funds to the greatest number of housing units. NASUCA is concerned that broadband deployment that is self-directed by the service provider will result in the low-hanging fruit being targeted, potentially ignoring the most difficult to serve areas. Finally, AT&T does not specify where the monies for this new fund would be raised. NASUCA recommends that the Commission reject AT&T's proposal.

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[130] Id., p. 13.

[131] Id., p. 6.

[132] Id., p. 12.

B. CenturyLink's "Quick-Start" Program

CenturyLink proposes that monies recovered from the elimination of CETC support programs be used on an interim basis to fund broadband deployment in rural areas. Specifically, CenturyLink proposes that the new program target price cap companies, whose "[b]roadband penetration … [has] fallen far behind even rural telephone companies...."[133] CenturyLink views the program as one that would be voluntary for carriers; for those carriers that choose to participate, CenturyLink recommends that funds be distributed to those carriers with the "highest density of unserved households."[134]

CenturyLink's proposal is problematic and should be rejected by the Commission. The institution of a new "voluntary" program would result in a needless overlap of support mechanisms. Price cap ILECs, while perhaps not deploying broadband in their rural areas to the same degree as RLECs, have nonetheless deployed broadband in some of these areas. CenturyLink's proposal will do nothing to reform the existing support of broadband. Further, CenturyLink's proposal to target the "highest density of unserved households" suggests that CenturyLink's method is designed not with the goal of achieving universal broadband, but with the objective of further improving CenturyLink's profits. Again, targeting only the low-hanging fruit is not the NBP's stated approach.

C. Qwest's Bidding Mechanism

Qwest proposes a bidding mechanism to extend broadband service to unserved areas.[135] Qwest states that the Commission could move forward on this project "without relying on a

[133] CenturyLink Comments, p. 56.

[134] Id.

[135] Qwest Comments, pp. 6-9.

model to set a reserve price," however, Qwest does state that the maximum grant should be capped at $3,000 per location passed.[136]

Qwest also correctly notes that with any competitive bidding process, it is necessary to cap the rates of the supported services. Qwest proposes that the cap should reflect "125% of the state-wide average rate for comparable broadband service."[137] While NASUCA reserves comment on whether 125% of the statewide average is the appropriate cap, Qwest's recognition of the need for a cap should be noted by the Commission.[138]

In addition, Qwest also proposes to allow "cooperative or mutual organizations" and "non-profit foundations" to participate.[139] Qwest does not make clear whether it also favors municipalities' ability to receive support, but the non-corporate entities identified by Qwest are likely to have outlooks that are more similar to municipalities than for-profit corporations. NATOA notes that high-cost rural areas where return on investment is likely to be low are better suited for public and non-profit entities.[140]

Qwest believes, however, that the broadband speed standards associated with the NBP are too rigorous. Instead, Qwest proposes that lower speed standards, such as 1.5 Mbps downstream and 896 kbps upstream, should be used.[141] NASUCA does not believe that establishing a lower standard is a reasonable approach for rural areas; this would only widen the digital divide, especially given the NBP's goal of 100 Mbps for urban areas.

[136] Id., p. 7. (Qwest does not explain the derivation of the $3,000 cap.)

[137] Id.

[138] Mercatus also notes the need for a price cap in any bidding approach. Mercatus Comments, p. 10.

[139] Qwest Comments, p. 8.

[140] NATOA Comments, p. 3.

[141] Qwest Comments, pp. 10-11.

While Qwest's competitive bid process provides more details than does the AT&T proposal, the same basic problem underlies Qwest's idea – adding another broadband universal service support mechanism on top of the existing support does not resolve the problems facing this Commission. It makes more sense to address broadband funding on a comprehensive basis.

Furthermore, proceeding with a process such as that proposed by Qwest and AT&T without the benefit of a robust cost model generates additional problems with regard to the constraint of funding levels. Even though Qwest's proposal requires that areas nominated as unserved be opened for alternative bidding for 30 days, it is unlikely that competitive bidding capable of driving bids to cost would emerge. As NASUCA discussed in opening comments, the degree of entry in any type of auction process is critical, and meaningful bidding competition in currently unserved areas is unlikely.[142] Absent a cost model, the Commission would be left to award grants based largely on what the single applicant bid. Such an approach is not reasonable and will result in further growth in the fund to deliver, under Qwest's proposal, broadband of questionable quality.

Qwest also proposes that ongoing support be addressed through a cost model.[143] Qwest states that a "well-designed forward-looking cost model could be an effective tool for determining and distributing on-going universal service support for broadband and voice services in high-cost areas."[144] Qwest also notes that failure to update the inputs associated with the model has been a shortcoming of the current model-based approach to determine high-cost support.[145] NASUCA agrees that models must be kept up-to-date.

[142] Roycroft Affidavit, pp. 37-38.

[143] Qwest Comments, pp. 12-18.

[144] Id., p. 13.

[145] Qwest Comments, p. 13.

D. MDTC's Bidding Approach

MDTC proposes a bidding approach that is based on the *71 Concerned Economists'* proposal attached to the NoI. MDTC recommends that the Commission identify unserved areas, but then allow bidders to self-identify the areas that they are willing to serve, even if the result is overlapping bids.[146] With regard to the actual funding distribution, MDTC recommends as follows:

> MDTC recommends that funds be first allocated to the region where the subsidy sought is the lowest (per household), and then to the next lowest subsidy and so on until all the available funds are utilized. The winning bid, by necessity, should not only be the lowest for the region but also low enough as part of the entire auction to qualify for funding.[147]

It should be noted that MDTC's suggested approach of allocating subsidy to the region with the lowest per household request would inherently disadvantage those regions with higher costs, and favor those regions with relatively lower costs. Such an approach is not reasonable under the provisions of the NBP.

MDTC also concludes that "[a]s long as there are multiple firms competing for broadband funding in a region, then the market-based mechanisms built into the auctioning process should ensure that the expenditures from the CAF are at efficient levels."[148] However, this necessary condition of the MDTC approach is also its undoing, and MDTC's proposal does not present a viable approach to distributing support. The level of support that would be awarded under the MDTC approach would be *entirely dependent on the degree of competition* in a particular area. Given the likelihood of limited bidding competition, under the MDTC's approach, winning bids will be completely divorced from underlying costs, and any claims

[146] MDTC Comments, p. 12.

[147] Id., p. 13.

[148] Id.

regarding the economic efficiency of the outcome are entirely unsupported. As NASUCA noted in its opening comments, unserved areas are those where markets have failed.[149] It is entirely unreasonable to rely on "market forces" to deliver the "efficient" outcome given the likelihood of little competitive entry. MDTC's proposal is even more unsettling as it is also proposes that this process can unfold without the benefits of a cost model to set reserve prices.[150] Combining cost-based reserve prices with MDTC's proposal would at least allow the Commission to make a "cut" on proposals that were completely divorced from costs.

E. MACRUC's One-Source Proposal

The NBP proposes separate fixed and mobility broadband funds.[151] MACRUC proposes that a "structured auction" be created so that "one bidder is responsible for all supported services (i.e., voice, broadband, and mobility) with no separate wireless fund."[152] MACRUC's proposal only makes the auction format worse. Requiring a sole source for both fixed and mobility services would substantially reduce the potential for bidding entry. The firms most likely capable of satisfying MACRUC's proposed pre-bidding qualification would be integrated service providers like AT&T and Verizon. Given the substantial entry barrier proposed by MACRUC, auctions would be certain to fail.

F. Auction Conclusion: The Proposals In The Comments On Auctions And Alternative Bidding Mechanisms Should Be Disregarded By The Commission

As was discussed in detail in NASUCA's opening comments, reverse auctions are unlikely to generate a beneficial outcome for the universal service program. Reverse auctions

[149] NASUCA Comments, p. iii.

[150] MDTC Comments, p. 13.

[151] NBP, pp. xiii.

[152] MACRUC Comments, p. 9.

will introduce risks and untended consequences that negatively impact consumers and the public interest. The main problem with a reverse auction is the reasonable expectation that auctions will not attract a sufficient number of auction bidders to generate an efficient outcome. An additional problem, given the likely importance of incumbents for the provision of the integrated provision of voice and broadband services, is the Commission's ability to define reasonable geographic bidding areas. The reform of universal service programs, and their expansion to address broadband will be better achieved without the use of auctions.

Other parties advanced alternative bidding mechanisms that provided targeted support for broadband deployment in an overlay fashion, i.e., existing support would continue and the new overlay mechanism would support broadband. Sprint states that "distributing broadband support dollars in the absence of firm rules is an invitation to waste, fraud and abuse."[153] NASUCA agrees that rushing to distribute funds with an overlay mechanism is likely to create problems. Expedited proposals such as those offered by AT&T, CenturyLink, and Qwest are not the appropriate approach.

Furthermore, starting such a program without detailed information regarding broadband availability raises substantial questions regarding how the Commission would verify that support monies were in fact being used in unserved areas. Conducting a provider-driven nomination process in the absence of a robust cost model would leave the Commission without a reasonable basis for evaluating proposals, and would place the Commission in a situation similar to that faced today – a total lack of clarity as to what the efficient delivery of support is capable of achieving.

[153] Sprint Comments, p. 15.

The Commission must establish a solid foundation for any new support mechanisms. Given the existence of ongoing ARRA funding,[154] which still has substantial support to be distributed, the need for an expedited process is certainly less severe than would be the case if the ARRA funds did not exist.

X. CONCLUSION

NASUCA encourages the Commission to carefully consider the information that NASUCA has supplied in both the opening and reply round of comments in the NoI. Reforming universal service programs, and expanding those programs to address the NBP's objectives with regard to broadband, will require much hard work. However, the Commission's labors will be much lighter if it ignores the often self-serving advice of many of those parties filing comments in this proceeding. As illustrated above, a common theme in the opening comments is that changing the status quo is impossible. Change is never easy, but changes must occur. The revolution in technology associated with broadband must be reconciled with the policy objectives identified the Telecommunications Act and in the NBP. By making tough decisions, the Commission can minimize disruptions, and deliver support to a new integrated communications platform that will deliver both high quality and affordable voice and broadband services.

[154] Id., p. 15.

Respectfully submitted,

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