

Requiring holding companies to make a state-level election for all study areas will deter to those companies from opting for ROR Carrier model-based CAF II support. As a result, the Commission would defeat its own goal of encouraging companies to make this migration. Accordingly, NRIC respectfully suggests that the Commission permit companies the option of converting to ROR Carrier model-based CAF II support on a study area by study area basis.

4. ROR Carrier support could transition from full frozen current support to full model support over a period of time.

As mentioned above, ROR Carriers will likely select the option that provides the most universal service support. In addition to the “kick start” as discussed above, the Commission could establish a transition period whereby a ROR Carrier selecting the model would receive some portion of support from the model and some portion from current support, eventually moving to full model support at the end of the transition period. If the Commission provided a mix of model and current support over a transition period, the build-out requirements would need to be appropriately modified and the time-frames for accomplishing build-out would need to be extended.

5. To eliminate ETC Obligations, a ROR Carrier must follow the procedures included in Section 214(e) of the Act.

The ITTA Plan also proposes that ROR Carriers that refuse model-based support in certain study areas would be relieved of their ETC status and obligations to serve in those study areas.⁴⁹ NRIC disagrees. Contrary to the factual and legal insufficiencies underlying this aspect of the ITTA Plan, NRIC respectfully submits that if a ROR Carrier receives the benefit of universal service support, regardless of the method used to calculate that support, it should be

⁴⁹ See *id.* at ¶ 281; see also, *ITTA Ex Parte*, Attachment at 3.

subject to ETC obligations and use the Act's framework to withdraw from ETC status if necessary.

From a factual perspective, the premise that underlies the ITTA contention – that at least one alternative voice and broadband provider qualified to be an ETC would step in to fill the shoes of the existing ETC – has not been demonstrated and is otherwise questionable. If an existing ETC has determined that ROR Carrier model-based CAF II support is insufficient for its operations, the ITTA has failed to explain why another telecommunications carrier would conclude otherwise. From a legal perspective, the law already provides for an “exit” process for an existing ETC, a process that is at odds with an existing ETC being able, as the ITTA effectively suggests, to essentially “un-designate” itself as an ETC. Section 214(e) of the Act requires state commissions (or in certain circumstances the FCC) to both designate ETCs and determine whether an ETC may relinquish its designation based on the existence of more than one eligible ETC in an area.⁵⁰ Thus, as a general matter, relinquishment of ETC status is the purview of state commissions as required by law and cannot be treated as if it does not exist within the ITTA Plan. Existing ETCs that wish to relinquish their ETC status in a study area have the means of doing so under law, and that legal structure established by Congress continues until and unless the law is modified.

IV. ADJUSTMENTS TO THE PC CACM ARE APPROPRIATE TO REFLECT THE COSTS AND CHARACTERISTICS OF ROR CARRIERS.

For the reasons stated herein, NRIC supports efforts to establish a ROR Carrier model-based CAF II and allowing carriers the option to elect such support. However, at this time, the ability to propose specific changes in the current PC CACM is inhibited by lack of access to

⁵⁰ See 47 U.S.C. § 214(e)(4).

certain of the underlying information regarding the model. Nonetheless, based on the experience of NRIC's advisors with the PC CACM, NRIC is in the position to suggest areas that should be investigated and respectfully recommends that, just as it did in the context of the PC Carriers, the Commission should establish a virtual workshop for, and provide illustrative runs regarding, the ROR Carrier model-based CAF II as it is developed and refined. This process, in turn, should not only aid in the development of a more robust ROR Carrier model-based CAF II but should also allow for a more informed process for those ROR Carriers that may not have participated in the development of the PC CACM. Accordingly for these reasons and those stated below, NRIC recommends that the Commission undertake this recommended process as it will advance the public interest.

A. The PC CACM is a Reasonable Platform for Beginning the Evaluation of Calculating Model-Based Support for ROR Carriers.

In the *FNPRM* the Commission requests commenters to address specific changes to the existing PC CACM.⁵¹ NRIC has undertaken a fairly extensive review of the various iterations of PC CACM and its outputs under numerous scenarios. NRIC analysis finds that the cost module of PC CACM incorporates many key network cost drivers, including emphasis on the density and distance factors, in determining network costs. NRIC has consistently and repeatedly established that these two elements alone are primary determinants of network costs,⁵² and

⁵¹ *FNPRM* at ¶ 290.

⁵² NRIC stated that costs in rural areas are high because of distance and density. *See Ex Parte Letter from Ken Pfister, on behalf of NRIC, to Marlene Dortch, Secretary, Federal Communications Commission, GN Docket No. 09-51, filed December 8, 2009, Attachment ("Universal Service in a Broadband World") at 3 and 7.* NRIC stated that based solely on density, less than 5% of households need support. *See id.*, Attachment ("Universal Service Recommendations for Broadband Expansion in Rural Areas") at 5. NRIC stated that density and cable route miles drive costs. *See Ex Parte Letter from Cheryl L. Parrino, on behalf of NRIC, to Marlene Dortch, Secretary, Federal Communications Commission, GN Docket No. 09-51, filed*

therefore these two elements should continue to be part of the foundation for a ROR Carrier model-based CAF II.

B. Certain Inputs to the PC CACM Need to be More Precise.

The PC CACM incorporates two modules – a cost module and a support module. The cost module is an engineering cost model driven by network design and topology, labor and material inputs and other cost drivers such as distance and density identified above.⁵³ NRIC has previously submitted comments in the past related to how the model might be used to distribute support.⁵⁴ While revisions to key cost inputs improve the precision of the model, there are other

November 4, 2010, Attachment (“Broadband Local Loop Upgrade Analysis”) at 6 and 7. NRIC stated that density is by far the most important predictor of costs. *See* Ex Parte Letter from Thomas J. Moorman, on behalf of NRIC, to Marlene Dortch, Secretary, Federal Communications Commission, WC Docket No. 10-90, GN Docket No. 09-51, WC Docket No. 05-337, filed January 10, 2011, Attachment (“Predicting Reasonable Broadband Costs”) at 7-10. NRIC stated that distance and density drive capital costs. *See id.*, Attachment (“Nebraska Rural Independent Companies Capital Expenditure Study”) at 6-19. NRIC stated that density and distance drive operating costs. *See* Ex Parte Letter from Cheryl L. Parrino, on behalf of NRIC, to Marlene Dortch, Secretary, Federal Communications Commission, WC Docket Nos. 10-90, 05-337, CC Docket No. 01-92, filed May 13, 2011, Attachment (“Operating Expense Study Sponsored by Nebraska Rural Independent Companies and Telergee Alliance of Certified Public Accounting Firms”). NRIC stated that density should be used as a cost predictor. *See* Ex Parte Letter from Cheryl L. Parrino, on behalf of NRIC, to Marlene Dortch, Secretary, Federal Communications Commission, WC Docket Nos. 10-90, 07-135, GN Docket No. 09-51, CC Docket Nos. 96-45, 01-92, filed April 12, 2012, Attachment (“Nebraska Rural Independent Companies Recommendations on Necessary Improvements to Proposed Rate of Return Carrier Regression Based benchmarks”) at 4-6. NRIC stated that distance and density drive costs. *See* NRIC June 2014 Ex Parte, Attachment (“Rate of Return USF Reform Recommendations to Ensure Fairness for All Rural Consumers”) at 4 and Attachment (“Reform for Rate of Return USF Should Stay True to the Statute”) at 7.

⁵³ *See* CACM Methodology Documentation version 4.1.1, revised April 11, 2014 (the “PC CACM Methodology Document”). The document can publicly be found at: https://apps.fcc.gov/edocs_public/attachmatch/DOC-326628A1.pdf.

⁵⁴ *See generally* NRIC June 2013 Comments. These comments are incorporated herein by reference.

steps that are extremely important in not only properly estimating network costs but also have a significant impact on distributing the limited ROR budget.

The Commission has directed the Bureau to incorporate the results of the study area boundary data collection into the ROR Carrier-based CACM.⁵⁵ Until NRIC can ascertain the success of incorporating the study area boundary changes, it believes that problems with the PC CACM continue to exist. As an example, the FCC's Rural Broadband Experiment list of PC Carrier includes census blocks situated entirely within one of NRIC's member company's service area.⁵⁶ NRIC suggests that in the context of developing and refining a ROR Carrier model-based CAF II, an important first step is to correct and validate the geographic areas served by each ROR Carrier because incorrect study area boundaries have cost implications as the model identifies and builds networks to locations within those boundaries. By way of example, for ROR Carriers that may have only 25 census blocks, any model inaccuracy is magnified as compared to a carrier that operates in large multiples of 25 census blocks. If the model does not adequately model cost on some metric, the large numbers of census blocks served by a PC Carrier can mitigate the effect of the model problem. Such is not the case for a ROR Carrier operating in a localized area. Even if the model predicts costs very accurately, in comparison to the larger PC Carriers and their larger service areas, smaller ROR Carriers do not have the averaging capabilities of PC Carriers across those PC Carriers' networks and cannot absorb mapping discrepancies.

⁵⁵ See generally *Wireline Competition Bureau Announces Procedures and Deadlines for Submissions of Study Area Boundaries, Public Notice*, DA 13-456, released March 18, 2013; see also *FNPRM* at ¶ 290.

⁵⁶ The test was conducted on four Consolidated Companies' study areas. Of the 29 PC Carrier census blocks touching these Consolidated Companies' study area boundaries, 12 of the census blocks are entirely within certain of these Consolidated Companies' study area boundaries. Yet the census blocks are listed as being eligible for the PC rural broadband experiment.

Another mapping issue that is key to using a model to calculate the offer of model-based support is the accuracy of the NBM as it is used to identify census blocks with unsubsidized competitors. The current version of the PC CACM determines the impact on the number of support-eligible ROR locations by using the June 2013 version of the NBM and the related Form 477 data.⁵⁷ Approximately [REDACTED] of all ROR locations and [REDACTED] of NRIC locations are eliminated from support based entirely on the unsubsidized competitor data as determined by the combined NBM and Form 477 process.⁵⁸ As noted in Section VI.A., NRIC believes that many of these unsubsidized competitors don't offer service meeting the performance standards set forth by the Commission.

NRIC has repeatedly noted that the use of a model for distributing universal service support must be precise and address the attributes of the ROR Carriers receiving that support.⁵⁹ NRIC realizes that any ROR Carrier model-based CAF II is distributing a fixed ROR budget and

⁵⁷ See *PC CACM Methodology Document*, pp. 33 – 35.

⁵⁸ See *PC CACM Methodology Document*, Architectural Component 4 – Define Existing Coverage (sub-section 5.2) (pp. 33-34).

⁵⁹ NRIC presented examples of unpredictable results to Commissioners and the Bureau in ex parte presentations. See generally *NRIC June 2014 Ex Parte*, Attachments (“Reform of Rate-of-Return USF Should Stay True to the Statute” and “Rate-of-Return USF Reform Recommendations to Ensure Fairness to all Rural Consumers”). NRIC stated that the data used in the model must be accurate. See *Ex Parte Letter from Cheryl L Parrino, on behalf of NRIC, to Marlene Dortch, Secretary, Federal Communications Commission, WC Docket No. 10-90, filed on September 6, 2013 at 2.* NRIC stated that data underlying models must be correct to ensure reasonable results. See *Ex Parte Letter from Cheryl L. Parrino, on behalf of NRIC, to Marlene Dortch, Secretary, Federal Communications Commission, WC Docket Nos. 10-90, 05-337, 06-122, CC Docket No. 01-92, filed June 6, 2013, Attachment (“Impacts of Uncertain Universal Service Support on Extremely Rural Areas”)* at 6-7. NRIC stated that there needs to be an appropriately tailored model for ROR ILECs. See *Ex Parte Letter from Thomas J. Moorman, on behalf of NRIC, to Marlene Dortch, Secretary, Federal Communications Commission, WC Docket No. 10-90, filed on November 13, 2013 at 2-3.*

as such it is the relative cost relationships that are important. Nonetheless, NRIC respectfully submits that it is necessary for inputs to be as correct as practically possible.

1. Both the cost and support modules of the PC CACM should be reviewed and revised as necessary for the ROR Carriers.

Many, if not most, of the parameters driving the cost portion of the PC CACM are either intrinsic in the model design (*e.g.*, engineering rules, network topology) or are not changeable by model users.⁶⁰ While NRIC can and has tested a number of input variables to determine the sensitivity of the both the PC CACM cost and support modules to changes in key drivers, NRIC cannot undertake changing state-specific inputs (*e.g.*, Plant Mix) with any degree of reliability for a number of reasons. NRIC only has specific knowledge of network deployment for its member companies, but does not have knowledge about the operational characteristics of ROR Carriers that are not NRIC members. Further, NRIC does not have access to outside proprietary data sources (*e.g.*, GeoResults) or the engineering design calculations that are an intrinsic part of CACM (*e.g.*, Efficient Road Pathing algorithm).⁶¹ However, NRIC was able to analyze the impact of changing take rate on network costs, eligible locations and the resulting support distribution.⁶² These results are displayed in Confidential Attachment A of this filing.

While the PC CACM does recognize some inputs as state-specific, additional granularity may be required for the significantly smaller and more localized ROR Carriers. As an example, one would logically expect a state such as Colorado with an extreme difference in terrain between eastern Colorado (prairie) and western Colorado (mountainous) to have an appreciably

⁶⁰ See *PC CACM Methodology Document*, Appendix 6 - CACM Input Tables (pp. 66-68).

⁶¹ See *id.*, Appendix 1 - CACM Network Topology Methods (pp. 41-52).

⁶² See *id.*, Appendix 10 – Take Rate Impacts to Network Sizing and Cost Unitization (pp. 80 – 82).

different mix of aerial and buried plant. In the *PC CACM Methodology Document*, it is uncertain whether the current PC CACM methodology accommodates a sub-state plant mix factor.

2. The method for determining operating costs for ROR Carriers should be reviewed and modifications considered.

The PC CACM categorizes operating expense as being network operations, customer operations, or general administrative expense.⁶³ The PC CACM's cost model estimates operating expense using several "cost drivers." In some categories, investment is the sole expense driver.⁶⁴

NRIC recognizes that outside plant maintenance work generates many operating expenses in rural areas, and it is at least approximately correct that these expenses follow investment. But for some operating costs, other factors are important.

To evaluate the reasonableness of the PC CACM's operating expense results, it is necessary to evaluate or replicate the regression studies that underlie the PC CACM's operating expense calculations.⁶⁵ Although the CostQuest analysis is summarized in the documentation, the full study is not publicly available. Accordingly, NRIC requests that the Commission publish more work papers detailing how CostQuest reached its conclusions regarding the factors that drive estimated operations expense.⁶⁶

⁶³ *See id.*, Section 4.3.3 Development of Opex Factors Table 5 (p. 29).

⁶⁴ *See id.*

⁶⁵ *See id.*, Section 4.3.

⁶⁶ CACM also recognizes that network operations costs are influenced by density. *See id.*, p. 30, n. 24.

C. The Commission should Establish a Virtual Cost Workshop for the ROR Carriers.

As noted in the discussion above, it is not possible for NRIC to undertake a comprehensive review of the PC CACM and its myriad inputs at this time. Accordingly, NRIC respectfully requests that the Commission establish a virtual cost workshop for the ROR Carriers similar to what was done for the PC Carriers.⁶⁷ With interested party input, the Commission could then use the record from the virtual workshop to review suggested changes that should be made to a ROR Carrier model-based CAF II in order to make it an appropriate mechanism for distributing support to ROR Carriers.

D. The Commission should Periodically Publish Illustrative Results.

Throughout the course of the PC Carrier virtual workshop the Bureau produced illustrative results of various model platform and input decisions. This same process should be adopted for the development and refinement of a ROR Carrier model-based CAF II. These illustrative results would allow for the analysis of various model changes publicly without the need to comply with the requirements of the current protective order applicable to the PC CACM.⁶⁸ These illustrative runs would, in turn, improve the transparency of the Commission's deliberative process and provide more ample opportunities for public discourse regarding the ROR Carrier model-based CAF II development and refinement. Thus, in producing the

⁶⁷ The Bureau released a notice announcing the virtual cost workshop on September 12, 2012. See *Wireline Competition Bureau Announces Connect America Fund Phase II Cost Model Virtual Workshop, Public Notice*, WC Docket No. 10-90, 05-337, DA 12-1487, released September 12, 2012. The virtual workshop for CAF Phase II (PC Carriers) was closed July 24, 2013. See *Wireline Competition Bureau Announces Closing of the Bureau's Cost Model Virtual Workshop, Public Notice*, WC Docket No. 10-90, DA 13-1635, released July 24, 2013.

⁶⁸ See *In the Matter of Connect America Fund, Third Supplemental Protective Order*, WC Docket No. 10-90, DA 12-1995, released December 11, 2012.

illustrative results for ROR Carriers, the Bureau should duplicate the process utilized in the CAM 4.1.1 results and additionally include the locations below any funding threshold.

V. THE TRANSITION TO A NEW LONG-TERM ROR SYSTEM SHOULD NOT RESULT IN DISRUPTIONS IN SERVICE AND FINANCIAL HARDSHIPS TO CARRIERS THAT HAVE BEEN REASONABLY DEPLOYING BROADBAND UNDER THE EXISTING MECHANISMS.

A reasonable transition from current support mechanisms or the use in the short term of a ROR Carrier model-based CAF II to a ROR Carrier forward-looking mechanism CAF III system is critical to the success of the Commission's goals of creating broadband-based support for ROR Carriers. And, most importantly, a reasonable transition is necessary to ensure consumers that enjoy broadband today will not experience a loss or degradation in service as a result of major changes to universal funding mechanisms. Companies that have reasonably invested to bring broadband to their consumers under the current system should have a reasonable period of time over which to recover their investment.

The *FNPRM* contemplates the development of model-based support as an alternative to the HCLS and ICLS mechanisms in place today. The Bureau also proposes that for ROR Carriers who elect model-based support, the transition be made over four years rather than five years as suggested in the ITTA Plan.⁶⁹ While NRIC agrees that a short transition to a properly-developed model-based system for ROR Carriers is appropriate for those carriers that voluntarily elect to receive model-based support, presumably because model-based support is higher than HCLS and ICLS, NRIC nonetheless believes a four-year transition to model support, or any other alternate long-term ROR Carrier CAF mechanism, is not reasonable for ROR Carriers that

⁶⁹ See *FNPRM* at ¶ 288.

will experience a decrease in support when moving from HCLS and ICLS to model-based support or a ROR Carrier forward-looking mechanism CAF III.

For example, NRIC anticipates that some ROR Carriers will experience significant reductions under a transition to model support. In these instances, a short transition might not allow the ROR Carrier to meet its financial obligations. In recognition of the impacts on such ROR Carriers and their customers, and to ensure there is no disruption in service, NRIC recommends that, should the Commission eventually mandate that all ROR Carriers transition to some yet-to-be-determined ROR Carrier forward-looking mechanism CAF III, the transition should be long enough to allow ROR Carriers an opportunity to recover their investment and to ensure that service is not disrupted for customers. Such a timeline would ensure companies that risked investing in high-cost areas, but did so in a reasonable fashion, would have an opportunity to recover those investment costs.

A. The Commission should Establish a Policy of No Backsliding such that Any Consumer Served with Terrestrial Broadband Prior to the Transition Maintains that Level of Service and the Carrier Maintains the Support Necessary to Maintain that Level of Service.

The Commission has established a goal of bringing broadband service to all consumers and institutions in the country. NRIC agrees. In addition, however, NRIC respectfully requests that the Commission establish additional objectives. First, any reform and modification should further the Commission goal by providing incentives to invest in and operate networks that are capable of providing broadband access. Second, under no circumstances should those modifications cause consumers that already have access to quality broadband and voice service, meeting the Commission's performance standards, to lose that service.

Once an ILEC makes an investment that results in the provision of voice and broadband service, the short-term ROR Carrier model-based CAF II and the long-term ROR Carrier

forward-looking mechanism CAF III should continue to provide support such that the ROR Carrier has an opportunity to recover its investment as well as to continue to support the provision of these services in these very high cost areas. By making such a commitment, the Commission will promote investment in, and the operation of, broadband-capable networks, an explicit goal of the USF program,⁷⁰ and avoid loss of service to consumers. Such results, NRIC respectfully submits, are entirely consistent with the public interest and should be adopted by the Commission as part of any reforms and modifications arising from the consideration of the issues in the *FNPRM*.

B. The Transition from Current Support Mechanisms to a New System should be Simplified from the Commission's Proposal.

The *FNPRM* asked initially whether the Commission should limit the investments recognized under the HCLS and ICLS programs to investments before a specific date but with later investment being addressed under a ROR Carrier forward-looking mechanism CAF III program of a still undetermined nature.⁷¹ NRIC respectfully submits that this approach be modified as suggested herein.

NRIC is concerned that the proposal in the *FNPRM* would impose more administrative and consultant-related costs on ROR ETCs than a transitional mechanism warrants. The Commission proposes to direct ETCs to identify assets as being pre-transition or post-transition, and then depreciate each class of assets separately. This process would add substantially to the work required of ROR Carriers in order to participate in the already complex USF system. Simultaneously operating different pre-transition and post-transition support mechanisms will greatly increase that complexity.

⁷⁰ See generally 47 U.S.C. § 254(e).

⁷¹ See *FNPRM* at ¶ 267.

Should the Commission nonetheless decide to mandate a transition from existing support to a long-term ROR Carrier forward-looking mechanism CAF III, NRIC respectfully submits that, where a ROR Carrier has elected to continue to receive HCLS and ICLS support, a simpler technique would be to freeze support at then-existing levels, and then gradually transition to a long-term CAF mechanism designed to address the specific operating characteristics of ROR Carriers and the levels of support dictated by that new mechanism. NRIC respectfully submits that this system would be far easier to administer for ROR Carriers and Commission Staff. If the transition occurred over a reasonable period of time, it would provide an opportunity for ROR Carriers to recover investments made under the old rules and minimize the chance of any service disruption for customers. Moreover, such a system is easier to understand and operate under.

C. Ongoing Support is Necessary in Most if not all ROR Carrier Areas.

The Commission has adopted a framework to provide ongoing support associated with universal service funding.⁷² ROR Carriers serve some of the least densely, highest cost areas in the country and one-time support is not sufficient to operate or maintain services in these areas or to replace obsolete plant. The Act recognizes the need for upgrading facilities, and for maintenance and operation of those facilities associated with the provision of universal service;⁷³ therefore on-going support to ROR Carriers is entirely appropriate and grounded in the Act.

As quoted earlier, the Commission has recognized that these “smaller carriers serve some of the highest cost areas of the nation.”⁷⁴ The Commission reaffirmed this finding in the

⁷² See *FNPRM* at ¶ 299 quoting *USF/ICC Transformation Order* at ¶ 17.

⁷³ See 47 U.S.C. § 254(e) (“A carrier that receives such support shall use that support only for the provision, maintenance, and upgrading of facilities and services for which the support is intended. Any such support should be explicit and sufficient to achieve the purposes of this section.”).

⁷⁴ *USF/ICC Transformation Order* at ¶ 209.

FNPRM, stating, with respect to ROR Carriers “play[ing] a significant and vital role in the deployment of 21st century networks throughout the country,” that “telephone service would not exist today in many rural and remote areas of the country without the concerted efforts of local companies to serve their communities.”⁷⁵ Thus, it is not surprising that the Commission has recognized that “[a]lthough they serve less than five percent of access lines in the U.S., smaller rate-of-return carriers operate in many of the country’s most difficult and expensive areas to serve.”⁷⁶

The Commission determined that PC CAF support would only be available for a period of five years. However, given the demographics, cost characteristics and the geography of the areas served by ROR Carriers, support should be ongoing for most or all ROR Carriers. Thus, NRIC respectfully submits that the time period for which long-term ROR Carrier forward-looking mechanism CAF III funding should be available to a ROR Carrier should not be the same as the 5-year period proposed for PC Carriers. The differentiation being proposed for ROR Carriers is rational and fully supported by data, logic and public policy, let alone the findings of the Commission quoted above.

Consistent with the manner in which many networks are financed today, NRIC presumes that the current PC CACM support mechanism pre-supposes use of private capital to finance network improvements. If the new long-term ROR Carrier forward-looking mechanism CAF III program is to rely on private capital sources, it is only logical for the Commission to presume that investors will act rationally and expect repayment of the their capital with a reasonable return. So too, the Commission should not presume that ROR Carriers will invest capital

⁷⁵ *FNPRM* at ¶ 258.

⁷⁶ *USF/ICC Transformation Order* at ¶ 26.

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without a reasonable expectation of receiving continuing universal service support so that debts will be repaid, investors will see reasonable returns, and operating expenses will be covered. In other words, the Net Present Value (“NPV”) of the future revenue streams must at least meet the sum of the investment NPV plus the NPV of future incremental operating expenses if the business case warrants. In high-cost areas, USF support is an important component in that revenue stream and the duration of that revenue stream is a critical factor in the NPV. Many investments would not be possible with a short universal service program life; however, when the expected stream of such federal universal service support has a longer life these investments become financially feasible. These same observations apply as well to a long-term ROR Carrier forward-looking mechanism CAF III.

Attachment B to these comments is a derivation of an NPV formula for evaluating a possible network investment. The paper assumes that: all of the proposed investment would take place in the first year; the engineering cost developed in PC CACM are exactly correct; and the investment will produce incremental subscriber revenue of \$52.50 per month per location passed, consistent with the PC CACM. The task of the analysis is to determine when the company would receive sufficient revenues to recover its expenses and capital cost, *i.e.*, when NPV is positive. The analysis considers all costs associated with the purchase, installation and maintenance of the new equipment, and considers all likely revenue sources. Further, the analysis demonstrates that in order to encourage investment the Commission should make any model-based CAF payment period long enough to adequately compensate ROR Carriers for their investments. Assuming that prudent expenditures are made that reflect the costs built into such a model, the only variables in play are the population served and the ROR USF support. The larger the population served, the higher the customer revenues that can be expected, so this

model-based payment period can be shorter and still adequately compensate the ROR Carrier. Similarly, the smaller the population served, the lower the expected customer revenues, so the USF support period must be longer.

A long program life also pays for continuing capital spending on post-construction investment and maintenance costs. Even after a new broadband network has been constructed, further investment is necessary over time. While outside plant may have an expected 25 to 30 year life, ultimately it needs to be replaced. Moreover, ROR Carriers experience new customer requests, cut cables, road relocations, cable washouts and other similar events that require capital expenditures just to maintain existing outside plant. The assurance that a long-term ROR Carrier forward-looking mechanism CAF III program will exist many years into the future is an essential means of encouraging this ongoing capital investment.

NRIC respectfully suggests that the Commission should provide ongoing funding for these ROR Carrier service areas in order to help ensure that network investments and the cost of operating and maintaining such networks continues and is encouraged and that consumers can benefit from the broadband services that such networks are capable of providing.

VI. THE COMMISSION MUST CLARIFY THE RULES APPLICABLE TO ROR CARRIERS OPTING TO MAINTAIN SUPPORT BASED ON THE CURRENT HCLS AND ICLS SUPPORT MECHANISMS AND MUST CODIFY RULES, PRIOR TO ESTABLISHING CAF MECHANISMS FOR ROR CARRIERS, FOR DETERMINING WHEN AND WHERE QUALIFIED COMPETITORS ARE PROVIDING SERVICE.

In the decisional section of the *FNPRM* (referred to as the 7th *Recon Order*), the Commission codified the rule to eliminate support in ILEC study areas where an unsubsidized competitor or combination of unsubsidized competitors offer voice and broadband to 100% of the ILEC's service territory and where those providers meet the Commission's service

obligations.⁷⁷ For the reasons stated herein, NRIC respectfully submits that these rules, as clarified per the discussion below, should apply to ROR Carriers that opt to continue receiving HCLS and ICLS. At the same time, NRIC respectfully submits that the Commission must codify, prior to implementation, new rules applicable to ROR Carrier model-based CAF II support and to the yet-to-be determined ROR Carrier forward-looking mechanism CAF III for determining when and where qualified competitors are providing service. And, in doing so, NRIC also respectfully submits that the Commission should adopt new rules, as discussed below, for ROR Carriers opting for ROR Carrier model-based CAF II rather than applying the PC rules and procedures applicable to the PC CACM.

A. The Current Rules Adopted for ROR Carriers should Apply to Those ROR Carriers Opting to Maintain Support Based on the Current Mechanisms and Should be Clarified to Impose the Same PC Carrier Performance Standards for Competitors Serving in ROR Carrier Areas.

The Commission directed the Bureau to establish the methodology for determining areas in which to eliminate support because an ILEC is 100 percent overlapped by an unsubsidized competitor.⁷⁸ Further, the Commission directed the Bureau to implement the methodology for determining areas in which to eliminate support where there is a 100% overlap of an ILEC service area by an unsubsidized competitor.⁷⁹ The Commission seeks comment on whether it should modify the rule to not provide support in areas with a “qualifying competitor,” *i.e.*, those areas that are served by any provider that offers voice and broadband services meeting the Commission’s service obligations – whether those providers are subsidized or unsubsidized.⁸⁰

⁷⁷ See 7th Recon Order at ¶ 54.

⁷⁸ See *id.* at ¶ 55.

⁷⁹ *Id.*

⁸⁰ See FNPRM at ¶ 266.

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NRIC respectfully submits that the Commission's first test in considering whether a service provider is a qualified competitor is if that service provider is "unsubsidized." Support should only be eliminated from an ILEC if the other competitor is in fact "unsubsidized". The Commission should develop a process to determine if a competitor receives support. In addition and as critical, the focus should be on whether the provider actually meets the entire service criterion necessary to be defined as a "competitor," and in fact provides such service throughout a ROR Carrier's entire study area. Accordingly, NRIC respectfully submits that the Commission should codify the service obligations a provider must meet in order to qualify as a competitor in a ROR Carrier's service area.

Specifically, and relying upon Section 54.319 of the Commission's Rules, in order to determine whether, *in fact*, an entity or combination of entities can be defined as a qualifying competitors, that entity (or combination of entities) must demonstrate that it offers voice and broadband service at speeds of at least 4 Mbps downstream/1 Mbps upstream. In addition, the entity (or combination of entities) must demonstrate that its service is offered with latency suitable for real-time applications, including Voice over Internet Protocol ("VoIP"), and usage capacity that is reasonably comparable to offerings in urban areas and at rates that are reasonably comparable to rates for comparable offerings in urban areas.⁸¹

NRIC notes that this determination must be service area-specific and based on demonstrated facts. Thus, as an initial step in determining, for example, whether the entity meets the speed criteria, NRIC recommends that the Commission use data derived from multiple sources including that from its FCC Form 477, in order to establish: (1) whether the entity meets the speed criteria in the census tract served by the ROR Carrier; and (2) whether the entity

⁸¹ See 47 C.F.R. § 54.319(a).

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reports that it is offering broadband at downstream rates greater or equal to 4 Mbps and upstream rates greater than or equal to 1 Mbps.

NRIC recognizes that the Commission adopted changes to its FCC Form 477 program in June 2013 to implement a new approach for reporting broadband connection speeds for fixed and mobile services, and to require reporting of wireline voice subscribership at the census tract level as is currently required for wireline broadband subscribership.⁸² NRIC respectfully submits that it would also be a marked improvement to produce the NBM and FCC Form 477 data at the same level of geographic granularity as the support to be distributed. In this way, the Commission would be able to undertake an “apples-to-apples” verification process.

While the Form 477 is one source of information regarding service levels in an area, NRIC respectfully submits that the Bureau should review as many sources of information as necessary, including study area boundary data in conjunction with data collected on the FCC Form 477 and the NBM, to determine whether and where 100% overlaps exist.

In addition to meeting the speed criteria, NRIC also respectfully submits that the provider must prove that its broadband and voice services meet the Commission’s performance criteria including sufficient bandwidth, a usage allowance, low latency, and proof of the provider’s service in the census block in question.⁸³ In this regard, the Commission has concluded that unsubsidized competitors should meet the same standards that are required of Phase II PC

⁸² See *In the Matter of Modernizing the FCC Form 477 Data Program, Report and Order*, WC Docket No. 11-10, 28 FCC Rcd 9887 (June 27, 2013).

⁸³ See *Wireline Competition Bureau Provides Guidance Regarding Phase II Challenge Process, Public Notice*, WC Docket No. 10-90, DA 14-865, released June 20, 2014 (the “June 20th PC Challenge Notice”) at ¶ 8 and n. 16.

Carrier recipients.⁸⁴ NRIC respectfully submits that these same standards relating to pricing, capacity/usage and latency should also apply to providers in ROR Carriers' service areas. In addition, the Commission has found that for those characteristics that are readily changeable, such as price or usage allowance, it would be more persuasive evidence if the would-be unsubsidized competitor commits to meeting those criteria for a five-year term,⁸⁵ a standard that NRIC also respectfully submits should be applicable to ROR Carriers' service areas.

Accordingly, and in light of the foregoing, NRIC respectfully submits that the following three (3) standards should be applicable to providers serving in ROR Carrier service areas in order to promote consistent, fact-based determinations of actual competitive services throughout PC Carrier and ROR Carrier service areas:

Pricing. The Commission adopted a conclusive presumption that a potential unsubsidized competitor is offering reasonably comparable prices if it offers the same or lower rates in rural markets as it does for its advertised non-promotional fixed wireline offerings meeting the requisite standards in urban markets.⁸⁶ In situations where the potential competitor does not offer fixed wireline service in urban areas, the Commission adopted a conclusive presumption that the pricing of any operator with non-promotional rates below the urban rate benchmark is reasonable.⁸⁷

Capacity/Usage. The Commission also adopted a conclusive presumption that if a potential unsubsidized competitor is competing in a particular census block with the

⁸⁴ See *In the Matter of the Connect America Fund, Report and Order*, WC Docket No. 10-90, DA 13-2115, released October 31, 2013 (the "PC Carrier Standards Order") at ¶ 40.

⁸⁵ See *id.* at ¶ 41, n. 98.

⁸⁶ See *id.* at ¶¶ 43, 46.

⁸⁷ See *id.* at ¶ 45.

incumbent PC Carrier, and both are offering services with at least 100 GB of data, the pricing of the competitor will be deemed reasonable, and not subject to challenge.⁸⁸

Latency Standards. The Commission has determined that latency standards must be suitable for real-time applications, such as VoIP. The Commission has also found that it is reasonable to set such standard as mouth-to-ear latency of 200 milliseconds (“ms”) or less.⁸⁹

B. For ROR Carriers Opting for ROR Carrier Model-Based CAF II in the Short Term as well as for all ROR Carriers once the Long-Term ROR Carrier Forward-Looking Mechanism CAF III is Established, the Commission Should Adopt Rules that Presume that In-Town Areas are Competitive and that Out-Of-Town Areas are Non-Competitive.

In order for the Commission to encourage ROR Carriers to transition to a ROR Carrier model-based CAF II in the short term, the Commission must address and resolve the serious problems with the current broadband reporting process whereby an entity can claim to provide service in competition with an ILEC in some or all of the census blocks in that ILEC’s study area. The PC CACM currently eliminates support in census blocks served by ROR Carriers where it identifies a cable or fixed-wireless provider reporting service meeting the specified speed criteria and if the provider reports voice services in the state on FCC Form 477.⁹⁰ The PC CACM does not, however, specifically take into account whether a competitive voice or broadband service is actually provided throughout the census block(s) or is provided even in the same census block(s) served by the ROR Carrier, nor does it take into account the entity’s broadband pricing, any usage allowance restrictions or any of the other quality standards

⁸⁸ See *id.* at ¶ 44.

⁸⁹ See *id.* at ¶¶ 19-20.

⁹⁰ See *PC CACM Methodology Document*, Architectural Component – Define Existing Coverage (pp 33-35).

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established by the Commission discussed above. Thus, while an entity could be offering its broadband service in the same census tract as the ILEC, if the entity reports that it has an affiliate that provides voice service in the same state as the ILEC, the ILEC loses support even though the competitive provider offers no voice service in the census block(s) served by the ILEC. These mismatches, in turn, potentially could eliminate support for ROR Carriers in census blocks that are reported as competitive but in reality are not.

NRIC respectfully submits that, in light of the limited number of census blocks within which a ROR Carrier typically operates, these issues must be addressed in order to ensure proper calculation and distribution of support to ROR Carriers and to develop a more accurate process for determining truly qualified competitors that are operating in a ROR Carrier's census block(s). While such issues exist for PC Carriers, the impact of any inaccuracies in determining actual competitors would likely not be as significant for such PC Carriers based on the overall larger number of census blocks they serve. Consequently, elimination of support for PC Carriers solely through the use of the NBM and FCC Form 477 process is, by comparison, not as serious of a financial hardship as it will likely be for many ROR Carriers if the process for determining qualified competitors is not modified.

Accordingly, as a baseline for implementing that process, NRIC recommends that the Commission establish rules for ROR Carriers associated with ROR Carrier model-based CAF II support and ROR Carrier forward-looking CAF III stating that in-town areas served by ROR Carriers are presumed to be competitive while out-of-town areas are presumed to be non-competitive. The challenge process for these ROR Carriers would then proceed from these baseline presumptions. NRIC respectfully submits that that this approach would be a more reasonable and equitable foundation from which any challenges would proceed in ROR areas.

C. The Challenge Process should be Corrected for All ROR Carriers.

Likewise, NRIC respectfully submits that the challenge process must also be fixed for ROR Carriers. As discussed in greater detail below, the challenge process adopted by the Commission for PC Carriers is expensive and cumbersome, and in that process the ILEC assumes all the risk. If this process were to be applied to the NRIC members, for example, inordinate burdens would be placed upon them because the current NBM indicates that large portions of the NRIC members' service territory is subject to "competition," thus indicating that support should be eliminated in those areas. In reality, however, many of the "competitive" providers do not serve the entire census block and they do not meet the Commission's performance standards. This result is inconsistent with the Bureau's finding that, to be an unsubsidized competitor, a provider must be offering service throughout the area in question.⁹¹

In light of the above, NRIC respectfully submits that the reporting and mapping errors are serious disincentives for those ROR Carriers considering moving to short-term ROR Carrier model-based CAF II support and would cause serious problems for a yet-to-be-determined ROR Carrier forward-looking mechanism CAF III.⁹² The Commission should codify rules to simplify the process for determining the census blocks where qualified competitors are providing service prior to finalizing a ROR Carrier model-based CAF II. To assist this effort, NRIC respectfully offers the following suggestions.

First, in determining which census blocks are competitive in ROR Carrier service area, the Commission should initially find that ROR Carrier model-based CAF II funding or ROR Carrier forward-looking mechanism CAF III funding will only be provided in those areas where

⁹¹ See *PC Carrier Standards Order* at ¶ 39, n. 96.

⁹² So too, where the service area of ROR Carrier that continues to receive HCLS and ICLS, the same concerns exist with respect to reporting and mapping errors.

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there is no private sector business case to provide broadband and high-quality voice-grade service.⁹³ Second, based on the experience of the NRIC members, the Commission should adopt a rule that presumes that: (a) in-town areas are areas where a business case can be made or where there are likely competitors and thus support would not be provided to those areas;⁹⁴ and (b) that out-of-town areas are non-competitive absent a showing that a competitor serves the entire census block and demonstrates that the service provided meets the Commission's performance standards as noted above. These suggestions, in NRIC's view, are entirely appropriate and should be adopted.

NRIC respectfully submits that this suggested approach not only simplifies the process for ROR Carriers but also for competitors and the Commission. This suggested approach also recognizes, consistent with NRIC's experience, that competitors providing voice and broadband service that meet reasonable performance standards typically provide service in the most densely populated areas. The most densely populated areas, in turn, are typically within a city, town, village, or other community limits. For example, cable providers typically do not provide service outside of the town or to the most remote locations of NRIC member service areas; cable providers do provide voice and broadband services within many of the towns and villages. NRIC submits that support should be targeted to the highest-cost areas to serve, *i.e.*, out-of-town areas where competitors generally do not serve.⁹⁵ The Commission could therefore presume that in-town areas are competitive given broadband service has been deployed by providers to most

⁹³ See *e.g.*, Ex Parte Letter from Cheryl L Parrino on behalf of NRIC, to Marlene Dortch, Secretary, Federal Communications Commission, WC Docket No. 10-90, filed September 6, 2013 ("Comparable Service and Prices Are Not Just Good Policy-It's the Law").

⁹⁴ For example, census blocks could be designated as "In-Town" or "Out-of-Town" based on density level or on a certain per-line cost.

⁹⁵ See generally NRIC June 2014 Ex Parte.

incorporated areas, and presume, subject to challenge, that out-of-town areas are not competitive.⁹⁶

- 1. The Commission should adopt a process to require that competitors have to challenge the presumption that out-of-town areas are non-competitive.**

In providing guidance regarding the Phase II challenge process, the Commission stated such guidance would ensure that the process is conducted effectively and efficiently.⁹⁷ The Commission recognized that during CAF Phase I, the Bureau was able to resolve challenges filed by over 80 providers on a host of different grounds.⁹⁸ Even though the Commission has established a challenge process that it claimed would allow the process to be effective and efficient, NRIC questions whether that same claim can be made in ROR Carrier service areas given the sheer number of ROR Carriers and the disproportionate resource impact of the challenge process on small ROR Carriers vis-à-vis other larger ILECs. Accordingly, NRIC respectfully submits that the PC Carrier challenge process should be modified for ROR Carriers as follows.

Once a ROR Carrier expresses the intent to convert to short-term ROR Carrier model-based CAF II support or when the Commission establishes a ROR Carrier forward-looking mechanism CAF III, the Commission should publicly notice such interest and provide a designated amount of time for competitors to provide sufficient evidence that they are providing qualifying services in some or all of the ROR Carrier's out-of town census blocks. The ROR Carrier should have a designated amount of time to respond to the challenge, if appropriate.

⁹⁶ See Comments of the Nebraska Public Service Commission, GN Docket Nos. 09-47, 09-51, 09-137 (filed December 7, 2009) at p. 8.

⁹⁷ See June 20th PC Challenge Notice at ¶ 5.

⁹⁸ See *id.* at ¶ 4.

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If a provider claims it is providing service throughout the out-of-town census block served by a ROR Carrier, that provider should have the opportunity to substantiate its claim. The provider should submit information available from multiple sources. Simply using information available from the NBM may very well, based on NRIC's experience, overstate the extent of competition, especially services compliant with the above-stated standards. For example, NRIC is not certain of the accuracy of data that is being used to identify purported "competitive" service areas; fixed wireless carriers may simply draw a circle around a tower site and label the area served without regard to that wireless carrier's ability to actually serve every customer with broadband and voice within the circle or census block.⁹⁹ This situation would cause the PC CACM, if not modified as part of a ROR Carrier model-based CAF II, to eliminate support for many customers based on inaccurate mapping and service coverage information. As if the mapping and service coverage problem was not a significant enough problem, additional data will be needed to determine whether voice and broadband is provided by a competitive provider in census blocks throughout the out-of-town areas served by the ROR Carrier at a price which meets the Commission's reasonable comparability benchmarks. While the FCC Form 477 provides additional information at the census tract level, the FCC Form 477 does not provide information regarding pricing and usage allowances. In its *PC Carrier Standards Order*, the Commission adopted on an interim basis the benchmarks of \$37.00 for voice service and \$60.00

⁹⁹ As discussed above, as long as the provider or an affiliate reports on the Form 477 that it provides voice service anywhere in the state, a ROR Carrier risks elimination of its support. In addition, other issues with respect to the provision of fixed wireless service – such as, by way of example, service quality and line of site issues – have already been noted. See Ex Parte Letter from Larry Thompson, Vantage Point Solutions, on behalf of NRIC, to Marlene Dortch, Secretary, Federal Communications Commission, WC Docket No. 10-90, filed October 28, 2013.

for broadband service.¹⁰⁰ On June 30, 2014, the Bureau sought comment on whether to adopt reasonably comparable broadband benchmarks in the range of \$68.48 to \$71.48.¹⁰¹ Until any new standards are adopted, however, NRIC respectfully submits that the \$37.00 for voice service and \$60.00 for broadband service adopted in the *PC Carrier Standards Order* should be applicable to ROR Carriers electing short-term ROR Carrier model-based CAF II support.

In addition, and consistent with the implementation of the “no backsliding” policy advocated by NRIC, customer-specific data regarding broadband capability must be incorporated into the ROR Carrier-model-based CAF II and the ROR Carrier forward-looking mechanism CAF III so that if a census block with costs over the ATC was shown to already have broadband capability, that the census block would not be eliminated from CAF-based support and thus would only be funded through the Remote Areas Fund. Such a policy is consistent with the Commission’s statement in the 7th *Recon Order* that “[c]lassification of a rate-of-return area as extremely high-cost under the forward-looking model does not mean that support would only be available from the Remote Areas Fund.”¹⁰²

¹⁰⁰ *PC Carrier Standards Order* at ¶ 45 citing *Wireline Competition Bureau Seeks Further Comment on Issues Regarding Service Obligations for Connect America Phase II and Determining Who Is an Unsubsidized Competitor*, Public Notice, WC Docket No. 10-90, DA 13-284, released February 26, 2013 at ¶¶ 17-18.

¹⁰¹ See generally *Wireline Competition Bureau Announces Posting of Broadband Data From Urban Rate Survey and Seeks Comment on Calculation of Reasonable Comparability Benchmark for Broadband Services*, Public Notice, WC Docket No. 10-90, DA 14-949, released June 30, 2014 at 1. In addition, the Commission in this Public Notice also proposed to adopt a separate broadband benchmark for services with differing usage levels. That proposal would set the reasonable comparability benchmark for a high-cost recipient offering a 4 Mbps/1 Mbps/100 GB offering at \$68.48 and a 4 Mbps downstream/1 Mbps upstream /unlimited usage offering at \$71.84. See *id.* at 1-3.

¹⁰² 7th *Recon Order* at ¶ 71.

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Finally, NRIC respectfully suggests that the Commission develop a competitive checklist for ROR Carrier census block areas as follows. A ROR Carrier's out-of-town census block(s) would be presumed not served by a competitive provider and support would not be reduced or eliminated in any census block it serves unless a competitor is able to demonstrate it meets all of the following:

1. The provider must offer its broadband service throughout the entire census block served by the ROR Carrier;
2. The provider's broadband service must be offered at speeds meeting or exceeding the Commission's speed threshold, currently 4 Mbps downstream/1 Mbps upstream, with a minimum usage allowance of 100 GB, adjusted over time, to take into account trends in consumer usage and at a price that is reasonably comparable to similar fixed wireline offerings in urban areas;
3. The provider's broadband service meets the latency standard by certifying that 95% or more of all peak period measurements of network round trip latency are at or below 100 ms;
4. The provider must offer its voice service throughout the census block at a price that is reasonably comparable to similar fixed wireline offerings in urban areas.

If these demonstrations were made, the ROR Carrier could then have an opportunity to respond if warranted.

NRIC submits that all conditions of the checklist should be required to be met, and declared such by the Commission, before a ROR census block can be deemed competitive. Without such a requirement, a ROR Carrier's support will not be predictable thus inhibiting investment and without predictable support, it is unlikely a ROR Carrier will voluntarily convert

to ROR Carrier model-based CAF II support. Both results are contrary to the Commission's objectives.

- 2. The Commission should codify the same PC Carrier performance standards for service obligations of competitors serving in ROR Carrier areas.**

As discussed above in Section VI.A., and consistent with Section 54.319, the Commission should require that a qualifying competitor, or combination of qualifying competitors, as defined in Section 54.5, offers voice and broadband service at speeds of at least 4 Mbps downstream/1 Mbps upstream. In addition, the competitive service must be offered with latency suitable for real-time applications, including VoIP, and usage capacity that is reasonably comparable to offerings in urban areas, at rates that are reasonably comparable to rates for comparable offerings in urban areas.¹⁰³

- 3. Once a ROR Carrier has committed to the ROR Carrier model-based CAF II in the short-term or once the ROR Carrier forward-looking mechanism CAF III mechanism is in place for the long-term, support must not be reduced as a result of a competitor's actions.**

Once a ROR Carrier has committed to the short-term ROR Carrier model-based CAF II or the yet-to-be-determined ROR Carrier forward-looking mechanism CAF III, NRIC respectfully submits that such ROR Carrier's support should not be subject to reductions based on another carrier's decision to provide service in the ROR Carrier's service area for the duration of the support period. There also should not be periodic reviews to determine if there is competitive overlap once support levels have been committed nor should there be a reduction in a ROR Carrier's support.

¹⁰³ See 47 C.F.R. § 54.319(a).

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The Commission has recognized that support has been directed to areas where providers would not have deployed and maintained network facilities absent universal service funding.¹⁰⁴ The Commission, in considering the term of support awarded through the competitive bidding process, also recognized that some entities may be unwilling to make the necessary long-term investments to build robust future-proof networks in areas that are uneconomic to serve absent continued support beyond a five-year term.¹⁰⁵ In lieu of these findings, the Commission should not consider elimination of support in ROR Carrier areas more frequently than over the economic life of the assets financed since a more frequent review could run the risk of default by support recipients whose business decisions were made on the basis of continuing receipt of such support.

Consistent with the Commission's conclusions relative to the term of support in the competitive bidding process, any potential reduction of support will create a disincentive for ROR Carriers to invest if support can be eliminated after the fact. NRIC respectfully submits that if the Commission considers reducing support more frequently than over the economic life of the assets it would violate Section 254 of the Act. Therein Congress specified universal service principles, including "specific, predictable and sufficient" support¹⁰⁶ so that consumers in all regions of the nation including rural and high-cost areas would have access to advanced telecommunications and information services that are reasonably comparable to those services provided in urban areas and that are available at rates that are reasonably comparable to rates

¹⁰⁴ See nn. 14 through 17, *supra*.

¹⁰⁵ See 7th Recon Order at ¶ 35 (Commission concluding that Connect America Phase II support awarded through the competitive bidding process should be available for ten years).

¹⁰⁶ 47 U.S.C. § 254(b)(5).

charged for similar services in urban areas.¹⁰⁷ The threat that support may be reduced does not provide ROR Carriers predictable or sufficient support.

Accordingly, for these reasons, NRIC respectfully submits that the Commission should develop a “no re-look” policy whereby a ROR Carrier that already serves areas with wireline broadband and voice service that meets or exceeds the Commission’s minimum standards will not have its support reduced simply due to another provider’s decision to provide service in those areas at least for the duration of the support period.

VII. THE COMMISSION SHOULD NOT RAISE THE BROADBAND SPEED REQUIREMENT TO 10 MBPS UNTIL THERE IS A SUFFICIENT BUDGET TO SUPPORT THAT STANDARD AND UNTIL ALL CONSUMERS HAVE ACCESS TO THE 4 MBPS STANDARD ADOPTED IN THE USF/ICC TRANSFORMATION ORDER.

The *FNPRM* proposes to increase minimum qualifying broadband speeds to 10 Mbps downstream and applying these new standards to all recipients of high-cost support that are subject to broadband public interest obligations, including all PC Carriers eligible for Phase II CAF support and also to ROR Carriers.¹⁰⁸ The *FNPRM* seeks comment on this proposal, as well as the consequences and tradeoffs involved in raising the standard, including the ability to preserve and advance broadband service for consumers within the CAF budget.

NRIC notes that a standard of 10 Mbps is a laudable goal. Nonetheless, NRIC respectfully submits that, at this point in time, it is not reasonable for the Commission to change the standard for what will be supported by universal service and what is required of universal service recipients.

¹⁰⁷ 47 U.S.C. §§ 254(b)(2) and (3).

¹⁰⁸ See 7th *Recon Order* at ¶ 138. The standards would have no effect on competitive ETCs while the legacy identical support rule is phased out. See *id.* at ¶ 314.

While all parties may agree that the speed standard should increase over time and that network infrastructure supported should be scalable in order to meet those increasing speed standards, such modification still needs to be justified. From both a practical and factual basis, however, such a change is not justified since the current budget does not support this increased standard, many consumers do not yet have access to 4 Mbps download speed, and the current models, maps and forms are all keyed to 4 Mbps or lower. Accordingly, NRIC respectfully submits that the *FNPRM* proposal to increase broadband speeds is premature for the following reasons.

First, NRIC is not aware of any factual analysis conducted that would suggest that raising the speed requirement to 10 Mbps can be attained under the current ROR budget. A 10 Mbps minimum standard would impose additional costs on the wireline industry. While many ILECs have their copper networks provide 4 Mbps using Digital Subscriber Line (“DSL”) technology, based on NRIC’s understanding of the capability of DSL, a standard of 10 Mbps would require considerable additional fiber deployment deeper into copper networks. Even if some ROR Carriers have fiber-based local distribution networks, other ROR Carriers do not, thus leaving these latter ROR Carriers with the possibility of substantial redesign and additional build out of their networks to achieve the 10 Mbps downstream speed. And, because of technology limitations, an increase in upstream speeds to above 1 Mbps is even more difficult and costly.¹⁰⁹

As such, NRIC respectfully submits that the Commission must first factually identify the infrastructure investment and operating costs associated with the necessary network upgrades to provide a 10 Mbps downstream speed and then compare that figure with the ROR budget in order to find that the funding of those network upgrades and operating costs can be covered by

¹⁰⁹ See *USF/ICC Transformation Order* at ¶ 95.

the ROR budget. These factual findings are necessary to ensure the “sufficiency” requirement of Section 254(b) of the Act is met.¹¹⁰ The Commission cannot simply declare a goal of higher speeds¹¹¹ that require network rebuilds without also finding ways and means to provide sufficient support for the needed investment.

Even if the Commission were to ultimately find that the ROR budget was sufficient to support the additional deployment and operating costs associated with meeting the 10 Mbps downstream speed, ROR Carriers would still need time to upgrade facilities to all locations, many of which have likely been engineered to a 4 Mbps downstream/1 Mbps upstream standard. The *FNPRM* indicates that the Commission is “primarily focusing on the minimum standard for *new* deployments of broadband-capable infrastructure,”¹¹² and that the Commission does not “intend to suggest that ETCs must deliver such speeds immediately upon adoption of a new rule.”¹¹³ While these statements are reassuring, the statements still need to reconcile with the fact that networks are financed and depreciated over a significant period of time, sometimes in excess of 20 years. Unless the Commission is willing to commit to refrain from forcing an ILEC to provide 10 Mbps service until its existing copper-based network is fully depreciated, NRIC seeks Commission assurance that the Commission will not force upgrades to existing copper networks before they are fully depreciated in the ordinary course of business. Moreover, absent a supporting ROR budget commensurate to the task, the new standard would have unpredictable

¹¹⁰ 47 U.S.C. § 254(b)(5).

¹¹¹ NRIC notes that requiring it as a condition of support has the same effect as requiring it directly.

¹¹² *FNPRM* at ¶ 142 (emphasis in original).

¹¹³ *Id.* Rather, the Commission proposes “a standard that ETCs, current and future, would be expected to achieve over a period of years, as they utilize high-cost support to extend and upgrade networks in high-cost areas.” *Id.*

consequences on the recovery and investment needed by ROR Carriers to continue to receive federal universal service distributions and could lead to a termination of existing voice service in some areas with copper networks.

Second, NRIC respectfully suggests that, before raising the standard at this point, the Commission must reconcile that decision with the fact that millions of customers in PC Carrier and ROR Carrier areas do not even have access to broadband service at the 4 Mbps downstream/1 Mbps upstream standard, and, even among those with some kind of broadband, many connections are slow and cannot even reach a 3 Mbps standard.¹¹⁴ In the current environment of significantly limited budgets for high cost support the Commission should ensure that all consumers have access to a basic level of broadband service before it shifts funding to provide higher levels of support to suburban areas. Establishing a higher standard of 10 Mbps will increase the overall cost of the task and will divert funding away from ensuring that all consumers have access to a basic standard of 4 Mbps. Accordingly, for this reason alone, NRIC respectfully submits that it is not reasonable to increase the speed requirements when parts of the country are unserved even at the current speed requirement of 4Mbps.

Third, NRIC notes that some processes now in place are predicated on a standard of 4 Mbps or lower. The current reporting forms as well as the current PC CACM that is yet to be implemented are based on a 4 Mbps standard. Changing the standard without changing the underlying data, model and forms is problematical since those sources have critical importance to the overall program.

¹¹⁴ The most recent Internet Access Services status report noted that as of June 30, 2013, among residential broadband connections of at least 200 kbps, 13.8 million connections (14.6%) have a downstream speed of less than 3 Mbps. See *Internet Access Services: Status as of June 30, 2013*, Industry Analysis and Technology Division, Wireline Competition Bureau (June, 2014), Figure 3(a).

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Fourth, changing the standard would result in major shifts in funding and would leave many customers in the have-not category. On June 17, 2014, the Bureau released a new set of PC CACM illustrative results showing the support results if the 10 Mbps standard were adopted, but only for PC Carriers.¹¹⁵ These results were contrasted to those generated in Release 4.1.1, which had been based on a 3 Mbps speed standard.¹¹⁶ To meet the overall budget constraint in the *June 17th Increased Broadband Speed Notice*, the Bureau reduced the ATC from \$207.81 to \$172.51.¹¹⁷ Contrasting the 3 Mbps runs with the 10 Mbps illustrative runs shows results for three classes of locations.¹¹⁸

1. Extremely High-Cost Losers. Under both scenarios, no support is provided to approximately [REDACTED] PC Carrier active subscribers with costs above \$207.81.¹¹⁹ These customers will receive substandard or likely no broadband service.
2. Moderate Cost Losers. Lowering the ATC eliminates support for approximately [REDACTED] PC Carrier locations that have costs above \$172.51 and below \$207.81. Support for these customers is eliminated when the model parameters are changed from 4 Mbps to 10 Mbps.
3. Low Cost Winners. Lowering the ATC provide support to [REDACTED] new locations that have costs below \$172.51 and that currently have broadband at 3

¹¹⁵ See generally *June 17th Increased Broadband Speed Public Notice*.

¹¹⁶ See *id.* at 2, n. 6 (“In addition to using 10 Mbps/768 kbps as a proxy for 10 Mbps/1 Mbps, the Bureau uses 3 Mbps/768 kbps as proxy for 4 Mbps/1 Mbps.”).

¹¹⁷ See *id.* at 2.

¹¹⁸ Detailed results for the following locations are found in Confidential Attachment C.

¹¹⁹ [REDACTED]

in ROR Carrier areas than in PC areas.¹²² Moreover, the Commission has expressly refrained from deciding how it will support extremely high-cost areas above the ATC.¹²³ Further increasing the already large number of locations above the ATC threshold would be an invitation to backsliding and possible loss of service in many areas now served by voice as well as those already served by broadband.

For the above reasons, NRIC respectfully submits that the Commission should not raise the speed standard to 10 Mbps if it also plans to maintain the current universal service high-cost budget.

VIII. CONCLUSION

For the reasons stated herein, NRIC respectfully requests that the Commission confirm the presumptions that NRIC noted in the Introduction to these comments, and, from there, adopt the proposals contained herein. NRIC respectfully submits that the proposals contained herein will provide a rational public policy and factual basis for the establishment of a short-term ROR Carrier model-based CAF II (thereby allowing an informed choice by ROR Carrier regarding any new mechanism) and the development of a ROR Carrier forward-looking mechanism CAF III. Moreover, NRIC also respectfully submits that the proposal contained herein will help provide the basis for increased investments in ROR Carrier networks capable of provide high quality voice service and broadband access at the established 4 Mbps downstream/1 Mbps

¹²² See 7th Recon Order at ¶ 71.

¹²³ See *id.* (“We emphasize that we have made no decisions regarding how the Remote Areas Fund might be implemented in those areas of the country where the incumbent provider is a rate-of-return carrier. Classification of a rate-of-return area as extremely high-cost under the forward-looking model does not mean that support would only be available from the Remote Areas Fund.”).

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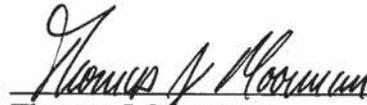
upstream speeds while helping to ensure no backsliding where consumers are or are capable of receiving such broadband services.

Dated: August 8, 2014.

Respectfully submitted,

Arlington Telephone Company, The Blair Telephone Company, Cambridge Telephone Company, Clarks Telecommunications Co., Consolidated Telephone Company, Consolidated Telco, Inc., Consolidated Telecom, Inc., The Curtis Telephone Company, Eastern Nebraska Telephone Company, Great Plains Communications, Inc., Hamilton Telephone Company, Hartington Telecommunications Co., Inc., Hershey Cooperative Telephone Co., K. & M. Telephone Company, Inc., The Nebraska Central Telephone Company, Northeast Nebraska Telephone Company, Rock County Telephone Company, Stanton Telecom, Inc., and Three River Telco ("The Nebraska Rural Independent Companies")

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Attachment A

Analysis of Changing Take Rate Demand from 80% (Default) in PC CAM 4.1.1 to 100%

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Attachment B - Page 1 of 4
Net Present Value Formula

Definitions:

EL = Economic Life of the equipment

n = Number of years that CACM is received

R = Carrying Factor for Expense

L = Customer Location Count in a given area

CapEx_{ACTUAL} = Investment needed to serve a given area

OpEx_{ACTUAL} = Actual annual operating expense incurred by the company

CapExAnnPymt_{CACM} = Amount received annually from CACM for purposes of CapEx recovery

OpExAnnPymt_{CACM} = Amount received annually from CACM for purposes of OpEx recovery

(p/a)^{IRR for n years} = $\frac{(1+IRR)^n - 1}{IRR * (1+IRR)^n}$ = Present Value of an annual amount received for n years

(p/f)^{IRR for n years} = $\frac{1}{(1+IRR)^n}$ = Present Value of a future sum received in the nth year

Assumptions:

1. All investment takes place in the first year.
2. A company will make investments and incur expense exactly in line with the engineering cost developed in CACM.
3. A company will not make an investment unless it receives sufficient revenues to recover its expenses and capital cost. That is, Net Present Value >= \$0
4. The company charges \$75 per month for broadband. The company's take rate for broadband as a percentage of the customer locations is 70%. Thus, the expected per customer revenue is \$75 * 70% = \$52.50

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Net Present Value Formula**

Net Present Value Analysis:

The cash flows related to an investment can be depicted as follows: the present value of the CACM payments for capital and expense-related costs, plus the present value of customer revenues from the investment, less the present value of actual operating expenses, less the initial capital investment. These cash flows are shown in Equation (1):

$$\text{Equation (1) Net Present Value} = \text{CapExAnnPymt}_{\text{CACM}} * (\text{p/a})^{\text{IRR for n years}} \\ + \text{OpExAnnPymt}_{\text{CACM}} * (\text{p/a})^{\text{IRR for n years}} \\ + \$52.50 * L * (\text{p/a})^{\text{IRR for EL years}} - \text{OpEx}_{\text{ACTUAL}} * (\text{p/a})^{\text{IRR for EL years}} - \\ \text{CapEx}_{\text{ACTUAL}}$$

A company will incur operating expense for the economic life of an asset. If the FCC were to limit funding of operating expenses to a fixed time period, n, that is shorter than the economic life, EL, then the company may experience a monetary shortfall even if the capital expenditures were adequately reimbursed. The cash flows associated with operating expense for an economic life that is greater than the funding period can be represented by the following equation, Equation (2):

$$\text{Equation (2) Net Present Value OPERATING EXPENSE} = \text{OpEx}_{\text{ACTUAL}} * (\text{p/a})^{\text{IRR for EL years}} \\ = \text{OpEx}_{\text{ACTUAL}} * (\text{p/a})^{\text{IRR for n years}} + \text{OpEx}_{\text{ACTUAL}} * (\text{p/a})^{\text{IRR for EL-n years}} * (\text{p/f})^{\text{IRR}} \\ \text{for n years}$$

Assuming OpExAnnPymt_{CACM} = OpEx_{ACTUAL} for the first n years, the following equation, Equation (3), results by substituting Equation (2) into Equation (1) and simplifying:

$$\text{Equation (3) Net Present Value} = \text{CapExAnnPymt}_{\text{CACM}} * (\text{p/a})^{\text{IRR for n years}} + \$52.50 * L * (\text{p/a})^{\text{IRR}} \\ \text{for EL years} \\ - \text{OpEx}_{\text{ACTUAL}} * (\text{p/a})^{\text{IRR for EL-n years}} * (\text{p/f})^{\text{IRR for n years}} - \text{CapEx}_{\text{ACTUAL}}$$

Substituting

$$\frac{(1+\text{IRR})^n - 1}{\text{IRR} * (1+\text{IRR})^n} = (\text{p/a})^{\text{IRR for n years}}$$

$$\frac{(1+\text{IRR})^{\text{EL}} - 1}{\text{IRR} * (1+\text{IRR})^{\text{EL}}} = (\text{p/a})^{\text{IRR for EL years}}$$

$$\frac{(1+\text{IRR})^{\text{EL}-n} - 1}{\text{IRR} * (1+\text{IRR})^{\text{EL}-n}} = (\text{p/a})^{\text{IRR for EL-n years}} \text{ and}$$

$$\frac{1}{(1+\text{IRR})^n} = (\text{p/f})^{\text{IRR for n years}} \text{ yields Equation (4):}$$

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Net Present Value Formula**

$$\text{Equation (4) Net Present Value} = \text{CapExAnnPymt} \text{CACM} * \frac{(1+IRR)^n - 1}{IRR * (1+IRR)^n} + \$52.50 * L * \frac{(1+IRR)^{EL} - 1}{IRR * (1+IRR)^{EL}} - \text{OpEX}_{ACTUAL} * \frac{(1+IRR)^{EL-n} - 1}{IRR * (1+IRR)^{EL-n}} * \frac{1}{(1+IRR)^n} - \text{CapEX}_{ACTUAL}$$

Simplifying the above equation yields Equation (5):

$$\text{Equation (5) Net Present Value} = \text{CapExAnnPymt} \text{CACM} * \frac{(1+IRR)^n - 1}{IRR * (1+IRR)^n} + \$52.50 * L * \frac{(1+IRR)^{EL} - 1}{IRR * (1+IRR)^{EL}} - \text{OpEX}_{ACTUAL} * \frac{(1+IRR)^{EL-n} - 1}{IRR * (1+IRR)^{EL}} - \text{CapEX}_{ACTUAL}$$

*A company will undertake an investment if the Net Present Value is greater than zero, assuming the discount rate is adequate. Thus, if the revenues, $\text{CapExAnnPymt} \text{CACM} * \frac{(1+IRR)^n - 1}{IRR * (1+IRR)^n} + \$52.50 * L * \frac{(1+IRR)^{EL} - 1}{IRR * (1+IRR)^{EL}}$, are greater than the costs, $\text{OpEX}_{ACTUAL} * \frac{(1+IRR)^{EL-n} - 1}{IRR * (1+IRR)^{EL}} + \text{CapEX}_{ACTUAL}$, a company will undertake the investment.*

- Revenues: *As n increases, the equation $\frac{(1+IRR)^n - 1}{IRR * (1+IRR)^n}$ becomes larger. So, for a given interest rate, IRR, and a given CACM payment, CapExAnnPymt, a company would be more likely to invest if the CACM payment duration was longer. In addition, as the economic life approaches 30 years, as is the case with outside plant investment, then $\frac{(1+IRR)^{EL} - 1}{IRR * (1+IRR)^{EL}}$ simplifies to $\frac{1}{IRR}$. So, the customer revenues simplify to $\$52.50 * L * \frac{1}{IRR}$. Thus, as the number of customer locations, L, increases, the customer revenues increase.*
- Costs: *Similarly, on the cost side of the equation, a company would be more likely to invest if its costs were lower. But, we have assumed that a company will make investments, CapEX_{ACTUAL}, and incur expense, OpEX_{ACTUAL}, exactly in line with the engineering cost developed in CACM, so these variables cannot be changed. The formula $\frac{(1+IRR)^{EL-n} - 1}{IRR * (1+IRR)^{EL}}$ can be restated as follows: $\frac{1}{IRR} * \left(\frac{1}{(1+IRR)^n} - \frac{1}{(1+IRR)^{EL}} \right)$. Assuming an IRR=10% and EL=30, if n=5 the result is 5.63, whereas if n=20 the result is 0.913. Thus, if the CACM payments extend for a longer time period, which is represented by a higher value of n, the present value of the operating costs will be lower, which will make the Net Present Value higher and the company will be more likely to invest.*

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Net Present Value Formula

Conclusion:

In conclusion, to encourage investment the FCC should make the CACM payment period long enough to adequately compensate companies for their investments. Assuming that prudent expenditures are made that reflect the costs built into CACM, the only variables in play are the population served and the CACM payment period. For a given service area, the larger the population served, the higher the customer revenues that can be expected, so the CACM payment period can be shorter and still adequately compensate the company. Similarly, for a given service area, the smaller the population served, the lower the expected customer revenues, so the CACM period must be longer.

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**Attachment C
Effects of ATC and Raising Broadband Standard to 10 Mbps**

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**Attachment D
3/1 versus 10/1 Analysis – ROR Carriers**

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