

REDACTED – FOR PUBLIC INSPECTION

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)
)
Connect America Fund) WC Docket No. 10-90
)
Petition For Waiver, *Nunc Pro Tunc*, Of)
North Central Telephone Cooperative, Inc.)
Of The Revision To Section 36.605 Of The)
Commission’s Rules That Eliminated)
Eligibility Of Local Exchange Carriers)
To Receive Safety Net Additive Support)

**PETITION FOR WAIVER OF
NORTH CENTRAL TELEPHONE COOPERATIVE, INC.**

David Cosson

Its Attorney

2154 Wisconsin Ave., N.W.

Washington, D.C. 20007

December 20, 2012

TABLE OF CONTENTS

SUMMARY	iv
I. INTRODUCTION	1
II. STATEMENT OF RELEVANT FACTS	2
A. History of North Central Telephone Cooperative Inc. (“NCTC”).....	2
B. Service Area Description.....	4
C. Consumer Demand for Adequate Broadband in NCTC Service Area.....	5
D. NCTC Investments Leading to SNA Qualification.....	10
E. Quantification of SNA Support Reductions	21
III. CONSEQUENCES FOR NCTC SUBSCRIBERS FROM LOSS OF SAFETY NET SUPPORT	21
A. Summary of Costs and Lost Quantifiable Benefits.....	22
B. Broadband Deployment – Access and Adoption.....	23
C. Systems and Business Process Improvements.....	24
D. Expansion of Business Services.....	26
IV. WAIVER WOULD SERVE THE PUBLIC INTEREST	27
A. Waiver Standards Applicable.....	28
B. Waiver would be consistent with the Public Interest as expressed in the <i>Transformation Order</i> generally and with the express concerns with Safety Net Additive support.....	30
C. Waiver is Necessary for NCTC to Achieve the Purposes of Section 254.....	35
D. Special Circumstances Demonstrating Good Cause.....	36
V. CONCLUSION	38
APPENDIX A – Service Area Maps	
APPENDIX B – Service Area Characteristics	
APPENDIX C – Alternate Providers – Cable and Wireless Coverage Maps	
APPENDIX D – Accounting for Unused or Spare Equipment	
APPENDIX E – Corporate Operations Expense	
APPENDIX F – End User Rates	
APPENDIX G - List of Services Provided over USF Supported Plant	
APPENDIX H – Customers Served	
APPENDIX I – Procedures for Allocating Shared or Common Costs Between Regulated and Non-Regulated Services or Operations	

APPENDIX J – TPIS 2009 and 2010 Cost Study, Safety Net Payment Eligibility Worksheet

APPENDIX K – Audited Financial Statements Including Notes

APPENDIX L – Information Regarding Outstanding Loans

**APPENDIX M – Identification of Specific Facilities and Services that will be Cancelled or
Deferred**

**APPENDIX N – Engineering Analysis/Affidavit Demonstrating that Construction Costs are
Reasonable and Prudent in View of Demand**

APPENDIX O – Letters of Support for NCTC’s Broadband and Fiber Initiatives

APPENDIX P - NCTC Five Year Financial Plan, SNA Waiver Offsets and Lost Benefits

SUMMARY

North Central Telephone Cooperative by this Waiver Petition seeks reinstatement, *nunc pro tunc*, of the Safety Net Additive (“SNA”) support which would have begun in February 2012 but for the rule changes adopted in the Commission’s *Transformation Order*. NCTC made extensive capital investments in 2010 to upgrade its facilities in rural areas that qualified it for SNA support without regard to line losses. These 2010 investments were an essential piece of a multiyear development plan in furtherance of specific national policies designed to encourage broadband development and stimulate the economy. The investments were funded by a combination of a loan and grant made by the federal government’s Rural Utilities Service under the BIP program of the American Recovery and Reinvestment Act of 2009 and by other loans under other RUS authority.

NCTC’s application for this government funding, and the federal agency approval of it, was reasonably based on the conclusions that the loans could be repaid from revenue streams that existed under the Commission’s rules in effect at that time, including SNA support. In 2011, after substantial loan and grant funds had been expended on investment in broadband facilities, the Commission first proposed to eliminate SNA. The stated rationale for elimination was a concern that carriers were qualifying for support because of line loss rather than increased investment. Following adoption of the *Transformation Order*, NCTC recognized that without SNA support it would be necessary to modify its deployment plan by deferring substantial investments for several years, if not indefinitely. Without waiver of the rule change, the result of such deferrals will be that many subscribers will not receive vital services for some time and cost efficiencies that would have resulted will not be realized. Alternative providers of comparable broadband service do not exist in NCTC’s service area of 929 square miles except within the borders of a couple of small municipalities. Waiver of the rule would therefore promote the Commission’s central policy goals of improving voice service, assuring broadband availability to those without and improving the efficiency and productivity of the provider, thus reducing the future need for universal service support.

NCTC is an 18,000 access line subscriber owned cooperative organized in 1951 because telephone service was not available in large rural portions of north central Tennessee and south central Kentucky. For some time NCTC provided high speed Internet access using DSL technology to a majority of its members. By 2008 NCTC

recognized that extensive upgrading of its network to provide substantially increased bandwidth would be required to meet the business and social needs of its consumers. Following careful demand studies and consideration of technology alternatives, a detailed and comprehensive plan was designed to meet the service area's needs. Initial RUS funding based on this plan was supplemented by the loan/grant under the ARRA and further RUS loans. In the absence of waiver a substantial portion of the community benefits and operating efficiencies expected from full implementation of this plan will, at best, face considerable delay.

Specifically, the reduced cost recovery resulting from the unanticipated flash-cut of SNA support requires NCTC to defer extending fiber transmission facilities to reduce copper loop length in several portions of the service area. This will not only delay the provision of higher speed broadband required by residents and business today (and desired by the Commission itself), but will require NCTC to continue expensive copper loop and DSL modem maintenance that would have been avoided. Moreover, loss of SNA revenue will require NCTC to defer the development and implementation of a number of systems and business process improvements which would improve efficiency and lower long term costs. Finally, NCTC will necessarily delay deployment of services that would make the broadband network more valuable to the community, such as further extension of telemedicine capabilities, a cloud/data solution to make local small businesses more competitive and provision of a support center that would accelerate broadband adoption.

The petition attempts to address each of the data requests specified in the *Transformation Order*, and raises public policy concerns that fit squarely within the Commission's interest in ensuring the continued operation of broadband-capable networks and the affordability of consumer rates. NCTC's eligibility for waiver rests upon its showing that it meets the long standing good cause precedents established by the courts in *Wait Radio and Northeast Cellular* because the particular facts make strict compliance inconsistent with the public interest. NCTC asks that the Commission take into account the specific facts that demonstrate the waiver is justified by considerations of hardship, equity, and more effective implementation of overall policy, where, among other factors, it was not on notice that SNA support was being considered for elimination when the investments were made.

Because NCTC's qualification for SNA support was established by actual increase in Telephone

Plant in Service grant of the waiver would be consistent with the Commission's specific concern that SNA eligibility should not be established because of line loss. NCTC's reasonable and prudent levels of investment and operating expenses fall well below the limits established by the Bureau's Quantile Regression Analysis model. Finally, and most significantly, grant of the waiver would be consistent with Congress' and the Commission's overall goal of ubiquitous availability of advanced services, as well as the stimulus goals of the ARRA.

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Connect America Fund)	WC Docket No. 10-90
)	
Petition For Waiver, <i>Nunc Pro Tunc</i> , Of)	
North Central Telephone Cooperative, Inc.)	
Of The Revision To Section 36.605 Of The)	
Commission’s Rules That Eliminated)	
Eligibility Of Local Exchange Carriers)	
To Receive Safety Net Additive Support)	

**PETITION FOR WAIVER OF
NORTH CENTRAL TELEPHONE COOPERATIVE, INC.**

I. INTRODUCTION

North Central Telephone Cooperative, Inc. (“NCTC”) is a local exchange carrier that provides telecommunications and broadband services to subscribers in very rural areas in north central Tennessee and south central Kentucky. Pursuant to Section 1.3 of the Commission’s rules, NCTC respectfully requests that the Commission waive, *nunc pro tunc*, the revision to Section 36.605 that eliminated eligibility of local exchange carriers to receive Safety Net Additive (“SNA”) support with respect to qualifying investments made during the year 2010.¹ The revised rule was adopted by the Commission’s *Transformation Order* and became effective December 29, 2011.²

NCTC will demonstrate below that in accordance with the Communications Act, the Administrative Procedure Act, relevant court and Commission precedents, the factual showings established in the *Transformation Order*, and the special circumstances facing NCTC that the public interest would be served by a narrow and limited deviation from the rules as requested herein.

In 2008 NCTC adopted a vision of a modernized communication network that could remove the historical geographic barriers, as measured in time and distance, so as to enable its subscribers to

¹ 47 C.F.R. § 1.3, 47 C.F.R. 36.605

² *Connect America Fund*, Report and Order and Further Notice of Proposed Rulemaking, 26 FCC Rcd 17663 (2011) (“*Transformation Order*”).

meaningfully interact with the world. NCTC concluded that a modern communication network that provides internet, voice, video and a host of other services is the foundation of the new economy just as roads and air transportation became the foundation of the 20th century. A lack of roads infrastructure and convenient access to commercial air transportation limited the NCTC serving area from fully participating in the 20th century economy, however with a modern communications network the citizens in the NCTC serving area have the opportunity to bridge the digital divide and fully participate in the new economy. NCTC reinforced this vision in its 2010 BIP application and renewed its commitment to substantially increase the capital invested in its network to expand broadband availability.

Because NCTC has not received the SNA support expected to begin in February of this year NCTC has necessarily begun to scale back and revise future broadband deployment (access and adoption) plans and defer the investment in systems and business process improvements and the development and deployment of new revenue generating services. These changes will harm consumers in NCTC's service area, contrary to the stated objectives of reform and the core objectives of universal service. Consistent with the Commission's clarified waiver standards, as explained further herein, this petition should be granted because, in the absence of relief, many of NCTC's consumers "face a significant risk of losing [or never obtaining] access to a broadband-capable network."³ Each reduction in service made necessary by the elimination of SNA is discussed in detail in Section II.F, below.

II. STATEMENT OF RELEVANT FACTS

A. History of NCTC

NCTC was organized in 1951 by the people who lived in this very rural area because they were unable to get service from Southern Bell (now AT&T). The goal of the cooperative founders was to provide communications to the area thus connecting the people to each other and to the outside world. Several of the residents had served in World War II and could not call home during the war. The creation of the cooperative was, in part, a result of their determination to do something about the lack of connectivity to the world when they returned home. NCTC has continued this tradition by providing free broadband internet service at the National Guard Armory in Lafayette, TN so that families of deployed service personnel can stay in touch.

³ Paragraphs 19 to 22 of the FCC's 5th Order on Reconsideration as released on November 16, 2012

NCTC started as a 1,600 member telephone cooperative and, through strategic efforts at growth, has expanded into ten exchanges with over 18,000 access lines. NCTC provides service to member subscribers in north central Tennessee and south central Kentucky.⁴ Exchanges include Bethpage, Defeated, Green Grove, Hillsdale, Lafayette, Oak Grove, Pleasant Shade, Red Boiling Springs and Westmoreland in Tennessee and Scottsville in Allen County, Kentucky. In 2003 NCTC began to offer competitive services in the town of Scottsville, Kentucky where Windstream is the incumbent service provider.

NCTC has expanded its services over the years. It now provides voice services (digital telephone service, advanced calling features, long distance, IP-PBX), internet services (dial-up, DSL, broadband – DSL and Fiber to the Premise (“FTTP”)), video services (IPTV), backhaul services for all wireless towers including Ethernet services, and residential and business security monitoring services. As detailed more fully below, in 2008 NCTC began building a fiber based Active Ethernet network to provide modern telecommunications services for the 21st century to its members, local businesses, public safety and government organizations. The first phase (Red Boiling Springs, TN) went into service in 2009 followed by Lafayette, TN and Scottsville, KY (Allen County Phase I and II) in 2010. By the end of 2011, NCTC’s network consisted of 5,412 miles of outside plant including over 925 miles of fiber. The core network has been upgraded with next generation Cisco routers and Genband softswitch equipment which will ultimately enable delivery of up to 1 Gigabit bandwidth to FTTP customers.

NCTC has 100 employees and operates business offices in Lafayette and Westmoreland, Tennessee, and Scottsville, Kentucky to service residents and businesses in the local area. In addition NCTC has invested in several companies which enhance NCTC’s service offerings, lower the cost structure and/or contribute significant annual cash flow. These include iRis Networks (a high-capacity transport network extending throughout Tennessee), Bluegrass Network LLC (fiber optic connectivity throughout south central Kentucky), Bluegrass Telecom (internet gateway), and Bluegrass Cellular (wireless carrier in KY). NCTC continually evaluates the contribution each makes to any given alternative line of business and takes steps to sell or minimize its investments in such ventures when they are no longer a value added or strategic contributor to NCTC’s bottom line.⁵ NCTC also provides competitive service in the town of Scottsville (Windstream is the incumbent).

⁴ Service area maps and service area characteristics are provided in Appendices A and B respectively.

⁵ NCTC sold its interest in a Tennessee wireless company, for example, because it did not believe it could compete effectively with the large national carrier in the area.

B. Service Area Description

NCTC provides telecommunications and broadband services to subscribers in very rural areas in north central Tennessee and south central Kentucky. The service area is approximately 929 square miles which reaches from the Appalachian Plateau in the east across portions of the Cumberland Plateau and Highland Rim to the Nashville basin in the south and west. A significant portion is rocky terrain and heavily wooded⁶ with substantial elevation changes presenting unique challenges to deploying and maintaining a communications network. The service area has approximately 21 households per square mile (vs. major cities and suburban areas with 443 and 79 households per square mile respectively). Much of the served area is well below the average with 60% of the routes having a customer density of less than 4 per route mile. Some areas such as Defeated (11 subscribers/square mile) and Pleasant Shade (12 subscribers/square mile) are well below the density average of the overall served area. Despite these geographic and density-related challenges, NCTC has maintained reasonable and prudent capital and operating costs even as it seeks to expand the reach of its cutting-edge network, falling well below the limits established by the Bureau's Quantile Regression Analysis model.⁷

The NCTC serving area is approximately 35 miles away from the nearest Interstate Highway and 64 miles away from the nearest commercial airport. Additionally, because the area does not have any four lane roads (which are a critical factor to manufacturing facilities in choosing where to locate), a telecommunications "highway" is critical to attracting high technology businesses to the area. All NCTC service areas qualify as rural as confirmed by the latest decennial census; none of the NCTC exchanges are located within either: (1) a city, town, or incorporated area that has a population of greater than 20,000 inhabitants; or (2) an urbanized area contiguous and adjacent to a city or town that has a population of greater than 50,000 inhabitants. NCTC has qualified for High Cost Loop Support since 1995.

In addition NCTC faces the challenge of serving a socioeconomically disadvantaged customer base. The area has a below average median household income of \$34,000 (vs. national average median household income of \$52,000) with up to 24% of the population falling below the poverty line (national average is 13.3%)⁸. Sixty four percent of Macon County, Tennessee students are on the

⁶ See picture in Appendix B.

⁷ *Connect America Fund* Order, 27 FCC Rcd 4235, App. B (WCB 2012)

⁸ See Macon, Smith, Jackson counties TN and Allen County KY, US Census Bureau, State & County Quickfacts

free/reduced price lunch program.⁹ Unemployment levels average 8.5% across the whole of the serving area just slightly above the national level.¹⁰ Only 9% of residents over the age of 25 have a bachelor or higher degree.¹¹ [REDACTED]

[REDACTED] As a result of these socioeconomic factors NCTC is currently constrained from recouping costs through higher rates and has been limited in its ability to make significant inroads with non-regulated services. NCTC is working closely with local governments and regional health and education institutions in order to improve the socioeconomic factors. Early results are encouraging as documented in Section II.D.6.

With respect to economic opportunity, the last significant manufacturing plant closed in 2008 and as a result 72% of people employed in Macon County leave the county for work. The NCTC serving area is comprised mainly of small business with over 85% of the businesses employing fewer than 10 people (only 1% or 5 businesses in Macon County employ 100-249 (none are over 250) employees of which 2 are cooperatives - NCTC and Tri-County Electric)¹².

C. Consumer Demand for Adequate Broadband in NCTC Service Area.

1. NCTC Service Area Prior to 2008

Prior to the start of NCTC's network upgrade and expansion project in 2008 voice services were ubiquitous throughout the served area, but relatively low-speed DSL services (512K) were available to only 65% of the customers. The remaining 35% of the customers in 2008 were limited to dial-up internet services. Put another way, as recently as four years ago, NCTC's aging copper plant precluded it from offering broadband as currently defined by the Commission (4/1 Mbps) to any subscriber. Due to the continually increasing demand for broadband services, and in light of the fact that its entire study area was effectively unserved from a broadband perspective by any metric, NCTC made the prudent determination that it needed to replace aging, high maintenance, copper plant in many of the more rural exchanges and reduce loop lengths. A Gigabit Active Ethernet network design with Fiber to the Premise was chosen to meet current and future requirements as it was determined to be less costly to deploy and maintain and to offer far superior bandwidth capabilities than other alternatives meeting the

⁹ Macon County Food Service Supervisor Dawn Thompson. NCTC is headquartered in Lafayette, the county seat of Macon County

¹⁰ US Department of Labor: Bureau of Labor Statistics, www.bls.gov, August 2012 Unemployment Rates

¹¹ See Macon, Smith, Jackson counties TN and Allen County KY, US Census Bureau, State & County Quickfacts

¹² See Appendix B for Employment statistics

necessary performance characteristics. NCTC also prudently sought to avoid an inefficient and ultimately much more expensive “piecemeal” construction process where construction crews might be constantly redeployed to shorten loop lengths to enable 768 kbps for a few years, 1 Mbps for a few more years after that, 1.5 Mbps for several years after that, and so on. To the contrary, NCTC’s plan was to build out its network in an orderly and economical manner as demand for the services materialized. In 2010 a Broadband Initiative Program (“BIP”) award enabled NCTC to advance the deployment of FTTP as demand ramped up while also serving the national purpose of stimulating economic activity and job growth. [REDACTED]

[REDACTED] The probability of meeting that necessary and reasonable objective, however, is now in serious jeopardy without the SNA Waiver sought by this petition. [REDACTED]

2. NCTC’s Evaluation of Demand for Broadband:

Although NCTC was of course aware of a generally acknowledged growing global demand for increased broadband capacity, prudence required it to make reasonable attempts to quantify the serving area current and future demand before committing large amounts of capital.

To this end, in 2009 NCTC contracted with CHR Solutions to conduct primary market research in the Lafayette service area to determine current broadband subscribership and future bandwidth demand. The 176 completed surveys in the Lafayette area (the area of highest population density) yielded results with a 95% Confidence Level and a Confidence Interval of +/- 7%. A summary of the findings:

1. Only 40% indicated they were high speed internet subscribers qualifying the area as underserved per the BIP program requirements.¹³
2. Of the two primary providers, NCTC served 76% and Comcast 16%.
3. Email and general web surfing were typical usage. The amount of usage for movie and music downloads, streaming video, photo sharing and online gaming predicted higher bandwidth needs in the future.
4. Reasons for not taking internet service: too expensive (15%), no need (29%), no computer (56%).¹⁴

¹³ High speed internet included speeds greater than dial-up but less than the current defined broadband of 4/1.

¹⁴ These are consistent with the “Broadband Adoption and Use in America: OBI Working Papers Series No.1” FCC, Washington, DC, February 2010.

5. Internet access through cell phone/smartphone – 13%

NCTC also evaluated the October 2009 Macon County, “Connected Macon County – Strategic Technology Plan” in which the county recognized the need for and the opportunities provided by broadband¹⁵. Based on a 2008 report by Connected Nation¹⁶ the county developed a vision for broadband expansion and adoption with the goal to create jobs and direct income growth, reduce healthcare costs and enrich the quality of life in the county while having a positive impact on the environment. The county identified nine sectors (agriculture, business, community organizations, government, healthcare, higher education, K-12 education, libraries, tourism/recreation) and set goals, objectives and actions for each aimed at closing the digital divide. Another Connected Nation report¹⁷ documented how broadband impacts business and found that: businesses that use broadband report median annual revenues that are approximately \$300,000 higher than businesses that do not use broadband; nearly 1 in 3 businesses earn revenues from online sales; over 2.5 million businesses use the internet to advertise job openings or accept applications including 139,000 that only accept online applications and that an online presence has become so important to small businesses that Google, along with several other partners in the state of Michigan are giving businesses free websites¹⁸. As highlighted in Section II.B, the serving area is comprised mainly of small businesses where access to a modern communications network and services are critical to be competitive.

A 2012 Calix study¹⁹ indicates that Internet traffic generated by rural consumers grew 53 percent quarter over quarter, as subscribers migrated to faster broadband speeds and streamed more Internet video. In addition the Calix study indicated that:

... 55% of rural broadband subscribers received a maximum downstream broadband speed of 3 Mbps or less – approximately one-tenth of the US peak downstream average published by Akamai in its most recent published “State of the Internet” report. In fact, two-thirds of rural subscribers received downstream broadband speeds that are slower than the target of the Connect America Fund (CAF) of 4 Mbps, and approximately 93 % are below the ultimate CAF upstream target of 1.5 Mbps. ... Not surprisingly, copper subscribers had lower peak speeds than fiber subscribers.

¹⁵ NCTC is headquartered in Lafayette, which is the county seat of Macon County

¹⁶ The Economic Impact of Stimulating Broadband Nationally, February 21, 2008, Connected Nation

¹⁷ The 2012 Jobs and Broadband Report – National Projections on How American Businesses USE Computers and Broadband to Grow, Hire and Thrive, May 2012 Connected Nation

¹⁸ Michigan Get Your Business Online. <http://www.michigangetonline.com/>

¹⁹ Calix US Rural Broadband Q2 2012 Report

Further in the report Calix notes that video streaming (62%) and internet browsing (23%) applications represented the top two consumers of downstream bandwidth while business services (30%) represents the largest consumer of upstream internet traffic. In addition their findings show that broadband subscribers who are served by fiber generate more internet traffic than those with copper access media. The study reports that in the second quarter of 2012, service providers that delivered broadband services exclusively over fiber saw their subscriber endpoints generate 87% more downstream traffic and nearly 10% more upstream traffic than copper based subscribers.

Current forecasts²⁰ by the Consumer Electronics Association (CEA) project that by 2016 over 53% of the US home video market (\$18B) will be video on demand (16%) and streaming (37% - \$6.7B) up from 28% in 2011 with the largest growth coming from streaming video (14% → 37%).

Steve Koenig, director of industry analysis at CEA explained:

Streaming and connected video services like Netflix and Vudu have eaten into Blu-ray Disc sales as consumers have experimented and shifted their purchase behavior. Streaming services and cloud based content are the future when it comes to video. Over time the drive to own a library of physical media content will give way to the convenience of on-demand content from the cloud.

Bandwidth demand is soaring driven by web applications, video multi-media, video streaming, telehealth, distance education, and cloud and collaborative services. Service providers of all sizes and kinds are working hard to meet the challenge knowing that such services and applications do not exactly sip bandwidth from a straw – they tip up the mug and guzzle it.²¹

In NCTC's controlled launch of its "Fusion Broadband" offering [REDACTED]

[REDACTED] This shows the pent up demand in the serving area. [REDACTED]

3. Lack of Competitive Alternative Providers

²⁰ USA Today August 24, 2012 – "Blu-ray caught in shift to streaming", page 2A and 2B.

²¹ Next Generation Networks, Special Report From the Center for Digital Government, Supplement to CIO Magazine, Intelligent Networks Reform Communication for Government and Society & Beyond Transport – Intelligent Networks Enable New Applications and Services 2012 – Issue 3 www.govtech.com/pcio/special_reports/

As of today there are few alternative broadband providers in the service area. Cable and wireless alternatives are constrained to several more densely populated areas and along the main roads. NCTC is the only provider that offers services throughout its rural serving area. There are no CLECs that compete with NCTC in the area.

Comcast offers broadband and video services only in the town areas of Lafayette and Westmoreland which comprise approximately 6% of the served land area and 12% of the population base in NCTC's service area. While a voice offering is indicated on its website NCTC has not been able to validate the offering, and Comcast does not have an interconnect agreement. There is no cable offering in the Scottsville exchange area (Allen, County, KY).

There are six wireless carriers (Verizon, AT&T, T-Mobile, Sprint, US Cellular, Bluegrass Cellular) providing service in parts of NCTC's serving area. Coverage is provided primarily along two State Highway corridors: State Highway 52 that runs east/west through the towns of Red Boiling Springs, Lafayette and Westmoreland and State Highway 231 which runs north/south through the western part of the serving area running through Westmoreland up to Scottsville. Due to the effect of, the hilly terrain and vegetation signal absorption and reflection properties on signal propagation, the average range of cell towers in the area is between 2 and 5 miles. The primary wireless providers²² in the Tennessee service area are Verizon Wireless and US Cellular, while Bluegrass Cellular is the predominant provider in the Kentucky service area. The Verizon coverage map shows that 3G broadband coverage should be available throughout most of the NCTC's Tennessee service area, although with the exception of the towns of Lafayette and Westmoreland, service is unreliable for voice and even less reliable for data. NCTC has run trials in its serving area to determine if Verizon voice and data services can be utilized in its service vehicles and have found that in the areas outside Lafayette in-vehicle signal boosters are required to receive signals and still in some cases drives of up to a mile are needed to get service. In-home tests also show limited to no service outside the core Lafayette and Westmoreland areas and the State Highway 52 and 231 corridors.

US Cellular also offers cellular service in parts of NCTC's Tennessee serving area but as can be seen from its coverage map most of the area has "Fair" coverage in home which would not be good enough for broadband. Bluegrass Cellular offers wireless phone and broadband service to the Scottsville exchange in Kentucky but has the similar service issues as Verizon does in Tennessee. In the long term, in order for the wireless carriers to provide ubiquitous broadband to the NCTC serving area many additional towers will need to be built and connected to Ethernet fiber pipes (100 to 300

²² See Appendix C for listing of wireless carriers and coverage maps.

Mbps).²³ Over the next five years it is unlikely that any of the wireless carriers will provide ubiquitous broadband services throughout the area and given the rapidly rising data ARPU (“Average Revenue Per Subscriber”)²⁴ driven by elimination of unlimited data plans and accelerating usage, it is hard to conceive that people in this region will be able to afford wireless broadband service sufficient to enable all of the future applications for mobility, internet access, streaming video, etc.

D. NCTC Investments Leading to Qualification for SNA Support

As a cooperative, NCTC’s mission is to provide the same quality of service to all of its member owners. In fulfilling this cooperative mission, NCTC has worked diligently over the last several years developing and implementing a new business plan based on a hybrid FTTP and copper (with loop lengths initially less than 10K feet) network. NCTC’s network upgrade plans were made to bring high-speed broadband and modern telecommunications services to its members in a cost efficient manner and enable the types of opportunities discussed in Section II.C.2. This objective is fully consistent with the explicit universal service objectives adopted by Congress in the Communications Act Amendments of 1996, the National Broadband Plan, and with the Guiding Principles as laid out by President Obama.²⁵

Realization of NCTC’s network deployment plans required access to substantial inexpensive capital funding. From the inception of the cooperative, NCTC has primarily relied on the lending programs of the Department of Agriculture’s Rural Utility Service (“RUS”) (formerly Rural Electrification Administration - REA) for capital funding. The demonstration of financial feasibility in a loan application requires revenue forecasts which in turn depend in part on the Commission’s rules governing ICC and universal service support.

In 2009 the American Recovery and Reinvestment Act (“ARRA”) was adopted by Congress at the urging of the President with the specific intent of stimulating the economy by creating and saving jobs, providing temporary relief to those most impacted and investment in infrastructure. As described below, NCTC utilized both of these governmental programs in addition to commercial bank loans to

²³ With the current fiber build NCTC will be in a position to meet the backhaul needs of the wireless carriers when they decide to add towers. NCTC currently provides backhaul to all 27 towers located in its served area.

²⁴ Verizon
www2.verizon.com/idc/groups/public/documents/adacct/2q12_earnings_release_slides.pdf , Chart 8 Verizon data ARPU \$24.53 growing at 15.4%, and AT&T
www.att.com/investor/earnings/2q12/slide.bw-2q12.pdf , AT&T Investor update 2Q12 Chart 8 data ARPU 28.04 and growing at 14.1%.

²⁵ <http://www.whitehouse.gov/issues/technology> - Guiding Principles

secure the capital necessary – and then combined those funds with a significant stake of its own private capital – to deploy advanced broadband services throughout its service area over a reasonable timeframe.

1. RUS “U” Loan

RUS granted a loan of [REDACTED] on October 3, 2003 with stated objectives to connect 4092 new subscribers, implement a short-loop design in order to provide high-speed broadband services to subscribers, provide electronic equipment (Next Generation Digital Loop Carriers NGDLC’s”, broadband digital and OC-48 fiber optic terminals), construct aerial and buried fiber optic facilities, purchase ADSL/VDSL gateways and provide other system improvements. This investment was made consistent with all the government and commission policies in place at that time and the build-out was completed in an efficient and economical manner.

With the U loan, NCTC initiated the fiber build-out by first constructing 10 GigE Ethernet transport rings to backhaul broadband data from major aggregation points (Lafayette/Westmoreland/Scottsville) to the main switching center. In addition NCTC began to extend the fiber from the major aggregation points to smaller aggregation points located deeper into the network to enable implementation of the short loop design and prep for last mile fiber. The goal was to reduce the number of subscribers on 10 to 30K foot loop lengths thereby enabling high speed internet DSL services to be deployed in a timely and economical manner to a greater number of subscribers. Eleven communities within the serving area were targeted for the upgrades.

The initial investments in the optical rings and the short loop design demonstrated the demand for high speed internet services; accordingly, in 2008 NCTC ramped up its investment in fiber deployments in the loop in three underserved communities, Red Boiling Springs, Lafayette, and Scottsville (Allen County KY). Red Boiling Springs went into service in 2009 and the latter two went into service in 2010. In 2010 NCTC closed out 5 major projects (funded by the U Loan) as noted in the table below and these investments along with other smaller projects increased NCTC’s Total Plant in Service (“TPIS”) from [REDACTED] at the end of 2009 to [REDACTED] at the end of 2010, an increase of [REDACTED] or 15.4%.

Year Closed	Contract #	Contract Description ²⁶	Amount
2010	U-112	Lafayette Phase 3 Network	[REDACTED]
2010	U-117	Scottsville Phase 1 Network	[REDACTED]

²⁶ See Appendix J for detailed description of investments.

2010	U-119	Scottsville Outside Plant	██████████
2010	U-121	Scottsville Phase 2 Network	██████████
2010	U-122	Scottsville Phase Outside Plant	██████████
2010	Misc	Misc Capital Projects	██████████
Total			██████████

The loan was closed out in mid-2011 and an RUS audit was completed in May 2012.

2. American Recovery and Reinvestment Act (BIP) Loan and Grant

On January 25, 2010, NCTC was awarded a loan and grant combination to accelerate construction of its broadband network in underserved areas under the Broadband Initiatives Program. The total amount awarded to NCTC was \$49,679,709, of which \$24,964,000 was in the form of a loan and \$24,715,709 as a grant. Under the Program, NCTC will be reimbursed for eligible costs associated with the construction of the broadband facilities over a five year period. As of June 30, 2012, NCTC has received ██████████ in loan proceeds and ██████████ of the grant portion.

The objective of the NCTC BIP project was to enable the delivery of advanced broadband services and stimulate their adoption in six underserved service areas of Tennessee including Bethpage, Defeated, Lafayette, Oak Grove, Pleasant Shade and Westmoreland. These six areas include 14,824 (73% of the serving area) households and businesses including a number of anchor institutions (public safety entities, hospitals, schools and industrial parks). The BIP plan included placing mainline fiber (middle and second mile) throughout the six areas to enable either direct fiber drops to subscribers or to shorten loop lengths to sub 5,000 feet. In addition the plan was to deliver fiber to 30% (5,600) of the homes passed using BIP funds and subsequently installing fiber drops based on demand utilizing the RUS V Loan funds. This would eventually enable 100% of subscribers in the areas to have access to 20Mbps broadband service.

In conjunction with the loans and grants NCTC began to deploy a next-generation multi-protocol label switching (MPLS) transport network to connect their various exchanges. This network provides a 10 Gigabit Ethernet meshed backbone network to enable Active Ethernet based services. Traffic that is expected to traverse this network includes voice, high-speed internet uplinks to NGDLC and FTTP access electronics, Ethernet connections to their next-tier internet service providers, business Ethernet circuits, IPTV video, cell site Ethernet backhaul services, and many others.

As NCTC moves forward with more Ethernet-centric access electronics, it was also necessary to expand the fiber optic transport infrastructure in order to serve the changing needs of the customers.

3. Commercial Bank and Operating Cash-flow Investments

In addition to the RUS Loans and the BIP award NCTC has invested substantial funds from operational cash flow [REDACTED] and commercial bank loans [REDACTED] to contribute to the network modernization and the CLEC build out in the town of Scottsville, which is in the middle of NCTC's Kentucky serving area.²⁷ In 2010 NCTC took out commercial loans to build a Class 3 data center [REDACTED] to host new IP network equipment (softswitch [REDACTED] and associated peripherals and routers) and the planned future investment in business cloud servers and storage. Additionally NCTC purchased and implemented the base [REDACTED] management system for [REDACTED]. Each of these base investments were funded through a combination of commercial loans and operating cash flow due to timing of the BIP and V Loan approval and the need to have the base infrastructure in place for the network and business modernization programs. NCTC also implemented a fleet²⁸ and computer modernization plan.

4. RUS "V" Loan

NCTC obtained its RUS "V" Loan November 9, 2011 for the amount of [REDACTED]. The funds will be used to expand the build-out providing advanced broadband service to communities and areas not served by the BIP Stimulus funding and to the other homes, that were passed with the BIP funded fiber but the drops were not installed pending customer demand for service. By the end of the loan draw period (2016) NCTC is now forecasting delivery of FTTP to [REDACTED] of homes and businesses (vs. [REDACTED] in previous 5 Year Plan) and an advanced Active Ethernet network capable of delivering up to 1Gbps to homes, businesses and government agencies in the serving area.

5. Total Investment, Funding and Internet Subscriber Profile

NCTC has invested [REDACTED] of capital from 2003 through 2011 to modernize the network and plans to invest a further [REDACTED] from 2012 through 2016 to push the fiber deeper into the network, shorten all loops, add the cloud business servers and continue the business modernization including cost reduction and service improvements. This investment has been/will be funded through the RUS T, U and V Loans, the BIP loan and grant, commercial bank loans and operational cash flow. The feasibility analysis of this plan included the \$3M Safety Net (SNA) payment which was designated to enable NCTC to accelerate the new services and expense reductions. A summary of the investment and funding is included in the table below.

²⁷ NCTC has an approximately [REDACTED] market share in the city of Scottsville as a CLEC, and serves the remainder of the county as an ILEC.

²⁸ Many of its vehicles had far surpassed 200,000 miles.

NCTC Consolidated Capital Investment and Funding 2003-2016 (\$M)															
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
Investment															
Capital															
Funding															
RUS T Loan															
RUS U Loan															
RUS V Loan															
BIP Loan															
BIP Grant															
Commercial Loans															
Operating Cash Flow															
Total Funding															

Notes to Table: NCTC Consolidated Capital Investment and Funding 2003-2016 (\$M)

1. The 2010 [REDACTED] TPIS increase includes capital expended in 2009 and 2010.
2. With BIP build-out timeline extended to January 2015 and the cancelation of SNA funding NCTC delayed major 2012 build-out pending analysis on most efficient and effective means of achieving BIP goals with the reduced funding.
3. 2012 V Loan funded activity is primary staking and schematics for [REDACTED] of BIP area drops and a limited number of drop installations.
4. Capital investment prior to 2009 was primarily copper plant upgrades and 10 Gigabit fiber ring connecting main collection points.
5. Capital investment in 2009 and 2010 was primarily fiber in Allen County, KY and Red Boiling Springs, TN areas.

In addition NCTC has retired [REDACTED] (DMS100 digital switch and associated peripherals) in network and outside plant and had planned to retire a further [REDACTED] of copper plant over the next 4 years. The copper plant needs to be kept in service in each remote serving area until all subscribers in the area have moved to fiber connections.

NCTC’s network modernization program was designed to enable the types of opportunities identified by Macon County and the Connected Nation and envisioned in The National Broadband Plan. NCTC’s modernization is fully consistent with the objectives of the ARRA program, and its effort to migrate responsibly from antiquated network plant fulfills the promise of the “IP evolution” in which the Commission has expressed such a great deal of interest.²⁹ NCTC has already delivered some of the vision to local healthcare, education and small businesses as documented in Section II.D.6 in this waiver request and will eventually be able to deliver 20-100 Mbps to homes and businesses in

²⁹ http://transition.fcc.gov/Daily_Releases/Daily_Business/2012/db1210/DOC-317837A1.pdf
http://transition.fcc.gov/Daily_Releases/Daily_Business/2012/db1210/DOC-317839A1.pdf

its serving area where fiber is available and a target of 12/2Mbps (short loop DSL) service to all other subscribers if this waiver is granted.

The initial RUS U Loan investment described in Section II.D.1 enabled NCTC to increase the number of customers receiving high speed internet from [REDACTED] during 2010. This 11.3% increase occurred even though overall loops reported by NCTC decreased from [REDACTED]. With the subsequent BIP award in 2010 NCTC continued to modernize its network and outside plant enabling large portions of the underserved areas to get access to broadband services. Since January 2010 NCTC has seen a rapid transition from dial-up internet to basic DSL (< 3Mbps) to broadband (DSL up to 12 Mbps and FTTP up to 20 + Mbps) services. Broadband subscriptions are growing at [REDACTED] annually with over [REDACTED] on FTTP. That number is expected to grow to [REDACTED] by end of 2012 with the completion of seven additional fiber projects in the fourth quarter [REDACTED]. These projects enable an additional [REDACTED] homes and numerous businesses to have access to FTTP broadband services. Over [REDACTED] of these homes have fiber drops however NCTC is only adding the electronics with broadband demand. While this is prudent from a upfront cost perspective it leaves both fiber and an aged copper plant in place which increases the maintenance costs as well as the overall cost base.

The table below shows the growth (actual and projected) in internet/broadband subscribers:³⁰

(Year End)	2008A	2009A	2010A	2011 A	2012 E	2013 E	2014 E	2015 E	2016 E
Dial-up	[REDACTED]								
DSL <3Mbps	[REDACTED]								
Broadband	[REDACTED]								
Total	[REDACTED]								

6. Network Modernization and Fiber Deployment Benefits Realized:

Utilizing the advanced network enabled by the RUS V Loan and BIP funding, NCTC will be able to offer additional advanced broadband services to schools, libraries, businesses, governmental organizations, non-profit institutions and other community anchor institutions in its served area. Some examples of early successful deployments are:

³⁰ Based on the NCTC 2012 5 Year Plan, NCTC is projecting that at the end of 2016 approximately [REDACTED] of its internet subscribers will be limited to 3/1 or less service due to loop lengths. NCTC is still committed to enabling 100% of the serving area access to broadband services by 2020.

a. Healthcare

NCTC implemented 30Mbps synchronous fiber connection to the local Critical Access Hospital, a member of the [REDACTED] and is working with the healthcare professionals supporting a trial which connects the local hospital to the [REDACTED] [REDACTED] for faster treatment of stroke patients. The trial success has prompted [REDACTED] to extend the trial by adding Psychology/drug treatment to the program. [REDACTED] has also started a telemedicine trial. NCTC's serving area is 40 miles from the nearest Regional Medical Center and this type of telemedicine, made available only through NCTC's FTTP network, is expected to be invaluable in improving service delivery, access and availability of health and human services while improving the quality of life, health and wellbeing of rural residents. Prior to bringing the broadband connection to the hospital it took upwards of 2.5 hours to send an x-ray to a radiologist to be read, now it takes just seconds and the rest of the hospitals IT infrastructure continues to operate. In addition, NCTC is working with the [REDACTED] to identify pilot programs to deliver innovative health services directly to the homes of very rural patients and the elderly to promote greater access to healthcare right in patient homes or local clinics. Broadband access and computer availability will be keys to the success of the in home service.

b. Education

A second critical area of need for broadband deployment is education. In order to attract employers to the area the workforce capabilities need to be upgraded. The availability of broadband services will not only make the serving area more attractive to colleges, universities and other educational facilities but will also offer NCTC subscribers the opportunity to participate in distance learning. NCTC broadband services are being deployed in schools and libraries throughout the serving area including:

- [REDACTED] School System – 100 Mbps Elementary School/ 1 GigE pipe High School
- [REDACTED] School System – 1 GigE pipe
- [REDACTED] School – 10 Mbps synchronous Ethernet connection
- [REDACTED] libraries – high speed access (12/2Mbps)

In addition the Macon County Education Foundation's diligent work and the addition of high bandwidth broadband capability have attracted Cumberland University to establish a satellite campus in the Macon County serving area. The county has been working for years trying to get a satellite university campus with little result, however now with the network and technology and the demand for an increasingly educated population Cumberland University opened its first classroom in September,

2012.

c. Business

As highlighted in Section II.C.2 of this waiver, businesses need high bandwidth pipes in order to be competitive both within and outside the serving area. NCTC has recently installed:

- A 10Mbps synchronous Metro-E connection at [REDACTED] and sixteen 5Mbps Metro-E's to connect the branch offices together and improve data transmission speeds
- A 20Mbps synchronous Ethernet pipe at [REDACTED] (Allen County)
- A 20Mbps synchronous Ethernet pipe at [REDACTED] (Allen County)
- A 20Mbps synchronous Metro-E connection at [REDACTED] and 4 10Mbps Metro-E's to connect branch offices together
- Hosted VoIP at [REDACTED]

In addition the city of Lafayette recently purchased 116 acres to build a technology park partially based on the availability of high bandwidth services (NCTC will place fiber throughout the park) to attract high technology businesses and contact centers. The first tenant scheduled to start in [REDACTED] is a contact center which will employ [REDACTED] people. NCTC is also working with the [REDACTED] [REDACTED] (a Tennessee Government organization) to add fiber to the [REDACTED] to support a growing business base. A [REDACTED] person call center is also under consideration for [REDACTED] again based on the network availability.

d. Public Safety

NCTC has been working with the local EMS organization to provide a modern telecom infrastructure for their growing needs. NCTC has deployed a Hosted VoIP phone system and a node on the NCTC 10Gbps fiber ring to provide high availability services. NCTC is planning on extending the service to other public safety organizations in the area as well as providing Ethernet backbone and network support services for the next generation public safety "700 MHz" network.

e. Wireless Industry

NCTC provides connections to [REDACTED] and 6 wireless carriers in the serving area including several with 50Mbps Ethernet service and has requests to provide up to 100 to 300Mbps service in the future. This will enable the carriers to provide 4G LTE and advanced broadband services to their coverage areas.

With these projects NCTC is demonstrating that it is able to provide the same advanced broadband services available to many urban areas and to bridge the digital divide which was

previously evident in much of the NCTC service area. Local business, civic and public safety leaders are outspoken supporters of NCTC's IP network and fiber initiatives as they see the opportunities it creates for the community at large.³¹

7. Reliance of NCTC on SNA support in RUS and BIP Applications

Absent grant of waiver, as described further in Section III of this petition, the elimination of SNA support by the *Transformation Order* will defer substantial revenues and undermine cost reduction opportunities that constituted an essential and material portion of the revenue and cash flow necessary to support financial feasibility of the loans.

In preparation of the BIP application in 2009, NCTC expected the Safety Net payments to begin in 2012 and continue into 2017 and planned to use those revenues to help offset the significant growth in loan repayments and the costs of aligning the business processes with the modernized network. Moreover, in preparation of the V Loan application financials, NCTC relied on the reasonable expectation that the SNA payments would begin in 2012 thereby providing the support needed to enable NCTC to continue adding fiber drops while also implementing the revenue and expense improvement programs as identified in Section II.F.

These were perfectly reasonable and prudent expectations, given that there was no indication or notice that SNA support based upon investments would be at risk – particularly at a time when the Administration was *actively encouraging* rural telcos and others to deploy broadband-capable networks as a matter of national policy. Indeed, even the discussion in the Commission's February 2011 Notice of Proposed Rulemaking – which was issued *after* the investments at issue here were made – offered no indication that “investment-qualified” SNA support was of significant concern or the potential subject of flash-cut elimination:

We are concerned that this rule may provide inadequate incentives for rural incumbent LECs to operate efficiently and that the rule's design leads to additional support in situations where no additional investment is occurring. Specifically, some incumbent LECs that qualify for the safety net additive are not qualifying as a result of significant increases in investment. To qualify for the safety net additive, an incumbent LECs year-over-year TPIS, *on a per-line basis*, must increase by a minimum of 14 percent. If an incumbent LEC loses a significant number of lines, however, its per-line TPIS may meet the 14 percent threshold because of the loss of lines and not because of significant increases in investment, contrary to the original intent of the rule to provide additional funding only for new investment.³²

³¹ See letters of support in Appendix O

³² NPRM at ¶ 184.

The extension of the BIP build out requirement to 2015 relieved some of the initial cash flow pressure, but by June 30, 2012 NCTC had already invested close to █████ of the BIP funds. As the construction activities were expected to be completed by the end of 2013, NCTC identified a number of revenue and expense improvements that it planned to undertake leveraging the modernized network built utilizing the capital noted above and the cost recovery afforded through SNA payments (see Section II.F).

In short, both the BIP and RUS V Loan financial plans reasonably and prudently anticipated that the SNA payments based upon qualifying investments made pursuant to a national policy that promoted actively broadband deployment would be available to provide a buffer through a short term “cash crunch,” enabling NCTC to invest in these major opportunities that would ultimately lead to a lower reliance on USF/CAF funding and promote access to the very kind of IP-enabled network that the Commission and other federal policymakers have been seeking to promote. NCTC has already tapped commercial loans as far as it can, given the covenants of the RUS loans. It also continues to push further cost reductions/cash flow improvements where it can such as health care and insurance premiums, prolonging vehicle life, delaying FASB 106 payments, however, these are needed just to stay ahead of uncontrollable expense increases such as pole fees (15 to 25%) and expected health care premiums as a result of the Patient Protection and Affordable Care Act.

8. Prudency of the investment

a. Cost Efficiencies and Revenue Growth Realized by Investment.

NCTC’s network deployment project is cost effective in part because of its ability to leverage existing personnel, facilities and systems in connection with the fiber build. Further, NCTC’s progressive broadband upgrade process of first shortening the loop lengths to provide subscribers with improved services and speed and then based on demand providing high speed broadband via fiber is an effective use of capital. This approach is consistent with national policies of providing broadband access and next-generation IP-enabled services to all citizens while being cost effective and prudent. By the end of 2012 NCTC will have cost effectively installed over █████ miles of mainline fiber in the network with another █████ miles either under or ready for construction.³³

NCTC will provide a minimum broadband service for fiber served customers of 6 Mbps down/1Mbps up (4/1 is available a la carte while 6/1 will be the basic bundle offering) and a maximum of

³³ NCTC cost of fiber deployment is averaging approximately █████ per mile. Industry average benchmarks are \$20,000 to \$50,000 per mile depending upon a number of factors including, aerial/bored/trenched, terrain, urban vs. rural, # of road crossings, # of fibers)

100 Mbps down/ 10 up, location and fiber dependent. For business customers, up to 1 Gig will be provided with faster speeds available dependent upon the business location. This transition to higher speed services will, result in increased revenues as both the internet subscriber base and ARPU grow and lower expense as the aged copper plant is eliminated creating a more efficient network to provide the service.³⁴

The \$3.0M SNA payment invested in the projects identified in Section II.F over five years would have provided a [REDACTED] pre-tax boost to NCTC's income over the five years and an annualized benefit of [REDACTED]. Without the SNA payments and access to further commercial bank funding and with the required RUS loan TIER ratio maintenance, NCTC has had to delay these programs into 2014. By doing so NCTC is losing [REDACTED] in annual benefits along with [REDACTED] one time and a number of other intangible benefits.

Finally, it is worth noting that NCTC's investment and operating practices in undertaking these significant and important network deployment and upgrade initiatives must be considered prudent and reasonable by the Commission's own measure, as the company falls well below the limits established by the Bureau's Quantile Regression Analysis model. In other words, by the very standards that the Commission has now set, the steps that NCTC took to deploy broadband to the vast majority of its customer base are *de facto* and *de jure* efficient and effective – and yet, in the absence of a waiver, NCTC still faces the flash-cut loss of much-needed support for that network deployment because the program upon which NCTC reasonably relied to enable such deployment also happened to provide support for line loss in other cases.

b. RUS Prudency Review

RUS operates in accordance with explicit Congressional policy and operational guidance and requires extensive demonstration that loan applicants' proposals are prudent and will achieve Congressional goals in a financial feasible manner. Former RUS Administrator Adelstein testified that:

RUS has helped define the standards for contemporary rural telecommunications services. By following those standards, reviewing system designs and operational plans and using vendors that offer products and services which meet RUS standards, the hundreds of small companies and co-ops that participate in our program have a scope and scale in the marketplace that rivals the largest telecom providers. That market strength is further reinforced by standard RUS warranty and contract terms which protect rural consumers from shoddy manufacturers,

³⁴ Fiber Cheaper than DSL?, Dave Burstein, thefastnews.com, July 14, 2009 “Verizon and British Telecom estimates of the maintenance savings were originally 70 to 90%, but much of that is due to replacing 20 to 50 year old equipment. Probably the better figure is about 30% saving, when the fiber is done right.”

unreliable equipment and technology fly-by-nighters. I am especially proud of the RUS staffers who provide engineering, operational, accounting and financial oversight. They ensure that RUS financed projects are rock solid, built to last and are prudent.³⁵

Previously, USDA Secretary Vilsack and former RUS Administrator Adelstein met with Chairman Genachowski and emphasized that:

... RUS only finances capital infrastructure, and that every RUS loan and grant dollar is scrutinized by program and field staff, and that each dollar spent in the RUS program is tied to specific purchases that are audited. RUS does not tolerate waste, fraud or abuse, ensuring that dollars are prudently spent.³⁶

The *Transformation Order* makes no findings nor expresses any opinion that such RUS review does not ensure that investments made are prudent.

E. Quantification of SNA Support Reductions

Under the prior version of Section 36.605, the result of the 15.4% increase in TPIS (see Appendix J) in 2010 would have resulted in an SNA payment for 2010 investments beginning in February, 2012.³⁷ The percentage increase in TPIS and hence the qualification for the SNA support was unrelated to the modest line loss NCTC has experienced (the increase with the line loss factored in is 18.1%). The elimination of SNA support for investments made after 2009 will result in [REDACTED] less USF support over 5 years. In addition, the proposed ICC reforms will reduce its recovery baseline 5% per year beginning July, 2012 from [REDACTED] to [REDACTED] in 2017. This will reduce total revenues by an estimated [REDACTED] in 2012, [REDACTED] in 2013, [REDACTED] in 2014, [REDACTED] in 2015 and [REDACTED] in 2016 for a total of [REDACTED] over the next 5 years.

III. Consequences for NCTC and its Subscribers as Result of Loss of Safety Net Support

In the absence of a waiver, NCTC has and will continue to take actions to ensure business viability with the resulting impact limiting some broadband service availability and cutting/reducing programs that will impact longer term revenue generation and expense reductions all of which would

³⁵ Statement of Jonathan Adelstein, Administrator, USDA Rural Utilities Service Hearing Before House Small Business Committee; July 18, 2012

³⁶ Letter from Jonathan Adelstein, RUS, to Marlene Dortch, FCC, May 31, 2012 re WC Doc. No. 10-90 et al. *See also*, letter from Jonathan Adelstein to Marlene Dortch, Oct. 20, 2011 (“...when FCC and RUS programs work together, tremendous leverage can be achieved, ensuring that USF funds are used prudently in RUS-financed infrastructure projects.”)

³⁷ USAC Forecast 1st Q 2012 App. HCO1A,

ultimately compensate for USF/CAF losses. The loss of SNA support will: (1) leave a significant number of rural subscribers (approximately [REDACTED] without access to broadband services at least until 2017/18 (non-broadband DSL services will be available); (2) delay the retirement of some aging copper plant and DSL modems both of which have a high maintenance cost; (3) defer the development and implementation of a number of systems and business process improvements which would improve efficiencies and lower longer term costs resulting in less reliance on high cost recoveries; and (4) delay the deployment of services which have proven potential to improve the overall socioeconomics of the serving area such as telemedicine and programs that have the potential to increase revenues of both NCTC and its enterprise customers. Specific impacts in each regard are detailed below. In order to close the gap created by the loss of the \$3,014,400 SNA payments NCTC has begun to take the following actions.

A. Summary of Costs and Lost Quantifiable Benefits:

NCTC					
All Table Numbers in \$K	Investment			Lost Benefits	
	Capital	One Time Expense	Annualized Expense	One Time	Annualized
BB Access & Adoption					
1.a Fiber projs to reduce loop lengths	[REDACTED]				[REDACTED]
1.b ONT electronics	[REDACTED]			[REDACTED]	
1.c BB Center and Ent Lab	[REDACTED]				
Systems & Process					
2.a Systems Enhancements	[REDACTED]	[REDACTED]	[REDACTED]		[REDACTED]
2.b AVL Implementation	[REDACTED]	[REDACTED]	[REDACTED]		[REDACTED]
2.c Network Monitoring	[REDACTED]	[REDACTED]	[REDACTED]		[REDACTED]
2.d Other Proj Wi-fi/Mgt Dashbd/Training	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
New Business Services Revenue					
3.a Cloud/data solution	[REDACTED]	[REDACTED]	[REDACTED]		[REDACTED]
3.b Telemedicine support	[REDACTED]	[REDACTED]	[REDACTED]		[REDACTED]
Total	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

B. Broadband Deployment – Access and Adoption

1. The NCTC 5 Year Plan includes many small construction projects which extend fiber facilities into areas that currently have no broadband access. Fiber is used to feed loop electronic equipment that can be re-deployed as NCTC converts certain other areas to a 100% FTTP architecture. The objective is to minimize the copper distribution loop length and improve transmission characteristics, making broadband service available in these remote areas. Engineering and construction activities are generally completed by internal resources and are funded with operating cash flow. Without a waiver of SNA elimination NCTC will be required to defer some of these projects. NCTC estimates that [REDACTED] of subscribers in these areas would not have access to broadband. (non-broadband DSL services will be available)

Cost: [REDACTED] capital for construction, fiber and electronics

Lost Benefits: [REDACTED] to [REDACTED] subscribers will have access to broadband services delayed for 3 to 4 years. Added revenue of [REDACTED] based on moving from internet to broadband speed would add a [REDACTED] to [REDACTED] per year revenue opportunity.

2. The Broadband Initiative Program (BIP) provides for FTTP facilities and a fiber service drop to approximately 4,000 homes. A traditional RUS loan will provision FTTP facilities and a fiber drop to an additional [REDACTED] homes. This work must be completed by early 2015. Without an SNA Waiver, NCTC will be required to install the gateway electronics on bandwidth demand basis. Although this defers an estimated \$1.0M in capital investment (3400 homes), it increases expense in the following ways:

- i. [REDACTED] – Truck Rolls [REDACTED]
- ii. [REDACTED] per year – DSL maintenance cost ([REDACTED])
- iii. Maintenance cost associated NCTC leaving [REDACTED] of copper in plant until 2015 TBD

Cost: [REDACTED] capital over 4 years for Optical Network Terminal (“ONT”) electronics

3. NCTC is very involved in community development. Current plans include the development of a Community Learning & Internet Access Center and an Enterprise Customer Applications Lab. The purpose of these facilities is to provide a classroom environment in which area residents will learn about broadband service capabilities, computer use, internet applications and other new technologies. It will be a valuable resource for students and for individuals seeking employment through internet postings

customer service as service orders will flow through automatically; technicians will be dynamically dispatched and will be available for more revenue generating service calls; network engineering will be simplified and customer service will have a complete view of inventory and service availability in real time. NCTC will be able to solve many issues from the central office/data center without having to go to the customer premise and as the systems are used to their fullest capabilities.

Cost: Capital software applications [REDACTED], process engineering [REDACTED] annual licensing and support [REDACTED].

2. Implementation of an Automated Vehicle Location (AVL) system that would equip each fleet vehicle with GPS and a mobile communications hub which would be connected to the command center in the home office. This would provide personnel in the field with direct access to all the information they need in the field, as well as providing the home office with the ability to receive real time data for dispatch and route optimization thereby reducing costs and improving response times. In addition it would provide real time situational awareness for all personnel in the field. The AVL system would be integrated into the eLations™ dispatch, time management and inventory modules.

Cost: Capital to equip the vehicles [REDACTED] plus [REDACTED] ongoing licensing and maintenance fees, [REDACTED] business process consulting

Lost Benefit: Annualized savings of (a) and (b) combined [REDACTED] when fully implemented

3. Implement total network monitoring by integrating all network device management systems into the overall Network Management System (“NMS”). NCTC will have to purchase licenses and in some cases additional hardware, replace some legacy network devices that do not have an element management system, as well as business implementation and process support which will result in lower maintenance costs, improve network performance (a requirement of any major business looking to relocate to the area) and reduce external (vendor) support costs.

Cost: [REDACTED] capital plus [REDACTED] in ongoing license and maintenance costs and [REDACTED] business process consulting.

Lost Benefit: Annualized savings of [REDACTED] when fully implemented

4. Other Projects deferred:

- i. Wi-Fi hot spots at CO locations (reduces wireless charges) and throughout the community (increased revenue, lower churn off load from wireless carriers³⁹)
- ii. Management Dashboard – Business Intelligence – this module will access, integrate and analyze data and other knowledge for the purposes of providing real time data for performance management and making optimal decisions.
- iii. Training and certifications of current and new employees will be limited thereby reducing the efficiency and effectiveness of the network investment.

Costs: █████ capital, █████ implementation and support costs

Lost Benefits: lower costs (TBD), improve customer service, increased revenue

D. Expansion of Business Services

1. Without an SNA waiver, NCTC will defer launching the planned enterprise data/cloud services leveraging the recently completed Class 3 central office/data center by 2 years. The cloud computing offering will enable small to medium businesses to access computing on demand for pennies, with dynamic scalability (computing and storage), accessibility through the internet anywhere, anytime in a highly secure and managed environment. NCTC will also offer access to open sourced applications such as websites, HRM, CRM and accounting running in the virtual computing environment providing small businesses with access to applications they would otherwise not be able to afford. The second site back-up, disaster recovery service has the potential to bring revenue dollars from outside into the area (NCTC has already tested the demand for the service through dialogs with potential customers). This initiative requires █████ in capital for the application servers and storage systems and two new skilled resources (enterprise application sales and customer/technical support). The business would require █████ of cash in year one and by end of year two would be cash flow positive. Revenues are forecasted to be █████ and █████ in the first two years respectively. Additionally the application and service experience would enable NCTC to work with the local public safety agencies to leverage the IP network backbone and DC

³⁹ A Nielson's Smartphone Analytics study of 1,500 smart phone users in UK performed between September 1 to 30 2012 showed that Wi-Fi is on average 3.5 times more dominant than 3G when it comes to delivering mobile internet data services. If the US follows the UK pattern Wi-Fi could play a major role in in the mobile data market. US rate plans and user behavior may generate different results.

capabilities and ultimately enable those agencies to lower their costs and improve response time and effectiveness.

Cost: [REDACTED] capital for cloud solution and [REDACTED] start-up expenses (through to cash flow breakeven) including two new IP skill resources (sales/technical support).

Lost Benefit: NCTC Lost revenue and margin for two years and the lost opportunity for local businesses to improve competitiveness and profitability. After two years the project begins to generate [REDACTED] plus positive cash flow per year.

2. NCTC will defer extending the telemedicine capabilities beyond the hospitals (planned to extend to homes of rural subscribers) and slow down the remote education trial initiatives that are improving the quality of life and economic outlook of residents. NCTC will not have the personnel to support the deployments.

Cost: [REDACTED] per year for a part of a resource to support the hospitals and schools

Lost Benefit: Opportunity to build on momentum achieved with local hospitals and schools over the last two years.

The BIP project may also be impacted as NCTC is currently re-evaluating the priority build-outs within the revised financial constraints to determine what impact the loss of SNA will necessarily require BIP funds that have not yet been expended to be returned. To the extent that non-BIP funds are then used at a later date, because the 50% grant portion would be unavailable, NCTC's investment base will increase accordingly.

Both the RUS V-Loan and the BIP Program were under taken to expand broadband to rural areas that were underserved with an understanding of the rules in place at the time of the investments. The programs were working as intended and encouraged NCTC to make needed investments, but now funds required to help NCTC pay for such investments have been reduced or eliminated after having qualified for them. The success of these programs in providing broadband to rural areas will be greatly diminished if the SNA funding is not there.

NCTC's 5 Year Financial Plan is included in Appendix P along with the annual spending reductions to offset loss of the SNA payment as well as the lost benefits that would have accrued.

IV. WAIVER WOULD SERVE THE PUBLIC INTEREST

A. Waiver Standards Applicable

1. *Transformation Order*

Paragraphs 539-40 of the *Transformation Order* recognized that carriers have expressed concern that USF reforms could threaten their financial viability and imperiling service to their consumers. Express provision was therefore made for waiver upon a demonstration of good cause “...to ensure that consumers in the area continue to receive voice service.” Waivers will also be considered in cases where the specific reforms “would cause a provider to default on existing loans and/or become insolvent.” Paragraph 542 states that waiver petitions must include all financial and other information sufficient to justify the carrier’s assertions, including a specified list of information requirements.⁴⁰

The *Fifth Order on Reconsideration* recognized that the *Order* established among its explicit goals universal availability of broadband and reasonably comparable rates and services levels. It therefore clarified that the Commission will consider the impact of reforms on the continued operation of broadband-capable networks.⁴¹

Although the reductions in USF and ICC revenue will bring NCTC close to the minimum TIER required by its RUS loan agreements, NCTC cannot at this point demonstrate that default is inevitable. NCTC will, however, provide the detailed information described in Paragraph 542. Even if default were inevitable, the loan agreement empowers RUS to enforce its lien and assume management of the carrier. In that event, it is probable voice service and broadband service would continue to be provided, at least for some period of time. If the carrier becomes bankrupt, its operating assets would likely be sold at some price substantially below book value, although subject to the RUS lien.⁴² Therefore, the loss of voice service and broadband service is not a waiver condition that many RUS borrowers, such as NCTC, are likely to be able to meet, regardless of the impact on the carrier. The result would likely be that the equity of the carrier’s owners (which in this case are also its subscribers) would be eliminated and the United States Government would incur substantial expense and possibly loss, but somebody would keep the

⁴⁰ The Wireline Competition Bureau recently issued its first waiver of the USF reforms. *Allband Communications Cooperative Petition for Waiver of Certain High-Cost Universal Rules*, Order, DA 12-1194, July 25, 2012. (“*Allband Order*”).

⁴¹ *Connect American Fund*, WC Doc. No. 10-90, Fifth Order on Reconsideration, FCC 12-137, rel. Nov. 16, 2012, para. 20. (“*Fifth Reconsideration Order*”).

⁴² See, letter from Megan Delany, General Communications, Inc. (“GCI”) to Marlene Dortch, FCC, July 30, 2012 p. 2, (If rural LEC forced to shut down, GCI could continue service by buying facilities from its estate.)

system running.

For the foregoing reasons, the *Transformation Order's* waiver standard does not provide a realistic standard by which a carrier, such as NCTC could demonstrate the public interest in waiving the general rule.⁴³ NCTC will show below, however, that its petition meets the judicially established standards for waiver.⁴⁴

2. Prior precedent

The *Transformation Order* also recognized that there are long established standards for consideration of requests for waiver of the Commission's rules:

Generally, the Commission may waive its rules for good cause shown. *See* 47 C.F.R. § 1.3. The Commission may exercise its discretion to waive a rule where the particular facts make strict compliance inconsistent with the public interest. *See Northeast Cellular Telephone Co. v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990) (*Northeast Cellular*). In addition, the Commission may take into account considerations of hardship, equity, or more effective implementation of overall policy on an individual basis. *See WAIT Radio v. FCC*, 418 F.2d 1153, 1159 (D.C. Cir.1969), *cert. denied*, 409 U.S. 1027 (1972); *Northeast Cellular*, 897 F.2d at 1166. Waiver of the Commission's rules is therefore appropriate only if special circumstances warrant a deviation from the general rule, and such deviation will serve the public interest.⁴⁵

This formulation recognizes correctly that there is no automatic right to waiver, rather an applicant must establish that waiver of the rule is in the public interest. The statement fails to acknowledge, however, the Commission's obligation to take a "hard look" at the facts and justification presented by a waiver applicant. Specifically, in *Wait Radio*, after noting the heavy burden on the applicant, the court explained that the Commission has an obligation to seek out the public interest in particular, individualized cases:

Yet an application for waiver has an appropriate place in the discharge by an administrative agency of its assigned responsibilities. The agency's discretion to proceed in difficult areas through general rules is intimately linked to the existence of a safety

⁴³ Since the effective date of the *Transformation Order* the Bureau has decided only one waiver petition. *See Allband Order*. NCTC recognizes that decision reached the correct result, but notes that the extremely small size and precarious situation of the carrier necessarily involved different considerations than those applicable to larger carriers with considerably longer operating life.

⁴⁴ The *Fifth Reconsideration Order* recognized that the waiver criteria described in the *Transformation Order*, were not intended to replace the ordinary standard for granting waivers under Section 1.3 of the rules. *Firth Reconsideration Order* at para. 19.

⁴⁵ *Transformation Order* at note 905.

valve procedure for consideration of an application for exemption based on special circumstances.

The salutary presumptions do not obviate the need for serious consideration of meritorious applications for waiver, and a system where regulations are maintained inflexibly without any procedure for waiver poses legal difficulties. The Commission is charged with administration in the "public interest." That an agency may discharge its responsibilities by promulgating rules of general application which, in the overall perspective, establish the "public interest" for a broad range of situations, does not relieve it of an obligation to seek out the "public interest" in particular, individualized cases. A general rule implies that a commission need not re-study the entire problem *de novo* and reconsider policy every time it receives an application for waiver of the rule. On the other hand, a general rule, deemed valid because its overall objectives are in the public interest, may not be in the "public interest" if extended to an applicant who proposes a new service that will not undermine the policy, served by the rule that has been adjudged in the public interest. An agency need not sift pleadings and documents to identify such applications, but allegations such as those made by petitioners, stated with clarity and accompanied by supporting data, are not subject to perfunctory treatment, but must be given a "hard look."⁴⁶

B. Waiver would be consistent with the Public Interest as expressed in the *Transformation Order* generally and with the express concerns with Safety Net Additive support

The SNA rule was adopted in 2001 to address the concern that the cap imposed on total high cost support functioned as a deterrent to investment by rural carriers both individually and collectively.⁴⁷ The Commission then concluded: "...providing this additional support will provide rural carriers with appropriate incentives to invest in the network infrastructure serving their communities."⁴⁸ In the February 2011 *NPRM* the Commission noted the growth of total safety net

⁴⁶ *Wait Radio v. FCC*, 418 F.2d 1153, 1157 (DC Cir. 1969). The court also noted "presumptions of regularity apply with special vigor when a Commission acts in reliance on an established and tested agency rule." *See also, RCA v. FCC*, 685F.3d1083, 1095 (D.C. Cir. 2012) (if a CETC's costs increase because it adds subscriber lines, perhaps extending service to a previously unserved rural area or filling in where a relinquishing CETC has withdrawn, then it may receive a greater subsidy. This exception ensures no consumer will be denied telephone service because of the interim cap,...). The rule in this case is new, no prior waiver requests have been filed or considered, and the rule is on appeal. *In re FCC 11-161*, 10th Circuit, No. 11-9900.

⁴⁷ *Federal-State Joint Board on Universal Service, Multi-Association Group (MAG) Plan for Regulation of Interstate Services of Non-Price Cap Incumbent Local Exchange Carriers and Interexchange Carriers*, Fourteenth Report and Order and Twenty-Second Order on Reconsideration, 16 FCC Rcd 11244, (2001) ("*Rural Task Force Order*").

⁴⁸ *Id.* at para. 79

additive support since 2003 and stated its concern that: “this rule may provide inadequate incentives for rural incumbent LECs to operate efficiently and that the rule’s design leads to additional support in situations where no additional investment is occurring.”⁴⁹

Specifically, the NPRM noted that because the additional support was based on additional investment per line, carriers with significant loss of lines could qualify for support even if it did not have a significant increase in investment, contrary to the original intent of the rule.⁵⁰ The *NPRM* did not identify or provide further discussion as to whether the mention of “inadequate incentives...to operate efficiently” reflected additional concerns beyond the line loss issue. No explanation beyond the line loss issue was provided as to the basis for the change in the Commission’s 2001 assessment that the SNA provided “appropriate incentives to invest” to its conclusion ten years later that the rule “may provide inadequate incentives.” Nor did the NPRM identify any specific facts or conclusions indicating that where a carrier did have a significant increase in investment that the investment was imprudent or not “used and useful” in the provision of supported services.

In their comments, several parties pointed out that the line loss problem could be easily remedied by basing qualification on total change in TPIS rather than per-line change. The *Transformation Order* acknowledged that this revision would address that deficiency with the rule, but found it would not address the “*overarching concern* that safety net additive as a whole does not provide the right incentives for investment in modern communications networks.”⁵¹ The Commission went on to explain that the rule does not ensure that investment is reasonable or cost efficient or targeted to areas that would not be served without support, for example “accelerated” construction of fiber-to-the-home in an area served by a cable operator.⁵² No actual examples of such problems were identified in the SNA portion of the *Order*.

The issues of competition with unsupported providers was addressed in the context of adopting the rule proposed by the cable association eliminating support in areas with 100% overlap,

⁴⁹ *Connect America Fund et al.* Notice of Proposed Rulemaking and Further Notice of Proposed Rulemaking, 26 FCC Rcd 4554, para. 184. (“*NPRM*”).

⁵⁰ *Id.*

⁵¹ *Transformation Order* at para. 251 (emphasis added). The *Order* also stated at paragraph 250, that the rule “is not designed effectively to encourage additional significant investment in telecommunications plant.”

⁵² *Id.* In this respect, of course, safety net additive was no different from the general high cost support rules. The *Order* here provides no information as to what it means by “accelerated” or whether non-accelerated Fiber-to-the-home would be considered appropriate. Because a substantial portion of NCTC’s project is being constructed under an ARRA grant/loan with a required completion date, it necessarily had to deploy facilities with dispatch.

and in the FNPRM discussions of further limitations in areas with less than 100% overlap.⁵³ As described in Section II, above, cable franchise areas cover approximately 6% of the served land area and 12% of the population of NCTC's served area. The cable operator's advertised offers of broadband service meet the Commission's specifications in the above noted area and no voice service is available at this time.⁵⁴

The Commission has not yet acted on the issue raised in the FNPRM of whether to reduce ILEC support in studies with less than 100% overlap. Any decision in that regard will need to address the "donut and donut hole" issue with respect to situations where rural LEC's broadband facilities cover a wide area, a small portion geographically of which may include a municipally franchised cable company also offering broadband. In such situations service to the "donut" is often not financially feasible without also serving the "hole."

1. NCTC's qualification for SNA is the result of actual growth in TPIS, not line loss.

With regard to the line loss problem, the first of two objectives given for eliminating SNA additive, grant of a waiver to NCTC would be consistent with the original objective of the rule in that NCTC's qualification in 2010 is the result of documented increase in *total* rather than per line investment in TPIS.⁵⁵ NCTC TPIS for 2010 was an increase of 15.4% well above the 14% threshold. The *Order* acknowledges that in such situations the concern is resolved. Therefore, grant of NCTC petition would be consistent with the public interest with respect to the need to eliminate support payments where carriers have not made substantial additional investment.

2. NCTC's Investment was and is reasonable and cost efficient

The second and "overarching" concern identified in the order is the belief that SNA does not provide the "right incentives for investment in modern communications networks" or ensure the reasonableness and cost efficiency of the qualifying investments.⁵⁶ Because NCTC's qualifying

⁵³ *Transformation Order* at paras. 280-284, *FNPRM at paras. 10-61-1078*.

⁵⁴ *Id.* Because Comcast is not designated an ETC for its operations within NCTC's study area, it may be "unsubsidized" by the definition at Section 54.1, but that does not mean it is unsubsidized in an economic sense. Comcast is franchised by the municipalities to provide multichannel video service. Comcast is not subject to regulation that would prevent it from using its video service revenues to support broadband Internet access. Further as the largest, vertically integrated video provider in the country, Comcast can provide its local operations with content at preferable terms, thus shielding them from competition from other multichannel video providers.

⁵⁵ *See*, Section II.E, above, and Appendix J

⁵⁶ *Transformation Order* at para. 251. The Order provides no basis for these beliefs nor explains why

investment in modern communications networks was demonstrably both reasonable and cost efficient, grant of its waiver petition would be consistent with the overall public interest policy of encouraging deployment of scalable broadband facilities to unserved areas. The following factors support the conclusion that the investment was reasonable, efficient and fully consistent with the stated purpose of the *Order*:

- a. NCTC's detailed proposals were approved after thorough review by RUS expert staff and leadership

NCTC's long term FTTP projects have been subjected and approved on three separate occasions by executive branch agency charged by Congress with promotion of rural development under both its organic statute and the American Recovery and Reinvestment Act. Because RUS has more applications than it has lending/grant authority, it necessarily gives careful scrutiny to the proposed use of funds to ensure that they are technically sound and an efficient use of the limited funds.⁵⁷ The specific purpose of the RUS loans and grants was to extend high speed broadband service to unserved and underserved areas, the precise purpose for which the Commission adopted the *Transformation Order*.⁵⁸

- b. The stimulus effect and reduced cost made possible by the ARRA grant will be lost without grant of the requested waiver.

Capital costs are a significant component of the total cost of constructing and operating broadband facilities, especially in low density rural areas where investment per subscriber is higher. The objectives of Congress and the President in enacting the ARRA were both to stimulate the economy in the short term and make the country more competitive in the long term by making possible the creation of infrastructure that would not otherwise be feasible.⁵⁹ One-half of the total ARRA funds awarded NCTC were grant funds. Because there is no interest or depreciation expense associated with the investment of the grant funds, the annual cost per broadband subscriber is reduced by [REDACTED]

the justifications it relied on when adopting the SNA are no longer valid. The concern with the efficiency of investment was identified as one of two concerns in the NPRM, but became "overarching" in the *Order* after the line loss problem was shown to be easily curable.

⁵⁷ Letter from Jonathan Adelstein, RUS to Marlene Dortch, FCC, May 31, 2012, Doc. 10-90 (re meeting between Secretary of Agriculture Vilsack and Chairman Genochowski: "...every RUS loan and grant dollar is scrutinized by program and field staff, and...each dollar spent in the RUS program is tied to specific purchases that are audited. RUS does not tolerate waste, fraud or abuse, ensuring that dollars are prudently spent."

⁵⁸ *Transformation Order*, at para. 51.

⁵⁹ C American Recovery and Reinvestment Act of 2009, Pub. L. 11-5, Sec. 3.

██ as compared to the costs if the capital for the investment had been loan funds.

Without grant of the requested waiver, however, NCTC will have insufficient revenues to support the operating expenses of all of the facilities approved by the ARRA that have not yet been constructed. If it is unable to forecast sufficient revenues or deliver enough expense offsets, NCTC will have no choice but to return the unused portion of the grant, as well as the loan component. The result of that action will be: (1) the stimulus objective will not be realized, (2) ██████████ subscribers will still not have access to broadband internet services at the end of 2016; and (3) any future construction of facilities to serve those subscribers will be more expensive because no grant for construction will be available.

- c. Grant of NCTC's waiver request would be consistent with the Commission's conclusions that carriers with existing infrastructure and COLR obligations are likely to more quickly deploy broadband capable facilities.

In the *Transformation Order* the Commission decided to provide Price Cap carriers exclusive access to CAF funds for the provision of broadband for a five year period. In so doing it expressly relied on its conclusions that such a rule would expedite the provision of broadband to unserved areas because the Price Cap carriers (a) would be able to "leverage" their existing telecommunications infrastructure to more quickly deploy broadband capable facilities, and (b) such carriers generally remained under state Carrier of Last Resort ("COLR") obligations that would have the effect of encouraging broadband build-out.⁶⁰

The factors of leverage and obligation operate more strongly with respect to NCTC than with respect to the typical Price Cap carrier. First, NCTC's existing "legacy" plant is generally equal or superior to the rural plant of adjoining Price Cap carriers in terms of modern design, reliability and ability to be "leveraged" to meet not only the initial but future FCC performance standards. Second, not only is NCTC obligated to provide USF supported services throughout its service areas in Tennessee and Kentucky, but as a cooperative NCTC also has the obligation to provide the best possible service to all of its member-owners. Grant of the waiver would therefore be consistent the rationales in the *Order* with respect to the initial Price Cap CAF rules.

⁶⁰ *Transformation Order* at para. 175.

C. Waiver is Necessary for NCTC to Achieve the Purposes of Section 254

1. Area wide broadband deployment

The FTTP project will make NCTC service areas more attractive communities for future economic development, job growth, and improve the quality of life for area residents. Each of these investments made by NCTC advances the quality of life for its valued members with technological capabilities that strive to put them on a level comparable with urban areas.

The *Transformation Order* adopted, pursuant to Section 254(b) (7) the new universal service principle: “Universal Service support should be directed where possible to networks that provide advanced services, as well as voice services.”⁶¹ The *Order* further adopted as a performance goal: “to ensure the availability of modern networks capable of delivering broadband and voice services to homes, businesses, and community anchor institutions.”⁶² The order found that ubiquitous deployment of broadband, was a purpose of Section 254

It was precisely to ensure that broadband services would be available as soon as possible throughout its service area that NCTC made its investments in 2010 that would have qualified it for SNA support under the rules then in effect. These investments were found by RUS to be necessary to achieve that goal. As described in Section II.F above, in addition to the general benefits of broadband deployment to residential and business users, NCTC would have been able to implement a number of business improvement programs as well as offer new data services to businesses enabling them to be more competitive collectively resulting in an annual income increase of \$1.3M.

2. Improved Medical and Educational Service to the Public

As described in detail in Section II.6, NCTC’s 2010 investments were particularly directed to provide improved service to medical facilities and educational institutions.⁶³ The benefits of broadband to these community anchor institutes, identified as a specific objective in the *Order*, will be assured by grant of the waiver and significantly impaired by its absence.

3. Improved Mobile Service to the Public

⁶¹ *Transformation Order* at para. 45.

⁶² *Id* at para 51.

⁶³ See Section II.6, above

The *Order* identifies the benefits of mobile service and makes special provision to encourage widespread deployment of broadband capable mobile service. The network constructed by NCTC will make available Ethernet backhaul capability that would not otherwise exist. Full realizations of the improvements in mobile services on a timely basis are much less likely to occur in the absence of grant of the waiver.

D. Special Circumstances Demonstrating Good Cause

As described in Section II, above, during 2010 NCTC made extensive investment in conjunction with the BIP project. These investments were necessary to bring high speed Internet access to the underserved areas within its service area. The investments were deemed financially feasible by RUS and NCTC because in addition to subscriber and ICC revenue, NCTC was able to project under the Commission's rules at the time that in addition to other High Cost Support, SNA support would be available. Along with other network investments over [REDACTED] million of broadband equipment plus over [REDACTED] million of fiber optic cable was put into service during the year. These investments contributed substantially to increase NCTC's Total Plant in Service (TPIS) of 15.4%. Under the rules in place when these investments were made this investment qualified for SNA to be paid out beginning in February 2012. In 2009 and 2010 all USF recipients perhaps could be assumed to be aware that the Commission and the Joint Board were considering various issues with and possible reforms to, the USF and ICC rules. It was not until February of 2011, after NCTC had completed its qualifying 2010 investment that the Commission first proposed to eliminate SNA. To the extent rural LECs should have been aware of the line loss issue prior to that time, because the solution was obvious and straightforward, there was no reason for a rural LEC to conclude that the Commission would abandon its prior conclusion that SNA provided "appropriate incentives to invest in the network infrastructure."⁶⁴

In these circumstances the Commission should take into account the equity of denying

⁶⁴ NCTC recognizes that it necessarily assumes the validity of the rule for the purpose of its waiver petition. The lack of any explanation in the *Order* for the complete change with respect to the incentives provided by SNA support are cited not to challenge the order, but to point out that NCTC could not have reasonably anticipated such change. : "[A]n agency, in the ordinary course, should acknowledge that it is in fact changing its position and "show that there are good reasons for the new policy." *FCC v. Fox Television Stations, Inc.* 129 S.Ct. 1800, 1811 (2009). The Court also noted that more detailed justification for change in policy is required where the new policy rests upon factual findings that contradict those that underlay the prior policy, or when the prior policy has engendered serious reliance interests. *Id.* Both of these factors are involved in the rule change eliminating SNA support.

support upon which NCTC, and its lender RUS, reasonably relied to justify very substantial investments. The Commission has made a major effort to establish a new program to encourage carriers to make the investments necessary to achieve the identified public policy objective of ubiquitous broadband deployment. If the Commission is unwilling to waive rules in appropriate cases where justifiable reliance led to precisely the type of investment desired, then NCTC and other carriers will be justifiably hesitant in the future to make decisions based on existing rules. Thus the Commission can obtain a substantial benefit to “effective implementation” of the program by granting a waiver in appropriate cases, such as this one.⁶⁵

In addition to equity and future impact on broadband deployment, the lack of any reasonable basis by which NCTC might have anticipated in 2010 that it would not receive SNA support if it made the broadband investments that the government wanted it to make is analogous to the situations in regulated entities are punished for violating regulations of which they had no notice. As the Supreme Court recently pointed out: “A fundamental principle in our legal system is that laws which regulate persons or entities must give fair notice of conduct that is forbidden or required.”⁶⁶

⁶⁵ Consistent with the concern that such unexpected changes in the rules inhibit investment, the large carriers recently commented with respect to a guarantee of support for CAF Phase II: “Without a guaranteed support period, few if any carriers would be willing to incur the enormous upfront investment cost of building out a broadband network, especially in rural locations where there is no business case to do so.” Reply Comments Of The United States Telecom Association, AT&T, Centurylink, Fairpoint Communications, Frontier Communications, Verizon, And Windstream Communications in WC Doc. 10-90, July 23, 2012.

⁶⁶ *Federal Communications Commission v. Fox Television Stations, Inc.*, 567 U.S. 1, 11(2012).

V. CONCLUSION

NCTC respectfully requests that the Commission promptly review and approve this request in order to ensure the benefits of broadband service are available to these rural areas.

Respectfully submitted

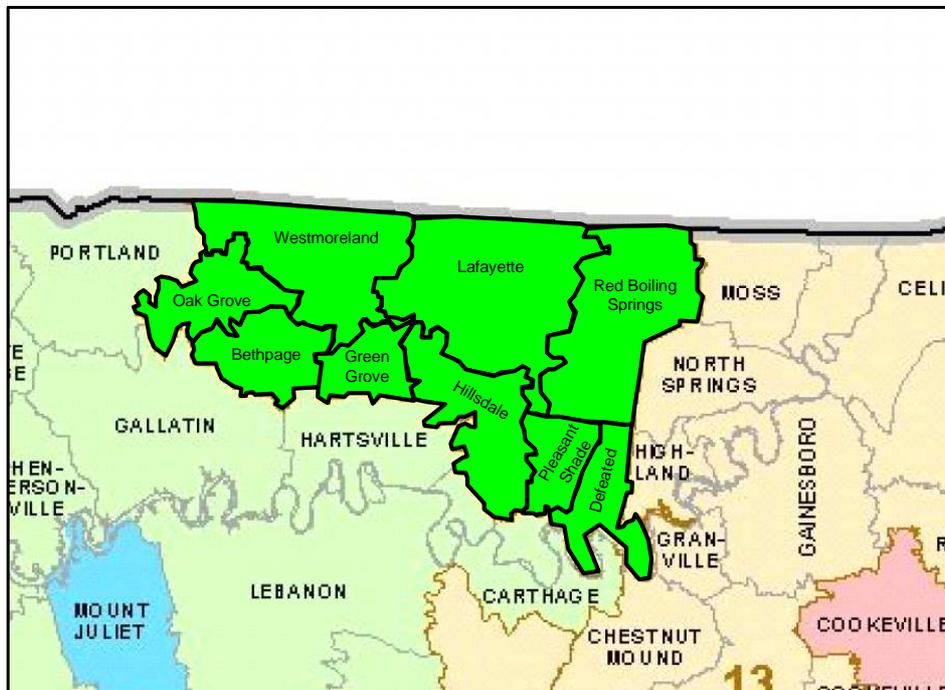
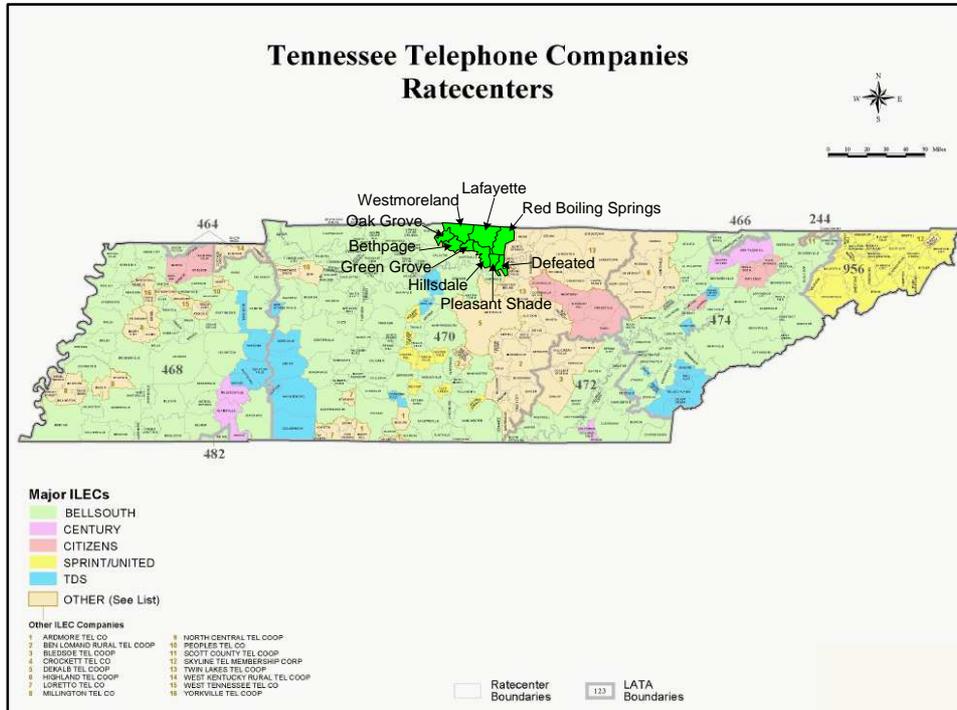
North Central Telephone Cooperative, Inc.

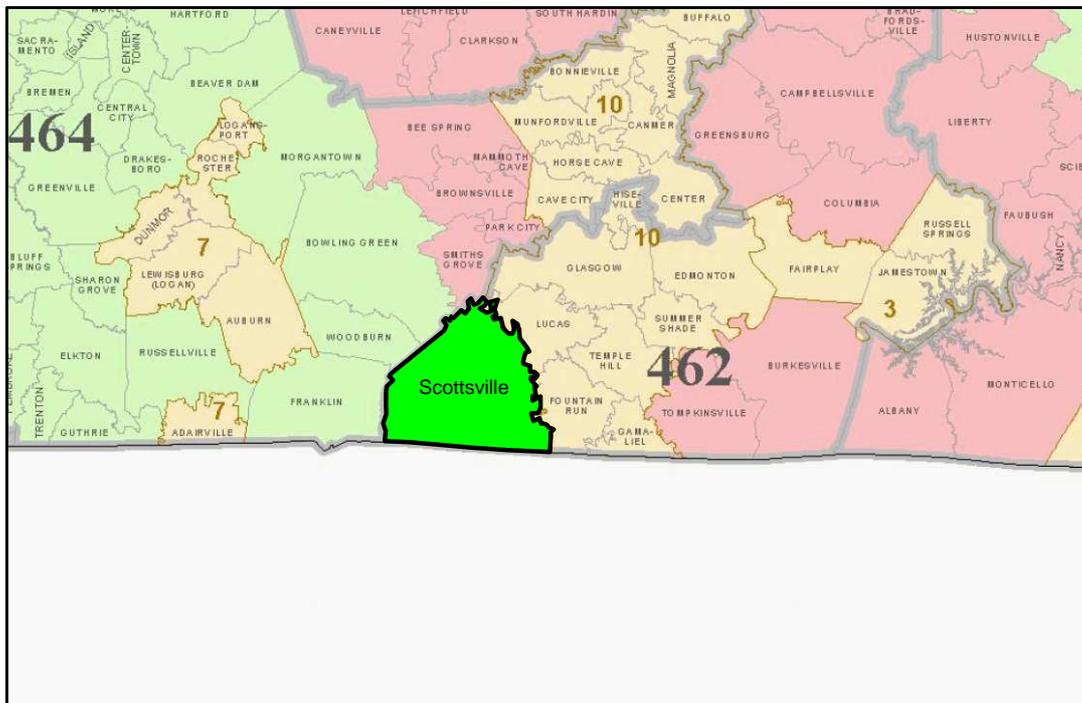
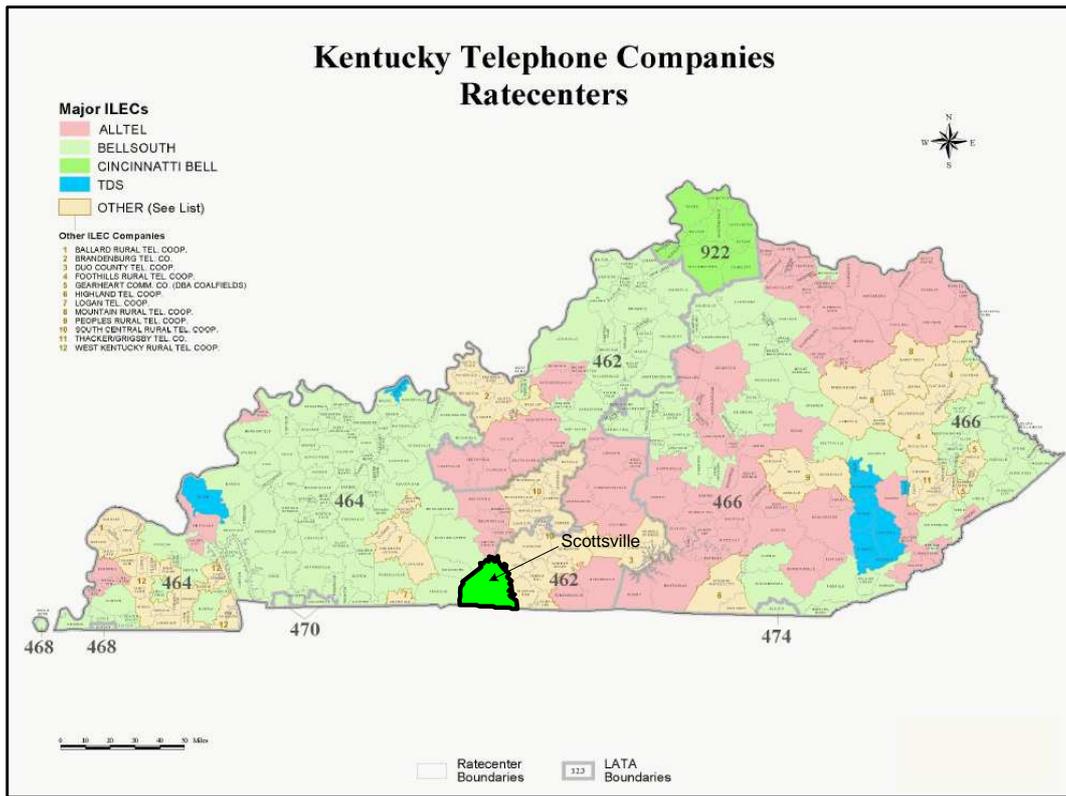
By/ David Cosson

Its Attorney

December 20, 2012

Appendix A – NCTC Serving Areas





Appendix B – NCTC Serving Area Characteristics

	Macon	Allen ¹	Smith	Trousdale	Clay	Sumner	National	Total	Source
Total Population	22,494	20,479	19,305	7,955	7,828	164,649		242,710	US Census 2011 Estimate
Served Population	22,494	14,068	6,937	1,348	2,810	4,288		51,945	US Census - NCTC Served Census Tracts
% Served	100.0%	68.7%	35.9%	16.9%	35.9%	2.6%		21.4%	
Total Households (occupied)	8561	7848	7410	2976	3358	60975		91,128	US Census 2010
Served Households	8561	5637	2707	501	1166	1565		20,137	US Census 2010
% of Households served	100%	72%	37%	17%	35%	3%		22.1%	
Labor Force	10,599	8,988	9,414	3,946	3,481	87,752			TVA Sites & US Dept of Labor
Job Growth Rate	-1.35%	-0.89%	-0.82%	10.42%	-13.84%	20.70%			TVA Sites & US Dept of Labor
Unemployment	8.2%	8.7%	7.7%	7.9%	10.2%	7.3%	8.3%		US Dept of Labor July 2012
Median Age	36.7	37	38.6	38.1	47.1	38.2	36.9		US Census 2010
Persons 65 & Older	14.3%	15.0%	13.9%	13.8%	20.3%	13.0%	13.3%		US Census 2010
Bachelor Degree or Higher	7.6%	10.6%	13.1%	10.0%	11.0%	23.0%	28.0%		US Census 2010
Median Household Income	\$33,087	\$34,568	\$47,685	\$44,205	\$32,106	\$54,916	\$51,914		US Census 2010
Persons Below Poverty	24.1%	20.3%	17.7%	9.7%	18.7%	10.1%	13.8%		US Census 2010
Business <10 Employees	85.7%	83.9%	81.0%	83.6%	82.2%	80.4%			TVA Sites
Persons per sq mile	72.4	58.0	61.0	68.9	33.2	303.4	87.4		US Census 2010
Note									
	1. Excludes Scottsville which is CLEC								
	2. Estimate that Serving area covers approx 25% of Trousdale County (Hillsdale Exchange)								
	3. Total Occupied Households 20,137 - total residential lines 15,510 = 77% penetration								

2012 Labor Force Report: Total Establishments by Size

Employee Size	Macon County, TN		Allen County, KY	
	Total	%	Total	%
1-4	521	69.8	353	64.5
5-9	119	15.9	106	19.4
10-19	53	7.1	50	9.1
20-49	32	4.3	22	4.0
50-99	17	2.3	11	2.0
100-249	5	0.8	3	0.6
250-499	0		1	0.2
500-999	0		1	0.2
>1,000	0		0	

Source: TVAsites.com

Main Populations Centers:

	Population	% of Served Area	Sq. Mi.	% of Served Area	Density (per sq mi)	2000 to 2010 Growth	Projected Growth to 2014
Lafayette	4,340	8.3%	40.81	4.4%	106.3	+11.71%	+3.53%
Westmoreland	2,106	4.1%	17.48	1.8%	120.5	+0.65%	-0.14%
Total	6,446	12.4%	58.29	6.2%			
Rest of Area	45,499		870.71		52.3		

Provided by CLRSearch.com

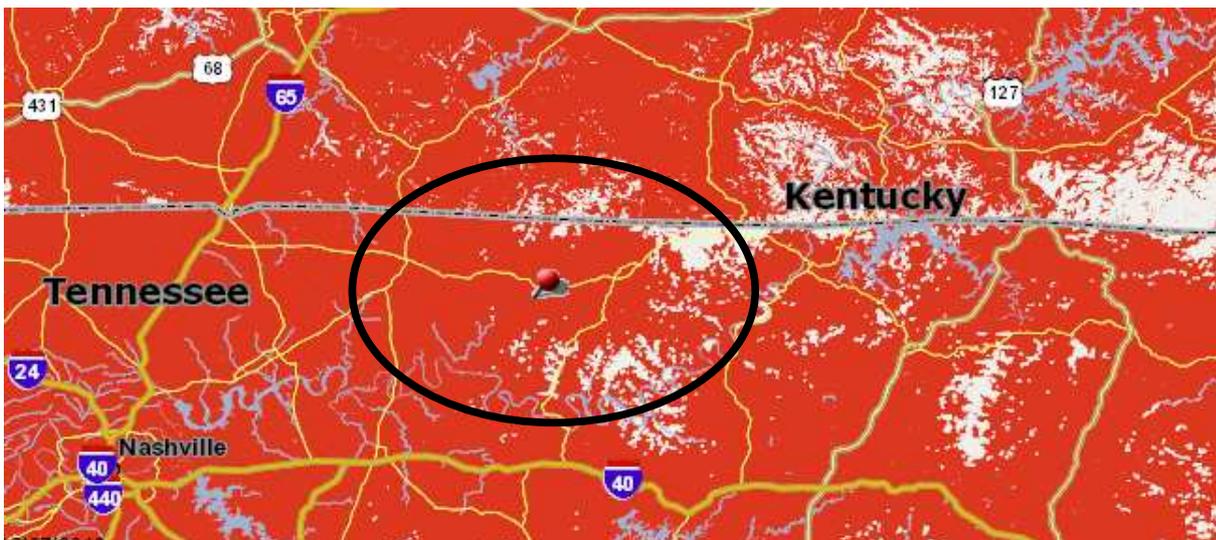
Typical Landscape of Serving Area



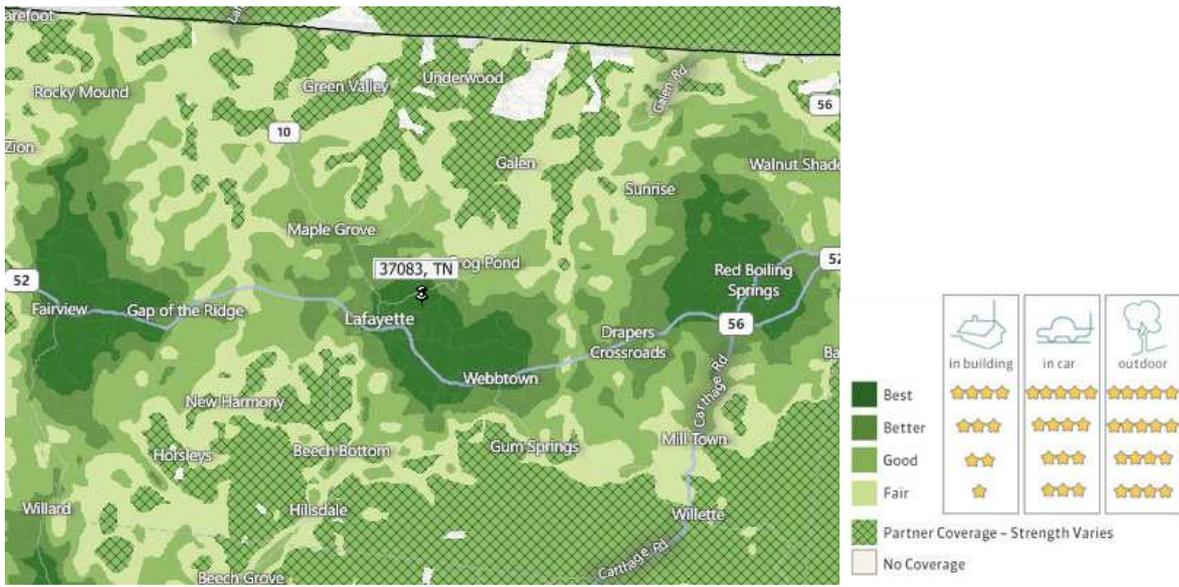
Peddlers Ridge: Courtesy of Barry Hiatt



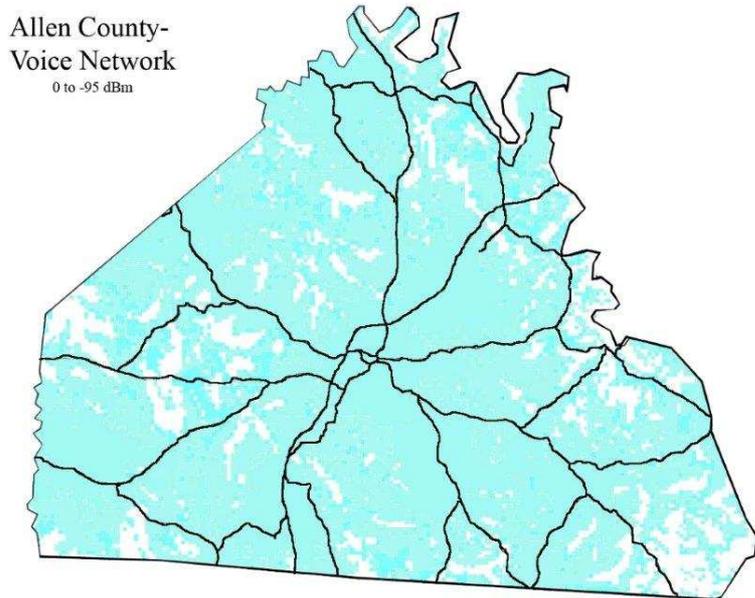
Wireless Coverage Map – Verizon



Wireless Coverage Map – US Cellular - TN



Bluegrass Cellular – Allen County, KY



Appendix D – Accounting for Unused or Spare Equipment

Accounting of Unused or Spare Equipment

Unused or spare equipment or facilities are booked to Part 32 Account 2410, Cable & Wire Facilities. NECA has an interpretation of Section 36.153 of the FCC's rules, 47 C.P.R. § 36.153. Based on this interpretation, spare facilities are assigned to the following categories: Category 1-Exchange Line, Category, 2 – Wideband and Exchange Trunk, Category3 - interexchange.

Appendix E – Corporate Operations Expense

NCTC Corporate Expense		
	2011 Audited	Notes
Compensation		1
Employee Benefits		2
Corporate T & L		3
Reg and Cost Study		4
Consultants		5
Professional Fees - Annual Audit		6
Legal		7
External and Community Relations		8
Governance		9
IT Support		10
Retiree Group Health		11
Insurance		12
Training		13
Stimulus Loan Application		14
Allocated in Overhead		15
Allocate out to Reg/Dereg		16
Other		17
Total Reg Corporate Expense		
De-Reg Corporate Expense		18
Total Corporate Expense		19

Note	Description
1	Seven Employees including CEO, VP Finance & Admin Services, Controller, Acct Clerks(2), Admin Assistant, HR Manager
2	Health, savings, accrued leave, retirement benefits associated with the seven employees noted above.
3	Travel & living associated with seven employees for training, conferences and board meetings.
4	Cost Study and regulatory expense for Vantage Point Solutions, Tennessee Telecom Assoc. regulatory dues, plus miscellaneous filings
5	Procurement & project management Services – data center, systems & switch implementation
6	Fees relating to required annual audit.
7	Legal expenses related to contracts, court cases and tariff issues
8	National Telecommunications Cooperative Association (NCTA) annual dues, community donations, cooperative related events and sponsorships
9	Cooperative annual meeting expense, director fees, benefits and travel, scholarships and awards, health benefits for current and retired directors
10	Data processing and information technology support for computer hardware and software maintenance and support
11	Health insurance for retired employees

12	Property, auto and workers compensation insurance
13	Training expense related to implementation of Innovative Systems eLations™ software
14	RUS BIP application expenses incurred in '09-10 timeframe which was closed out in 2011 pertaining to financial projections prepared by various consultants.
15	Overhead allocation in concurrence with the NCTC cost allocation manual such as facilities, utilities and benefits based on total company labor hours which are spread to the appropriate cost causing accounts.
16	Costs allocated out to non-regulated businesses based on time study – see Appendix I
17	Other expenses -
18	Includes non-regulated security and computer subs plus
19	Ties to audited financial statements

Appendix F – End User Rate Plans

Service	NCTC End User Rates		Comcast Rates	
	Service Type	Residential		Business
Voice¹	Lifeline	9.99	N/A	
	Basic Voice	\$14.90	\$23.03	\$44.95
	Hunt Group Lines	N/A	\$32.97	
	Long Distance	\$0.15	\$0.20	
Internet¹	Dial-up	\$11.99	\$11.99	
	Online Flex 4/1	\$29.95	\$29.95	
	Online Extra 6/1	\$39.95	\$39.95	
	Online Super 12/2	\$44.95	\$44.95	\$44.99
	Online Premium 20/4	\$59.95	\$59.95	\$58.95
	Online Star 30/6	\$69.95	\$69.95	
	Online Silver 50/10	\$69.95	\$69.95	
	Online Gold 100/10	\$199.95	\$199.95	

¹ Base price before bundling and limited time specials. All providers offer different bundles (including features such as long distance, calling features and video) which make a direct comparison difficult.

Appendix G – List of Services Provided Over USF Supported Plant

1. Voice Services

- i. Basic Voice – Business/Residential
- ii. Long Distance
- iii. Advanced Calling Features

2. Internet Services

- i. Dial-up
- ii. DSL up to 20/2
- iii. Fiber Broadband - 4/1 up to 100/10

3. Video Services

- i. Basic Video – local network channels, NCTC local channels, school channels
- ii. Deluxe Video - basic + cable channels, HD, music
- iii. Premium Channels – HBO, Showtime , Starz
- iv. On Demand, DVR, HD

4. Security Monitoring Services (through NCSS)

- i. Residential and Business Monitoring

5. Special Circuit Services

- i. Private Lines
- ii. Wideband (HiCap) loops -- Ethernet

6. Enterprise Services

- i. Hosted VoIP services
- ii. Unified Communications Systems (IP-PBX)

Appendix H – Customers Served

NCTC Customers Served							
	2011	2012	2013	2014	2015	2016	2017
ILEC Local Subscribers (Avg)							
ARPU (\$)							
ILEC Internet Subscribers (Avg)							
ARPU (\$)							
CLEC Local Subscribers (Avg)							
ARPU (\$)							
CLEC Internet Subscribers (Avg)							
ARPU (\$)							
Video Subscribers (Avg)							
ARPU (\$)							
Security Monitoring Subs (Avg)							
ARPU (monthly \$)							

Other Customers:

- Private lines to local businesses, government
- High Capacity Loops – wireless carriers, local businesses, government
- Leased Fiber to IRIS (of which NCTC is a shareholder) a Tennessee wholesaler of high capacity transport

NCTC Subscriber Trends through June 2012

Voice:

- ILEC Residential Access loss – [redacted] [consistent for last 18 months]
- ILEC Business access line loss – [redacted]
- CLEC overall access line loss [redacted]
- Homes Served ILEC - [redacted] - Jan 11 penetration [redacted] - June 12 penetration [redacted]
- Homes served CLEC – [redacted] - Jan 11 penetration [redacted] - June 12 penetration [redacted]

Internet

- ILEC growing at [redacted]
- Dial-up - [redacted] loss rate – [redacted] of subs as at June 12
- DSL < 3Mbps [redacted] growth – [redacted] of base as at June 12
- Broadband > 4 Mbps [redacted] annual growth rate - [redacted] of base June 12 (up from [redacted] Jan 11)
- [redacted] penetration of access lines June 12 – up from [redacted] Jan 11
- Homes Penetrated ([redacted] at Jun 12) [redacted] ([redacted] BB penetration), (up from [redacted] Jan 11)

Video

- ILEC growth [redacted] in 2011, [redacted] annualized to June 2012
- Residential Video Home Penetration – [redacted] subs June 2012 [redacted] - (up from [redacted] Jan 11)
- Residential Video Penetration Access Lines - [redacted] June 12 – (up from [redacted] Jan 11)

Appendix I – Procedures for Allocating Shared or Common Costs Between Regulated and Non-Regulated Services or Operations

North Central Telephone Cooperative, Inc. utilized John Staurulakis, Inc. (JSI) to perform a time study during the summer and fall of 2010 to be used to ensure that appropriate time reporting procedures were in place. This data would also be used in the cost allocation process to appropriately allocate costs between regulated and deregulated operations. The company recognizes that proper time reporting is essential to the successful management of the business. Payroll and labor distribution systems are automated and include appropriate edits and controls for management oversight and review. Other controls that the company uses to ensure proper time reporting include employee training of proper time reporting, ongoing supervisory review and approval of timesheets, periodic sampling and testing of timesheets for compliance with time reporting policies and procedures and retention of all records for the required time period.

Excerpt from Summary of JSI Prepared NCTC Cost Allocation Manual

The NCTC Cost Allocation Manual (CAM) is designed to allocate costs between the regulated and non-regulated activities of the company. These procedures ensure that the costs and risks associated with non-regulated activities will not be unduly imposed on the regulated ratepayers.

Costs will be directly assignable to either regulated or non-regulated accounts whenever possible. For example, direct labor will be assigned to either regulated or non-regulated accounts through time reporting procedures in 1/2 hour increments. Expenditures related to non-regulated activities will be directly assignable to non-regulated expense accounts when possible. Costs that cannot be directly assignable and are deemed to be common costs will be allocated to regulated and non-regulated activities based on direct and indirect measures of cost causation. These common costs are apportioned to regulated and non-regulated accounts based on: direct labor hours, total labor hours, revenues, net plant or general allocation based on directly assignable expenses. Whenever possible, the basis used in allocating common cost will have a direct relationship to the cost.

Appendix J – TPIS 2010 and 2009 Cost Study, Safety Net Payment Eligibility Worksheet

NORTH CENTRAL TELEPHONE COOPERATIVE, INC.								
ASSET ANALYSIS								
SNA INVESTMENT 2010								
	Trial	2010 COST STUDY ADJUSTMENTS						Cost Study
Account	Balance	NON REG	NON REG	NON REG	GENERAL ALLOC	CPR	Common	Balance
Number	12/31/2010	REMOVALS	REMOVALS	REMOVALS	NON REG REMOVALS	Reclass/Adj	Transfers	2010
2111.000.0								
2112.002.0								
2115.000.0								
2116.000.0								
2121.000.0								
2122.000.0								
2123.001.0								
2123.002.0								
2124.000.0								
2124.001.0								
2212.000.0								
2212.002.0								
2231.001.0								
2232.000.0								
2232.001.0								
2232.002.0								
2232.003.0								
2232.004.0								
2232.005.0								
2411.000.0								
2421.000.0								
2421.001.0								
2421.002.0								
2422.001.0								
2422.002.0								
2423.001.0								
2423.002.0								
2431.000.0								
2441.000.0								
2690.000.0								

NORTH CENTRAL TELEPHONE COOPERATIVE, INC.								
ASSET ANALYSIS								
SNA INVESTMENT 2010								
	Trial	-----2009 COST STUDY ADJUSTMENTS-----						Cost Study
Account	Balance	NON REG	NON REG	NON REG	GENERAL ALLOC	CPR	Common	Balance
Number	40,178	REMOVALS	REMOVALS	REMOVALS	NON REG REMOVALS	Reclass/Adj	Transfers	2,009
2111.000.0								
2112.002.0								
2115.000.0								
2116.000.0								
2121.000.0								
2122.000.0								
2123.001.0								
2123.002.0								
2124.000.0								
2124.001.0								
2212.000.0								
2212.002.0								
2231.001.0								
2232.000.0								
2232.001.0								
2232.002.0								
2232.003.0								
2232.004.0								
2232.005.0								
2411.000.0								
2421.000.0								
2421.001.0								
2421.002.0								
2422.001.0								
2422.002.0								
2423.001.0								
2423.002.0								
2431.000.0								
2441.000.0								
2690.000.0								

Study Area Name:	North Central Telephone Cooperative Inc.	Study Area ID:	290573
Payment Year:	2011		
Safety Net (High Investment Growth) Payment Eligibility Worksheet			
Line	Data Description	Input Value	Constant Access Lines
1	Total Plant In Service (TPIS) - Account Balance as of 12/31/2009		
2	Total Plant In Service (TPIS) - Account Balance as of 12/31/2010		
3	Access Lines Reported to Settlements - In December 2009 (Latest View)		
4	Access Lines Reported to Settlements - In December 2010 (Latest View)		
5	TPIS Per Access Line 2009 (Line 1/ Line 3)		
6	TPIS Per Access Line 2009 (Line 2/ Line 4)		
7	Percent Change in Investment per Line (Line 6 - Line 5)/Line 5	18.13%	15.40%
Note: Company Qualifies if Line 7 is 14% or More			

Description of 2010 Plant in Service Changes

1. Special Equipment Contract U-112

This project is the last phase of a 3 phase project in the Lafayette Exchange. Phase 3 consists of providing (1) BDT in the Lafayette host office, (5) five cabinet mounted Broadband Loop Carriers (BLC), (6) six Universal Services Access Multiplexer (USAM) Single Shelf Enclosures (SSE'S), (1) one Broadband Services Access Multiplexer (BSAM) Single Shelf Enclosures (SSE'S) (2) BSAM Shelves to be placed in racks located in an existing building remote, along with extended reach POTS line cards to be placed in existing USAM Shelves. The estimated number of customers that are served by this contract is [REDACTED]. The approximate closeout completion value of the contract was [REDACTED].

2. Special Equipment Contract U-117

This contract furnished and installed Broadband Loop Carrier's (BLC'S) to provide IP Advanced Data Services to all the NCTC customers in the northeastern portion of the Scottsville (Allen County, KY) exchange which was known as Phase 1 for the outside plant facilities construction. This contract provided the equipment required to provide Advanced Data Services in several existing remotes that are housed in buildings, along with the Scottsville central office. This contract covered equipment and/or installation material in each of the existing exchange central office buildings. The contract provided equipment chassis and installation material for Advanced Data Services to customers that are within 5,000' of the central office locations. The estimated number of customers that are served by this contract is [REDACTED]. The approximate closeout completion value of the contract was [REDACTED].

3. Outside Plant Contract U-119

This contract was for Scottsville (Allen County) Phase 1 for construction of outside plant facilities in the northeast section of Allen County, Kentucky. This project consisted of the deployment of

approximately 20 miles of aerial fiber cable and 118 miles of buried fiber cable. Approximately [REDACTED] customers were served by this contract with the approximate completion cost of [REDACTED]

4. Outside Plant contract U-121

This contract was for Scottsville (Allen County) Phase 1 for construction of outside plant facilities in the northwest section of Allen County, Kentucky. This project consisted of the deployment of approximately 33 miles of aerial fiber cable and 96 miles of buried fiber cable. Approximately [REDACTED] customers were served by this contract with the approximate completion cost of [REDACTED]

5. Special Equipment Contract U-122

This contract was for Scottsville (Allen County) Phase 2 for the deployment of Broadband Loop Carriers (BLC'S) to provide IP Advanced Data Services to NCTC customers in the northwest section of Allen County, Kentucky. Approximately [REDACTED] customers were served by this contract with a completion cost of [REDACTED]

6. Miscellaneous Capital Projects

Several different projects were completed in various areas of the cooperative which consisted of the deployment of fiber to the premise in the Red Boiling Springs exchange, advanced data gateways and equipment were installed in the Lafayette exchange, as well as the implementation of a fiber ring in the Lafayette exchange. Remote facilities were also added in the Westmoreland, Hillsdale, Bethpage, Oakgrove, Defeated, Pleasant Shade, Green Grove exchange and the Scottsville KY exchange. The approximate cost of these facilities was [REDACTED]

Appendix K - Audited Financial Statements

“REDACTED”

Appendix L – Information Regarding Outstanding Loans

Notes Payable and Long Term Debt Summary

Note Holder	Maturity	Rate	Balance as of Dec 31, 2011	Balance as at Dec 31, 2010
RUS “T” Loan	Various			
RUS “U” Loan	Various			
Rural Telephone Bank	Various			
	10/22/13			
	10/12/15			
RUS BIP	6/17/31			
	12/21/16			
Total				
Less Current Maturities				
Total Long Term Debt				
Notes Payable				
Total Notes Payable				

¹ Citizens Note Payable of [REDACTED]
Principle and interest installments on the above notes are due quarterly and monthly.

RUS “U” Loan

- RUS Project Designation: Tennessee 545-U12 & LA1 North Central
- Promissory Note Dated: January 13, 2004 Maturity 14 years
- Loan Amount: Rural Utilities Service - [REDACTED] and Rural Telephone Bank [REDACTED]
- Interest Rate: 4% to 5.1%
- Objective: Build buried and aerial fiber optic facilities with associated electronics and gateways to shorten loop lengths and enable 4,092 customers to gain DSL internet access.
- TIER of at least 1.0 throughout to December 21, 2007 and then 1.42 thereafter.

Broadband Initiative Program Loan

- RUS Project Designation: Tennessee 1102-A40
- Promissory Note Dated: June 17, 2010 – Maturity June 17, 2031
- Loan Amount: \$24,964,000 - Drawn as of September 29, 2012 [REDACTED]
- Grant Amount \$24,715,709 – Drawn as of September 29, 2012 [REDACTED]
- Interest Rate: Treasury Rate for comparable loans/maturities at time of each Advance
- Objective: awardee shall provide the broadband service described in the RUS approved application
- TIER – maintain same TIER as required in the Prior RUS Loan Contract and then 1.0 after termination of RUS loan until BIP loan is repaid in full.
- Additional Project Funding – must ensure that adequate funding is in place to complete the Project
- Additional Indebtedness shall not exceed 5% of awardees consolidated total assets.
- Security – all assets are pledged as security

RUS “V” Loan

- RUS Project Designation: Tennessee 545-V9 North Central
- Loan Agreement Dated: November 9, 2011- Maturity
- Loan Guarantee Amount: [REDACTED] – Drawn as of September 29, 2012 [REDACTED]
- Interest Rate: variable based on rate established by FFB on date of advance

- Objective: to provide broadband services in rural areas not covered by BIP Program
- TIER – maintain a TIER of 1.0 through December 31, 2015 and 1.5 thereafter.

North Central Communications (NCC) obtained a loan in the amount of [REDACTED] from Farmers National Bank in Scottsville Kentucky in 2002 to build out facilities for our new CLEC operation located in the city of Scottsville, Kentucky. These facilities overbuilt the incumbent provider to provide competitive local and long distance telephone and broadband services. An additional loan of [REDACTED] was obtained from Farmers National Bank in 2010 to upgrade electronics and network equipment as the existing Motorola platform was manufacturer and support discontinued. In order to ensure support for present and future growth NCC chose a solution based on the OCCAM network platform.

In 2011 North Central Telephone Cooperative (NCTC) obtained a loan in the amount of [REDACTED] from Macon Bank and Trust located in Lafayette Tennessee for the construction of a new central office annex for the purpose of housing facilities for 5000 fiber terminations, a softswitch and a data warehousing network. NCTC chose a local bank solution instead of RUS due to time limitations and speed of construction.

In 2011 North Central Telephone Cooperative (NCTC) obtained a line of credit in the amount of [REDACTED] from Citizens Bank located in Lafayette, Tennessee for the purchase of new billing, engineering and carrier access billing software, data processing hardware, core network equipment and data storage servers and hardware.

Appendix M – Identification of Specific Facilities and Investments that will be Deferred or Canceled

1. NCTC will defer and scale back middle and second mile fiber deployments that will leave approximately [REDACTED] of the subscriber base on loop lengths which will not enable provisioning of broadband services. Aged copper plant (in excess of 30 years) and associated peripherals will be left in service alongside new fiber plant resulting in higher maintenance costs. Fiber has lower loss subsequently longer runs between repeaters and much greater reliability and lower error rates.
 - a. NCTC will leave more copper drops in place resulting in a larger installed base of DSL modems which are the single highest cause of truck rolls (average [REDACTED] of truck rolls each month) and largest source of customer dissatisfaction.
 - b. In places where fiber drops have been completed NCTC will only install ONT electronics on demand resulting in second truck rolls as the demand grows (once broadband services are available demand grows rapidly)
 - c. NCTC had planned to remodel a portion of its old central office building to enable a Community Learning and Internet Access Center and an Enterprise Customer Applications Lab. These initiatives would result in faster broadband adoption, improve the competitiveness of local businesses and improve the area economics and quality of life.
2. NCTC will defer plans to implement a number of systems and business process improvements which would reduce operational expenses ([REDACTED] of workforce) and ultimately the level of reliance on CAF funding.
 - a. Delay the planned implementation of an AVL system and integration with the dispatch, time management and inventory applications. This would result in a significant annual savings once implemented.
 - b. Delay the integration of all the element management systems into the overall network monitoring application. This would include a number of hardware and software replacements/upgrades to enable the systems to feed real time data up to the NMS resulting in lower personnel costs and improved customer service.
 - c. Defer the deployment of Wi-Fi hotspots at the CO locations and in the town centers to reduce the communication costs for the field personnel and create new revenue opportunities respectively.
 - d. Defer implementation of a management dashboard targeted to provide near real time business information to management. The purchased application would pull data from the eLations™ business system database.

3. NCTC planned to add new business services which would ultimately lower the regulated cost base and increase the service offerings to the community.
 - a. NCTC built a Class 3 data center with the intention of not only hosting the NCTC softswitch and associated peripherals but also hosting enterprise data and cloud applications. The applications would attract new business to the area and enable the current enterprises access to services they could not otherwise afford. This would improve the competitiveness of local businesses and improve the area economics.
 - b. NCTC has begun to support a number of healthcare and education initiatives working with local hospitals, governments and education institutions to bring new and better services to the area leveraging the new IP network. To expand these initiatives NCTC will need new IP technical support capabilities which it planned to hire in the near term.

Appendix N – Engineering Analysis/Affidavit Demonstrating that Construction Costs Reasonable and Prudent in View of Demand



September 26, 2012

PHONE 256 845-0501
FAX 256 845-2071
1509 GAULT AVE. S
FORT PAYNE, ALABAMA 35967
P.O. BOX 680747
FORT PAYNE, ALABAMA 35968-1808
www.laddengineering.com

RE: Reasonableness of Construction Costs

To Whom It May Concern:

As North Central's design engineering partner we have reviewed and managed the construction costs as shown in the table on Page 12 of the Safety Net Waiver that is being submitted by North Central Telephone Cooperative Inc. and have determined that the costs as shown are reasonable and prudent. My determination was based on my experience of working on similar projects in size and scope.

Respectfully submitted,

Carol Leigh Brackett, PE
Engineering Coordinator
TN Registered Engineer No. 108179

Appendix O – Letters of Support for NCTC’s Broadband and Fiber Initiatives

**MACON COUNTY
EMERGENCY COMMUNICATIONS DISTRICT**

898 Hwy 52 By Pass E - Lafayette, TN 37083
Ph: 615-666-7070 - FAX: 615-688-6911
Email: macon911@macontn911.com

October 11, 2012

Ms. Nancy White
North Central Telephone Cooperative
PO Box 70
Lafayette, TN 37083

Dear Ms. White,

In 2009, we took great pleasure in voicing our support of North Central’s submission of the Broadband Infrastructure application. We knew that this was an opportunity that would allow NCTC to enhance its high speed internet and broadband services.

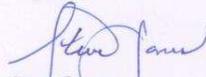
Since that time, Macon County has built a state of the art Emergency Management Center that implements and daily reaps the benefits of fiber to our premise and the implementation of hosted VoIP.

Now, our employees are not hindered by distance when it comes to training and education, as this can now be done on-line at our facility. Also, we are now able to participate in national emergency response drills and training sessions from our facility. This is all because of the enhancements of the high speed internet and broadband services and the implementation of the fiber optic network.

However, we have counted on the NCTC data center as a backup in case of emergency as well as storage for our systems. Currently we utilize tape drive and would like to take advantage of the broadband capacity and hope that you will open for business soon.

We look forward to continuing our strong partnership with NCTC.

Regards,



Steve Jones,
Director of Operations



MACON COUNTY GENERAL HOSPITAL
P. O. BOX 378
LAFAYETTE, TENNESSEE 37083

PHONE 615-666-2147

November 19, 2012

Mrs. Nancy White
North Central Telephone
872 Highway 52 Bypass
Lafayette, TN 37083

Dear Mrs. White,

We are looking forward to your new data center services for several reasons. First of all Macon County General Hospital (MCGH) is the Critical Access Hospital which serves Macon County, TN and surrounding areas. We use an IBM AS/400 for our Electronic Medical Records (EMR) system which includes all aspects of the hospital's operations including billing, filing, clinical, etc. We understand that NCTC has recently replaced its AS/400 and it is our wish that NCTC will use it to provide offsite remote backup/disaster recovery services for our AS/400.

Additionally, due to the critical nature of this data, MCGH would like to utilize NCTC's new eF5 rated tornado resistant facility to house the AS/400 remote backup/disaster recovery to this system. As we have seen in disaster situations, it is critical to patient care to have access to our patient's history to treat and care for members of our community. We are anxious to know when you will have the staff and facilities to offer these important services to our hospital.

We look forward to hearing from you soon.

Sincerely,

A handwritten signature in cursive script that reads "Thomas J. Kidd".

Thomas Kidd, CPA
Chief Financial Officer
Macon County General Hospital

CITIZENS BANK

Main Office - 400 Highway 52 By-Pass West
P. O. Box 100 • Lafayette, TN 37083 • Phone (615) 666-2195
With Branches in Macon, Clay, Smith and Sumner Counties

October 11, 2012

Ms. Nancy White
North Central Telephone Cooperative
PO Box 70
Lafayette, TN 37083

Dear Ms. White,

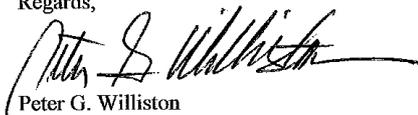
In 2009, we took great pleasure in voicing our support of North Central's submission of the Broadband Stimulus Infrastructure application. We knew that an enhancement of the high speed internet and broadband services would be the basis for many enhancements in our communities and for our own business.

Almost three years later we are seeing the results in many ways. We have fiber to most of the businesses and many residences in our town; we are also seeing local companies embrace the new technology to grow their business. The town is implementing a new industrial park which hopes to take advantage of the great communications capacity available to us.

Because of the investment that NCTC has made in new state of the art technology and the deployment of the fiber optic network, Citizens Bank has chosen NCTC to handle all our data traffic for the bank and our subsidiaries in 15 locations in Middle Tennessee. Our network is much more robust and redundant at a much lower price. Additionally we are in the process of implementing a VoIP communications system from NCTC for all our locations. This is the first time we have invested in this type of technology and we are very happy with the functionality and efficiency the system delivers. Next generation technology will enable Citizens Bank to communicate between locations by teleconference, transmission of financial reports, between locations, and much more.

This is an exciting time for Citizens Bank and the communities we serve in large part due to the investments being made by North Central Telephone Cooperative. We wish you much continued success as you continue to work toward providing a next generation network for our communities.

Regards,



Peter G. Williston
Chief Executive Officer
Citizens Bank

*Room 201
Macon County Courthouse
Lafayette, Tennessee 37083*

*Phone (615) 666-2363
Fax (615) 666-5323*

*Sheloy Linville
Macon County Mayor*

October 11, 2012

Ms. Nancy White
North Central Telephone Cooperative
PO Box 70
Lafayette, TN 37083

Dear Ms. White,

When North Central submitted its application for the Broadband Infrastructure program, I was proud to support NCTC on behalf of Macon County and its citizens. I knew that if NCTC was successful in its submission, Macon County would see a benefit in many ways.

With the enhancement of the high speed internet service and broadband service due to the fiber optic deployment, we can already see a return on this investment in very significant ways.

- The town of Lafayette has purchased a tract of land with more than 120 acres and has designated that it is not an Industrial Park, but a Technology Park. We plan to utilize the infrastructure that is in place as a result of NCTC's build out of a completely new high speed and high capacity network. The goal is to bring companies who need a world class communication network to the area.
- Call/Contact Center companies have come to investigate our area based on the network facilities being built by NCTC. To date they include several call/contact centers with one of them looking to hire up to 1000 employees from the 40 mile surrounding area.
- One very visible result of NCTC's investment is that the electric and telephone cables have been removed from the courthouse property and are now underground. NCTC suggested that Tri County Electric consider putting their cables underground at the same time in order to be more cost effective. The town has been trying to make this happen for years and never had the funds. Needless to say, our town square looks much better and also has new street lights.
- NCTC has built a small world class data center that is F5 tornado resistant. Its purpose is not only to house the network but also to be a control center in case of emergency. Connections for easy access for a 911 center and FEMA are already in place.

- The new NCTC data center not only is functional but is also the only new structure build within a block of the county square in many years. It is functional and also blends in to make the town look better.

The above items are just a few of the reasons I am writing this letter of support. NCTC is one of the cornerstones of our business community and with your help we hope to continue to help our population become more aware and able to utilize the services available now and in the future. Currently we have an average household income of approximately \$32,000 with a fairly large percent who cannot afford computers. The public library also has benefited from the fiber connections that NCTC provides.

We look forward to a continued partnership with North Central and hope that the FCC will grant the Safety Net Additive waiver you are requesting. Our area needs their continued focus to help our citizens adopt and utilize broadband. We know that, with NCTC's success, our local government and the services we offer to our citizens will only be enhanced as we all move forward together with the next generation of technology.

Regards,


Shelby Dixville
Mayor, Macon County, TN

cc:

Appendix P – NCTC Five Year Financial Plan - SNA Waiver Offsets and Lost Benefits

NORTH CENTRAL TELEPHONE COOPERATIVE							
INCOME STATEMENT (\$K US)							
	Actual	Forecasted Financial Data					
	2011	2012	2013	2014	2015	2016	2017
Local Network Services							
Internet Revenues							
Interstate Access							
Intrastate Access							
USF/CAF							
Long Distance Revenues							
Special Access Intrastate							
Special Access Interstate							
Misc Revenue							
Uncollectible Revenues							
Total Regulated Revenues							
Local Network Services							
Internet Revenues							
Video Revenues							
Enterprise Data Revenue							
Security Revenues							
Other Security Revenues							
Long Distance Revenues							
Interstate Access							
Intrastate Access							
Other							
Total Non Regulated Revenue							
Total Operating Revenue							
Plant Specific Operations							
Plant Non Specific Operations							
Internet & Video							
Security Equip COGS & Monitoring							
Provision for Depreciation							
Customer Operations Expense							
Corporate Operations Expense							
Operating Taxes							
Total Operating Expense							
Other Income (Loss)							
Income from investment							
Interest & Dividends							
Non Regulated Income							
Loss from Invest Impairment							
Gain on Sale of Equip							
Total Other Income (Loss)							
Fixed Charges							
Interest Expense							
Interest Charged to Construction							
Total Fixed Charges							
Income before taxes on income							
Taxes on Income							
Net Income							
Footnotes:							
1) NCCT leases vehicles, computers, switching and computer hardware and software equipment to NCTC. Leasing revenues from NCCT and the corresponding expense on NCTC have been excluded from the above financial presentation. Leasing revenue and corresponding expense was \$XXXX for 2011.							
2) With the exception of footnote 1, the above financial presentation does not contain any intercompany eliminations.							
3) Income from investments derived from current 5 year plans of investment entities							

NORTH CENTRAL TELEPHONE COOPERATIVE							
BALANCE SHEET (\$K US)							
	Actual	Forecasted Financial Data					
	2011	2012	2013	2014	2015	2016	2017
<u>CURRENT ASSETS</u>							
Cash - general							
Cash - construction funds							
Temporary cash investments							
Telecommunications Accts Receivable							
Other accounts receivable							
Materials and supplies							
Refundable tax deposit							
Other current assets							
TOTAL CURRENT ASSETS							
<u>NONCURRENT ASSETS</u>							
Investments							
Nonregulated investments--Net CPE							
Notes Receivable							
Goodwill - net (Franchise)							
Deferred tax asset							
TOTAL NONCURRENT ASSETS							
<u>PROPERTY, PLANT AND EQUIPMENT</u>							
Telecommunications plant in service							
Telecommunications plant under construction							
Less Accumulated provision for depreciation							
TOTAL PROPERTY, PLANT & EQUIPMENT							
TOTAL ASSETS							

<u>CURRENT LIABILITIES</u>							
Note Payable							
Accounts payable							
Advance billings and payments							
Customer deposits							
Current maturities of existing long-term debt							
Accrued taxes							
Accrued interest							
Accrued rent (pole rent)							
Accrued salaries and wages							
Accrued vacation and sick leave benefits							
Other current liabilities							
TOTAL CURRENT LIABILITIES							
<u>LONG TERM DEBT</u>							
Long term debt							
<u>OTHER LIABILITIES</u>							
Postretirement benefits other than pension							
Deferred taxes - net							
TOTAL LIABILITIES							
<u>MEMBERS' EQUITY</u>							
Patronage capital							
TOTAL MEMBERS' EQUITY							
TOTAL LIABILITIES & EQUITY							

NORTH CENTRAL TELEPHONE COOPERATIVE - Waiver Income and Cash Flow Impact Analysis (\$K US)						
	2012	2013	2014	2015	2016	Total
2012 5 year Plan Income						
Plus SNA Support Payment	\$ 553	\$ 603	\$ 603	\$ 603	\$ 603	\$ 2,965
Minus Program Spending						
Plus Program Benefits						
Revised 2012 Plan Income						
2012 5 Year Plan Cash Flow						
Plus SNA Support Cash Flow	\$ 553	\$ 603	\$ 603	\$ 603	\$ 603	\$ 2,965
Minus Program Spending						
Plus Program Benefits						
Revised 2012 Plan Cash Flow						
SNA Expense Offsets and Lost Benefits						
Forecasted SNA Support Payment	\$ 553	\$ 603	\$ 603	\$ 603	\$ 603	\$ 2,965
Offsets to SNA Cancelation						
1.a Fiber projs to reduce loop lengths	\$ -					
1.b ONT electronics						
1.c BB Center and Ent Lab						
2.a Systems Enhancements						
2.b AVL Implementation	\$ -					
2.c Network Monitoring	\$ -					
2.d Other Proj Wi-fi/Mgt Dashbd	\$ -					
3.a Cloud/data solution						
3.b Telemedicine support	\$ -					
Total Offsets						
Annual Expense - License, Support						
Lost 5 Year Benefits						
1.a Fiber projs to reduce loop lengths						
1.b ONT electronics - mult Truck rolls						
1.b DSL Maintenance reduction						
1.b Copper Plant duplication						\$ -
1.c BB Center and Ent Lab (TBD)						\$ -
2.a/b Systems Enhancements/AVL						
2.c Network Monitoring						
2.d Other Proj Wi-fi/Mgt Dashbd (TBD)						\$ -
3.a Cloud/data solution						
3.b Telemedicine support (TBD)						\$ -
Total Lost Benefits	\$ -					