U.S. House of Representatives

House Committee on Energy and Commerce

Subcommittee on Communications and Technology Hearing

"Is The Broadband Stimulus Working?"

Testimony of

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President and CEO

MCNC

February 27, 2013

Thank you Chairman Walden and Ranking Member Eshoo and Members of the Subcommittee for this opportunity to present congressional testimony regarding the successful implementation of broadband stimulus funds in North Carolina. I particularly want to thank Congresswoman Renee Ellmers from MCNC's home state of North Carolina. She represents the great people

of North Carolina's second congressional district and is a champion of better healthcare, education and access to technology – all benefitting from the investments made by the BTOP program.

For over 25 years, the private non-profit organization that I lead, MCNC, has operated North Carolina's fiber optic highway of innovation, the North Carolina Research and Education Network or NCREN. While the roots of NCREN are in serving the vast research needs of the 16 universities in the University of North Carolina System, the community of connectors to NCREN has grown the last several years to include connections to more than 450 Community Anchor Institutions, including all of K-20 public education, many private universities, numerous non-profit healthcare providers, and several state and federal research organizations.

These anchor institutions require large amounts of very low latency, high-speed connectivity and collectively their demand for bandwidth doubles every two years.

An example of the growth in demand comes from our North Carolina Community Colleges. Since 2011, the 58 community colleges in North Carolina have reported a 5-fold increase in bandwidth demand, and since 2007 our K-12 public school districts have recorded a 20-fold increase in bandwidth use. Students in our community colleges now directly access and program advanced manufacturing equipment virtually over NCREN to gain

current skills needed in the workforce while the colleges avoid having to spend precious capital purchasing these machines.

MCNC has a long history of cooperative work with our incumbent service providers, telephone membership cooperatives, electric membership cooperatives, and independent telecommunications companies in North Carolina. We spend about $9 million per year for local circuits and Internet bandwidth with these providers.

In 2007, in our meetings with our service provider partners, it became evident that NCREN's need for bandwidth particularly in rural North Carolina was going to outstrip the capacity of the existing middle-mile fiber. There was either no fiber available in certain sections of North Carolina or limited fiber capacity to meet the growing needs of the anchor institutions served by our network. We also found that these service providers, even supported by a proposed $8 million MCNC investment, lacked a business case to build into areas with no fiber or to add fiber capacity to underserved areas.

To serve the needs of the students, healthcare providers and research institutions connected to NCREN, MCNC made the decision to pursue BTOP funds. For matching funds, MCNC allocated $8 million from its capital refresh fund for NCREN. MCNC also raised $4 million from private-sector

wholesale service provider FRC, $24 million from North Carolina's non-profit Golden LEAF Foundation, and $4 million in donated conduit and land. MCNC brought a total of $40 million to the table, and a vision for a statewide network that would bring broadband to some of the most rural, mountainous and difficult areas to reach in the state. Leveraging these matching funds, MCNC applied for and won two rounds of BTOP funding totaling $104 Million.

Today, MCNC is within 50 miles of completing a 2,600 middle mile network. This network is comprised of 1,800 miles of new build fiber and 800 miles of leased fiber. MCNC leased 800 miles of fiber from service providers through long-term contractual arrangements common in the industry that committed this fiber to MCNC's exclusive use, typically for 20 years. These leases are a tangible demonstration of the solid relationship MCNC enjoys with its service provider partners, and how MCNC was able to leverage local infrastructure into its new statewide broadband network.

The construction phase of the project has given a badly needed infusion of revenue to engineering, construction, optical equipment, and fiber/conduit companies. Our fiber/conduit supply company is CommScope. CommScope is headquartered in Hickory, N.C. When we chose CommScope as our supplier, their conduit plant was idled. During the height of our project, over a two-year period they operated 24/7 with more than 100 workers to

keep up with demand. Since our project, CommScope has been awarded business through other BTOP winners and outside of the BTOP program. Keeping these workers employed.

Much of the BTOP fiber is already in use and benefitting 450 Community Anchor institutions served by NCREN and allowing NCREN to serve over 1500 more Community Anchor Institutions. The BTOP award will allow us to scale connectivity to these institutions to the multi-gigabit level as these institutions need additional bandwidth and our sustainability plan will allow this scalability to occur at today's costs.

Also, MCNC is in discussions with more than 10 wholesale and last-mile service providers interested in the new build fiber. Many are looking to enter areas unavailable to them in the past. Rural broadband is migrating quickly from wired services like DSL to wireless services like WiMAX, Wi-Fi mesh and 4G/LTE as the primary last-mile solution. The commonality in all these over-the-air, last-mile services is the need for fiber-based wireless backhaul and transport services. The BTOP funded fiber is of high interest and likely positions North Carolina to be an early deployment state for these services and a test bed for emerging services.

Mr. Chairman, our story is a great success story. It's based on leveraging privately-raised matching funds, utilizing existing local infrastructure and

attracting BTOP federal investment to build a digital highway that directly supports innovative research, idea formation, equity of access to education, and better healthcare outcomes for rural North Carolinians. Also through partnership, this is a highway that private and public non-profit service providers can use to drive new resources and value into the last mile for our rural citizens.

MCNC owes much of our success to the BTOP staff at the NTIA. Their guiding hand has led to a highly successful broadband investment in rural North Carolina.

Thank you.

Supplemental Materials:

About MCNC

For more than a quarter century MCNC has operated a robust, secure, exclusive communications network that has connected institutions of the University of North Carolina System, Duke University, and Wake Forest University to each other and through advanced research networks such as Internet2 and National Lambda Rail, to the world.

Over the last 5 years, MCNC has expanded the reach of its services to non-profit and university hospitals, public safety, libraries and other key CAIs. Through two Broadband Technology Opportunities (BTOP) grants and other private investments, MCNC is investing over $140M in a network infrastructure that is able to meet the rapidly increasing bandwidth demands and shared services needs of North Carolina-based CAIs for the foreseeable future.

About NCREN

NCREN, operated by the non-profit organization MCNC, is one of the nation's first statewide education and research networks. It provides broadband communications technology services and support to K-12 school districts, higher education campuses and academic research institutions across North Carolina. MCNC offers NCREN technology tools and services to guarantee equal access to 21st century learning by providing a future-proof technology network that is the foundation for change and innovation in our educational systems. In addition to all public school districts in North Carolina, the NCREN user-community now includes: 17 institutions of the UNC System and General Administration; 40 North Carolina Charter Schools; 27 of the 36 North Carolina Independent Colleges and Universities; 58 North Carolina Community Colleges; research institutions and foundations; and, along with the N.C. Office of Information Technology Services and other partners, MCNC provides broadband services for 70 Public Health agencies and 30 Non-Profit Hospitals through the N.C. Telehealth Network.

MCNC and NCREN

MCNC is the company and NCREN is the network, our flagship product MCNC is Connecting North Carolina's Future Today.

MCNC History - A Brief Timeline

1980 – North Carolina General Assembly initially funds the Microelectronics Center of North Carolina to be a catalyst for technology-based economic development throughout the state.

1985 – MCNC receives state mandate for providing and operating an advanced communications network CONCERT (subsequently called NCREN). Initial microwave system linking NCSU, UNC-CH, Duke, NC A&T, UNC-C, RTI and MCNC is completed. This is the first broadcast-quality, two-way interactive, multipoint video and audio system in the United States.

1987 - The mcnc.org domain was registered on the Internet on January 15, 1987. It is number 6 on the list of the oldest .org registered domains.

In 1991, the VistaNet project focused on research in communications, computer science, and the use of supercomputing to support cancer treatment through computer visualization.

1990 – VISTAnet project is implemented – first operational national gigabit test bed using OC48 backbone. 3-D imaging computers at UNC use supercomputing resources to enable medical researchers to simulate thousands of possible treatment options to find the optimal therapy for individual patients, targeting radiation in a much more precise way than was possible before.

1993 – NCREN completes broadband connections to each of the 18 core members of the network, combining video and data, using a combination of digital microwave technology and broadband ATM technology.

1994 – Through a collaborative effort between the N.C. State Government Office of Information Technology Services (ITS) and NCREN, North Carolina becomes the first state to deploy high-speed network capabilities to every county through the North Carolina Information Highway.

1995 – All 16 campuses of the UNC system, Duke and Wake Forest are able to fully participate in the high-quality, two-way interactive video capabilities enabled by NCREN.

1997 – World's first "GigaPOP" is developed – an extremely fast access point, or high-speed on-ramp, to the next generation Internet. This network infrastructure becomes a model throughout the world and is used to test next-generation networking applications and systems, leading to the establishment of a national network testing laboratory in North Carolina. The GigaPOP becomes the gateway for all Internet service for all NCREN customers and the state government. This includes North Carolina becoming one of the first states to connect to Internet 2.

2000 – NCREN becomes the nation's first near-broadcast quality two-way interactive video system using Internet-based technology (IP using MPEG2) to support up to 20 simultaneous locations in that service with full, continuous presence audio for all participants all the time. All participants at remote sites can hear audio and see video from all other sites - exactly how a conversation would work if they were all in the same room.

2000 – Cronos is sold to JDS Uniphase Corporation. Proceeds to MCNC enables over $100 million investment in the state.

2000 – MCNC pledges $30 million to Rural Internet Access Authority, now operating as The e-NC Authority. The donation helps accelerate the spread of high-speed Internet access across North Carolina.

2001 – North Carolina BioGrid establishes partnership with universities, the N.C. Biotechnology Center and private-sector companies. The N.C. BioGrid is one of the nation's first scientific grid computing test beds.

2003 – MCNC is restructured into two companies. Research and venture funding activities are established as a separate company, MCNC Research and Development Institute (MCNC-RDI).

2005 – The research operations of MCNC-RDI are sold to RTI International. MCNC-RDI changes name to NC IDEA with mission to provide early-stage companies with venture funding, grants and loans.

2005 – MCNC is selected to lead applications support for Internet2's Hybrid Optical and Packet Infrastructure test bed.

2005 – NCREN and N.C. State University are selected by National LambdaRail (NLR) to operate its first national Experiment Support Services.

2006 – MCNC leads U.S. consortium for first international demonstration of integrated computing and network technology as part of the Global Lambda Integrated Facility, including Virtual Computing Lab resources at N.C. State University.

2008 - MCNC provides connectivity to the K12 community, creating a K20 network in the state.

2009 - MCNC celebrated 25 years of the North Carolina Education and Research Network (NCREN).

2010 - MCNC was awarded two rounds of Broadband Technologies Opportunities Program (BTOP) historic funding to expand high-speed connectivity through the North Carolina Research and Education Network.

MCNC BTOP Background:

MCNC currently is working on a $144 million expansion of the North Carolina Research and Education Network (NCREN) scheduled to be completed by 2013. This initiative has been labeled the Golden LEAF Rural Broadband Initiative.

To fund this expansion, MCNC applied for and received two U.S. Department of Commerce Broadband Technology Opportunities Program (BTOP) awards totaling $104 million.

In addition, MCNC raised $40 million in private matching funds as required by the BTOP program. MCNC's sources of matching funds included $24 million from the Golden LEAF Foundation, $8 million from the MCNC Endowment, $4 million from private-sector wholesale telecommunications company FRC, and an estimated $4 million through donations of land and existing conduit from individual community colleges, universities, and others including the Albemarle Pamlico Economic Development Corporation. No direct funding from the State of North Carolina was required.

MCNC estimates the expansion of NCREN will create or save 2,500 engineering, construction, and manufacturing jobs in the state.

Both MCNC awards are a part of a coordinated strategy developed by the Office of former North Carolina Governor Bev Perdue, the N.C. Office of Economic Recovery & Investment, and e-NC Authority to improve broadband access for businesses and residents in underserved areas.

Once all work is complete, the two rounds of BTOP infrastructure have the potential to serve directly, or through MCNC partnerships with private-sector service providers, more than 1,500 community anchor institutions, 180,000 businesses, and reach more than 300,000 underserved families.

BTOP PROGRESS MAP

Back to BTOP Progress

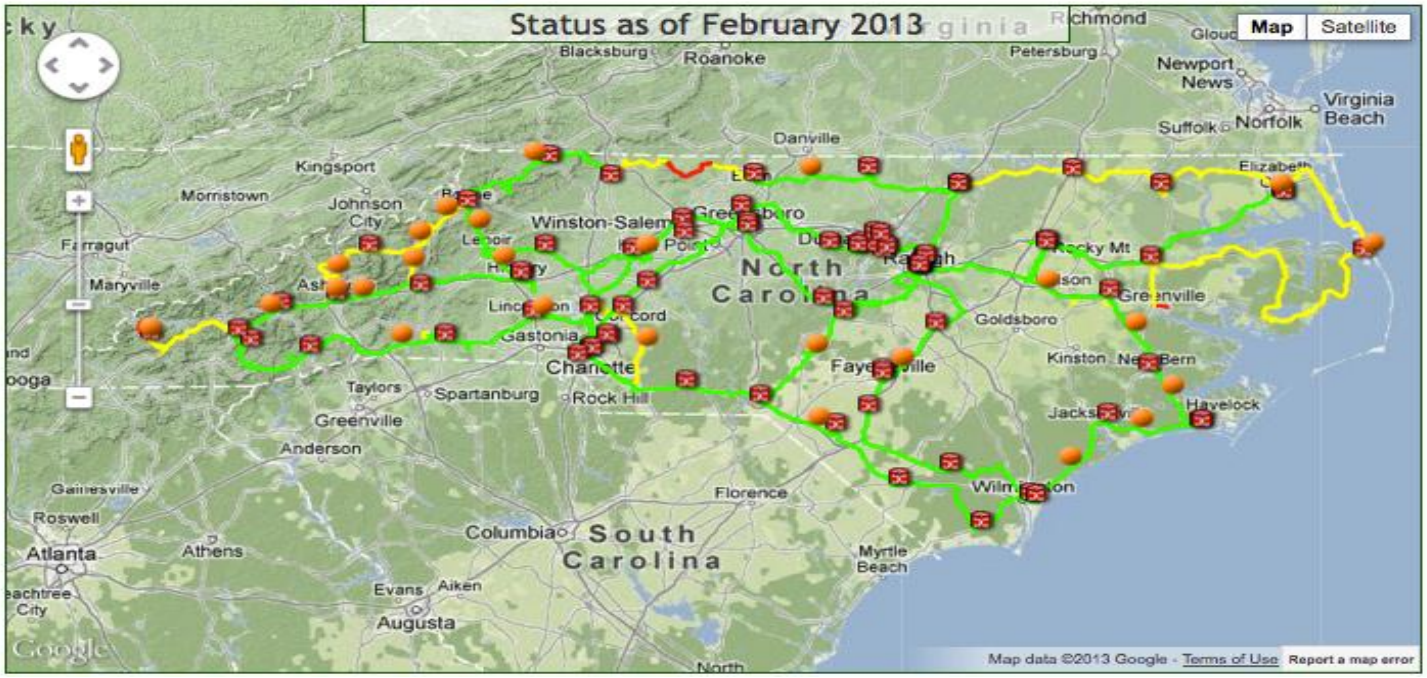
MCNC is pleased to offer this interactive map to illustrate monthly progress on the completion of its BTOP projects, which will result in a total of 2598.53 miles of newly operational network infrastructure. Please either use the drop down menu below to see the status of the NCREN backbone as it existed in 2008 prior to the NTIA Broadband Technology Opportunities Program (BTOP), and representative views of progress on the project to date, or click the blue button to watch a time-lapse view of progress on the build. The map depicts information about the routes to be constructed as well as progress building the network over time.

Map Legend

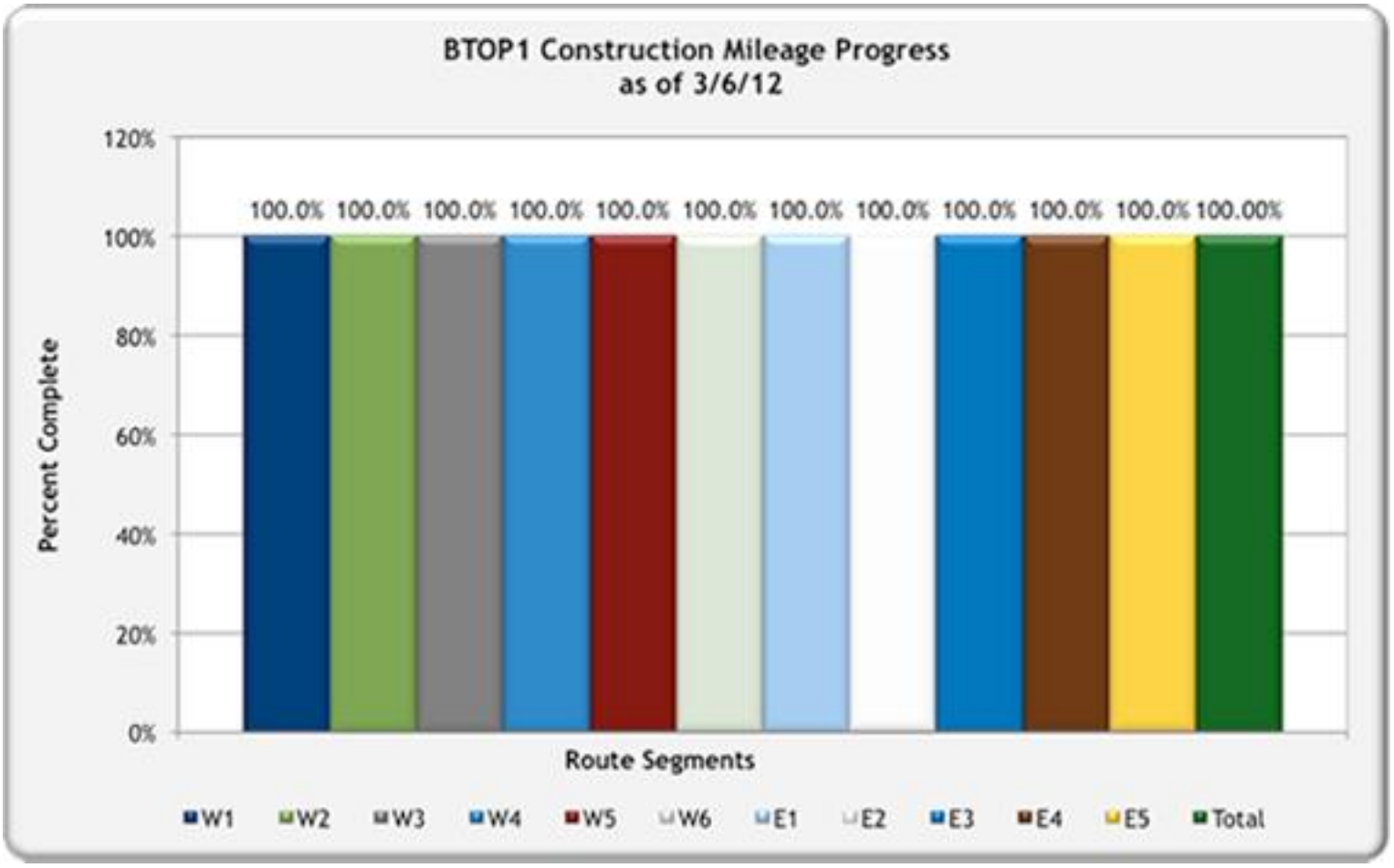
- Operational
- Built or agreement to acquire in place
- To be completed
- Click for route segment information
- Optical equipment locations

Show: Status as of February 2013

Play time-lapse view:

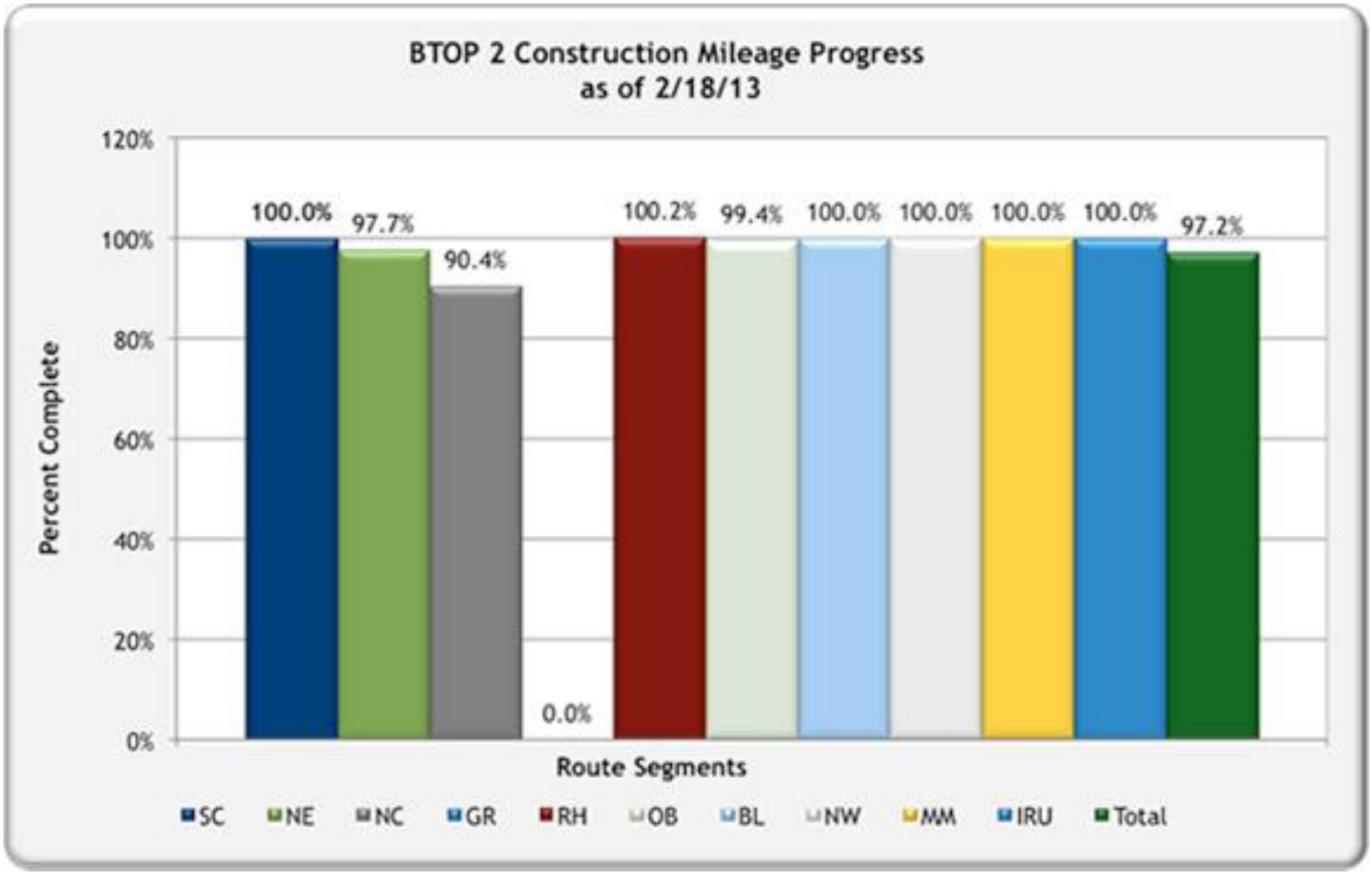


BTOP1 CONSTRUCTION PROGRESS



Routes	Segment	Miles to be Installed	Miles Installed	% Complete
Mocksville	W1	6.45	6.45	100.0%
Lenoir to Hickory	W2	19.99	19.99	100.0%
Old Fort to Asheville	W3	26.2	26.20	100.0%
Enka to Sylva	W4	37.08	37.08	100.0%
Huntersville to Shelby	W5	46.33	46.33	100.0%
Shelby to Hendersonville	W6	60.02	60.02	100.0%
Rocky Mount to Greenville	E1	51.87	51.87	100.0%
Greenville to New Bern	E2	42.33	42.33	100.0%
New Bern to Morehead City	E3	37.54	37.54	100.0%
Morehead City to Jacksonville	E4	41.16	41.16	100.0%
Jacksonville to Wilmington	E5	45.37	45.37	100.0%
	Total	414.34	414.34	100.00%

BTOP2 CONSTRUCTION PROGRESS



Routes	Segment	Miles to be Installed	Miles Installed	% Complete
SC - Charlotte to Wilmington	SC	252.80	252.80	100.0%
NE - Henderson to Elizabeth City	NE	297.37	290.52	97.7%
NC - Sparta to Henderson	NC	209.06	188.94	90.4%
GR - Graham	GR	19.54	0.00	0.0%
RH - Raleigh to Hamlet	RH	119.72	119.93	100.2%
OB - Outer Banks	OB	275.03	273.32	99.4%
MM - Mooresville to Monroe	MM	60.02	60.02	100.0%
NW - ERC Broadband	NW	44.00	44.00	100.0%
BTOP Laterals	BL	34.91	34.91	100.0%
IRUs	IRU	336.35	336.35	100.0%
BW-L - Lenoir to Hickory	BW-L	20.00	20.00	100.0%
L3 - Raleigh to Henderson	L3	40.00	40.00	100.0%
	Total	**1708.80**	**1660.79**	97.2%

REQUESTS FOR PROPOSAL (RFP) OR REQUESTS FOR INFORMATION (RFI)

MCNC applied for and received two U.S. Department of Commerce Broadband Technology Opportunities Program (BTOP) awards totaling $104 million in 2010 as part of the American Recovery and Reinvestment Act of 2009 (ARRA). The awards are administered through the National Telecommunications and Information Administration's (NTIA).

What is the difference between a RFP and RFI?

Requests for Proposals (RFP) will be submitted as definitive requirements for portions of the project as identified. These requests will be related to the procurement of services and or products required to implement the project.

Requests for Information (RFI) will be submitted from time to time to gain information related to certain sorts of services and products for which RFP's may ultimately be released. The purpose of the RFI's will be for identification of vendors who can meet certain requirements for delivery of formal services and products.

Topic	Status
Engineering, Design Services and Environmental Assessment	**AWARDED**
Materials Availability related to NCREN Southeaster and Western North Carolina Fiber Expansion Project	AWARDED
Optical Network Design NCREN Southeaster and Western North Carolina Fiber Expansion Project	AWARDED
Materials Related to NCREN Southeastern and Western North Carolina Fiber Expansion Project	**AWARDED**
Fiber Asset Management Software Related to NCREN Southeastern and Western North Carolina Fiber Expansion Project	AWARDED
Construction and Splicing of the Fiber Optic Middle Mile Project Related to NCREN Southeastern and Western North Carolina Fiber Expansion	**AWARDED**
Optical Network Design and DWDM-based	**AWARDED**

Optical Networking Equipment Related to NCREN Southeastern and Western North Carolina Fiber Expansion Project	
Waterway Crossing Construction Related to NCREN Southeastern and Western North Carolina Fiber Expansion Project	**AWARDED**

Topic	Status
Engineering Design Services and Environmental Assessment for MCNC Golden LEAF North Carolina Rural Broadband Initiative	**AWARDED**
Fiber Asset Management and Mapping Software for MCNC Golden LEAF North Carolina Rural Broadband Initiative	**AWARDED**
Materials Related to MCNC's Golden LEAF North Carolina Rural Broadband Initiative	**AWARDED**
Construction and Splicing of the Golden LEAF Rural Broadband Initiative (GLRBI)	**AWARDED**
Marketing and Sales Vendor of the Golden LEAF North Carolina Rural Broadband Initiative	**AWARDED**
Attachment of Conduit and Fiber Optic Cable to Bridge Railings for the Golden LEAF Rural Broadband Initiative	**AWARDED**
DWDM-based Optical and/or Carrier Ethernet Network Design and Equipment Related to the Golden LEAF North Carolina Rural Broadband Initiative	**AWARDED**

Topic	Status
Locate Services and Maintenance of the Conduit, Fiber Optic Cable, and Access Points for the Golden LEAF North Carolina Rural Broadband Initiative	**AWARDED**

Samples of recent Press Coverage:

December 2012 – January 2013

Updated Jan. 28, 2013 at 5:52 a.m.

Broadband boosts power of national climate center in Asheville

By WRAL Tech Wire

ASHEVILLE, N.C. — Last year, NOAA said it was the warmest year on record in the lower 48 states.

In 2012, the average temperature was 55.3°F, which eclipsed 1998, the previous record holder, by 1°F. That difference from 1998 is an unusually large margin since annual temperature records are typically broken by just tenths of a degree.

This report is just one example of the important work happening at NOAA's National Climatic Data Center (NCDC) in Asheville.

However, since most of the data for this particular announcement is station-based throughout the U.S., this is relatively a small volume of data compared to what the facility ingests on a day-to-day basis with satellites and

radar.

And, without high-speed broadband connectivity, none of this would be possible to tackle in a timely fashion.

NCDC maintains the world's largest climate data archive and provides climatological services and data to every sector of the United States economy and to users worldwide. The center's mission is to preserve this data and make it available to the public, business, industry, government, and researchers.

NCDC recently initiated a satellite Climate Data Record (CDR) program to continuously provide objective climate information derived from weather satellite data that NOAA has collected for more than 30 years. This data comprises the longest record of global satellite mapping measurements in the world, and is complemented by data from other sources including NASA and U.S. Department of Defense satellites as well as foreign satellites.

For the first time, NOAA is applying modern data analysis methods, which have advanced significantly in the last decade, to these historical global satellite data. This process will unravel the underlying climate trend and variability information and return new economic and scientific value from the records. In parallel, NCDC will maintain and extend these Climate Data Records by applying the same methods to present-day and future satellite measurements.

In fall 2011, NCDC received two 10G broadband connections as part of the build-out through the first phase of the of Golden LEAF Rural Broadband Initiative

administered through RTP-based non- profit MCNC. These connections were a significant upgrade from the two 1G connections previously used at NCDC.

Most of the specific uses of these 10G connections are classified, but one use mentioned is for the Suomi National Polar-orbiting Partnership (NPP), which represents a critical first step in building next-generation Earth-observing satellite systems. The NPP is the result of a partnership between NASA, NOAA, and the U.S. Department of Defense.

Since Oct. 2011, 1.3 petabytes of data has streamed into NCDC for consumption and storage from the NPP. In that process, a copy also is made of all data and is sent as a backup to Colorado. This means since this project went active, more than 2 petabytes of information has traveled over broadband-based pipes to researchers all over the world.

"Broadband is absolutely critical to what we do now," said Alan Hall, IT project manager at NCDC. "If we didn't have broadband, we wouldn't be able to move all this data in a timely manner and get it to researchers who need it ... it is absolutely critical and broadband is a must to be able to do what we do."

"As more data comes in and out every day, we need high-speed connections to realize all these data sets," added Preston Carter, an IT specialist at NCDC who works on network operations and storage. "We have better download rates now and as others get more speeds soon, we will be ready as we continue to future-proof our infrastructure."

NCDC has seen astronomical spikes in data in recent years with new technology and higher-speed connections. On a typical day, about a terabyte of data comes in to be stored and archived - most in real-time. During major weather events, like Hurricane Sandy last fall, that would jump three-to- six times that amount.

NCDC was incorporated with all civil weather entities as part of NOAA in 1970. Twelve years later, the organization was renamed the National Climatic Data Center and has remained housed at the Veach-Baley Federal Building since 1995.

Today, data comes to NCDC from not only land-based stations but also from ships, buoys, weather balloons, radars, satellites, and even sophisticated weather and climate models. In the past 10 years, NCDC's digital archive experienced a six-fold increase from 1 petabyte to 6 petabytes. With increasing sophistication of data collection equipment, data is expected to exceed 15 petabytes by 2020.

The United States has made tremendous investments in Earth-observing satellites over the past five decades. Despite remarkable success, great potential remains in the nation's archived measurements for climate change applications.

NOAA's new Climate Data Record Project promises to unleash the potential of this data to address critical climate questions. But again, doing this type of work today would not be possible without high-speed, low latency broadband. *WRAL Tech Wire any time:* Twitter, Facebook

The Daily Advance

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Benefits of broadband cable coming into focus

Many things that will happen in the year ahead that we can't yet see, but one of them that is coming into clear focus is the completion of a $144 million project to bring high-speed broadband cable to all counties in the Albemarle.

Large Internet users are eagerly awaiting the March target date for completion of the second phase of building 1,200 miles of broadband infrastructure through eastern North Carolina.

Broadband — a far cry from the days of dial-up Internet connection — is the fastest Internet technology currently available. While many residents already have access to broadband through providers such as CenturyLink and Time Warner, the need for greater bandwidth by schools, colleges, hospitals, libraries and government buildings will soon be met.

The project was kicked off more than two years ago with Gov. Beverly Perdue announcing that $115 million in federal stimulus money had been obtained to extend broadband service to 69 rural counties.

The benefitting counties encompass nearly 6 million residences, or about 66 percent of the state's population, and 160,000 businesses, or about 68 percent of businesses in the state. Among the counties to benefit are Pasquotank, Camden, Currituck, Perquimans, Chowan and Gates.

The largest grant awarded, $75.8 million, went to the nonprofit Microelectronics Center of North Carolina — based in Research Triangle Park — which followed another $39.9 million awarded to MCNC in January 2010. There was also a $24 million grant from the Golden LEAF Foundation and $8 million from MCNC's endowment. Today, the total project cost is estimated at $144 million.

The project has received much praise from area business leaders, educators and elected officials.

"The world we live in today is defined less and less by distance and more and more by connections," U.S. Sen. Kay Hagan, D-N.C., said last year. She noted that broadband "has quickly become as important to a community's success as traditional infrastructure" such as highways, rail lines, sewer and water systems.

It means North Carolina will be able to compete on equal footing with other states, when it comes to offering the best in technology.

Along with offering a great location to live, work and raise a family — close to growing southeastern Virginia and the coastal N.C. Outer Banks — area economic development leaders will soon have an added enticement, allowing them to go after larger companies that require broadband.

The result will be an expanded tax base, good paying jobs, and economic growth that benefits us all.

"I can't think of a company that doesn't want the fastest broadband that is available," said Currituck's Economic Development Director Peter Bishop.

Also, Camden's Economic Development Commission is already looking at getting high-speed service to the county's new Eco-Industrial Park on U.S. Highway 17. Economic Developer Charlie Bauman said offering that service will be as important as providing water and sewer at the eco-park.

Others are also excited. Albemarle Hospital, which already has broadband capabilities, sees a benefit by having a backup cable in case its main connection is lost, and doctors and patients will more easily be able to access medical

records and talk to physicians electronically.

The new line will connect many major institutions, but won't go everywhere. Nevertheless, Elizabeth City is already calculating how much it will cost to extend the broadband line a couple miles to the Elizabeth City Regional Airport and aviation park, where new jobs are expected.

Considering the potential benefits of widely available broadband to schools, medical facilities and industry, this project will have immense impact on the Albemarle region in the years ahead. It's just now coming into focus.

OUR VIEW

The issue

A new broadband cable line that will serve the Albemarle will be installed by the end of March.

Our position

While some argue that high-speed Internet is already available, the broadband network will offer additional connections to schools, colleges and hospitals, governments and be a valuable tool in helping to attract new business and industry.

August 2011:

MCNC begins Round 2 of Golden LEAF Rural Broadband Initiative

Historic event showcases NCREN's capabilities with virtual groundbreaking in four locations

KANNAPOLIS, N.C. (Aug. 12, 2011) – MCNC [3], the private, not-for-profit operator of the North Carolina Research and Education Network (NCREN), hosted a Statewide Virtual Groundbreaking Ceremony today in four locations throughout the state to highlight the start of construction on Round 2 of the of the Golden LEAF Rural Broadband Initiative (GLRBI).

The GLRBI is funded through grants from U.S. Department of Commerce's Broadband Technology Opportunities Program (BTOP) and significant matching funds from private donations and investments including a $24 million investment from the Golden LEAF Foundation. The GLRBI will greatly expand the reach and capacity of NCREN in northeastern, north central, western and south central North Carolina.

"Today, we can link several sites via HD video for a one-time event. The GLRBI expansion, when complete, will allow us to host hundreds of these sessions simultaneously across the state. It will impact all facilities and institutions connected to NCREN. It will broaden the way teachers teach, students learn, doctors provide care, and for citizens at a local library searching to find a job." -- Joe Freddoso, MCNC President

and CEO

The high-definition simulcast event was hosted at Asheville-Buncombe Tech Community College, Elizabeth City State University, the North Carolina Research Campus in Kannapolis, and UNC Pembroke. The event leveraged the existing video capabilities of NCREN. These video capabilities and capacity for HD video use among NCREN connectors will greatly expand as a result of the GLRBI.

“Thanks to the Recovery Act, this project is creating jobs and will support continued innovation and expanded economic and educational opportunities in North Carolina,” said Lawrence E. Strickling, Administrator of the U.S. Department of Commerce’s National Telecommunications and Information Administration (NTIA).

MCNC received federal approval to begin GLRBI phase 2 construction in late June. Since that time, MCNC has mobilized efforts and worked to finalize all necessary permits and materials to begin construction.

The Round 2 project is three-times the size of MCNC’s BTOP Round 1 project. Those areas of construction for Round 2 include 1,200 miles of broadband infrastructure through 79 counties in North Carolina. Sixty-nine of these counties include significant areas that meet the federal definition of “underserved” for access to affordable broadband services.

"Thanks to the Recovery Act, this project is creating jobs and will support continued innovation and expanded economic and educational opportunities in North Carolina." --
Lawrence E. Strickling, Administrator of the
U.S. Department of Commerce’s NTIA

The total second phase project cost of $104 million was funded by two sources. The first was a federal BTOP grant of $75.75 million awarded in August 2010 through the NTIA. The BTOP investment was matched by $28.25 million in private donations including the $24 million investment from the Golden LEAF Foundation.

The total investment for both Round 1 and Round 2 of the broadband infrastructure build is $144 million and includes an investment of $8 million in funds from the MCNC endowment that was used as matching funds for the Round 1 project. This level of investment represents one of the largest in broadband infrastructure in North Carolina history. The majority of the project funds have been spent with private-sector engineering, construction, materials, and technology companies who will assist with the build. No direct funding from the State of North Carolina was required, and MCNC estimates the expansion of NCREN will create or save 2,500 engineering, construction, and manufacturing jobs in the state.

“MCNC is excited to begin the second phase of building North Carolina’s highway to the future. We want to thank our state and federal leaders for their continued support for the Golden LEAF Rural Broadband Initiative," said Joe Freddoso, president and CEO of MCNC. “Today, we can link several sites via HD video for a one-time event. The GLRBI expansion, when complete, will allow us to host hundreds of these sessions simultaneously across the state. It will impact all facilities and institutions connected to NCREN. It will broaden the way teachers teach, students learn, doctors provide care, and for citizens at a local library searching to find a job.”

To date, MCNC has awarded contracts for Round 2 to the

following firms: CommScope for fiber-optic cable and materials; Edwards Telecommunications, Fiber Technologies, and Globe Communications for construction and fiber installation, and Kimley-Horn & Associates for engineering design, project planning, and related services.

All construction is to be complete by 2013.