

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

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

**Comments of the  
Schools, Health and Libraries Broadband (SHLB) Coalition**

## Executive Summary

While this NPRM focuses on the broadband needs of residential consumers in rural areas, the broadband needs of community anchor institutions in these areas are just as important. Community anchor institutions – schools, health care providers, libraries, public safety providers, public media, and others – require affordable, high-capacity broadband to provide essential services to **all** members of the community, especially “at-risk” populations.

Unfortunately, community anchor institutions often are not able to obtain the quality of broadband services that they need. The National Broadband Map revealed that that community anchor institutions are “largely underserved.” Several recent studies reveal that the shortage of affordable, high-capacity broadband is especially dire in rural areas.

The Commission should include measures to address the broadband needs of rural anchor institutions into its framework for reform of the high-cost program. Community anchor institutions have broadband needs that are very different from the needs of residential consumers and must be distinctly addressed. Extending broadband to anchor institutions can be accomplished relatively inexpensively, as anchor institutions are often clustered together in town centers and serve millions of people every day (“bang for the buck”). Including anchor institutions can also bring significant political support for the Commission’s reform efforts.

The Commission can address the needs of community anchor institutions in a variety of ways, depending upon how it resolves several other issues in this proceeding. For instance, the Commission could find that providing high-capacity broadband services to anchor institutions is a supported service under section 254 and could directly fund a portion of or all of the costs of such deployment. Or, the Commission could require bidders in a “reverse auction” to commit to serve anchor institutions as part of their service obligations.

Furthermore, the policies adopted in this proceeding should encourage community anchor institutions to consider connecting to broadband providers that specialize in serving the needs of anchor institutions, such as research and education networks and municipalities, in addition to the traditional commercial providers.

The high-cost program is funded almost entirely by the *general public*. Therefore it is especially appropriate that at least some of the funds in the reformed high-cost program should support broadband to community anchor institutions that, by definition, are focused on serving the *general public*.

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

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

**Comments of the  
Schools, Health and Libraries Broadband (SHLB) Coalition**

The Schools, Health and Libraries Broadband Coalition (“SHLB Coalition”)<sup>1</sup> respectfully submits these comments in response to the Federal Communications Commission’s (Commission’s) recent Notice of Proposed Rulemaking (NPRM) regarding reform of the high-cost program within the federal Universal Service Fund (USF) and creation of the Connect America Fund (CAF).<sup>2</sup>

The SHLB Coalition is a broad-based coalition consisting of representatives of schools, health care providers, libraries, private sector companies, for-profit and not-for-profit broadband providers, state and national research and education (R&E) networks, municipalities, philanthropic foundations, consumer organizations and others.<sup>3</sup> All members of

---

<sup>1</sup> “SHLB Coalition” is pronounced “Shell-Bee Coalition.”

<sup>2</sup> See, Notice of Proposed Rulemaking and Further Notice of Proposed Rulemaking, FCC 11-13, released February 9, 2011.

<sup>3</sup> See [www.shlbc.org](http://www.shlbc.org) for a current list of the members of the SHLB Coalition.

the SHLB Coalition share the common goal of bringing affordable, high-capacity broadband to community anchor institutions across the United States.

## I. Summary

While this NPRM focuses primarily on the important broadband needs of residential consumers in rural and high-cost areas, the broadband needs of people served by community anchor institutions in these areas are just as important. Community anchor institutions – schools, health care providers, libraries, public safety providers, public media, and others – require affordable, high-capacity broadband to serve not only residential consumers, but also the homeless, vacationers, travelers, and others who may not reside in that particular community. In addition, anchor institutions provide a wide variety of services to the community, including public access computing, digital literacy training, distance learning, telemedicine, job training, and basic research. Community anchor institutions also serve the disabled, the elderly, low-income people, and other vulnerable members of the community. In short, broadband is an essential component of the increasingly valuable and diverse array of services that these institutions provide to *all* members of the community, not just residential consumers.

Unfortunately, community anchor institutions often are not able to obtain the quality of broadband services that they need. The National Broadband Map revealed that that community anchor institutions are “largely underserved.” Several recent studies reveal that the shortage of affordable, high-capacity broadband is especially dire in rural areas.

We thus urge the Commission to build into its framework for reform of the high-cost program a commitment to provide community anchor institutions with affordable, high-capacity broadband. Community anchor institutions have broadband needs that are very different from the needs of residential consumers and must be distinctly addressed. Extending broadband to anchor institutions can be accomplished relatively inexpensively, as anchor institutions are often clustered together in town centers and serve millions of people every day (“bang for the buck”). Including anchor institutions in this high-cost reform program can also bring significant political support for the Commission’s reform efforts.

Further, we encourage the Commission to adopt a “comprehensive community” approach to ensure that public investments meet local needs and interests. By encouraging and enabling community anchor institutions to share high-capacity broadband network assets, the Commission can leverage local community investments to benefit more than one public purpose.

The SHLB Coalition supports the transition to broadband but takes no position on who should be eligible to receive funds from the High-Cost Fund, the creation of the Connect America Fund, or other proposals to alter the distribution of support in high-cost areas. Similarly, we do not express any view as to what geographic areas should receive support, or how the amount of funding should be determined.

Our key request is that the anchor institutions should be able to receive the amount of affordable, high-capacity broadband that they need to serve their communities, no matter what regime the Commission adopts. The Commission can address the needs of community anchor institutions in a variety of ways, depending upon how it resolves several other issues in this proceeding. For instance, the Commission could find that providing high-capacity broadband services to anchor institutions is a supported service under section 254 and could directly fund a portion of or all of the costs of such deployment. Or, the Commission could require bidders in a “reverse auction” to commit to serve anchor institutions as part of their service obligations.

Furthermore, the policies adopted in this proceeding should encourage community anchor institutions to consider connecting to broadband providers that specialize in serving the needs of anchor institutions, such as research and education networks and municipalities, in addition to the traditional commercial providers.

The high-cost program is funded almost entirely by the *general public*. Therefore it is especially appropriate that at least some of the funds in the reformed high-cost program should support broadband to community anchor institutions that, by definition, are focused on serving the *general public*.

The Commission properly identified the needs of anchor institutions as one of seven critical national goals in the National Broadband Plan.<sup>4</sup> However, the Commission has chosen not to open a specific proceeding to address this goal; rather it has indicated it intends to address anchor institutions’ needs in its ongoing proceedings. Adopting the policies suggested herein will go a long way toward accomplishing the goal of the National Broadband Plan and promote economic growth in rural America.

---

<sup>4</sup> “Connecting America: The National Broadband Plan,” released March 17, 2010, (National Broadband Plan) p.10.

## II. Community anchor institutions have unique needs for broadband service that are very different from the needs of residential consumers

Community anchor institutions have unique needs for very high-capacity bandwidth that are very different from those of residential consumers. Of course, community anchor institutions need very high-capacity bandwidth, from 10 Mbps to 10 Gbps. But bandwidth is only one of several qualities that describe the type of broadband connectivity needed by anchor institutions. Providing “big pipes” to an end user does not necessarily guarantee the delivery of high-end applications. For example, an improperly configured router or a firewall can affect performance and act as a network bottleneck. Providing adequate connectivity requires a certain degree of network openness, the availability of performance data to monitor the network, and remote troubleshooting. Unlike residential users, community anchor networks often require additional network design and engineering, network monitoring, and training to obtain the level of broadband connectivity needed to run education, e-government, health and job-training applications.

Community anchor institutions also serve the needs of the general public, not only the needs of residential consumers. Broadband plays a critical role in allowing anchor institutions to offer increasingly essential services to their communities. For instance:

- Public libraries make wired and wireless broadband connections available to the public at no charge. Nearly one-third of Americans age 14 or older—roughly 77 million people—used a public library computer or wireless network to access the Internet in the past year to find work, apply for college, secure government benefits, learn about critical medical treatments, and connect with their communities.<sup>5</sup> People use library-provided broadband services to submit job applications, apply for e-government benefits, participate in distance education classes and complete school homework assignments.<sup>6</sup> On-site professional librarians provide the additional benefit of technical and information support. Similarly, libraries in schools, community colleges, colleges and universities depend on high-capacity broadband to deliver essential learning services.

---

<sup>5</sup> “Opportunity for All: How the American Public Benefits from Internet Access at U.S. Libraries,” <http://www.imls.gov/pdf/OpportunityForAll.pdf>, Institute of Museum and Library Services, 2010.

<sup>6</sup> See, “Technology Comes to Baltimore’s Public Libraries,” by Jacques Kelly, *The Baltimore Sun*, July 5, 2010, available at [http://articles.baltimoresun.com/2010-07-05/news/bs-md-pratt-hayden-20100705\\_1\\_job-seekers-electronic-library-reading-devices](http://articles.baltimoresun.com/2010-07-05/news/bs-md-pratt-hayden-20100705_1_job-seekers-electronic-library-reading-devices). (“ [S]taff members say their 160 computers are enabling unemployed people to find jobs, do homework or manage their budgets. ‘From McDonald’s to McDonnell Douglas, 85 percent of all hiring is done online,’ said Pratt [Library] CEO Carla D. Hayden. ‘In a city like Baltimore, where 30 percent of the population has no home computer access, we have found a new role.’”)

- Primary and secondary schools need high-capacity broadband access to build and expand connected learning environments to offer specialized courses and leverage new learning tools. Accessing cloud-based applications and content requires sufficient bandwidth at every school. Advanced multimedia educational applications help teachers address various learning styles and abilities, and tailor instructional programming to meet individual students' needs, often using high-capacity broadband connections.<sup>7</sup> Increasing connectivity between classrooms and students support 7x24 learning and greater collaboration across schools, communities and countries.
  
- Community colleges and higher education require high-capacity broadband to provide online degree programs and job training, to engage in research and collaboration, and to give rural and low-income areas remote access to experts and laboratories through distance learning.<sup>8</sup> Research universities are often at the center of innovation in our economy; they need high-capacity broadband to exchange and analyze data and develop new applications that will restore our global leadership in advanced technologies.
  
- Hospitals and health clinics need high-capacity broadband to exchange diagnostic information and medical records, and to provide remote monitoring of out-patients.<sup>9</sup> The effectiveness of telemedicine depends upon high-quality, high-capacity broadband connections. Health professionals can obtain quality continuing medical education through the Internet as well. Rural health clinics have a great need for broadband connections to provide rural residents with immediate access to specialists in hospitals and other health care providers outside of their rural communities.

---

<sup>7</sup> The New Media Consortium's 2010 Horizon Report found that schools are increasing their use of "cloud computing", which requires advanced broadband connectivity. ("While it was difficult to find examples of the use of cloud computing in schools a year ago, there are now many, many schools that have adopted cloud-based tools for productivity, scheduling, curriculum development, and collaboration, at least at the administrative level.") Pp. 9-10. <http://www.nmc.org/pdf/2010-Horizon-Report-K12.pdf>.

<sup>8</sup> "Colleges of Education Are Urged to Focus More on Online Learning," Chronicle of Higher Education, March 16, 2010, by Jill Laster, available at <http://chronicle.com/blogs/wiredcampus/colleges-of-education-are-urged-to-focus-more-on-online-learning/21862>

<sup>9</sup> One study voiced the seven benefits of telemedicine as follows: 1. Increases patient access to quality care, ultimately improving outcomes; 2. Streamlines patient care, often reducing mortality and complication rates; 3. Avoids costly, potentially risky transfers to other facilities; 4. Avoids unnecessary admissions, diagnostic testing; 5. Expands referral network to include providers in rural areas ; 6. Secures greater return on existing service offerings; 7. Raises investment value by leveraging infrastructure for multiple uses. See, FCC Testimony of Protima Advani, Practice Manager, IT Insights Program, the Advisory Board Company, September 15, 2009, "Accelerating Adoption of Telemedicine Solutions: Understanding the Barriers, Aligning the Stakeholders," available at [http://www.broadband.gov/ws\\_healthcare.html](http://www.broadband.gov/ws_healthcare.html).

- Community and public media outlets use broadband networks and applications for production, archiving and distribution of local media content that serves public, education and government (PEG) purposes. Community broadband and media access provide essential outlets for local voices, resources for lifelong teaching and learning, public safety, and meaningful access to local government and civic engagement. Broadband communication access is critical for healthy, sustainable media that serve local community needs and interests.

In short, the Internet has become a fundamental cornerstone of modern education, learning, health care delivery, economic growth, social interaction, job training, government services, and the dissemination of information and free speech, and much of that “purposeful use” is hubbed at community anchor institutions. The Commission’s reform of the high-cost program should recognize the critical role that broadband connections play in allowing community anchor institutions to promote economic growth and provide these essential services in rural America.

### **III. Community Anchor Institutions Do Not Have Sufficient High-Capacity Broadband Available to Them.**

A number of recent studies document the shortage of broadband capabilities at community anchor institutions:

- a. A recent survey of E-rate participants conducted by the Commission found that “[n]early 80% of all [schools and libraries in the E-rate program] say their broadband connections do not fully meet their current needs.” (In fact, 20% of E-rate participants state that broadband services meet their needs sometimes, rarely, or not at all).<sup>10</sup>
- b. The National Broadband Map developed jointly by the Commission and the National Telecommunications and Information Administration (NTIA) showed that anchor institutions are “largely underserved.” According to NTIA: “The data show that two-thirds of surveyed schools subscribe to speeds lower than 25 Mbps, however. In

---

<sup>10</sup> 2010 E-Rate Program and Broadband Usage Survey: Report, Federal Communications Commission, Wireline Competition Bureau, DA 10-2414, released Jan. 6, 2011, available at [www.fcc.gov](http://www.fcc.gov).



addition, only four percent of libraries reported subscribing to speeds greater than 25 Mbps.”<sup>11</sup>

- c. The State Educational Technology Directors Association (SETDA) found that most schools have less broadband than the average home. According to a 2008 SETDA study:

Broadband connection speeds in schools are already behind average households, and in the next few years as bandwidth needs expand, schools will need to *significantly* upgrade their high-speed broadband capabilities to try to keep pace with what children are accustomed to at home. Even in schools that are sufficiently connected with broadband, bandwidth demand is quickly exceeding capacity as they utilize advanced technology tools. Simply having connectivity is not enough: without measurable upgrades in bandwidths to allow for greater speeds – or even to maintain current speeds as demand grows, teachers and students will be severely limited in the technology applications they can utilize.<sup>12</sup>

- d. The National Broadband Plan found that 29% of the 3700 rural health care clinics were located in areas where mass-market broadband was not available. The Plan then noted that most health clinics need much greater capacity than 4 Mbps capacity typically available to households, so the number of rural health clinics who do not have access to high-capacity broadband is much higher than 29%.<sup>13</sup>
- e. A study performed by Lieberman Research Worldwide on behalf of the Bill & Melinda Gates Foundation found that 62% of public libraries had a broadband connection at 3 Mbps or less. Rural libraries had much lower connection speeds than urban or suburban libraries – 77% of rural libraries had connections less than 5 Mbps, compared to 46% of urban and 59% of suburban libraries.<sup>14</sup>
- f. A recent study finds that anchor institutions in non-urban areas have less broadband capability than urban institutions. Using data recently compiled by the NTIA as part of the efforts to construct the National Broadband Map, Chris Forman et. al. conclude that “[s]chools, libraries, and medical/healthcare organizations in MSAs

---

<sup>11</sup> “COMMERCE’S NTIA UNVEILS NATIONAL BROADBAND MAP AND NEW BROADBAND ADOPTION SURVEY RESULTS,” NTIA Press Release, Feb. 17, 2011 (available at [http://www.ntia.doc.gov/press/2011/NationalBroadbandMap\\_02172011.html](http://www.ntia.doc.gov/press/2011/NationalBroadbandMap_02172011.html)).

<sup>12</sup> “High-Speed Broadband Access for All Kids; Breaking Through the Barriers,” Report by the State Educational Technology Directors Association (SETDA), June 2008, p. 6

<sup>13</sup> National Broadband Plan, Chapter 10

<sup>14</sup> Broadband Assessment Project, National Summary Findings, September 17, 2009.

have broadband bandwidth that are between 14.6 Mbps and 40.9 Mbps higher than those in other areas.”<sup>15</sup>

#### **IV. The Commission should incorporate the needs of anchor institutions into its reform of the High-Cost Fund and creation of the Connect America Fund.**

##### **A. While the National Broadband Plan properly identified the needs of anchor institutions for affordable, high-capacity broadband as a National Goal, the Commission must take more specific action to achieve this goal.**

The National Broadband Plan specifically recommends the provision of high-capacity broadband service to anchor institutions as one of the seven key goals of the Plan:

Goal No. 4: Every American community should have affordable access to at least 1 gigabit per second broadband service to anchor institutions such as schools, hospitals and government buildings.

Schools, libraries and health care facilities must all have the connectivity they need to achieve their purposes. This connectivity can unleash innovation that improves the way we learn, stay healthy and interact with government.<sup>16</sup>

While we are pleased that the National Broadband Plan articulates this goal, it is not self-fulfilling. Achieving this goal will require specific rule changes and policy initiatives. The Commission has not, to date, opened a proceeding dedicated to accomplishing this 1 Gbps goal for anchor institutions. If it is not going to open such a proceeding, we respectfully suggest that it ought to fold the needs of anchor institutions into its most important proceedings, such as this one. Otherwise, the Goal #4 will become mere words on a page.

---

<sup>15</sup> Chris Forman, Avi Goldfarb, and Shane Greenstein, “Local Capabilities and Broadband Bandwidth at Community Anchor Institutions,” Jan. 31, 2011, available at <http://mgt.gatech.edu/directory/faculty/forman/pubs/BroadbandBandwidth--FormanGoldfarbGreenstein.pdf>. (“In this study we have examined the relevance of urban leadership to a technology complementary to advanced internet: high bandwidth broadband. Our findings are broadly consistent with the model: Urban location is related to use of high broadband bandwidth, and more so when the location appears to have the expertise that enables institutions to adopt and use that bandwidth cheaply and effectively.”) p. 13.

<sup>16</sup> National Broadband Plan, p. 10.

This comprehensive proceeding to reform the High-Cost Fund and to create a new Connect America Fund may establish the framework for the distribution of support for high-cost areas for much of the next century. It is thus extremely important for the Commission to incorporate the broadband needs of community anchor institutions at the front end of designing this framework. Once the framework is established, it may be much harder to add additional provisions to address anchor institutions' broadband needs later.

**B. Incorporating the broadband needs of anchor institutions into this proceeding is consistent with and encouraged by the statutory language.**

The statutory language authorizing the FCC to develop the broadband plan recognized the importance of these services. It directed the FCC to adopt a plan for use of broadband infrastructure and services in advancing consumer welfare, civic participation, public safety, and homeland security, community development, health care delivery, energy independence and efficiency, education, worker training, private sector investment, entrepreneurial activity, job creation and economic growth, and other national purposes.<sup>17</sup>

Section 254(h)(2)(B) requires the Commission to ensure that schools, libraries and health care providers can obtain adequate broadband service. That provision states the Commission shall adopt “competitively neutral rules . . . to define the circumstances under which a telecommunications carrier may be required to connect its network to such public institutional telecommunications users.”<sup>18</sup> In enacting this statute, Congress clearly established that providing these anchor institutions with adequate communications capability as a national priority.

While this specific provision is limited to schools, libraries and health care providers, other statutory language authorizes the Commission to include additional anchor institutions as well. For instance, Section 706 provides authority for the Commission to order recipients of universal service support to supply high-capacity broadband facilities to anchor institutions. That section says that the Commission “*shall* take immediate action to accelerate deployment” if it finds that advanced telecommunications capability is not being deployed to all Americans in a reasonable and timely fashion. In July of 2010, the Commission found that up to 80 million adults did not subscribe to broadband, and 14 to 24 million Americans did not have advanced

---

<sup>17</sup> American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, § 6001(k)(2)(D), 123 Stat. 115, 516 (2009) (Recovery Act).

<sup>18</sup> See, section 254(h)(2)(B). “Public institutional telecommunications user” is defined as “an elementary or secondary school, a library, or a health care provider. . . .” See Section 254(h)(5)(C).

telecommunications capability available to them.<sup>19</sup> Given this finding that broadband is not being deployed in a reasonable and timely fashion, the Commission is not only authorized but required to take action. Including anchor institutions in whatever program the Commission implements will go a long way toward addressing this statutory imperative.

**C. Incorporating the broadband needs of anchor institutions into this proceeding may yield significant benefits for rural communities without adding significantly to the costs of the program.**

Community anchor institutions provide significant benefits to their communities. As discussed at the beginning of this document, anchor institutions provide a variety of valuable services to their communities – from traditional services such as digital literacy training, distance learning, social networking and job-training, to advanced services such as cloud computing, entrepreneurial business development, and remote telemedicine. Community anchor institutions are particularly important to vulnerable segments of our country that have been hardest hit by the economic recession. For instance, public access computers at libraries and schools allow people in need to apply for unemployment benefits, social security payments, tax refunds, and other e-government benefits. Low-income families are more likely to rely on the public library as their sole access to computers and the Internet than any other income group. The 2010 “Opportunity for All” report found that low-income people were more likely to visit public libraries frequently, with 28% of people whose income is below the poverty line visiting libraries almost every day.<sup>20</sup>

Even those with broadband access from home take advantage of public access and services offered at schools and libraries. The Opportunity for All report found that 78% of library public access users also had broadband access somewhere else.<sup>21</sup> People come to the library for a sense for community, to get help with online services, to access specialized databases or coursework, or because their home access is insufficient.

---

<sup>19</sup> The Commission found that “roughly 80 million American adults do not subscribe to broadband at home, and approximately 14 to 24 million Americans remain without broadband access capable of meeting the requirements set forth in section 706. . . . Accordingly, we conclude that broadband deployment to *all* Americans is not reasonable and timely.” *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, Amended by the Broadband Data Improvement Act*, GN Docket Nos. 09-137, 09-51, Report, FCC 10-129, paras. 1 and 2 (rel. July 20, 2010) (*2010 Sixth Broadband Deployment Report*).

<sup>20</sup> “Opportunity for All: How the American Public Benefits from Internet Access at U.S. Libraries,” <http://www.imls.gov/pdf/OpportunityForAll.pdf>, Institute of Museum and Library Services, 2010. p. 27.

<sup>21</sup> “Opportunity for All,” p. 38.

Broadband enabled anchor institutions can also promote economic development. To give just one example, Merit Network, the R&E network provider in Michigan, is in the midst of extending its fiber optic network to the site of a pre-planned Technology Park and Data Center in Hillsdale, Michigan. The fiber optic network extension ensures that the plan for a Technology Park and Data Center is a likely reality, and with it more high-skilled jobs in the area. The city expects that Merit's REACH 3MC Project will create a broadband infrastructure in Michigan that will serve as a catalyst for job creation and economic development.

Rural areas are losing population to urban areas in part because of the extensive social services available in metropolitan areas. Improving the broadband capabilities of anchor institutions not only helps to attract population growth, it also contributes to improved job skills. The schools, the libraries, the community centers, the public safety centers, hospitals and health clinics have a direct effect on whether or not our students are well-educated, our population receives better and more efficient health care, and our workforce is better trained. Bringing high-capacity broadband capabilities to these anchor institutions will go a long way toward creating the "high-performance America" envisioned by Congress and the National Broadband Plan.

Building broadband facilities to anchor institutions can also be used to help serve residential and business customers. The high-capacity broadband networks built to serve community anchor institutions can provide "jumping off" points for distributing additional broadband services into surrounding neighborhoods, including residences and businesses. In other words, as long as the network facilities are open to interconnection, the broadband network built to the anchor institution can serve as the "hub" from which to extend service to the surrounding community.<sup>22</sup> The SHLB Coalition agrees with the goal of the Plan that, ultimately, all homes and businesses should have access to affordable, high-capacity broadband. Bringing high-capacity broadband to anchor institutions can help to achieve this important goal.

Furthermore, increasing the focus on service to anchor institutions may provide the strongest service value by serving the greatest number of people for the least investment while promoting the National Purposes outlined in the National Broadband Plan. Anchor institutions in rural areas are often clustered together near the town or community center; extending high-

---

<sup>22</sup> These connections to anchor institution "hubs" are sometimes referred to as the "second mile." See, COMMENT SOUGHT ON IMPACT OF MIDDLE AND SECOND MILE ACCESS ON BROADBAND AVAILABILITY AND DEPLOYMENT, NBP Public Notice # 11. DA 09-2186 (Oct. 8, 2009), available at [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DA-09-2186A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-09-2186A1.pdf). ("Second mile transport" refers generally to the transport and transmission of data communications from the first point of aggregation (such as a remote terminal, wireless tower location, or HFC node) to the point of connection with the middle mile transport.")

capacity broadband connections to the anchor institutions may cover a shorter distance from the network “hub” than remote residences. Of course, since anchor institutions require greater capacity than residential consumers, the program must also factor in the cost of implementing the necessary bandwidth capacity, electronics and technical expertise to provide anchor institutions with the quality of service that they need. Nonetheless, since the largest expense of deploying broadband facilities is often associated with the per-mile costs of constructing conduit (digging trenches, placing telephone poles, etc.) or deploying broadband through existing conduit, the costs of serving anchor institutions will likely be less than deploying to serve homes in, for instance, mountainous, wooded or other remote areas.

Finally, incorporating community anchor institutions into the high-cost reform plan is likely to yield significant political benefits. Community anchor institutions are strong, respected voices for their local communities and often carry significant weight with local, state and federal policy-makers. Including broadband services for anchor institutions into the high-cost reform plan is likely to generate strong advocates for the Commission’s reform program and help it to achieve its other objectives.

For all these reasons, incorporating the broadband needs of community anchor institutions into the framework for rural broadband support is a wise investment in the future.

**D. The Commission can incorporate the broadband needs of anchor institutions no matter what rural program it adopts.**

The NPRM in this proceeding suggests a variety of steps to reform the High-Cost Fund such as creating a Connect America Fund, revising the formulas for distributing funds, and a “reverse auction” to determine what provider shall receive support. The SHLB Coalition is not in a position to recommend which of the proposed methods will best serve rural America. Our view is that, there are opportunities for the Commission to incorporate the needs of anchor institutions in whatever regime the Commission ultimately adopts.

For instance, if the Commission chooses to adopt a reverse auction method of distributing funds, it could establish the service rules for the auction so that the auction bidders must agree to provide anchor institutions with affordable, high-capacity bandwidth. If the Commission chooses instead to award support based on a cost model that determines the amount of financial support, it can build into the model the costs of serving anchor institutions in the region.

We are uncertain about requiring recipients of support to serve anchor institutions as a “condition” of receiving support. We prefer that the Commission take into account the costs of serving the anchor institutions when determining the amount of support awarded in each area. Requiring recipients to incur the costs of building to anchor institutions without providing any financial support for those costs could be seen as a type of “unfunded mandate” that might be in tension with the statutory requirement that support be “specific, predictable and sufficient.” On the other hand, providing some financial support for the costs of deploying high-capacity broadband to anchors through the high-cost program will increase the chances that anchor institutions will receive the broadband capacity that they need.

**E. Connecting anchor institutions directly to state and national non-profit or for-profit R&E networks, municipal broadband providers or other providers that specialize in serving anchor institutions can lower costs both for the anchor institutions and the broadband provider that receives support.**

In addition to a *local* high-capacity broadband connection, the anchor institution will also require connection with a Middle Mile or backbone connection that is sufficiently robust and is engineered to handle the needs of the anchor institutions. Ideally, anchor institutions in each region will aggregate their traffic to obtain the greatest efficiencies and lowest costs. Non-profit and for-profit research and education (R&E) networks often provide aggregated Middle Mile and backbone capacity at rates that are extremely affordable. R&E networks and municipalities often specialize in serving the needs of anchor institutions and can provide network engineering and design, training, monitoring, troubleshooting and other services that are specifically designed to meet the needs of anchor institutions. In addition to R&E networks, municipal government or other not-for-profit and for-profit public entities could also provide similar broadband network support and management to anchor institutions.

To provide one example of the benefits of R&E networks, the North Carolina Research and Education Network (NCREN) serves the 115 K-12 Public School districts in North Carolina, encompassing 2400 schools. In 2011, the 1.7 million students and teachers who occupy these schools use quadruple the amount of Internet bandwidth that they used in 2008. Because of NCREN's ability to aggregate demand for Internet bandwidth, the total cost of this bandwidth in 2011 is roughly the same as the total amount paid for Internet bandwidth by these school districts in 2008.

Thus, broadband providers that receive High-Cost and/or Connect America Fund support should be able to connect anchor institutions to these non-profit or for-profit R&E networks or other networks in addition to the traditional commercial provider. In fact, anchor

institutions themselves should be given the opportunity to express their preference in this regard. Thus, we request that the Commission make clear in this proceeding that, when broadband providers receive support to build or provide high-capacity broadband service to anchor institutions, the anchor institution must be given the opportunity to determine how its traffic should be routed, and that it should have the option to route traffic to and interconnect with a not-for-profit or for-profit R&E network, or a municipal or other broadband provider in addition to a traditional commercial provider.

## V. Conclusion

The SHLB Coalition respectfully requests that recipients of funding to provide broadband service in high-cost areas should deploy affordable, high-capacity broadband networks to community anchor institutions in their geographic areas. The provision of support to rural, high-cost areas should be focused on both residential customers **and** anchor institutions because of the essential services that anchor institutions offer to **all** people in rural areas, including low-income, disabled, elderly and even residential consumers.

Respectfully Submitted,

A handwritten signature in black ink that reads "John Windhausen, Jr." with a stylized flourish at the end.

John Windhausen, Jr.  
Coordinator  
Schools, Health and Libraries Broadband (SHLB) Coalition  
[jwindhausen@telepoly.com](mailto:jwindhausen@telepoly.com)  
(202) 256-9616

April 18, 2011