

**PROMOTING  
COMPETITION for  
COMMUNITY ANCHOR  
INSTITUTION  
BROADBAND  
SERVICES**

**Policymakers can improve anchor institution broadband by fostering competition, lowering prices, and promoting open interconnection and shared use of broadband networks.**

*by John Windhausen, Jr.*

The SHLB Broadband Action Plan includes the following:

## Connecting Anchor Institutions: A Vision of Our Future

1 **Broadband Needs Assessment and Planning for Community Anchor Institutions**

2 **Wi-Fi and Wireless Networking for Community Anchor Institutions**

3 **Partnerships, Sharing, and Community Anchor Institution Broadband**

4 **Promoting Competition for Community Anchor Institution Broadband Services**

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5 **Broadband Infrastructure Policy and Community Anchor Institutions**

6 **Community Anchor Institutions Served by Government and Non-Profit Fiber Networks**

7 **Broadband Subsidies for Community Anchor Institutions**

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9 **Rural Broadband Programs and Community Anchor Institutions**

10 **Community Anchor Institutions and Residential Broadband Adoption**

## Introduction

Many studies show that competition breeds greater investment in broadband networks, more jobs, innovation, lower prices and higher quality customer service.<sup>1</sup> Yet many anchor institutions still have only one choice for their broadband provider, and the lack of competitive choices hampers anchor institutions' ability to acquire high-capacity broadband at affordable prices. Policymakers can address the shortage of competition by making it easier for new broadband providers to enter the market; requiring more bidders for E-rate services; ensuring that existing networks are open to interconnection to competitive providers; reducing prices of wholesale access to existing infrastructure and services that competitors need to expand their networks; and promoting network sharing.

### Federal Policymakers Are Promoting Competition in the E-rate Program

In its December 2014 E-rate modernization order, the Federal Communications Commission (FCC) found that many schools and libraries only receive one response, or no responses, after they issue a request for proposal (RFP) seeking service.<sup>2</sup> According to a survey of school districts by the Consortium for School Networking (CoSN), 29 percent of schools (38 percent of rural schools) report having one or no qualified bidders for Internet services.<sup>3</sup> The Research and Education Network in Missouri (MOREnet) found that 30 percent of the RFPs issued by schools in Missouri received either one bid or no bids at all, most of them in rural areas.<sup>4</sup> Similarly, more than one-third of U.S. public libraries (and 41 percent of rural libraries) report they cannot improve their broadband connectivity because they already are at the maximum speed available to them.<sup>5</sup>

The FCC has worked to address this lack of competition in rural areas by requiring broadband companies that receive financial support from the FCC's Connect America Fund to respond to E-rate RFPs. The FCC found, "In high-cost, hard to serve areas, we expect that recipients of high-cost support will be best situated to offer affordable broadband service to eligible schools and libraries. Obligating these recipients to offer affordable services to schools and libraries in high-cost areas increases the likelihood that schools and libraries will receive affordable broadband service at the lowest cost to the E-rate program."<sup>6</sup> In addition, the FCC also equalized the treatment of lit and dark fiber, allowing schools and libraries the option of deploying their own broadband networks, giving them another (competitive) alternative for their broadband needs.<sup>7</sup>

### Anchor Institutions Benefit from Open Access and Interconnection Policies

Open access and interconnection policies can open markets to non-traditional providers and promote competition. The American Recovery and Reinvestment Act (ARRA) required Broadband Technology Opportunities Program (BTOP) funding recipients to comply with open access and interconnection policies.<sup>8</sup> The theory was that building "open middle-mile" networks to anchor institutions could make it easier for other competitive providers to build out last-mile networks, not only to the anchor institutions, but also to the rest of the community, including residential users. The evidence shows that this theory has worked. To date, BTOP grant recipients have reached over 800 interconnection agreements with other providers. As ASR Analytics (ASR) describes it in a National Telecommunications and Information Administration-funded BTOP impact study:

Through open access policies and network architecture, these projects provided the means for third-party middle-mile and last-mile providers to use the BTOP-funded infrastructure to expand their future reach into unserved and underserved areas. BTOP infrastructure

also provided means for service providers to improve the redundancy of their networks by expanding route diversity to new Internet peering points and improving traffic routing. The increased reliability facilitated by the BTOP infrastructure is a key feature in attracting businesses to the areas served by BTOP infrastructure grants.<sup>9</sup>

Admittedly, it takes open access policies a few years to have an impact, in part because the network needs to be deployed across a large enough footprint to impact the market. Nevertheless, in its 2014 report, three years after the BTOP projects began to deploy, ASR found a yearly increase in GDP in the areas served by the new broadband investment of between \$5.7 billion to \$21.1 billion. ASR also found that anchor institutions achieved significant cost reductions:

Community anchor institutions served by BTOP infrastructure experienced a decline in broadband prices of approximately 95 percent, regardless of institution type. As an example of the potential importance of price reductions of this size, K-12 schools connected by BTOP grantees could experience a cost difference of \$2 billion annually...<sup>10</sup>

ASR also noted that many interconnection agreements were still being negotiated and that it would take time for last-mile build-out to occur.

To expedite competition by last-mile providers, one state provides discounted access to its middle-mile network. The Maine Fiber Company (MFC), which owns the Three Ring Binder, a BTOP-funded project, announced rate reductions for more than half of its network starting in January 2016. These offers include no payments due during the critical first two years when last-mile providers face the most severe funding challenges.<sup>11</sup>

**Many anchor institutions still have only one choice for their broadband provider.**

The UC2B project in Champaign-Urbana, Illinois, provides another important example of the benefits of open access for community anchors. This BTOP-funded middle-mile project connected 294 anchor institutions and over 1,000 households to a fiber network. UC2B then initiated a competitive bidding process for a broadband and video service provider to expand and operate the network. The contract was recently awarded to iTV3, which will: 1) invest tens of millions of dollars to build gigabit fiber in areas of the city where at least 50 percent of potential customers commit to signing up for service, 2) offer wholesale access on the network to competing broadband providers, and 3) make unused capacity available to other providers to serve communities that iTV3 does not serve.<sup>12</sup>

The City of Sanford, Maine, has proposed to build the largest municipal fiber network in that state. Sanford intends to build a 32-mile fiber and open access network that will allow multiple ISPs to provide services. The city will partner with the Maine-based company Great Works Internet (GWI). The city's Economic Growth Council is a major driving force behind the public-private project that is estimated to generate between \$47 million and \$192 million in economic benefits over the next decade. The city expects to pay for the network, in part, through cost savings from signing long-term contracts with community anchor institutions. These anchor customers will pay significantly less than what they had been paying traditional commercial providers.<sup>13</sup>

## **The FCC Should Consider Price Controls on Special Access Services**

Special access (and, more recently, Business Data Services) is the term used to describe direct, point-to-point data connections over both traditional copper telephone and fiber networks. According to the FCC, special access services are used by businesses, schools, libraries, and other institutions of state and local government.<sup>14</sup>

The Communications Act requires that prices for special access services must be “just and reasonable.” There is evidence that special access prices are much higher than they should be. The FCC deregulated special access pricing over a decade ago based on the expectation that competition would develop, but many claim that competitive networks simply do not exist for most locations.

Some analogize the impact of special access service prices to the price of a barrel of oil. When oil prices increase, so do gasoline prices, home heating prices, and even taxi cab rates. Similarly, high prices for special access services impact the rates consumers pay for home Internet connections, for wireless data plans, and even for basic telephone service. Special access services are an input to virtually every other communications and broadband service cost.

Special access prices also affect competition. Competitive local exchange carriers (CLECs) often lease special access circuits from large incumbent providers because CLECs do not have their own facilities to serve schools, libraries, hospitals, and government offices. Competitive carriers say reducing prices for special access services will encourage them to lease circuits and enter new markets, thus increasing competition.

These competitive providers allege that high prices for dedicated (point-to-point) circuits from incumbent companies thwart the rollout of advanced networks to new markets.<sup>15</sup> They have called upon the FCC to place greater price controls over incumbents’ special access prices in order to promote competition. The FCC is considering renewing price controls over telephone companies’ special access services.

**Lack of competitive choices hampers anchor institutions’ ability to acquire high-capacity broadband at affordable prices.**

AT&T has criticized the FCC’s investigation, saying that competitors have a wide array of choices for special access services, and that rate regulation of special access services would discourage them from expanding their broadband networks. But Level3, a competitor, notes that there are not, in fact, many competitive providers of special access services and that AT&T has a virtual

monopoly on high-capacity networks to many buildings in its service area. For instance, Level3 claims that there are approximately 20 million business buildings across the country, and Level3 has only connected 30,000 buildings with lit fiber. Level3 must purchase special access services from the one and only other provider of data services if it wants to provide competitive services to the other buildings that it does not serve with its own fiber.

The FCC is expected to make a decision about the pricing for these special access services later in 2016.

## **Shared Networks Can Facilitate Lower Prices for All Anchor Institutions**

The National Broadband Plan spoke eloquently about the value of sharing networks across sectors:

[Government policies] frequently drive institutions to use dedicated, single-purpose networks that are not available for broader community use... These restrictions make it difficult to expand and share broadband with other community institutions in the most cost-effective way. This problem is especially acute in rural areas and Tribal lands where broadband may only be available and affordable to residents and small businesses in a community if the fiber optic infrastructure in that town is shared not only by commercial users but also by the local hospital, government office and school system. Because broadband networks—particularly fiber optic networks—demonstrate large economies of scale, bulk purchasing arrangements for forms of connectivity like second-mile and middle-mile access can drive down the per-megabit cost of such access considerably. As a result, policy restrictions that impede the ability of school

networks funded by E-rate to share capacity with hospitals funded by the Rural Health Care program, or the public safety system, which may be funded by state and other federal sources, drive up the cost of connectivity for those institutions and for others in the community.<sup>16</sup>

There are several examples of communities that are building shared networks to support multiple kinds of users, such as:

- Danville (Virginia) built the nation's first open access fiber network beginning in 2007. The nDanville Network is a public-private partnership with the city and the electric utility. The network now serves the needs of the electric utility, the school systems, and the medical community. Private sector service providers use the nDanville Network to provide Internet access to businesses and residential consumers.<sup>17</sup>
- Bell County (Texas) designed and installed a countywide fiber optic system to provide connectivity to county offices, local colleges, the regional medical center, and Fort Hood, a military base. This shared fiber network is the key to Bell County's consolidated 911 communications center, allowing remote court testimony by doctors and promoting collaboration between city law enforcement agencies and prosecutors.<sup>18</sup>
- Harford County (Maryland) began deploying its own countywide fiber network in 2014. The network services 108 sites, including schools, libraries, volunteer fire companies, county and public school administration buildings, Harford County Transit, police departments in Bel Air and Havre de Grace, county and municipal water and sewer facilities, and the county's backup 911 center. The network builds off of the OneMaryland Network that was built across the state with BTOP funds. The county estimates that it will save about \$1 million a year by having its own communications network, freeing it from depending on traditional Internet service providers.<sup>19</sup>

## Recommendations

### Federal policymakers can:

- Enforce the new requirement that Connect America Fund recipients must bid in response to an E-rate RFP issued by a school or library.
- Place limits on the pricing for special access services to promote greater competition.
- Eliminate barriers that prevent anchor institutions from sharing their networks with other anchors and with the surrounding residential community to improve the availability of broadband for everyone.
- Ensure that any new Federally-funded investments in broadband infrastructure have open access provisions similar to those in the BTOP program.
- Develop mechanisms and incentives to harmonize the E-rate, Healthcare Connect Fund and Connect America Fund investments to promote shared use and prevent funding of duplicative infrastructure.

### State and Local Policymakers can:

- Promote open access networks that are open to interconnection and shared use, in order to promote economic development and aggregated demand, especially in rural areas.
- Facilitate building of municipal and competitive networks off of state middle-mile networks, perhaps by offering discounted access to the middle-mile network.
- Coordinate the shared use of fiber networks serving the needs of police, public safety, government offices, schools, libraries, public media, and other anchor institutions.

## Endnotes

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- 14 Federal Communications Commission, In the Matter of Special Access for Price Cap Local Exchange Carriers, Report and Order (WC Docket 05-25) (September 18, 2013).
- 15 See John T. Nakahata, Comments of Windstream Services, LLC, WC Docket 05-25, Jan. 27, 2016 <http://apps.fcc.gov/ecfs/comment/view?id=60001386514>: “Windstream’s competitive operations typically must rely on other [broadband providers’] existing infrastructure in the last-mile.... Without such access on just and reasonable terms, Windstream will not be able to continue to be a nationwide provider of complex communications solutions to large, medium, and small businesses; federal, state, and local governments and agencies; schools; and healthcare providers.”
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**“Grow2Gig+: Anchors Advance Communities”** is the SHLB Coalition campaign to make gigabit speeds for anchor institutions a national priority. “Connecting Anchor Institutions: A Broadband Action Plan” is a crucial component of the Grow2Gig+ campaign, which also includes an interactive website that provides a hub for discussion, updates, and information to guide these national efforts. Gigabit broadband for community anchor institutions is an attainable goal, but only if we reach together. Help us Grow2Gig+! [www.shlb.org/action-plan](http://www.shlb.org/action-plan)





The **Schools, Health & Libraries Broadband (SHLB) Coalition** is a 501(c)(3) advocacy organization that supports research and public policies that promote open, affordable, high-capacity broadband connectivity for anchor institutions and their communities. Founded in 2009 in Washington, DC, the SHLB Coalition receives financial support from its non-profit and corporate members and from the Bill & Melinda Gates Foundation. For more information, visit [www.shlb.org/](http://www.shlb.org/).

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