

Public and Private Rural Broadband Can Make Financial Sense

Community-based providers that understand the market and manage capital carefully find success where others have failed.

By Patrick Coady

The general deregulation of telephone services has led to many benefits for consumers. However, because telephone is not a truly regulated utility, any provider that thinks it can make more money skipping over broadband-deficient areas and putting its capital elsewhere is going to do so.

The reason is quite simple: No profit-making private entity is going to willingly build to and service sparse, poor, rural areas where return on investment (ROI) – let alone a profit – will not be realized for many years. Nor should people expect it to, particularly if it is a publicly traded company. All such companies have a fiscal obligation to their investors or shareholders to seek the best ROI or apply capital elsewhere.

There are three ways of ensuring that poor, rural areas receive service:

- 1 Through a public or nonprofit entity
- 2 Through a cooperative owned by its members and formed to provide the service
- 3 Through a private utility under one of the three following provisions:
 - By being a regulated utility ensured a rate of return in exchange for serving its entire area
 - By public support, such as grants or long-term, low-cost bonds in exchange for service
 - By writing strong franchisee contracts with serious enforcement provisions

As a lifelong entrepreneur, I am fully in favor of options 2 and 3, but experience shows they don't work in the real world. Just look at any jurisdiction's attempt to get a franchised cable provider to reach out and finish building to the most remote homes. Or look at any attempt to get a current incumbent provider to provide broadband service where it doesn't see positive high returns (Fios anyone?) Or look at any fixed wireless provider that promises to serve everyone in its assigned area. These scenarios just don't work.

For example, the Eastern Shore of Virginia Broadband Authority (ESVBA) offered a request for proposals for a last-mile provider to build out the region in return for substantial capital investment to extend fiber to needed locations and favored pricing that basically allowed the vendor to pay for increased bandwidth as demand increased. After nearly a year's negotiation with the best and only marginally compliant respondent, the deal fell apart when the vendor refused to accept any penalty for non-performance.

If universal coverage is the goal, there must be a strong focus on the first two ways. The third is always great, if it can be pulled off, but don't expect to achieve true universal access solely based on such private agreements.

The quickest way to move rural broadband forward is to offer 30- to 50-year 0–3 percent interest bonds, such as those used to build



As an open-access network, the ESVBA helped expand opportunity for new entities focused on deploying broadband in rural Virginia. Here, equipment and material is loaded for a trip to install broadband on Tangier Island, Virginia, in the Chesapeake Bay.

rural electric and telephone in the last century. Grants are great and they were key to the Eastern Shore of Virginia success story below, but the U.S. will not be able to tax and grant its way to full broadband coverage.

Bonds should be available to all three groups: public, co-op and private. All the normal federal provisions regarding failure to perform, abandonment and change of control should be used.

The following two success stories illustrate how both private and public broadband ventures can be feasible.

A PRIVATE RURAL VENTURE

After spending several years attempting to get reasonably priced, high-speed data circuits for business computer customers, I co-founded Hudson Valley DataNet, a competitive local exchange company (CLEC). It was funded through angel capital and began building a fiber ring around Orange County, New York, which is anchored by two small cities and one large town.

The network overlaid four telephone companies, two cable companies, and three electric utilities; I was unable to convince any of them that high-speed fiber to the end user was widely needed and justifiable.

Hudson Valley DataNet faced three hurdles: extremely high interest rates, high pole attachment fees, and,

worst, terribly slow make ready from incumbents that didn't want us. With smart construction, careful control of expenses, and a well-defined definition of our initial market and what we needed in revenue return from each customer, we survived.

At the two-year mark, when revenue was low and the dot-com meltdown was making investing in a CLEC an anathema, we were able to use a 9/11 recovery program to turn a three-year, 10 percent loan into a 15-year, 4.5 percent loan with interest only for the first five years. That change allowed Hudson Valley DataNet to avoid shutdown and immediately turn cash flow positive. In six more months, we were profitable.

Two years later, the company was sold for approximately \$60 million. To recap: For roughly a \$4 million private capital investment, investors gained \$60 million, and the community's businesses got direct fiber to the premises. Interestingly, the incumbent telephone companies became some of our largest customers as we enabled them to do things they couldn't get the capital to accomplish on their own.

This story illustrates two points: First, understanding the market and carefully managing capital is of utmost importance. Second, the cost of funds will make or break a new provider.

The simple reason private entities have not already built out rural America is because it is hard to see a reasonable return on the investment, particularly when there are so many easier places to invest.

When capital build costs are extremely high and revenue streams are relatively low, providers need very patient investors or exceptionally low cost of funds to survive. Fortunately, a fiber network is inexpensive to operate. Once it's built, the cash flow can be good – and once a provider attains positive cash flow, it can carry its sunk capital cost and may well have revenue to continue expansion.

A PUBLIC BROADBAND SUCCESS STORY

Officials on the Eastern Shore of Virginia (Accomack and Northampton counties) spent several unsuccessful years talking with and encouraging the area's incumbent communication utilities to improve internet and broadband access. In 2008, the two counties took advantage of a relatively new commonwealth law, the Wireless Service Authorities Act, to form the authority.

In total, the Eastern Shore and the ESVBA received approximately \$11 million dollars via seven grants. The initial grant, administered by



Equipment, crew and material needed to install broadband on Tangier Island travel by barge.

NASA, was awarded to Mid-Atlantic Broadband Communities Corporation (MBC), then a subsidiary of Old Dominion Electric Cooperative.

MBC subcontracted the design and construction of its portion, which was from Virginia Beach to a regeneration hut in Cheriton, Virginia. That construction ran into issues, which ultimately led to the bonding company's taking control to finish the contract.

The construction eventually ended at the north end of the Chesapeake Bay Bridge-Tunnel (CBBT). The ESVBA's strong management of future contracts allowed a change order to build the missing 9-mile segment created by failure to fulfill the first contract to build to Cheriton.

The second and largest grant from the U.S. Department of Commerce and matching funds from the Community Development Block Grant built the "backbone" from the CBBT to Cape Charles, along the railroad to Bloxom and then east to NASA Wallops, where it joins Maryland Broadband Co-op fiber to continue northward. That engineering and construction was also subcontracted, but with the oversight of the ESVBA's second executive director, Nicholas Pascaretti, the contracts were completed without major issues.

For the remaining grants, the ESVBA was able to bring the design and construction management in-house. The resulting savings, together with improved bid procedures, enabled it to ultimately build twice the mileage of fiber originally approved under the final five contracts.

For the Northampton grant, the ESVBA had to twice seek permission from CDBG to expand the scope of the work to allow expending the full grant by building fiber to more locations. One scope expansion enabled building to all schools except one island school building.

Network construction started in early 2009, and the first direct customer was turned up in late 2010. It grew its customer base by selling to end users and to other providers, who leveraged the network to expand their own business footprints.

The ESVBA now is completely funded by revenues it receives from subscribers. In 2013, without request from either party, it proactively began repaying the startup investment originally provided by Accomack and Northampton counties.

Even at the authority's initial rates, all early customers with commercial internet service of some type were able

to at least double their bandwidth for half the cost. With five subsequent price reductions, all ESVBA customers continue to benefit.

ESVBA NETWORK

As an open-access network, the ESVBA also helped expand opportunity for new entities focused on deploying broadband in the community. Over the years, these for-profit partners have included Chesapeake Bay Communications (formerly Bay Creek Communications), Eastern Shore Communications and NeuBeam/Declaration Networks.

These new companies were able to form and execute their business plans because of the ESVBA. Chesapeake Bay Communications was able to expand beyond Cape Charles, and an incumbent cable provider was able to finally offer internet access.

Without the ESVBA, there would be no competition for upstream internet portal access and no ability for private ISPs to gain access to the advantages of being on an open-access network without registering with the State Corporation Commission as CLECs (i.e., as competing telephone companies or a similar FCC registration).

The largest advantage to the ISPs is that by providing fiber to customer sites, buildings and towers, the ESVBA absorbs significant capital cost that the ISPs would otherwise bear. They are able to exchange high capital cost for recurring costs, which follow their increased revenue.

The founding of the ESVBA created an open-access network with the goal of providing communications services to anyone who wished to subscribe. The ESVBA is *not* a middle-mile provider.

The concurrent resolution that formed the authority from the two counties stated, "... a Wireless Broadband Authority needs to be created to provide high-speed data service and internet access service to local businesses, local government, and the public." The Wireless Services Authorities Act authorizes the ESVBA to sell to any entity it chooses, and it does not and may not limit

which entities may purchase from the available services.

As a public entity, the ESVBA believes it has a duty to serve all constituents. It does not believe limiting the entities that may purchase service advances the mission to extend broadband to all on the Eastern Shore.

In 2016, because of the failure of other providers to meet the needs of residents, the ESVBA began offering fiber-to-the-home residential service. In 2018, it completed a \$5 million loan to finance approximately 200 miles of residential buildout to fully cover all the towns and significant parts of the rural region.

At the close of 2020, approximately 80 percent of the projected buildout was completed and more than 1,500 residences were added to the network. Residential service was the second-highest category of income for the ESVBA, surpassing all markets except

wholesale (other providers) on the network. The network now passes approximately 60 percent of potential service locations on the Eastern Shore.

A benefit of the ESVBA's success in proving market demand is that the incumbent cable provider, which previously served just three towns and strings between them, has now begun updating its network – 15 years after it was asked to do so. It also is completing an aggressive buildout to compete with the ESVBA.

It's amazing what a little success will do – even convince a competitor to invest in an area previously deemed not worth considering. ❖

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