

# Communities Join Forces For Broadband

Regional efforts to develop broadband infrastructure are becoming more common. Recent examples include collaborations between two towns in Maine, two counties in Virginia and two public entities in Skagit County, Washington.

By Lisa Gonzalez / *Institute for Local Self-Reliance*

**B**uilding a publicly owned network to serve a small town or village can be daunting and costly. When local communities band together, however, they can take advantage of economies of scale. In addition to reducing per-household deployment costs, they find that funding may be easier to obtain, ISPs are more interested in delivering services via their infrastructure and incumbents may improve existing services and rates.

## **DOWNEAST BROADBAND UTILITY**

Calais and Baileyville are two small towns at the eastern tip of Maine, on the New Brunswick border. Many of the approximately 4,500 residents are aging; young people find little reason to stay or relocate there, especially because internet access is so poor. Most residents rely on slow DSL from Consolidated Communications (formerly FairPoint), and a few have access to cable from Spectrum (formerly Time Warner Cable). Expensive, unreliable satellite service is also an option, and there's some limited fixed wireless coverage.

Economic development suffers because, although fiber optic connectivity is available to a few larger businesses, rates are high. Small and mid-size establishments typically can't afford the high fees for fiber connections. Community leaders recognize that new industries and young families need a reason to come to the area to keep the towns from disappearing.

The two communities are collaborating to create the Downeast Broadband Utility. The dark fiber network will belong to the regional utility, a nonprofit corporation formed for public benefit. Recent changes in state law vastly reduced the cost of pole attachments and make-ready work and expanded communities' ability to create regional broadband utilities. Both residents and businesses expressed intense interest in connecting, and they plan to work with small, local ISPs that wish to deliver services via the infrastructure. Four private ISPs have expressed an interest in delivering services via the DBU network. The 87-mile fiber network will serve both communities.

Calais and Baileyville investigated federal grants and loans, but the application process was long, and they faced competition from other communities that had even fewer options for internet access. The towns recognized that the odds were stacked against them. Local banks that needed better connectivity and saw the promise of the investment offered to provide loans for the project. DBU has a two-year line of credit at 1.99 percent interest for \$2.9 million, with all principal payments deferred for two years. The costs will cover construction of the network and the central offices. When construction is complete in two years, DBU will renegotiate the amount due into a 20-year loan.

Baileyville and Calais hired a marketing firm to help stave off any attacks from incumbents

and to keep the DBU message strong. The project caught the attention of the Post Road Foundation, a nonprofit, research-driven organization that provides grants and partners with rural communities to help document the benefits of intelligent infrastructure, high-quality connectivity and sustainability. The DBU project broke ground in summer 2018 and will provide a petri dish for observing the impacts of rural connectivity.

## EASTERN SHORE OF VIRGINIA BROADBAND AUTHORITY

Farther south, a group of coastal, rural Virginia communities are enjoying better connectivity. Two counties, along with a nearby NASA facility, launched an effort to fund a fixed wireless and FTTH network that is incrementally expanding to more premises.

The landscape on the Eastern Shore is typical of rural Virginia – houses and businesses spread out into the woods in the low-density configuration that large, corporate ISPs don't consider profitable enough to serve. In 2008, Accomack and Northampton counties created the Eastern Shore of Virginia Broadband Authority (ESVBA) through the Virginia Wireless Service Authorities Act to serve local needs and boost economic development.

NASA needed high-speed connectivity on the Eastern Shore of Virginia to serve its Wallops Flight Facility on Wallops Island, Virginia. The federal facility employs 1,100 people, launches rockets, and administers a visitors center. Government agencies, local schools, and health care institutions also needed reliable connectivity for their programs.

The counties provided an initial sum of about \$270,000 to ESVBA to plan the network and obtained about \$8 million for the middle-mile backbone from NASA and the National Oceanographic and Atmospheric Administration. Funding for the last mile to residential properties and small businesses came from the communities themselves, with about \$1 million of support from a community development block grant. When the network became financially sustainable, ESVBA repaid the seed

## NASA helped fund the Eastern Shore network so it could connect its flight facility there.

money, returning the initial investment to the counties.

ESVBA's middle-mile network is open-access, and wireless ISPs, cellular providers and others use it to deliver residential and business services throughout the Eastern Shore. Several ISPs use the infrastructure, including national provider Windstream Communications and the local Eastern Shore Communications.

By 2016, ESVBA launched the Town Broadband Initiative Project and began with an FTTH test project in Harborton, Virginia. Early on, it signed up the first few customers in the small town of only about 100 homes.

Since then, the ESVBA has steadily expanded, adding more premises to the FTTH network. Sixteen rural communities along the shore now have access to FTTH, and the authority continues to add towers to expand the reach of the fixed wireless component. Residents and businesses in the rural community of Bloxum (population about 380) recently received improved access via a new ESVBA tower. In addition, ESVBA provides a free wireless hotspot near the tower, and cellular coverage has improved.

Over the past few years, the ESVBA has been able to lower prices for wireless ISPs while using revenues to expand the network and upgrade equipment. The network stretches down the coast and provides free Wi-Fi hotspots for visitors.

## SKAGITNET, A PUBLIC-PUBLIC PARTNERSHIP IN WASHINGTON

In Skagit County, Washington, north of Seattle, the cities of Mount Vernon and Burlington own and operate fiber optic networks, and Anacortes is building out infrastructure. Public entities in Skagit County are now collaborating to develop a countywide infrastructure and provide a boost to economic development. The Port of

Skagit and the Skagit Public Utility District (PUD) formed SkagitNet to develop an open-access network, which will connect the communities across the county, including the larger municipalities that already have their own networks.

The first segment, which connects Anacortes to Burlington, is complete. The next two segments, connecting Anacortes to Mount Vernon and the town of La Conner, are in construction and expected to be completed in early 2019. Another segment, constructed several years ago, will be connected later in the construction phase. The entire network will include six segments connecting seven municipalities. Residents and businesses on the routes between cities will also be able to connect to the network.

In May 2018, Robbie Robertson, president of the PUD Commission, told the Skagit Valley Herald that both the port and the PUD searched for several years for opportunities to improve their infrastructures.

"The port recognized they needed to improve their overall system, as did we," Robertson said. "It was decided the two primary entities that were best qualified to go through this process of laying out the backbone [were] the port and PUD."

State law doesn't allow PUDs to offer telecommunications services directly to customers, but a law passed in 2018 expands the ability for ports to use their infrastructure to partner with private sector ISPs. With the SkagitNet infrastructure in place and the restrictions lifted, there will be new opportunities for private ISPs to deliver services via public fiber. ❖

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