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Broadband Case Study: Delta-Montrose Electric Association





Cooperative Profile

The Western Slope of Colorado accounts for nearly 40 percent of the state's land area, but only about 10 percent of its population. In the heart of this sparsely populated region, Delta-Montrose Electric Association (DMEA) delivers power to 27,900 members over 3,300 miles of electric lines in Delta and Montrose counties, as well as a small part of Gunnison county. Community leaders in the region have worked hard to overcome the disadvantages of its rural location and lack of an advanced technology infrastructure.

Availability of high-speed Internet access has been extremely limited, and addressing the problem has long been a priority for a consortium of county, state, and federal economic development agencies.¹ Indeed, Delta County Economic Development (DCED), one of the consortium's partners, spurred a grassroots effort in late 2014 to make the case to DMEA's board that the cooperative needed to be directly involved in building a high-speed communications network to enhance Internet access in its communities. A compelling case was made and DMEA developed a plan to leverage the fiber ring it had recently deployed to connect its electrical substations to further enable broadband communications and Internet access across its service territory. A new, for-profit subsidiary called Elevate Fiber was created to build the fiber network and deliver the new services. Its first customer was connected in June 2016, and 2,600 more customers were connected in the startup's first year. Today, Elevate has more than 4,000 subscribers and has laid 650 miles of fiber, passing the doors of 17,000 of the homes and businesses in its service area. The regional economy of western Colorado may soon be revving its engine.

To Put It Bluntly

"If you don't have high-speed Internet, you're behind. You're behind in education. You're behind economically. You're behind in medicine. You're behind in communication. The Internet is part of our daily life. It's part of the infrastructure."

-Becky Mashburn, marketing communications manager for Elevate Fiber and its parent company, Delta-Montrose Electric Association.

Business Drivers of the Broadband Investment

In his first four years as DMEA's CEO, Jasen Bronec could not attend an economic development meeting without hearing about the pressing need for faster Internet service in Delta and Montrose counties.

¹ Including Delta County Economic Development, the Economic Development Administration, Region 10 League for Economic Assistance and Planning, DMEA, Delta County and area municipalities.

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Community leaders, constituents, and DMEA members all viewed economic development as the catalyst for investment in high-speed Internet, "which is expected to promote a remote workforce, support 'aging in place' for our elderly residents (55 percent of area residents are retirees, according to Bronec), and connect our students. The county has also put former coal miners to work building the Elevate network across the Delta-Montrose communities."² Bronec points to telemedicine (remote access to medical diagnoses, consultations, and treatments) as another essential community service that enhanced Internet service enables. The question for DMEA was how to do it. Over the years, DMEA's board had considered what would be the best business structure for broadband services. Should DMEA lease its fiber network to third parties? Provide services itself as an Internet Service Provider? Feasibility analyses showed the network investment itself to be solid, even with conservative assumptions about take rates for broadband services.

Electric operations are also significantly enhanced by the advanced metering infrastructure (AMI) — 34,000 advanced meters coupled with high-speed communications — that DMEA has put in place. The cooperative uses its AMI system for metering data collection and outage monitoring, and was featured in an NRECA article on AMI-enabled theft detection in early 2018.³

Project Overview and Deployment Approach

DMEA's plan is for Elevate Fiber to extend its fiber network to encompass all 27,000 of its member locations by 2021. This will require the business to deploy a total of 3,000 miles of fiber across Delta and Montrose counties.⁴ The work is being staged on a "pay-as-you-go" basis using a series of zones predefined by the cooperative, as illustrated in figure 1.

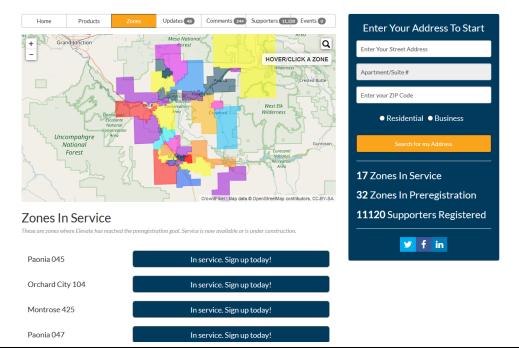


Figure 1. Elevate Fiber's crowd-sourcing platform for determining subscriber interest.



² Pat Sunderland, "Elevate to take broadband 'across the finish line' in Delta," <u>Delta County Independent</u>, January 25, 2018.

³ John Vanwig, "Co-op Tech: Stop, Thief! Turning AMI data into power theft detection," <u>RE Magazine</u>, May 4, 2018.

⁴ The City of Delta is not served by DMEA; however, Elevate provides fiber connections to some businesses in the city.

Elevate uses a crowdsourcing approach to predetermine the level of member interest in subscribing to the new fiber broadband service, zone by zone.⁵ Once a threshold take rate is achieved by pre-registrations and \$100 deposits, DMEA commences construction on that zone. There is an incentive to sign up early. Subscribers who wait until the zone is up and running pay a \$199 installation fee to receive the same fiber broadband service. Phase 1 of the fiber network deployment covered several zones and required \$10 million of capital investment.

Broadband Business Case

Overall capital investment by DMEA in its fiber network to date is \$62 million, not including the cost of the initial fiber ring connecting DMEA's electrical substations. The associated fiber network assets are reflected on DMEA's books as utility plant. According to CEO Bronec, "Other than a \$2.65 million grant from Colorado's broadband fund, we've pretty much had to stand on our own as far as financing the fiber network, so we're careful not to proceed with construction in a particular zone before we have a firm take rate of at least 25 percent."

While initial take rates are typically running around 25 percent, zones that have been in service for a year or more exhibit more robust subscription levels, with take rates as high as 60 percent. Bronec notes that the higher take rate is not a given, saying "It takes a concerted marketing effort, and time." DMEA has marketed its new services exceedingly well. The co-op was awarded NRECA's Edgar F. Chesnutt Award for Best Total Communication Program in 2017. With projected revenues of \$5.1 million in 2019 and \$7 million in 2020, Bronec's team expects positive cash flow (EBITDA basis)⁶ by 2020, three and a half years from launch, and positive net income by 2024. These are results many startups would envy.



Figure 2. Elevate Fiber install specialist, Ray Saenz, with Elevate's 1,000th connected customer, Larry Foltz, in zone Montrose 721.

Photo courtesy of DMEA.

⁶ Earnings before interest, tax, depreciation and amortization (EBITDA) is a widely accepted measure of a business's operating performance.



⁵ See <u>join.elevatefiber.com</u> to see how interest is registered.

Broadband Business Model

Elevate Fiber is a wholly owned, for-profit subsidiary of DMEA. DMEA owns and operates the fiber network including the customer drops. It uses the network to read meters and operate member load control programs, among other functions. Elevate leases the fiber assets from its parent and owns the electronics that enable its service offerings to member subscribers. The subsidiary currently has 15 dedicated employees including network engineers, installers, and personnel working on outside plant. Many back-office functions, such as CSRs handling calls, human resources, GIS, finance and accounting, are treated as shared services with the same departments handling the needs of both electric members and broadband subscribers. As Bronec sees it, shared services are a good way to spread the fixed costs of department operations over more accounts, thereby gaining administrative efficiencies and lowering average unit cost. Elevate's current focus is its electric membership area, but this is not a hard-and-fast rule. Bronec sees potential market opportunities beyond his boarders down the road, noting that DMEA has a regional strategy in mind to bring financial benefits back to its electric members.

Elevate's current broadband service offerings include Internet access speeds of 100 Mbps (megabits per second) or 1 Gbps (gigibit per second) and Voice over IP (VoIP) service for both residential and business customers.⁷ Elevate also plans to be the first broadband service provider in the area to offer an app-based streaming video service using the MOBITV platform, which has a look and feel similar to that of traditional cable TV.⁸ Local broadcast TV channels will be included in the channel bundle.

Network Architecture

DMEA's broadband network is 100 percent fiber-to-the premises (FTTP), utilizing a GPON (Gigabit Passive Optical Network) architecture with 1 to 32 splits for residential connections and 1 to 16 splits for commercial businesses. In this type of network, optical splitters play a key role by allowing a single PON interface to be shared among many subscribers. By using a lower splitting ratio for businesses, access speeds are enhanced.

Regulatory and Tax Issues

Easement issues were an important hurdle Elevate Fiber needed to surmount to operate widely throughout DMEA's electric service territory. The cooperative asked the state of Colorado to ease access limitations on existing fiber in the region. Moreover, DMEA had to gain approval to use its existing fiber network — installed for electrical reasons — for commercial purposes, e.g., offering broadband services to the community. Much of DMEA's original fiber ring was also laid in county easements. Bronec refers to this process as "perfecting the easements." Bronec also says that his co-op has been careful to ensure compliance with all applicable Federal Communications Commission (FCC) requirements as it began to consider offering telephone service. There are no tax implications in the short term, according to Bronec, so long as the co-op is careful to handle significant dollar grants in a way that does not threaten the co-op's tax-exempt status. However, he expects that his new subsidiary will become a taxable entity in 10 to 15 years as profitability improves.



⁷ For service options and prices see: <u>http://www.dmea.com/content/elevate-fiber</u>

⁸ <u>https://www.mobitv.com/</u>

Market Setting

According to DMEA, options for high-speed Internet service were extremely limited in its membership area at the time of Elevate Fiber's entry into the market in mid-2016, as well as today. Charter Spectrum (cable, download speeds up to 100 Mbps), CenturyLink (DSL, Fiber up to 40 Mbps download),⁹ and Viasat (satellite, up to 25Mbps download)¹⁰ all have a footprint in the local market area. In early 2018, TDS Telecom (TDS[®]) began extending its broadband network in portions of Delta and Gunnison counties with construction expected to be completed in the fall of 2018. Several small cable companies also operate locally. The area was, however, seriously underserved. In the city of Montrose, only 15 percent of households have access to Internet speeds faster than 25 Mbps, compared to 82 percent of Colorado as a whole.¹¹ Download speeds of 1 Gbps were unheard of. Elevate is actively soliciting pre-registrations in the Montrose area. Nine Montrose zones have reached threshold pre-registration levels at which construction can begin. Some zones are already actively in service. As reported in other case studies in NRECA's broadband service provider by bundling services and launching a "price war" in which subscribers are incentivized to enter into three- to five-year contracts by a deep discount for the first year price.

Competition for grant funding is a significant issue in Elevate's competitive business environment. Colorado's governor signed a law in early 2018 creating further subsidies to encourage broadband investment in rural areas by redirecting funds that previously subsidized rural telephone service to the broader category of entities providing high-speed broadband. Earlier, Colorado's Broadband Fund had been created to connect communities and drive economic growth in unserved areas across the state. \$11.5 million in grants have been awarded to seventeen projects statewide since 2016. DMEA is a grant recipient. These state grant sources complement the FCC's Connect America Fund, which also supports deployment of highspeed Internet access in rural areas.¹²

Lessons Learned

DMEA's Bronec has reflected deeply on what worked well, and not so well, in his initial rollout of Elevate's fiber network and the response by his members. He shares several key insights:

- Branding and marketing are essential to initial success in lining up subscribers. These are not necessarily core competencies at electric utilities.
- Use of a web-based platform to generate grassroots interest in pre-defined zones is also key. He praises CrowdFiber, the geomarketing and sales automation platform DMEA relied upon for its effectiveness.¹³
- Collaboration with local and regional government entities and economic development authorities is fruitful but can be time-consuming. A great deal of time can be spent negotiating easements, as well as franchise agreements, with cities and towns for video services.



⁹ https://www.centurylinkquote.com/

¹⁰ https://www.viasatspecials.com/lp/internet?kbid=88449&utm_source=highspeedinternet.com&utm_medium=affiliate

¹¹ <u>https://www.highspeedinternet.com/co/montrose</u>

¹² https://www.fcc.gov/general/connect-america-fund-caf

¹³ <u>https://crowdfiber.com/</u>

Why is this Case Important?

Economic development is always a key interest of electric cooperatives. Indeed, concern for the community is one of the cooperative principles. These days, high-speed Internet access is widely viewed as a critical infrastructure element enabling economic growth. DMEA recognized that building a fiber broadband network would bring economic opportunities and quality of life necessities like telemedicine and distance learning to the sparsely populated Western Slope of Colorado. The approach it adopted — deploying fiber according to demonstrated community needs through pre-registration — reduces investment uncertainty. And, if CEO Bronec is right, the move into broadband services will also help DMEA gain administrative efficiencies and yield economic benefits for co-op members. It seems the DMEA way is a win-win for the community at large and cooperative members.

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