Background

NTCA – the Rural Broadband Association represents nearly 850 independent, community-based telecommunications companies that are lead innovation in rural and small-town America. What was once thousands of small firms consolidated down to 1,100 rural cooperatives that serve 5% of the US population, but cover 37% of the landmass, and members on average serve 5,000 homes. Members of NTCA are a combination of cooperatives and family-owned telecommunications companies.

Their vision is to build a better broadband future for rural America. NTCA advocates on behalf of its members in the legislative and regulatory arenas and provides training and development; publications and industry events; and an array of employee benefit programs that promote operational efficiencies. NTCA additionally manages several organizations and subsidiaries that represent and provide solutions to community-based telecommunications firms.

- The Services Management Corporation (SMC), a wholly owned subsidiary of NTCA, provides administrative services for the association's insurance and benefits programs through contractual relationships with trust committees that are appointed by the NTCA Board to administer the programs. The services SMC provides include claims and benefits administration, data processing and member relations.
- The NTCA Rural Broadband Political Action Committee operates a government affairs program and provides contributions to key congressional representatives.
- The National Telecom Corporation (aka Telecom Insurance Group) is an association-captive property and casualty insurance company. As a captive, TIG serves only NTCA members and provides opportunities to minimize administrative costs and control losses.
- The Communications Supply Service Association, a group-purchasing venture formed by individual NTCA members, provides technical services, and offers economies of scale in buying telecommunications equipment.
- The Foundation for Rural Service is a non-profit foundation whose mission is to sustain and enhance the quality of life in America by advancing an understanding of rural issues. FRS supports rural telecom companies, communities and policymakers with educational information, products and opportunities to increase their community development and involvement.

Electricity and telephone cooperatives (both non-profit and municipally-owned) powered and provided telephone service across rural America in the first half of the twentieth century. As internet became a vital service, these providers expanded to offer broadband internet, with the most successful example in North Dakota. However, in many states both non-profit cooperatives and municipality-owned utilities face legal barriers in expanding their services to include broadband, including bans and financing restrictions that make service impossible.

Beyond legal restrictions, cooperative broadband utilities still face issues of financial solvency. Broadband requires fiber construction, service support, and maintenance. Cooperatives may face competition from private ISPs. Many experts point to the 'density problem' as a major roadblock for financially viable broadband deployment. Specifically, that 20 households Per Sq Mi is generally the lowest density to justify the capital cost of infrastructure deployment by a private ISP. NTCA surveys its members every year to learn more about their infrastructure deployment and line counts. NTCA also manages the network of Smart Rural Community providers. Smart Rural Communities are where ISPS

and government collaborate on broadband-enabled projects tied to digital training programs and other economic opportunities. These Communities leverage broadband-enabled applications to support broadband-enabled agriculture, education, health care, transportation and other industries.

Establish Strategic Leadership

Successful broadband development programs engage a suite of users and stakeholders that can help sustain a potential network expansion by engaging would-be customers for improved broadband service. This includes any group that can leverage broadband to improve service delivery or outcomes through digital inclusion, such as education, healthcare, and economic development. In rural areas, this might involve an association of agricultural producers working with ISPs to expand their service-area so that farmers can leverage broadband-enabled devices.

Strategic leadership for community-led broadband efforts is just as much about strategic relationships. NTCA often hears that partnerships between cooperatives and their member organizations to expand broadband infrastructure and service are about having the right conversations, and less about getting the money right. Partners need to be willing and able to transform what can be difficult conversations on the current service-level of broadband into opportunities to expand into underserved areas. Local Development Districts can play a crucial role in bringing together stakeholders from across the region and facilitate strategic planning discussions to expand broadband service.

Municipal and cooperative provided broadband services can actually tap into local exchange carriers as a resource when trying to start up. An NTCA paper[1] provides a guide to help regional ISPs and public-sector broadband efforts find opportunities to partner around expanding service in a region. This includes serving as a consultant, helping train staff, supporting back-office operations or technical support, and partnering around projects to expand service to new areas by leveraging public infrastructure funds and private service delivery and operation.

Promote Digital Inclusion and Skills Training

Regional ISPs, family-owned companies, and cooperatives have a sociological commitment to the communities they serve that changes their incentives relative to the CFO of a national ISP. NTCA's members and other local ISPs want to see their hometowns prosper and are willing to make community investments that do not necessarily have an immediate financial return.

The People's Rural Telephone Cooperative (PRTC) in McKee, Kentucky provides an example of how small ISPs can leverage digital training efforts to create new funding streams and sustain rural networks. PRTC is a classic example of the three-legged stool model of revenue for small, rural ISPs – public ARRA funds offset initial costs to deploy infrastructure, FCC Universal Service Funds help sustain rural networks, and PRTC collects revenue as a service provider. As a result of the network's success, Teleworks USA partnered with PRTC and McKee to create a training program for telework customer service positions at Facebook, Google, and other Fortune 500 companies. So far the training center has created 300 – 400 broadband-dependent jobs in Mckee, and 3100 jobs across 23 counties and $70 million in economic activity, that were only made possible by PRTC's investment in the community.

[1] https://www.ntca.org/sites/default/files/documents/2018-02/Navigating%20Partnerships%20for%20Rural%20Broadband_1.pdf

Models to Deploy Broadband Infrastructure

Efforts to develop broadband should focus on broadband as a tool to achieve community development outcomes, and not the outcome in itself. NTCA provides the Smart Rural Community designation to communities that leveraged broadband for social and economic good. The Mountain Rural Telephone Cooperative (MRTC) and People's Rural Telephone Cooperative (PRTC) tapped into Department of Veteran's Affairs funding streams to expand broadband service and offer free telehealth access to Veterans. These organizations are able to successfully expand and upgrade service despite operating rural networks and having around 5,000 subscribers, including a local prison.

Local Development Districts can provide the nucleus between community development opportunities and broadband development. LDDs facilitate planning between multiple counties and townships, and are perfectly positioned to pull together multiple stakeholders that can capitalize on any broadband development efforts. Areas that might be in local competition need to pull together to invest in digital opportunities. Communities invested in creating opportunity with broadband can better pursue and justify effort needed to build broadband infrastructure. Partnerships and organizations might vary to the situation, but by viewing broadband as a tool, rather than a goal, it positions partnerships to tap into broadband to create impact and develop sustainable demand that can grow local networks.

Navigate Legislative and Regulatory Barriers

NCTA and its members engage in a variety of advocacy efforts with federal agencies and Congress in support of increased funding for broadband development. Additionally, members need to understand local regulatory barriers and how incumbent service areas might impact any proposed expansion.

Incumbent service area rights can inhibit expansion of a network and prohibit access to federal and state funds. Its key for public sector partners to understand how these regulations impact private expansion. For example, ISPs that want to expand service to an area with an incumbent ISP as a Competitive Local Exchange Carrier cannot leverage FCC or other state/federal funding to expand into that area, even if it lowers consumer-prices and provides a significantly improved service in that area. Larger companies will sue or seek other legal recourse to prevent expansion into their service area.

NTCA advocates Congress and federal agencies around a number of broadband-related issue areas, with the ultimate goal of leveraging public funds to support the expansion of broadband networks into unserved and underserved areas. As a member of the Rebuild Rural Coalition, NTCA recently advocated President Biden to approve funding targeted at investment in rural roads, bridges, waterways and sewage, broadband and other infrastructure. The Farm Credit Council supports the Coalition, which includes hundreds of private, public, and non-profit members.

Direct government funds for broadband development can help expand infrastructure in underserved areas. NTCA is an advocate for direct, federal investment into broadband infrastructure as an effective means to achieve universal broadband access. However, infrastructure funds only solve the capital investment component of the cost associated with network expansion by an ISP, leaving problem ensuring the coverage of operating costs when expanding to a new and/or rural underserved area. NCTA maintains a list of case studies with best practices sourced from its 100 members that have received USDA ReConnect loan and grant funds to deploy broadband infrastructure in rural areas.

FCC funding programs provide a stable source of revenue to cover operational costs associated with network maintenance and service delivery. These costs can include wire and equipment maintenance, software updates, and cybersecurity controls. FCC high-cost programs provide subsidies to ISPs that expand networks and service at negotiated speeds to rural and underserved areas. In coordination with grants to cover capital expenses, FCC subsidies provide a second-leg for rural providers to offer rural broadband at affordable rates.

A key issue for NCTA on Capitol Hill is the sustainability of the High-Cost program and its potential transition of the from provider subsidies to consumer vouchers. Every network-user would receive a voucher to freely purchase services from providers, which would eliminate a temporary monopoly, but fragment markets and make it unsustainable for ISPs to expand service. The High-Cost program is funded by assessments on long distance telephone calls, a shrinking pool of revenue. With a shrinking number of transactions, the assessment grew from 18% to 25%, which still could not cover the revenue shortfall to attain sustainability.

Another key policy issue for NCTA in Washington is the Rural Digital Opportunity Fund. NCTA helps review applications for bidders in the reverse-auction process, ensuring that bidders have the financial and technical wherewithal to provide service at the promised service level. Bidders utilizing fixed wireless broadband solutions often overpromised service as a result of a poor understanding of the available spectrum in an area and line of sight issues. Homeowners in rural areas will often build a square of trees around their home to protect the property from wind gusts, which also disrupts any fixed wireless signal. While more costly, fiber to the premises ensures stable network transmission and is easily upgradeable as broadband technology advances.

NCTA submitted comments on an NTIA appropriation for a broadband development project on tribal lands to favor proposals that create jobs. The CARES Act program statute includes both the development of infrastructure and telehealth/telework opportunities as eligible uses of funds. Attaching infrastructure investment to workforce and healthcare development outcomes creates demand for the network's services and engages community leaders that sustain the network can finance expansion. CARES Act funds have been widely available for broadband development projects. Additionally, the FCC has made available the Emergency Broadband Benefit Program for low-income consumers to finance broadband service during the pandemic.

Explore Funding Opportunities

Rural ISPs and telecommunications providers rely on a three-legged stool of revenue funding, in NCTA staff-member's experience. Tapping into FCC funding programs that subsidize expansion of service to rural areas and infrastructure grants to finance capital expansion, in addition subscriber fees, helps rural providers maximize their income-potential and reduce costs associated with providing service. This model has resulted in tremendous success for NCTA's members. 93.5% of NCTA members deploy fiber to the home and 2/3 of members can reach 2/3 of their service-area with 100 Mbps download fiber to the home deployments. 45% of members can provide service at Gigabit speeds.

Rural telecommunications cooperatives had to adapt their revenue streams to broadband in reaction to shifting federal regulations that de-monetized long-distance calls. Prior to the Telecommunications Act of 1996, rural telecommunications companies collected access-charges from national telephone service providers, whose users made long-distance calls to users in local networks. Local networks used these

charges to cover last-mile infrastructure, keeping subscribership rates low and allowing for near universal service. After the 1996 Act, access-charge funds were transferred into the Universal Service Fund, which assesses companies a percentage fee for making long-distance calls. This removed a key revenue stream for local telecommunications cooperatives.

Initially, the Telecommunications Act of 1996 only provided funds to support the expansion of telephone service. After comments by NCTA and other organizations, the FCC issued a duel-use decision in 2005 that allowed Universal Service Funds to be used for telephone and broadband service. Funds from the High-Cost program enabled NCTA's members, cooperatives and family-owned ISPs, to expand service to rural areas where private providers could not typically financially justify expansion. However, these firms were not in competition with expanding, national networks. Fees collected by the Universal Service Fund support the E-Rate, Rural Healthcare, Lifeline, and High-Cost programs, which are accessible for any company that expands broadband and telephone service.

FCC programs subsidize the expansion of service-delivery to rural and disadvantaged areas and represent a second-leg of funding for rural networks. FCC funds from these programs have become a critical revenue stream for small rural providers, who can offer competitive prices that grow membership with the FCC subsidies in place. National companies need to maximize profit and report to shareholders, and these firms focus their resources on dense areas with 1000s of homes per square mile. Regions serviced by NCTA members typically have 5-6 homes per square mile in a dense part of the service area, and fiber typically needs to run through miles of uninhabited land. The High-Cost program and other Universal Service Fund programs offer an additional revenue stream to rural providers to help them recover some cost associated with offering broadband service to areas where it would be otherwise unprofitable.

Best Practices

Utilize the three-legged stool revenue model for rural broadband development. Tap into public funds to support broadband infrastructure, take advantage of FCC subsidies to provide service in rural areas, and collect revenue from subscriber fees. Multiple revenue streams can help cover capital and operational expenditures and enable expansion into new areas.

Align broadband development with community development goals. Leveraging broadband as a tool to improve service-delivery or access new opportunities, rather than a goal, brings more partners to the table and creates demand for the network. This can unlock new funding opportunities for expansion, and increase the take-rate and sustainability of the network.

Advocate on relevant policy-issues. Telecommunications policy seriously impacted the revenue of rural cooperatives in the past. Policies can either inhibit broadband development efforts in rural communities or unlock new opportunities for providers. By advocating to national, state, and local policy-makers, local development districts can ensure that relevant policies reflect their priorities.