Rural Broadband Case Studies

Peter Pratt
Public Utilities Regulatory Analyst, Communications Division
Commissioner Committee on Emerging Trends

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Rural Broadband Case Studies

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- Mississippi

Comparative Tribal Broadband Statistics: % of Population with Available Broadband at 25 Mbps Download / 3 Mpbs Upload

	All	Urban	Rural	Tribal
California*	94.4%	96.7%	49.9%	68.7%
United States**	94.0%	98.5%	75.7%	68.0%

* Source: California Public Utilities Commission, Communications Division; Data as of 12/31/17, Wireline and Fixed Wireless Technologies

** Source: Federal Communications Commission, Communications Marketplace Report, GN Docket No. 18-231, FCC 18-81, adopted December 26, 2018

Confederated Tribes of Warm Springs

The Challenge:

- 4,800 Residents on a Reservation of 1,000 square miles
- 65% adoption rate for plain old telephone service (POTs)
- 30% of households had broadband, via ILEC DSL network
- Public safety wireless coverage lacking
- Mobile wireless coverage lacking

Confederated Tribes of Warm Springs

The Solution:

- Tribal carrier (Warm Springs Telecommunications Co., WSTC) established
- Best practices from National Tribal Telecom Association (NTTA)
- Technical capacity building grants from USDA-Rural Development
- $11 million in total federal, tribal, and local venture funds received
- WSTC is issued CLEC & ETC certifications by Oregon PUC
- Oregon PUC authorizes State USF subsidy status for WSTC
- WSTC becomes preferred telecom provider for enterprises within the Warm Springs Reservation
- Partnership with IOU Portland General Electric (PGE) provides fiber backhaul
- Utility fiber drops cost of backhaul from $140Mb to $1.89Mb

Havasupai Tribe

The Challenge:

- Located at the bottom of the Grand Canyon, the Havasupai community is the most remote Native American locality in the lower 48 states.

- The community is comprised of 800 members of the Tribe.

- Lack of broadband impacted the entire community, especially local school children.

- The Bureau of Indian Education school supporting the Tribe “consistently ranked the last in the United States for educational attainment.”

Havasupai Tribe

The Solution:

- California-based nonprofit MuralNet, and Northern Arizona University provide professional and technical services to support network deployment.

- 2018 -Tribe files with FCC to use Educational Broadcast Service (EBS) spectrum for a tribal broadband network.

- Local wireless internet service provider (WISP) Niles Radio Communications installs network using off-the-shelf equipment.

- 2019 – FCC awards EBS spectrum to Tribe for expansion of temporarily licensed tribal LTE network using EBS spectrum over tribal lands.

Virginia IOU Broadband Pilot Projects

The Challenge:

- In 2016 the Virginia Chamber of Commerce reports that lack of rural broadband to be a persistent challenge to efforts to improve the rural economy. The report finds that only 53% of Virginians in rural areas are able to access broadband services of at least 25 Mbps download / 3 Mbps upload.

- Federal Recovery Act (ARRA) funding, state initiatives including broadband mapping, and USDA broadband funding programs all contribute to positive gains, but substantial improvement is not achieved.

Virginia IOU Broadband Pilot Projects

The Solution:

- 2018 - State legislation (SB 966) authorizes IOUs to investigate the feasibility of offering broadband services using “electric distribution and transmission infrastructure.”
- 2018 - Dominion Energy issues its *Broadband Feasibility Report*, a roadmap for possible use of distribution and transmission (D&T) assets for broadband.
- 2019 state legislation (HB 2691),establishes annual $60 million pilot programs for Appalachian Power and Dominion Energy to use their D&T fiber facilities for middle mile networks in broadband unserved rural areas.
- 2019 Appalachian Power announces partnership with WISP GigaBeam.

Mississippi IOU – CLEC Partnership

The Challenge:

- The State of Mississippi consistently ranks in the bottom tier of states, in terms of rural broadband availability.

- Data, based on FCC findings, published by *BroadBandNow.com* in 2018 states that only Montana has a higher percentage of its population unserved by broadband.

- The FCC's most recent figures document that only 70% of rural Mississippians have access to broadband speeds of 25/3.

Mississippi IOU – CLEC Partnership

The Solution:

- 2017 – IOU Entergy Mississippi applies to the Mississippi Public Service Commission for permission to jointly extend its dark fiber infrastructure in a partnership with a competitive local exchange carrier (CLEC) called C Spire.

- 2018 – An Order of MPSC approves the IOU – CLEC partnership.

- C Spire will deploy 302 miles of middle mile fiber along 5 Entergy transmission routes to support broadband access networks in 15 broadband underserved Mississippi counties. Entergy will access an allocation of dark fiber assets owned by C Spire, in order to improve grid control and operations.

Recommended Next Steps

- **Educational Broadband Service** (FCC Docket 18-120)
  Consider filing Comments in FCC EBS proceeding to preserve the public purposes of EBS, and allow time for tribal spectrum filings.
- **CA High Cost Fund A** (CPUC - R.11-11-007)
  Determine whether High Cost Fund A program should be modified to service additional communities, including tribal communities.
- **Utility Backhaul Fiber**
  Conduct a pilot program to incentivize IOUs and POUs (including Irrigation Districts) to increase middle mile fiber availability at competitive costs for ISP rural broadband networks.
- **Tribal Capacity Building**
  Determine how California Tribes may be supported with federal and state funds to increase tribal capacity for broadband infrastructure development.

Thank you!

For Additional Information:

http://www.cpuc.ca.gov/