Expanding Broadband Infrastructure in Rural Communities

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PINELAND TELEPHONE SERVES OVER 1,300 SQUARE MILES
in all or part of ten counties and seventeen exchanges in south Georgia, bringing Telephone, Internet, Technology, and Security solutions to its customers. 100% of Pineland’s customers receive their services via a dedicated Fiber-to-the-Home network capable of delivering broadband speeds Up to 1 Gigabit per second.

ORGANIZATION OF PINELAND TELEPHONE COOPERATIVE, INC.
was accomplished in late 1951, by a group of progressive minded individuals from Candler and Emanuel counties. The cooperative was created to provide telecommunications service to areas of rural Southeast Georgia the larger entities did not assist. Seventy plus years later, that goal has changed very little. Pineland worked diligently since 2005 toward completion of the Fiber-to-the-Home project and strives to be on the cutting edge of new technology, service, and support to this day.

PINELAND’S MISSION IS TO OFFER AN OUTSTANDING CUSTOMER EXPERIENCE through the efficient delivery of progressive technology solutions in the markets served. We will achieve this mission by applying our core values of Excellence, Integrity, Innovation, and a Servant’s Heart in everything we do.
### Pineland Telephone | about us

**Connecting our Communities**

- 3,750 miles of fiber
- 17 exchanges spanning 1,300 sq. miles

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Backdrop: The State of Broadband Generally

- Highlighted by the pandemic, broadband has become a “must have” for economic, social, and civic participation in today’s world.
- And better broadband has become key to that as videoconferencing, VPNs, and remote learning become part of the routine.
- Per OpenVault’s Broadband Insights Report:
  - Weighted average usage is up 23% from 2Q20 to 2Q21.
  - Upstream usage from 1Q21 to 2Q21 increased by 18% (vs 14% for downstream).
  - Gigabit subscriptions grew from 4.75% in 2020 to 10.5% by 2Q21.
  - Most subscribers in the US now buy 100 Mbps or better broadband.
Backdrop:
The State of Broadband Generally

- Estimates range widely for how many Americans lack access to robust broadband
  - 35% of rural Americans according to President Biden
  - 17% of rural Americans according to the FCC
  - 48% don’t use broadband sufficiently according to Microsoft
- Bigger point may be – we know many people lack it, and figuring out where they are is key
- State of Georgia recently released its own map showing unserved areas of state
Backdrop: The State of Broadband Generally

FCC Map

Georgia Map
Good news is in many rural communities, progress is being made

- NTCA reports 70% of rural customers served by smaller providers like Pineland have fiber access and speeds in excess of 100 Mbps
- 100% of the locations served by GA Coops have access

And good news as well is help seems to be on the way – many funds useable for or dedicated to rural broadband

- CARES Act Funding
- ARPA Funding
- Federal Universal Service Funding
- New Infrastructure Bill Pending in Congress
But it will take lots of work to get service to the remaining unserved – and even to sustain service for those who are connected

- Providers need construction crews or contractors trained in network deployment
- Providers need employees trained in maintaining and upgrading networks
- Providers need access to supplies to build and maintain networks

This all highlights the need for a trained workforce – and enough workers to do all of the work that will come as funding comes online
This brings us to a discussion of what’s needed to develop this workforce – and to help make sure they are available in urban and rural areas alike.

If we want to win “the race to 5G and fiber,” we’re going to need to invest in human capital and supply chain too.

The U.S. telecom industry employs 672,000 works – and at the current rate of deployment, we will need 850,000 more through 2025.

And that’s before factoring in a big infrastructure funding push.
Providers taking creative approaches

- Apprenticeship programs – 90% of such programs help with placements upon completion, but only so much capacity/availability esp. for small/rural firms
- STEM-related courses and coding academies at local educational institutions sponsored or promoted by community-based operators

Policymakers have an important role here too, however

- Promote programs focused on broadband network deployment, engineering, and cybersecurity – estimated that up to 2/3 of all jobs will require postsecondary training and education in coming years
- Modernize existing programs to provide more hands-on training
Smaller providers need access to contractors for construction as well

- Generally not cost-efficient for small firms to hire their own construction employees for periodic deployments, but contractors are in high demand and short supply

Rural areas face special challenges in attracting and retaining talent

- Over 90% of U.S. counties losing population are rural
- Urban migration of younger populations especially impactful

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Efforts Underway

- **Telecommunications Skilled Workforce Act**
  - Bipartisan Legislation –
    - Walberg (R) and Clarke (D) are House sponsors
    - Thune (R), Tester (D), Wicker (R), Peters (D), and Moran (R) are Senate sponsors
  - Directs FCC to work with other federal agencies to identify changes in federal law needed to address barriers to expanded/enhanced workforce training
  - Directs federal agencies to work with States to improve coordination and sharing of data on workforce needs
  - Directs federal agencies to recommend “Federal incentives” (i.e., funding or relief) that would encourage private sector development of workforce development programs
  - Directs the Government Accountability Office to conduct an assessment of current telecom workforce needs
A Note on Supply Chain

- Of course, even if you have the workforce, you also need supplies for them to use in building networks.
- Just as important in achieving broadband deployment goals as a trained workforce – and just as significant a problem.
- NTCA has found substantial and growing supply chain concerns among rural providers.
  - Nearly 90% of survey respondents indicated delays for customer premises equipment – more than 50% facing delays of more than 12 weeks.
  - Over 80% reported delays for fiber – nearly 60% facing more than 12 weeks of delays, and reports that orders now must be placed >1 year in advance.
Key Takeaways

- Broadband Equals Opportunity, Especially in Rural Areas
  - Great equalizer in allowing work and education from anywhere
- Broadband is Getting Better
  - More people are demanding – and receiving – better broadband
- But Broadband Requires Work to Deliver on that Promise, Especially in Rural America
  - Need to Attract and Retain a Skilled Workforce
  - Need Access to Contractors
- More Funding Can Help Promote Broadband Goals – But it Will Also Highlight Shortcomings in the System
  - Skilled Workforce Shortages
  - Supply Chain Challenges
- Solutions Require Both Public and Private Efforts – and Will Take Time so Start Now
  - Private sector ramping training and apprenticeship programs locally
  - Federal and State policymakers putting more into not only broadband funding, but skilled workforce training and supply chain also
Q&A