A New Perspective on Expanding Broadband Access to Rural Virginia

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Meet the Team

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Importance of Broadband Access

Reliable Internet access is necessary for:

- Education
- Healthcare
- Economic development and job creation
- Public safety
- Citizen engagement

Challenges and Barriers to Broadband Access

The internet plays a vital role in ensuring that people stay in contact regardless of the physical barriers

Fiber Optic Connections

- Collaboration
- Funding
- Infrastructure/Engineering Cost
- Regulatory Burdens

Parallels with Other Services (Utilities)

Infrastructure through business or utilities models

Is there parity across the Commonwealth?

- Educational/job opportunities
- Modern communities

How do we deal with this disparity?

- Clean water
- Waste
- Electricity

Broadband internet is the next “utility” to help erase disparities across the Commonwealth

Parallels with Other Services (Utilities)

- Investment in broadband is not a one-to-one business model
  - Improves education opportunities
  - Improves B2B connectivity
  - Improves community desirability
  - Improves “work in place” opportunities (telework)

- Investment in broadband is well beyond email and streaming movies
  - There are people implications
  - There are community implications
  - There are state implications

- Broadband can start to ameliorate some of the disparities in Virginia
  - Worth much more to Virginia than just tax revenue

Rural Electrification Act of 1936

Allowed the Federal Government to make low-cost loans to non-profit cooperatives bringing electricity to rural America

- One piece of the New Deal legislative push by Franklin Roosevelt
- 3% of farm homes were electrified in 1936; 90% were electrified by 1959

Challenges were similar to extending broadband

- Not profitable to electrify rural areas
- Lack of standard construction due to companies not making equipment because of a lack of demand

Rural Electrification Act of 1936

Benefits

- With the assistance of federal funding, the massive push allowed the cooperatives to create assembly line methods for electrical line construction and standardized hardware
- Economic benefits such as improved health
- Was so successful that it was extended in 1949 to extend telephone service to rural communities and eventually to water and sewage

International Broadband Case Study - Sweden

- Almost universal access to broadband
- Government's stated vision is a "Completely Connected Sweden" by expanding access to high-speed broadband
- Goal of 98% of population with high-speed access by 2025
- Sweden vs. Virginia
    - Population
    - Land Area
    - Population Density
    - Utility Ownership
    - Tax Rate

Other US State Initiatives

- **Nevada** “Dig Once Program”
- **Wyoming** modified definition of “*unserved populations*”
- **Wisconsin**, **Arizona**, **North Dakota** and **South Dakota** are currently in pilot phase for Microsoft’s “*Rural Airband Initiative*”
  - Piloted for educational use in Halifax and Charlotte Counties

Recommendations

- Continue with Existing State Broadband Plan
  - Utilize current statewide assets to address identified gaps, using proven technology to obtain universal connectivity

- Continue to Expand Upon American Broadband Initiative
  - Tie future state programs to federal initiatives, including E-Rate program

Recommendations

- Focus on Providing Broadband for Educational and Healthcare Purposes
  - Leverage public private partnerships and partner with local businesses
  - Use alternatives to fiber in rural communities (“regional Wi-Fi model” or “Microsoft Whitespace model”)
  - Equip school buses and mobile healthcare units with Wi-Fi

"Investment in a high quality environment in the form of complete new communities and associated amenities may be necessary to attract and hold a skilled labor force."

"Largest returns to society and to rural residents will be obtained from the public provision of an adequate level of education, health, and other community services."

1968. James Angus McMillan.
Public Service Systems in Rural-Urban Development. Iowa State University.