Electric Co-ops Bringing Fiber to Rural America

NTIA Webinar Series

You must dial in to hear the webinar!
Conference Line: 800-593-7190 Passcode: 984-4951#

November 15, 2017

Participants

Moderator

- Scott Woods, Manager, BroadbandUSA Technical Assistance, NTIA, Department of Commerce

Presenters

- Brett Kilbourne, Vice President Policy and General Counsel, Utilities Technology Council

- Randy Klindt, Founder, Conexon; General Manager, OzarksGo

- Paul Belk, President and CEO, North Georgia Network

Presentations

- **Brett Kilbourne, Vice President Policy and General Counsel, Utilities Technology Council**

- Randy Klindt, Founder, Conexon; General Manager, OzarksGo

- Paul Belk, President and CEO, North Georgia Network

Electric Co-ops Bringing Fiber to Rural America

BroadbandUSA Webinar

Utilities
Technology
Council™

utc.org

About UTC

- Established in 1948, UTC is a global trade association that advocates for the telecom and IT interests of electric, gas and water utilities and other critical infrastructure industries.

- UTC's members include all types of utilities, including large investor-owned utilities, as well as smaller rural electric cooperative and public power utilities.

- Based in Washington, DC, UTC has affiliate organizations around the world in Europe, Canada, South America and Africa.

About RBC

- Created in 2012 as an independent operating unit of UTC which:
  - Promotes opportunities for broadband funding for rural utilities.
  - Educates and informs members through newsletters, webinars and case studies.
  - Enables networking with utilities on ways to provide broadband to rural America.

About UBC

- UTC established the Utilities Broadband Council this year to encourage all utilities to participate w/UTC to promote broadband.
- Continues the work started by the Rural Broadband Council in 2012 and expands efforts on advocacy, education and information for and about utility broadband.

Current State of Broadband

Section 706

- Requires the FCC to regularly examine the availability of advanced telecommunications capability (i.e. broadband), and if it finds that it is not being made available to all Americans on a <u>reasonable and timely</u> basis, the FCC is required to take <u>immediate action</u> to remove barriers to broadband investment.

2016 Broadband Progress Report – Access is Not Reasonable and Timely

- 34 million people nationwide lack access to 25/3 mbps – 4 percent of people in urban areas.

- 39 percent (23 million people) in rural areas lack 25/3 mbps.

- 41 percent (1.6 million people) in tribal areas lack 25/3 mbps.

- Only 59 percent of schools have access to 100 mbps per 1000 students and far fewer have access to 1 Gbps per 1000 students.
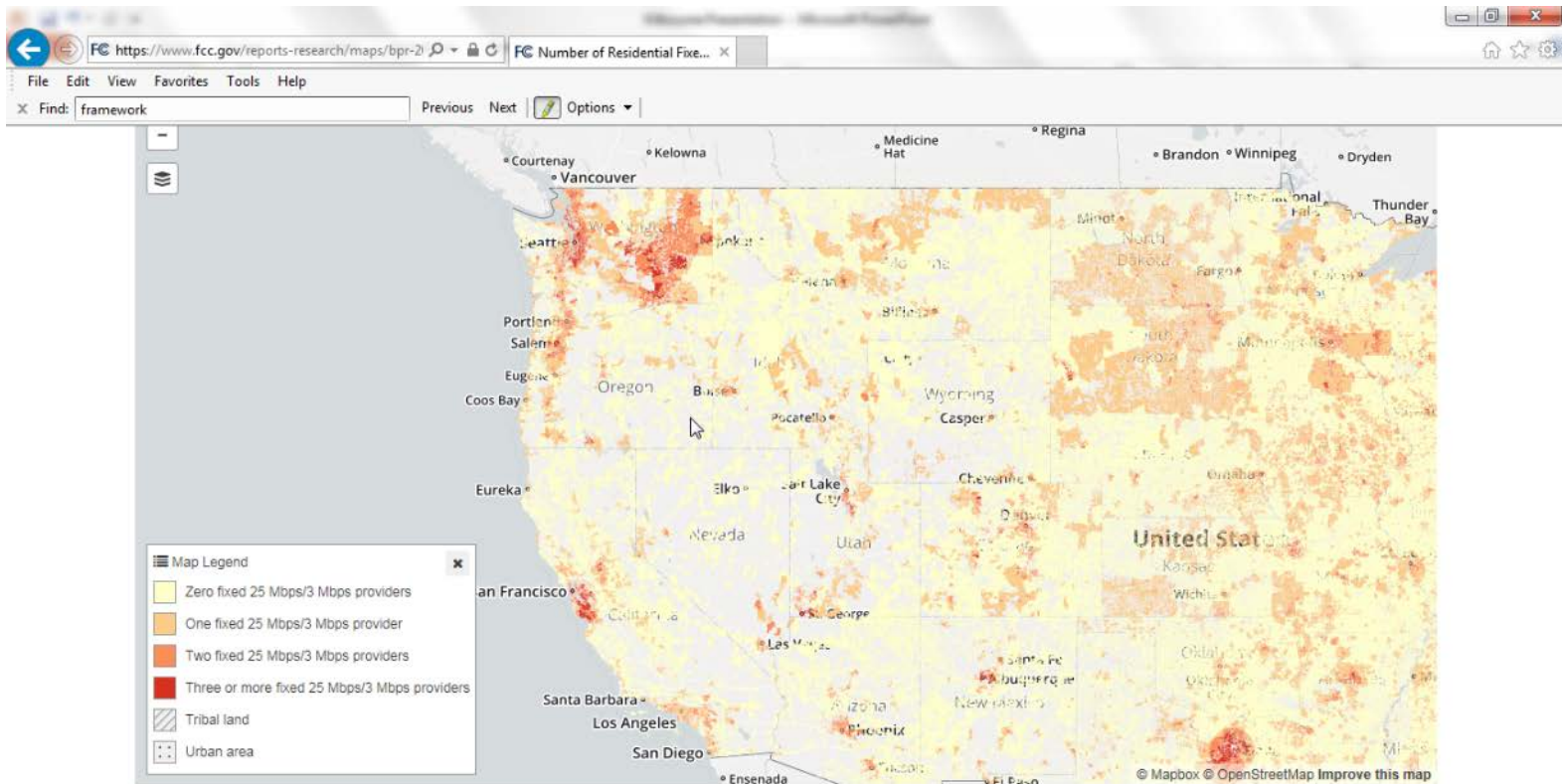
Utilities Technology Council™

Regional Coverage of 10/1 Mbps or higher speeds
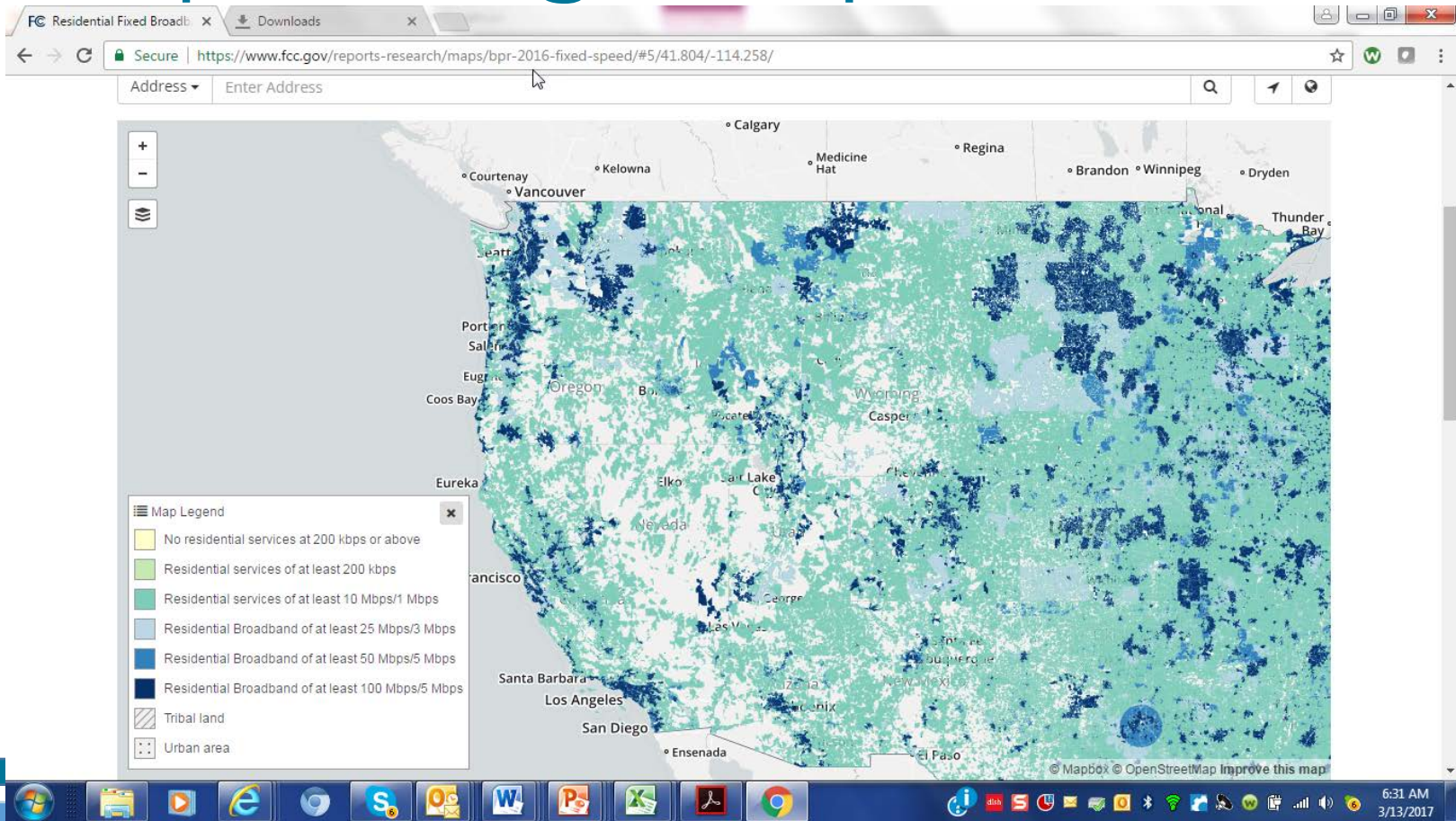
Regional Coverage of 25/3 Mbps or higher speeds
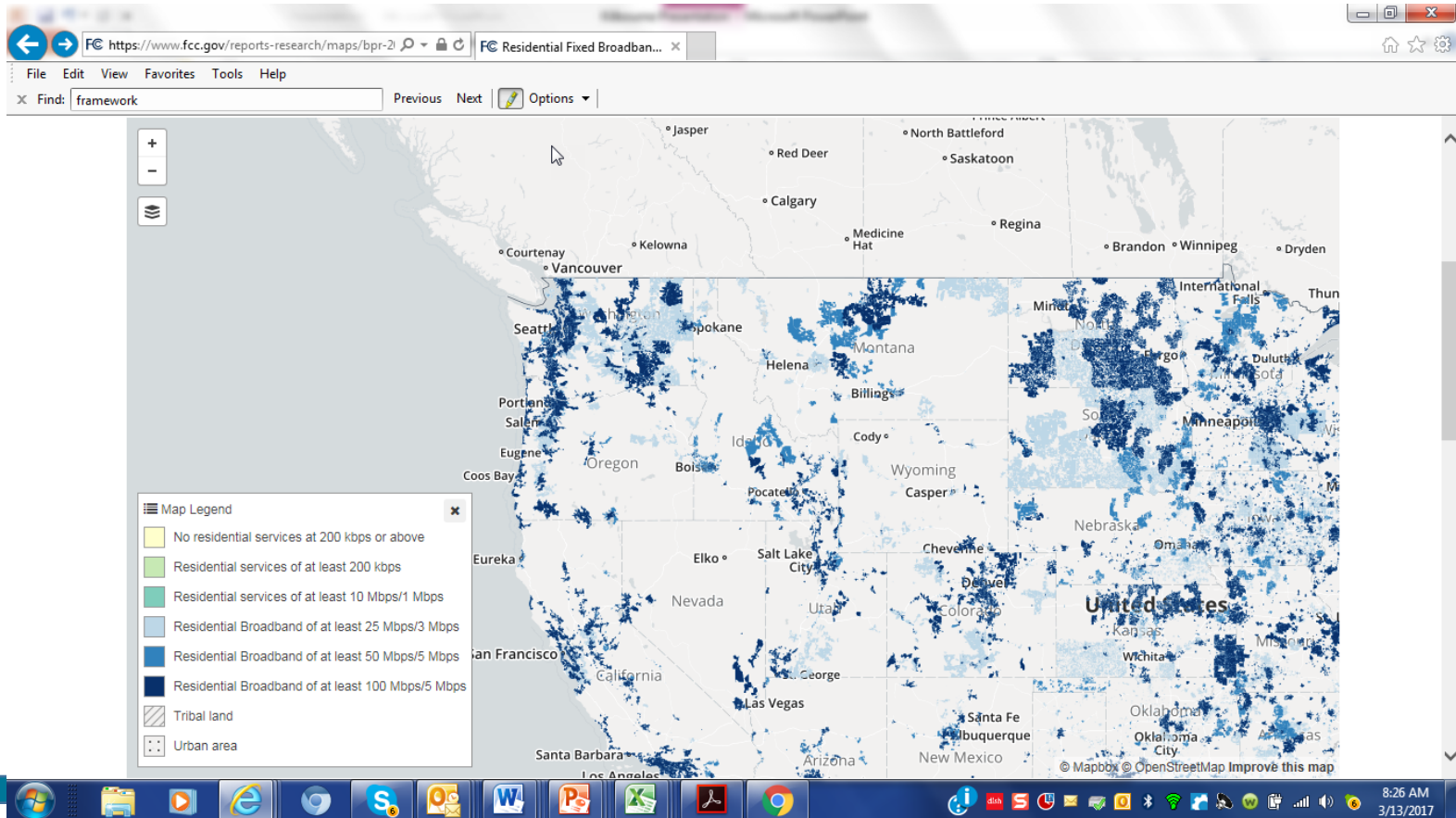
Number of Providers Offering 25/3 Mbps Speeds

utc.org

Rural America Wants and Needs Robust Broadband

- Streaming video and audio comprises 63 percent of downstream traffic with each video stream typically requiring from 5 to 25 Mbps.

- The average American household with children has more than four people living in it and using seven Internet-connected devices on a shared, broadband network.

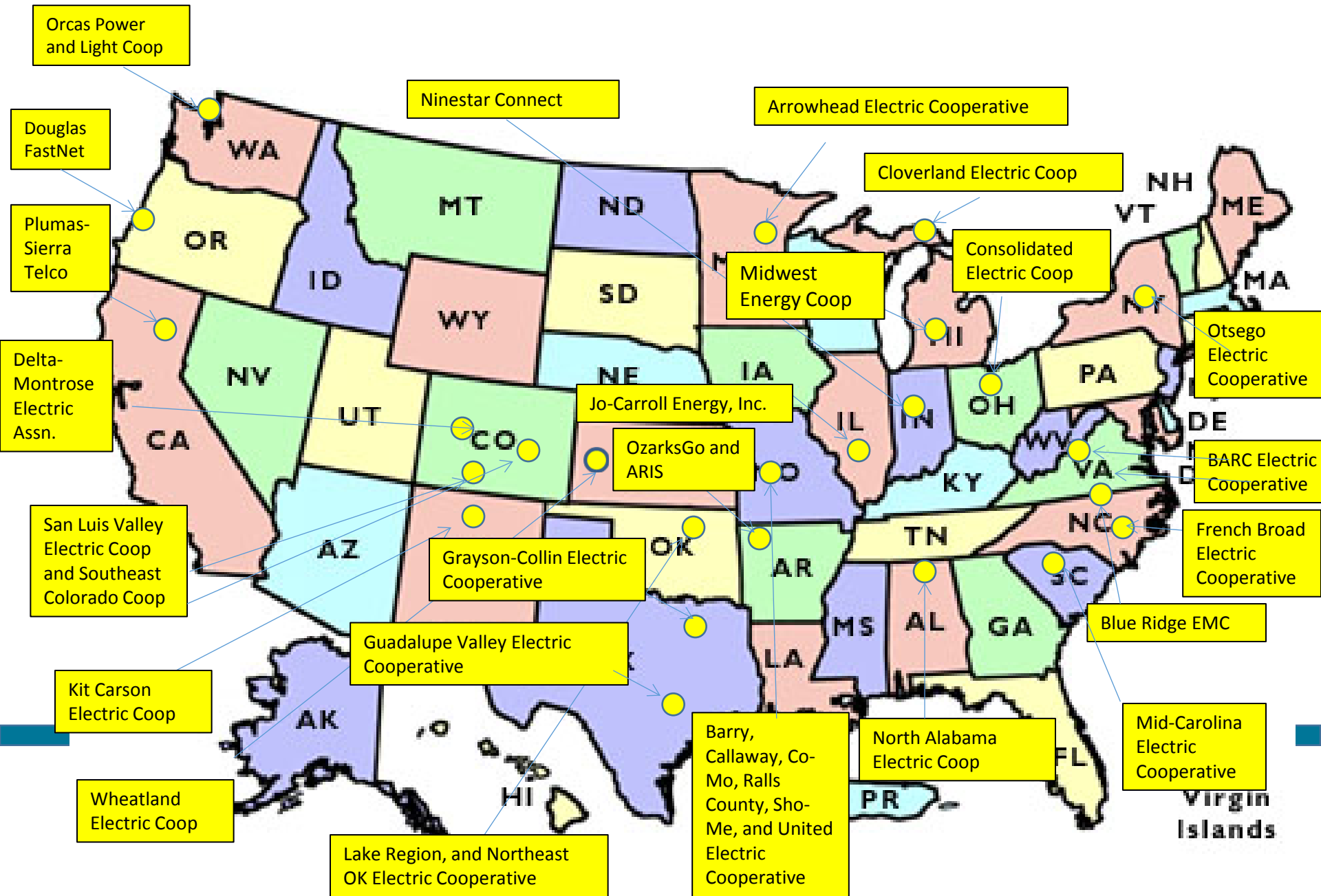# Rural America Wants and Needs Robust Broadband

- Subscribership in urban and rural areas is about the same, where 25/3 mbps is available (30% in urban/28% in rural).

- Broadband Opportunity Council Report finds that "Broadband has steadily shifted from an optional amenity to a core utility for households, businesses and community institutions. Today, broadband is taking its place alongside water, sewer and electricity as essential infrastructure for communities."

Utilities
Technology
Council™

utc.org

Electric Co-ops and Broadband

Utilities Technology Council™

utc.org

Electric Cooperatives and Broadband

- Aligned with core principles –
  - Broadband today is like electricity in the 1930s
  - Cooperatives serve all members in their service areas
- Aligned with smart grid –
  - Broadband networks can improve electric service.
- Committed to rural America
  - Approximately 900 cooperatives in 47 states provide electric service to 37 million people in almost three-quarters of the nation's landmass

Utilities Technology Council™

Electric Cooperative Fiber Networks

Orcas Power and Light Coop

Ninestar Connect

Arrowhead Electric Cooperative

Cloverland Electric Coop

Douglas FastNet

Consolidated Electric Coop

Plumas-Sierra Telco

Midwest Energy Coop

Otsego Electric Cooperative

Delta-Montrose Electric Assn.

Jo-Carroll Energy, Inc.

BARC Electric Cooperative

OzarksGo and ARIS

San Luis Valley Electric Coop and Southeast Colorado Coop

French Broad Electric Cooperative

Grayson-Collin Electric Cooperative

Blue Ridge EMC

Guadalupe Valley Electric Cooperative

Kit Carson Electric Coop

Mid-Carolina Electric Cooperative

Barry, Callaway, Co-Mo, Ralls County, Sho-Me, and United Electric Cooperative

North Alabama Electric Coop

Wheatland Electric Coop

Lake Region, and Northeast OK Electric Cooperative

FCC Connect America Fund

- $1.8 billion available; price cap carriers accept $1.5 billion in model-based support ($9B over 6 yrs) <u>to provide 10/1 mbps</u>.

- Remainder ($215 million annually, $2.1B over ten yrs) subject to competitive bidding in reverse auction.

- Areas must not be unserved by 25/3 mbps from an unsubsidized provider.

- Electric cooperatives positioned to bid, particularly in areas where price cap carriers declined the ROFR and/or there were qualified non-winning Category 1 Rural Broadband Experiments (25/3 mbps) filed with the FCC.
    - Verizon declined the offers of statewide support in Connecticut, Delaware, the District of Columbia, Florida, Maryland, Massachusetts, New Jersey, New York, North Carolina, Pennsylvania, Rhode Island, and Virginia;
    - AT&T declined the offers in Missouri, Nevada, and Oklahoma;
    - CenturyLink declined the offers in California, Mississippi, Oklahoma, and Wyoming;
    - Fairpoint declined the offers in Colorado and Kansas; and
    - Windstream declined the offer in New Mexico.
    - List of eligible census blocks and *potential* available amounts, subject to revision by FCC 477 data.
        - https://apps.fcc.gov/edocs_public/attachmatch/DA-16-908A1_Rcd.pdf

- FCC establishes performance tiers and weighting criteria for CAFII auction, which promotes funding for high-speed, low latency networks.
    - Performance tiers (and weights) = 1 Gbps/500 Mbps (0); 100 Mbps/20 Mbps (15); 25 Mbps/3 Mbps (45); and 10 Mbps/1 Mbps (65) – also any high latency projects are assessed 25 points weighting

- FCC currently developing rules for CAFII auction, including pre-and post auction filing requirements.

USDA RUS Electric Program

The RUS Electric Program has a $5.5 billion annual loan budget for financing electrical infrastructure in rural areas, including smart grid initiatives.

- The Electric Program, thru the funding of:
  - Smart grid initiatives;
  - Communications facilities for energy management; and
  - Fiber to the meter for increased energy efficiency initiatives …

- …can aid in the **support and deployment** of **broadband** through the use of those facilities implemented for smart grid purposes.

USDA RUS Electric Program

- The Electric Program (EP) makes loans to borrowers for fully integrated "smart grid" purposes, including fiber connections directly to the meters of electric service consumers.

- It is the policy of the RUS to promote smart grid deployment among all electric utilities serving rural consumers.

- Smart Grid capabilities can improve reliability, promote energy efficiency, enhance grid security, advance safety, provide security, reduce pollution and restrain consumer electricity costs.

Brett Kilbourne, VP Policy and General Counsel:
brett.kilbourne@utc.org
202-833-6807

Presentations

- Brett Kilbourne, Vice President Policy and General Counsel, Utilities Technology Council

- **Randy Klindt, Founder, Conexon**; General Manager, OzarksGo

- Paul Belk, President and CEO, North Georgia Network

OzarksGo
Cooperative FTTH

About Ozarks Electric Cooperative

- 7,000 miles of electric line
- 75,000 meters
- Parts of Northwest Arkansas and Northeast Oklahoma
- Most reliable, lowest rates, and very high ACSI score
- One of the fastest growing regions in the country
- Needing communication to electric devices

ozarks
go

Broadband at Ozarks (before)
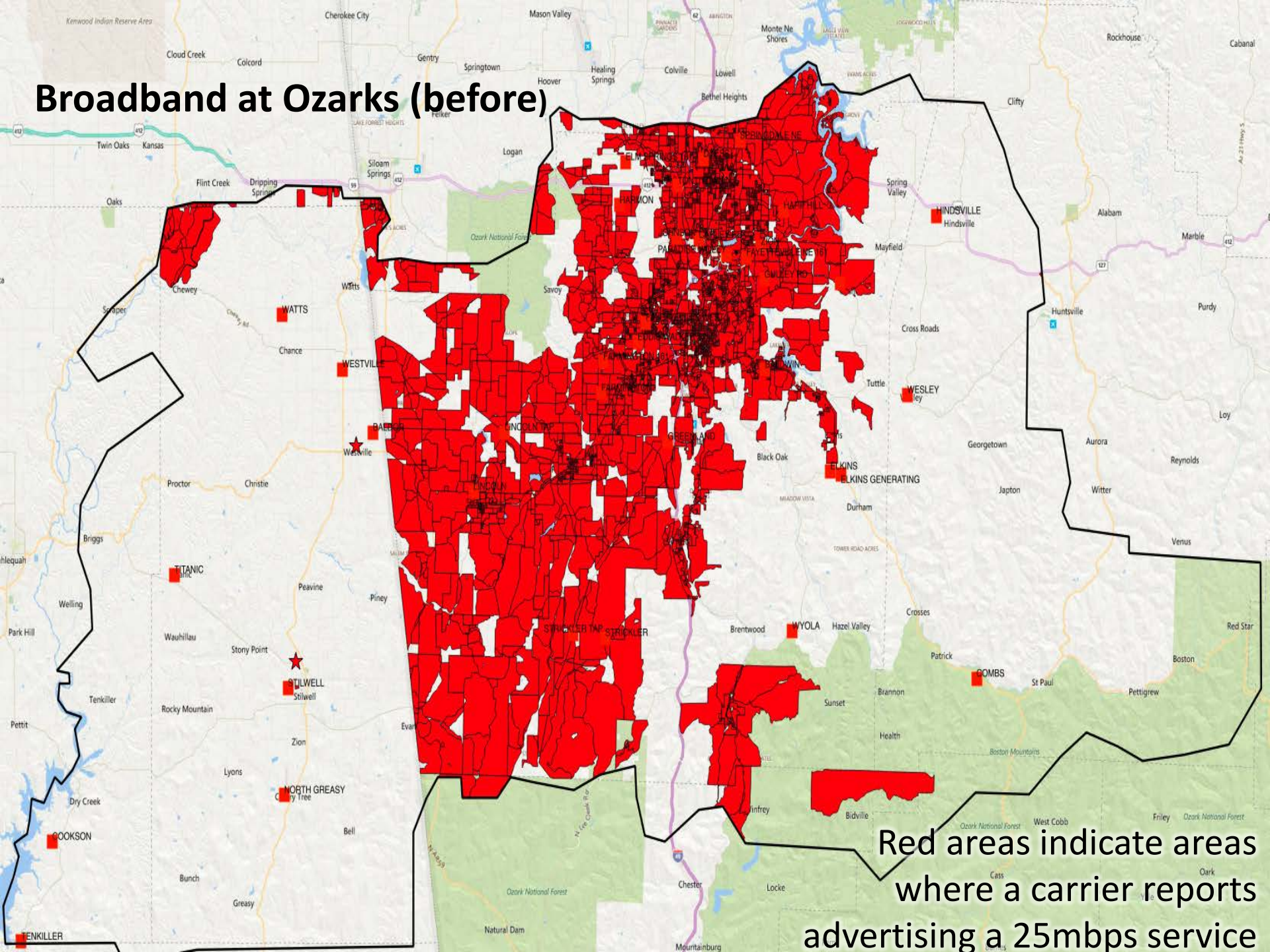
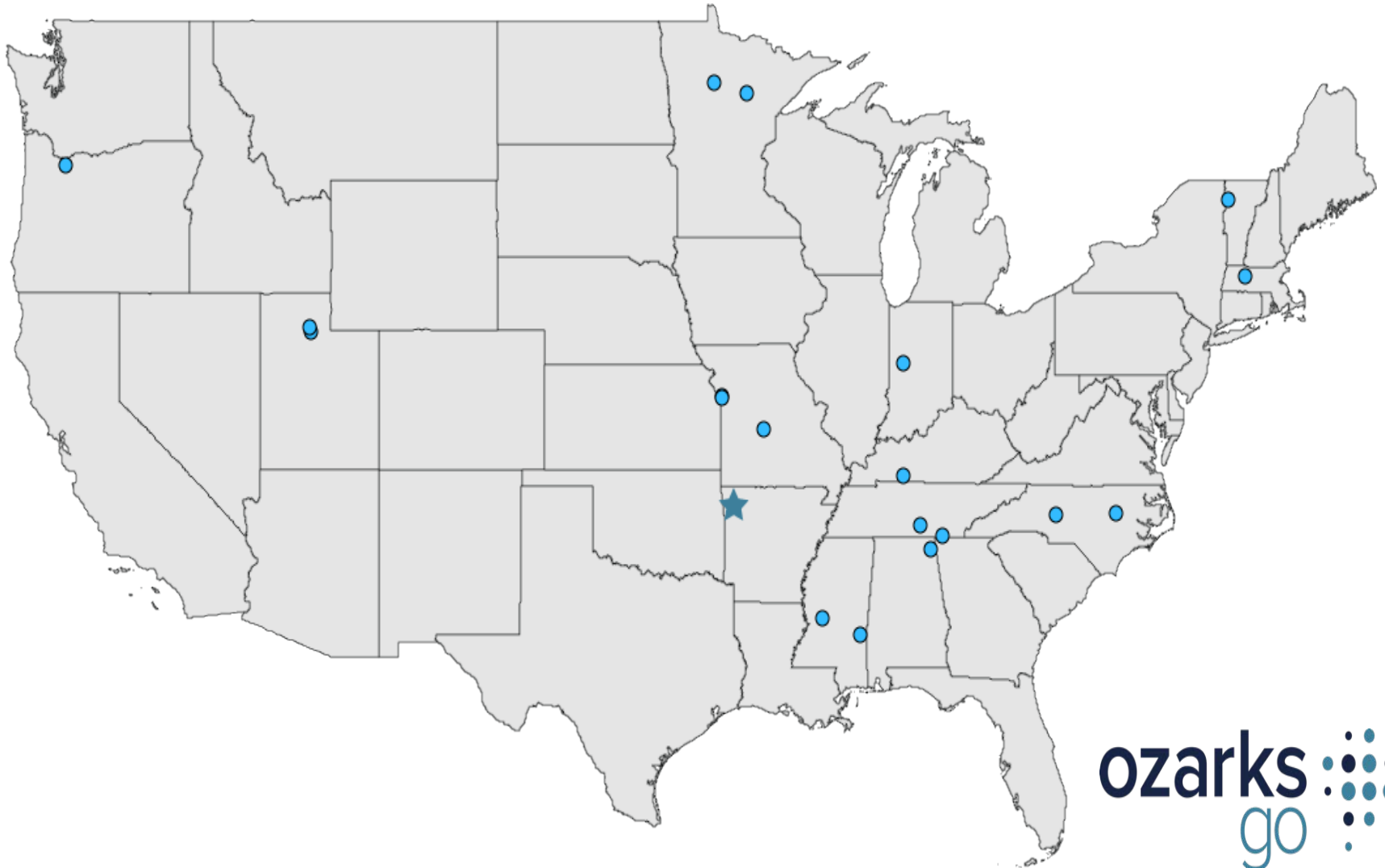Red areas indicate areas where a carrier reports advertising a 25mbps service
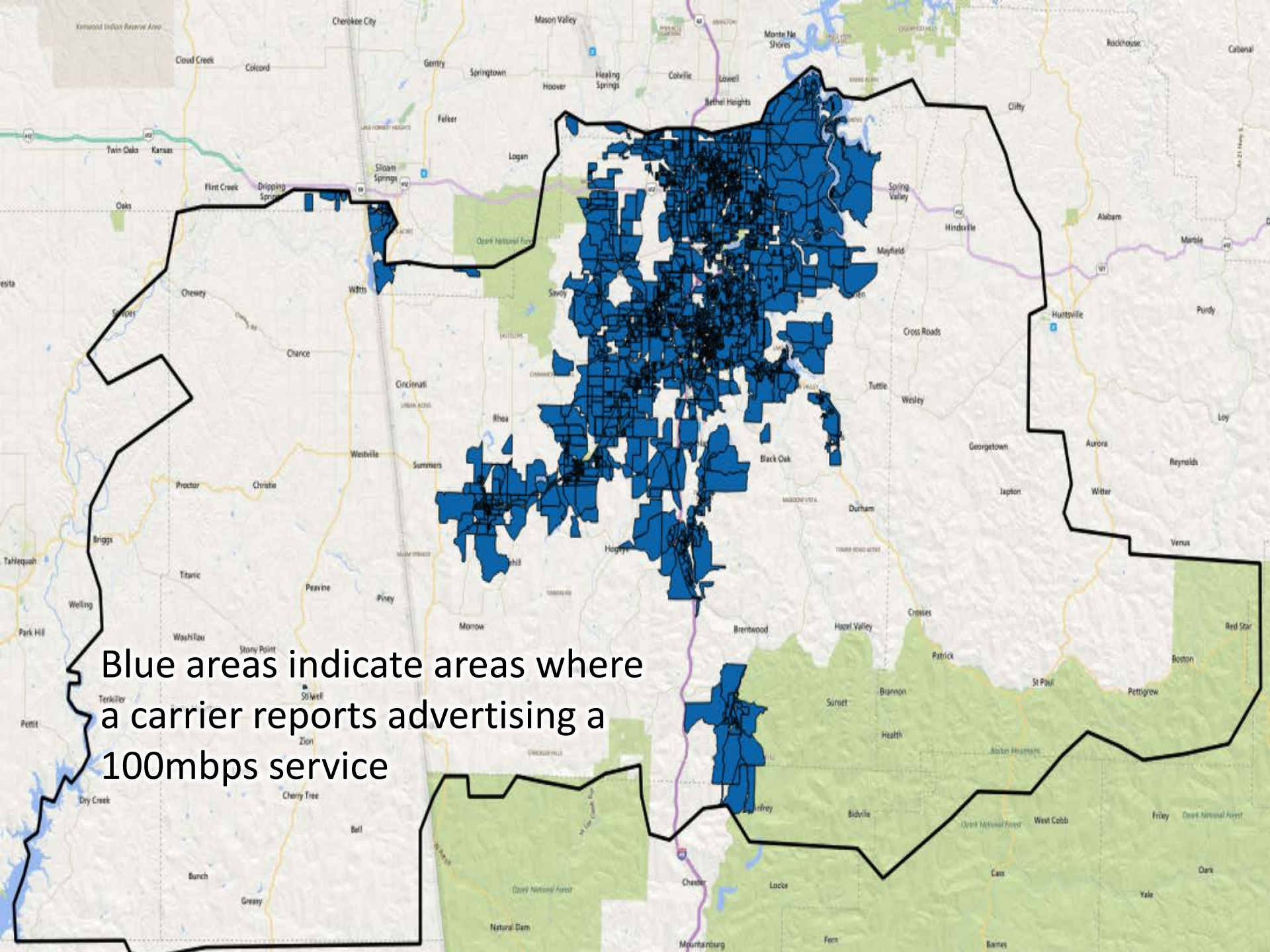
Blue areas indicate areas where a carrier reports advertising a 100mbps service

Deployment Progress -Timeline

- March 2016 - Project approval

- October 2016 - Construction start

- December 2016 - Data center complete and first subscriber online

- June 2017 – Television service launched

- October 2017 - 1000th customer connected

- December 2017 – Phase 1 complete, over 2,000 subscribers connected

ozarks
go

Fully deployed gigabit networks

Service Offerings Residential Rates

Internet
- $49.95 - 100mbps
- $79.95 - Gigabit

Television
- $65.95 - Basic
- $129.95 - Ultra

Phone
- $24.95 - Unlimited

$20 Bundle Discount

ozarks go

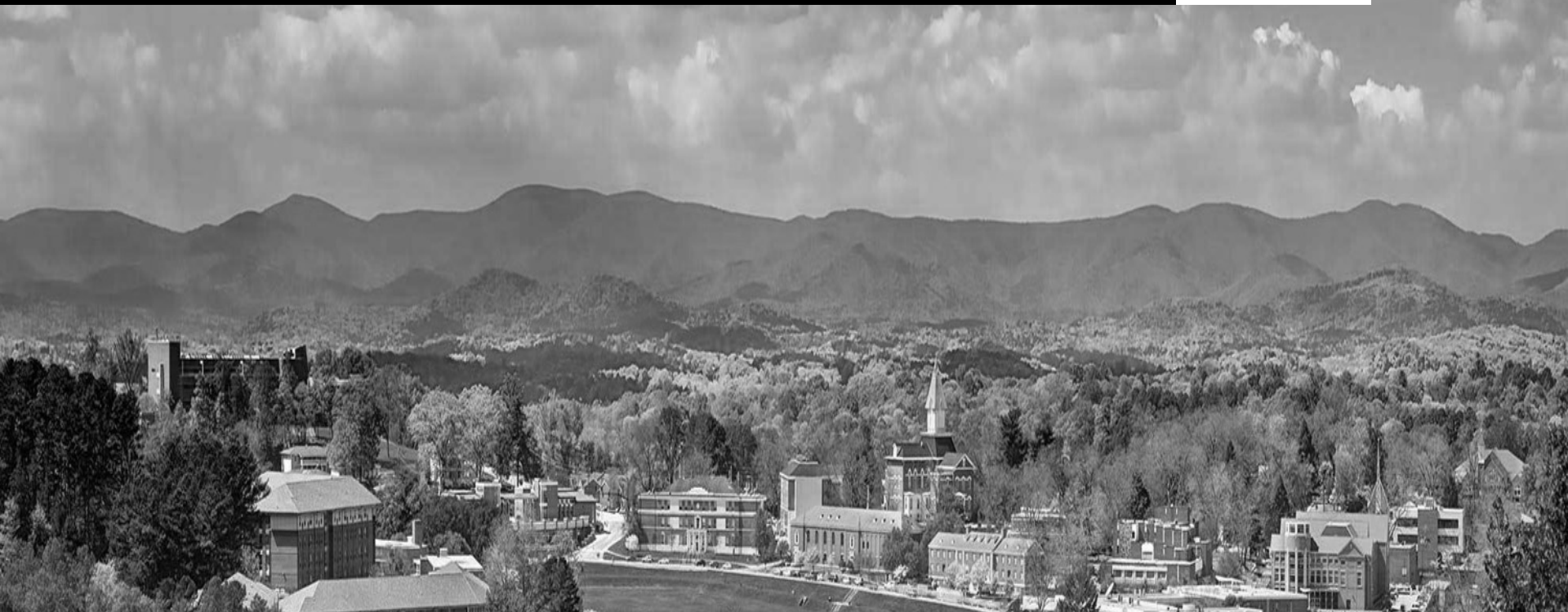# Community Benefits
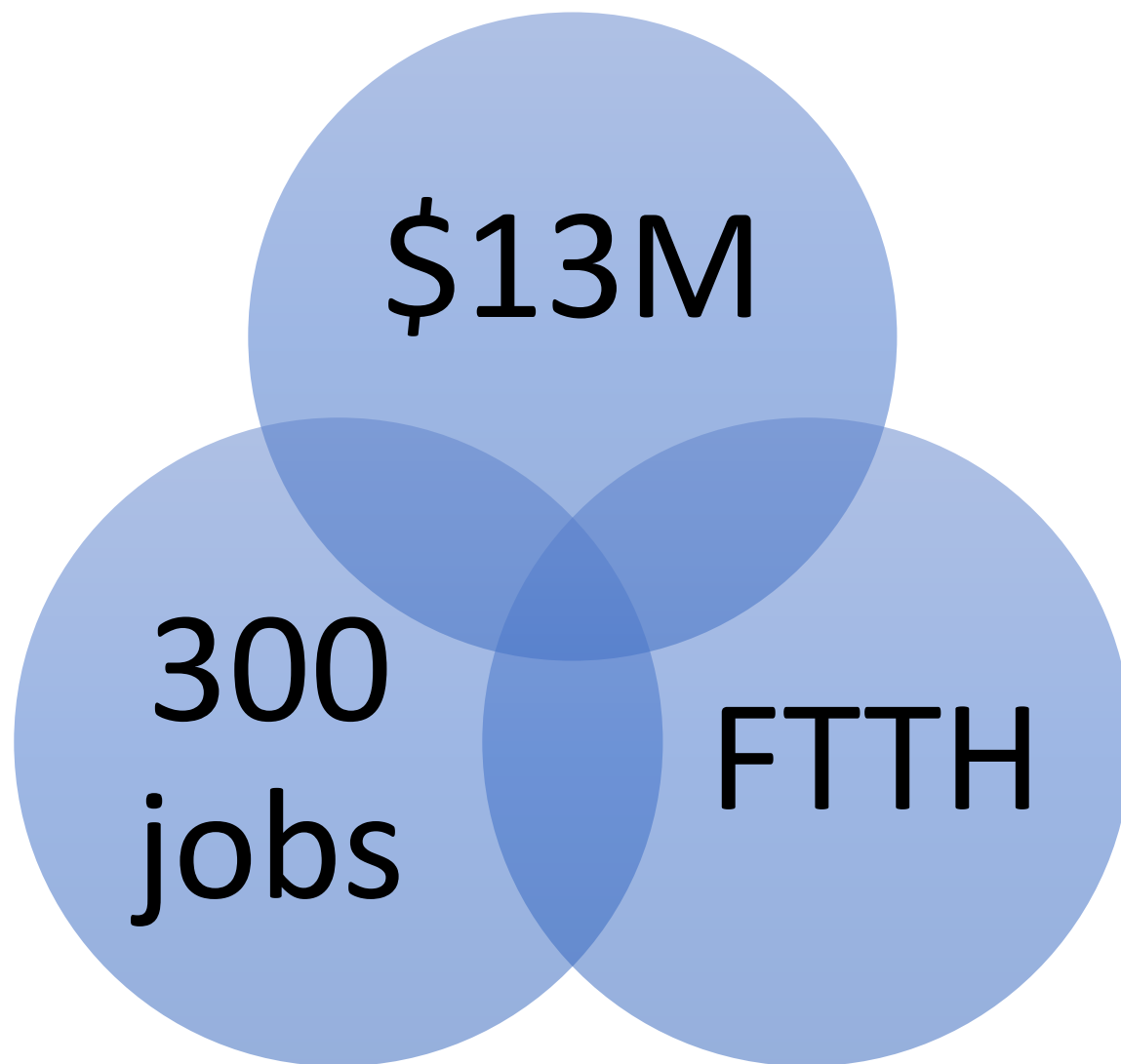
Randy Klindt

General Manager

OzarksGo

rklindt@ozarksgo.net

Presentations

- Brett Kilbourne, Vice President Policy and General Counsel, Utilities Technology Council

- Randy Klindt, Founder, Conexon; General Manager, OzarksGo

- **Paul Belk, President and CEO, North Georgia Network**

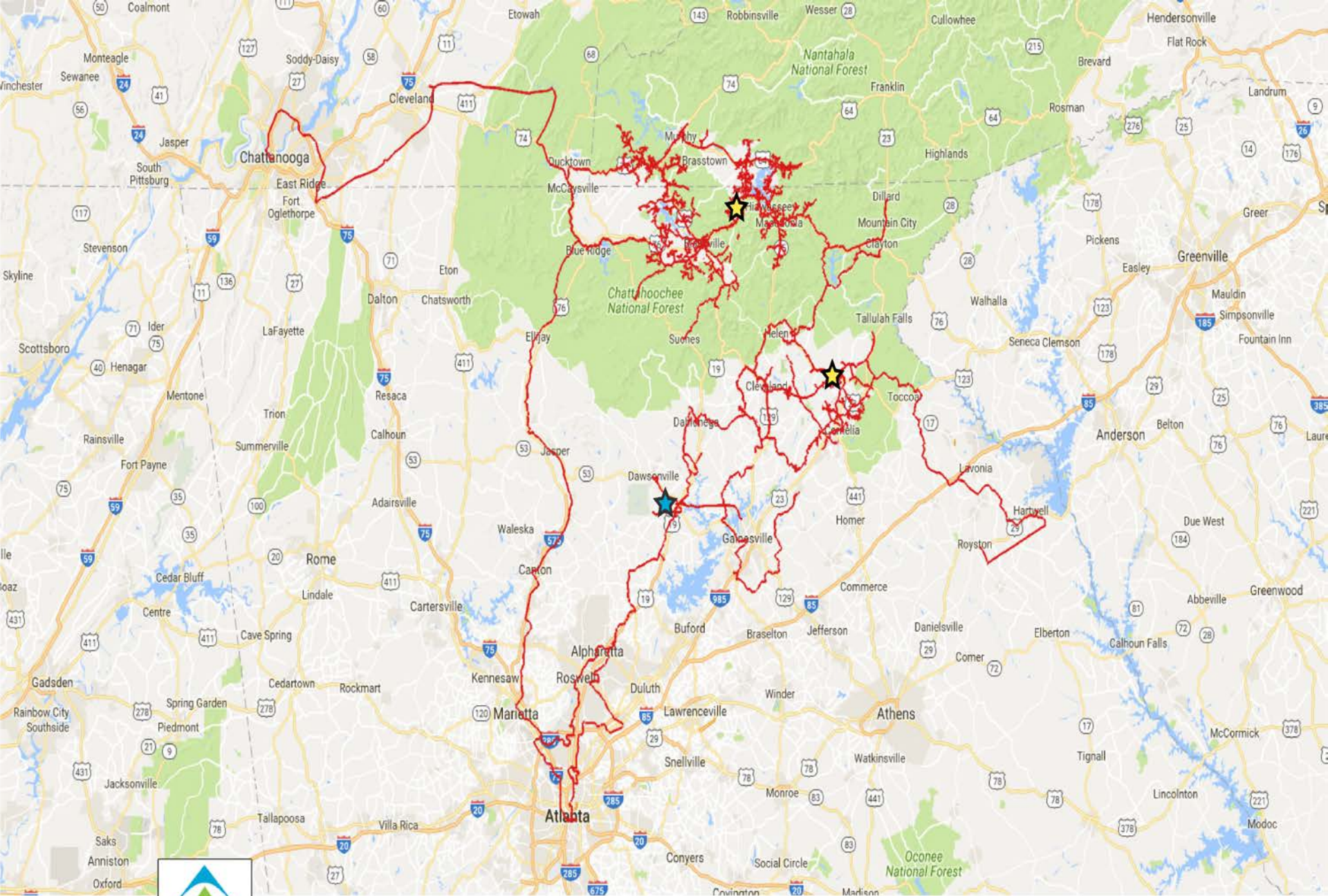ELECTRIC CO-OPS BRINGING FIBER TO RURAL AMERICA.

NGN

NGN IS

REGIONALFIBER OPTIC SYSTEM WITH FULLY-REDUNDANT 260 MILE CORE RING

MEMBER-OWNED COOP MANAGING 1,700 + MILES OF FIBER INFRASTRUCTURE

NEXT-GENERATION NETWORK FOCUSED ON COMMUNITY & ECONOMIC DEVELOPMENT

2017 NGN Network Map

⭐ Office Location   ⭐ Remote Operations Facility

9,500+ Subscribers

Network Uptime

100%

0%

99.999%
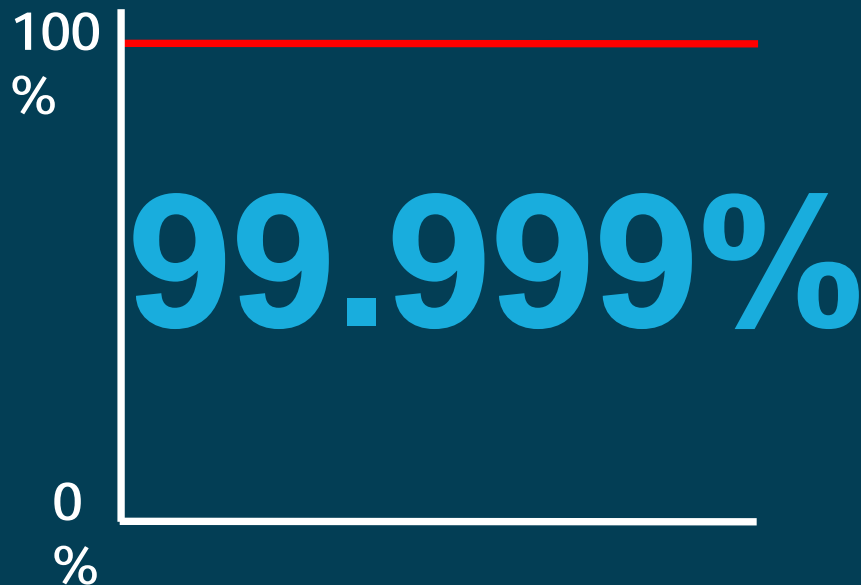
OVER

1,700

NETWORK

MILES

with GIG CAPACITY TO EVERYONE on net

HOW DID IT START?

A LACK OF BROADBAND CAPACITY CAUSED AREA COMPANIES TO CLOSE & LARGE MANUFACTURERS TO DEPART THE REGION.

CLOSURES RESULTED IN 2,200+ LOST JOBS.

ECONOMIC DEVELOPERS DESPERATELY LOOKED FOR A SOLUTION…

THE NGN STORY

In 2009, Blue Ridge Mountain EMC and Habersham EMC combined their utility resources and knowledge of the region to support the creation of NGN.

NGN completed its 260 mile core ring in 2011 and the first Core Point-of-Presence was installed in 2012.

Since the launch of the network, almost **10,000** of Blue Ridge Mountain EMC and Habersham EMC's electric customers have been able to receive high speed internet service.

THE NGN STORY

In 2012, NGN Connect (CLEC) was created as the retail service arm of NGN.

In areas where EMCs cannot meet the need for better broadband, NGN leases fiber from the EMC or builds its own and NGN Connect serves as the customer's ISP.

THE NGN MODEL

EMC/ Utility

Role: Dark Fiber Lessor

-Builds fiber infrastructure for electric smart grid to substations, member meters, and key plant facilities.

-Excess capacity leased to NGN.

NGN

Role: Dark Fiber Lessee / Wholesaler

-Leases dark fiber from Utility and lights it.

-Sells use of LIT fiber strands to service providers who want to provide quality broadband services to the community. ex. NGN Connect

NGN Connect

Role: Retail Internet Service Provider (CLEC)

-Buys access to LIT fiber strands from NGN.

-Sells reliable, high speed broadband services to Rural Americans who would have had no other option than the incumbent provider if not for the EMC/Utility.

For utilities, a regional network creates the opportunity for:

- **Greater Network Redundancy & Security**

- **Variance in Protect Paths**

- **Greater Network Capacity**

- **Another Revenue Source**

BENEFITS & OPPORTUNITIES

- Shared Resources:
    - Network Expertise
    - Network Operations Center
    - Contact Center
    - Marketing / Branding
    - Government Relations Efforts
- Consolidated Purchasing Agent
- Higher Level of Collective Bidding Power
- Regional & Statewide Multi-Location Businesses & organizations become attainable customer prospects.
- Infrastructure Support & Disaster Recovery

CONTACT

✉ Paul.Belk@ngn.coop

🐦 @ngnetwork

in NGN, Inc.

🌐 www.ngn.coop

Electric Co-ops Bringing Fiber to Rural America

Questions and Comments

- Please type your questions in the chat or Q&A box.

- Slides and Transcript will be posted on the BroadbandUSA website within 7 days after the webinar.

http://www2.ntia.doc.gov/

BroadbandUSA is available to help communities with their broadband efforts

BBUSA Resources:

- Public-Private Partnerships Guide
- Community Broadband Roadmap Toolkit
- Introduction to Stakeholder Outreach
- Using Partnerships to Power Smart Cities

For General Information:

📞 202-482-2048

✉️ broadbandusa@ntia.doc.gov

🖥️ http://www.ntia.doc.gov/broadbandusa

To Request Technical Assistance:

📝 Submit Intake Form

Broadband USA

Thank you for attending.

Tune in for the next Practical Conversations Webinar

Innovative Funding Solutions for Digital Inclusion Programs

January 17, 2018

2:00 pm EST

Registration is required for each webinar:

http://www2.ntia.doc.gov/ under *Events*