

A photograph of a yellow sign for KIT Carson Electric Cooperative Inc. The sign is mounted on a wall and has the company name written in black, serif, all-caps letters. The sign is slightly tilted. The background of the sign is a bright yellow, and the text is in a dark, bold font. The sign is set against a blue sky background.

Presentation for:

**Science and Technology
Committee**

Presented by:

**Luis A. Reyes Jr, Chief Executive Officer
Andrew Gonzales, Public Information Officer**

Overview

Kit Carson Electric Broadband Project:

- Will bring many more opportunities in the areas of Emergency Services, Education, Medical Fields, and Economic Development
- Kit Carson worked with the Local and Tribal communities to achieve great success in rural fiber optics deployment

Kit Carson Electric Cooperative (KCEC)

- ▶ Member-owned, non-profit electric distribution co-op
- ▶ Formed in 1937 and incorporated in 1944
- ▶ One of 17 co-ops serving rural New Mexico communities, second largest in the state
- ▶ Serves 29,484 members in Taos, Colfax and Rio Arriba counties including 2 tribes, Taos Pueblo and Picuris Pueblo
- ▶ Our Services
- ▶ Solar power: Own and operate 7 MW DG solar energy or 10% of load is solar powered and operates most advanced smart green grid in New Mexico, with an additional 3MW's in Angel Fire, Eagle Nest, and Carson
- ▶ Services: Electric, Internet, Telecommunications and Propane
- ▶ Current project: Fiber-to-the-Home implementation

“Owned by those we serve”

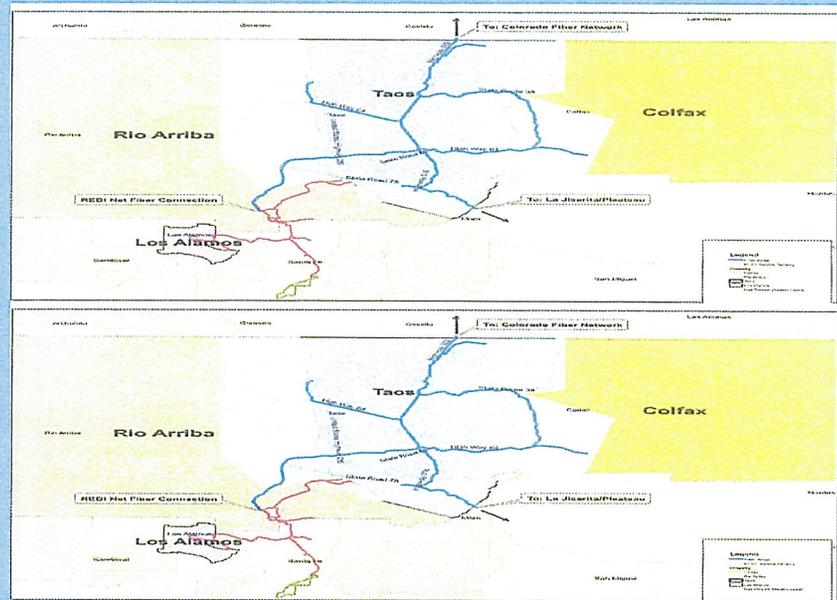


Fiber To The Home (FTTH) Project Executive Summary Objectives

- Revolutionize Northern New Mexico communities with affordable and accessible high-speed broadband service
- Create a model for rural communities

Greater Prosperity and Quality of life:

- 20,500 households
- 3,600 businesses
- 183 critical community institutions
- 2 Native American Pueblos



KCEC Project, Funding and Community Benefits including Economic Development

Deploy Fiber-To-The-Home Network & Prepare for Smart Grid

- Secure \$64M RUS funds to build and operate network
- Deliver 1 Gbps broadband service to 29 communities within 2,951 sq. mile area in Northern New Mexico
- Initiate smart grid for electric system
- Identify reliable partner responsible for network planning and design, deployment, maintenance and support



Community Benefit(s) and Economic Development

- The project to date, has created 405 jobs, 90% which have been local
- In total 30-45 permanent jobs have been created.
- Increased bandwidth availability
- The system upgrade project, which has made our electric service more reliable and safer has contributed **\$21,168,007.23**, including payroll to locals of **\$8,734,016.00**, rent utilities, meals and lodging.
- The solar array projects we have undertaken in order to make our community less dependent on fossil fuel generation have added \$24.5 million in construction spending in our communities. Most of the labors utilized to build these projects were from our local communities, including Amalia, Costilla, Questa, Penasco and Taos.

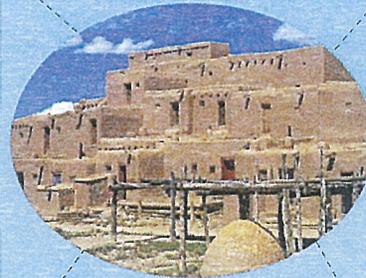
KCEC: The driving force for Broadband

Economic Development

- Job creation
- Business opportunities
- Sustainable economies
- Broadband-based companies



Taos Pueblo 1Gb



Kit Carson Electric Cooperative

High-Speed Advanced Infrastructure

- Medical community
- Research & education
- Local businesses
- Members choice
- Real-time power monitoring



Reliable Electric Grid

- AMI applications
- Smart grid services
- Efficient energy usage
- DG Integration (Renewables)

Bridge the Digital Divide

- Online learning
- Telemedicine
- Affordable access
- Public safety deploy NG911



Transforming to become an integrated provider is critical to securing future economic and future prosperity



Requirements for Northern New Mexico & KCEC

Providing Broadband to Underserved and Non Served

- ▀ Connectivity to the house
- ▀ Economic Development Engine
 - ▀ Virtual Job Creation
- ▀ Regional Approach
- ▀ Speed & Price options
 - ▀ Affordability & Accessibility to all
- ▀ Back office operations: - Customer care and billing
 - NOC
- ▀ Unbundled Services
 - ▀ Netflix, Apple TV, etc.
 - ▀ Voice (Voip)

What else can the Network do for us?

- ▀ Smart Meters
- ▀ Smart Thermostats
- ▀ Energy Efficiency programs
- ▀ Peak load management
- ▀ Electric Vehicle
- ▀ Substation Automation
- ▀ Distribution Automation
 - ▀ Solar inclusion (DG Option)
 - ▀ Grid Sensors
 - ▀ Auto Reclosers
 - ▀ Smart Outage Detection (Reliability)

CAF Funding: Latest News

2014 *

\$438M in grants

1. \$75M very high performance standards:
 - Broadband speeds of 25 Mbps down/5 Mbps up
2. \$15M for more rural areas:
 - Broadband speeds of 10 Mbps download/1 Mbps and 100 Mbps targeted w/ 100 Gbps usage allowance
3. \$10M for projects dedicated to serving extremely high-cost locations
 - Broadband speeds of 10 Mbps download/1 Mbps and 100 Mbps targeted w/ 100 Gbps usage allowance

2015 – as of 4/29/2015

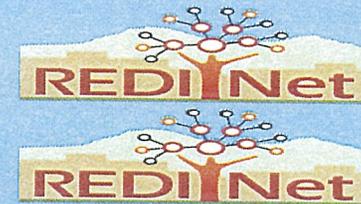
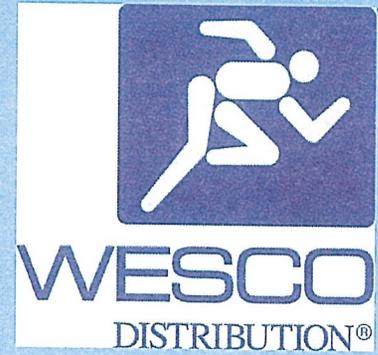
\$1.7B in grants and up to \$10B for the next 6 years

1. Carriers will have 120 days to determine whether or not to accept the funding on a state by state basis
2. After the 120 days, States declined by the Carriers, others will be offered on a competitive basis.

Additional Funding Sources

- ★
 - ▶ *Coordination Among Real Estate Agents and Builders for Economic Development* <http://www.grants.gov>
 - ▶ Community Connect program and the Distance Learning and Telemedicine program http://www.rurdev.usda.gov/utp_commconnect.html
 - ▶ *Distance Learning and Telemedicine Program Grants* http://www.rurdev.usda.gov/UTP_DLT.html
 - ▶ and <http://www.fcc.gov/encyclopedia/lifeline-program-low-income-consumers> and http://transition.fcc.gov/wcb/tapd/universal_service/highcost.html
 - ▶ *Schools and Libraries (E-rate) Program* http://transition.fcc.gov/wcb/tapd/universal_service/schoolsandlibs.html

KCEC Broadband Team



THANK YOU

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