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## CDFA-TEDC Webinar: Rural Broadband-Financing the Last Mile

# Welcome

The Broadcast will begin at 10:00 AM (Central)



for joining the conversation today. Send us your questions and comments!

## CDFA-TEDC Webinar: Rural Broadband-Financing the Last Mile **Moderator**



# **Genna Auteri**Coordinator, Research & Technical Assistance Council of Development Finance Agencies

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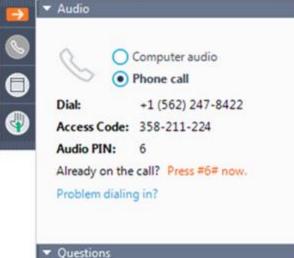


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File View Help -

Submit your questions to the panelists here.





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# CDFA-TEDC Webinar: Rural Broadband-Financing the Last Mile Panelists



Joe DeLeon
General Field Representative
USDA, Rural Development



**Jeff Reiman**Vice President of Business
Strategy
The Broadband Group



John Padalino
General Counsel & Chief Administrative
Officer
Bandera Electric Cooperative

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# CDFA-TEDC Webinar: Rural Broadband-Financing the Last Mile Panelist



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# Telecommunications Program Overview

Presented on 12/18/2019



# Rural Development Mission

**USDA Rural Development** 

Committed to helping improve the economy and quality of life in rural America.

Provide loans, grants, and loan guarantees that support essential services, such as:

- Housing
- Economic Development
- Health Care
- First Responder Services and Equipment
- Water, Electric, and Telecommunications Infrastructure

# Rural Development Background

Rural Development includes 3 agencies with unique programs and objectives:

- Rural Utilities Service (RUS)
- Rural Housing Service (RHS)
- Rural Business-Cooperative Service (RBS)
- Across the 3 agencies, Rural Development administers over 40 programs.
  - RUS Electric & Telecommunications programs are administered by National Office
  - RHS and RBS programs are administered by State & National Offices

# Telecommunications Program History

From ele	ectricity to broadband
1935	Rural Electrification Administration (REA) created and began providing financing to promote rural electrification
1949	REA received authority to finance telephone service in rural communities
1995	Evolving from the REA, the Rural Utilities Service (RUS) required all financed telecommunications networks have the capacity to deliver broadband
2010 to present	RUS has provided over <b>\$6 billion</b> in loans and grants to build out broadband infrastructure in rural areas

# Rural Broadband Loan Programs

Telecommunications
 Infrastructure Loan Program

 Rural Broadband Access Loan Program



#### Telecommunications Infrastructure Loan Program

- Loans finance new and improved telecommunications infrastructure, primarily for the benefit of rural populations of 5,000 or less
- Loans may serve non-rural subscribers in some cases
- Applications are accepted <u>year round</u>
- Applications are submitted through the RD Apply online application system
- Historically, \$690 million has been available for this program each fiscal year

For more information, go to:

https://www.rd.usda.gov/programs-services/telecommunications-infrastructure-loans-loan-guarantees





#### Standard Loan Terms include:

- 2 Year Principal Deferral
- Interest Rate at the Cost-Of-Money
- Loan Maturity Life of the Facilities Financed Plus 3 Years

Staff can assist and review loan applications before submission

#### Rural Broadband Access Loan Program

- Loans finance the construction or improvement of broadband infrastructure to provide service at the **Broadband Lending Speed** in rural areas of 20,000 or less
- At least 15% of the households in the service area must be unserved (meaning no access to Broadband Service)
- Service area cannot have 3 or more incumbent service providers
- Application windows are defined each fiscal year in a <u>Federal Register</u> notice
- Applications are submitted through the RD Apply online application system

Based on the funding announcement for FY 2019:

Broadband Service and Broadband Lending Speed was defined as 25 Mbps (download) and 3 Mbps (upload)

For more information, go to:

https://www.rd.usda.gov/programs-services/farm-bill-broadband-loans-loan-guarantees





#### Standard Loan Terms include:

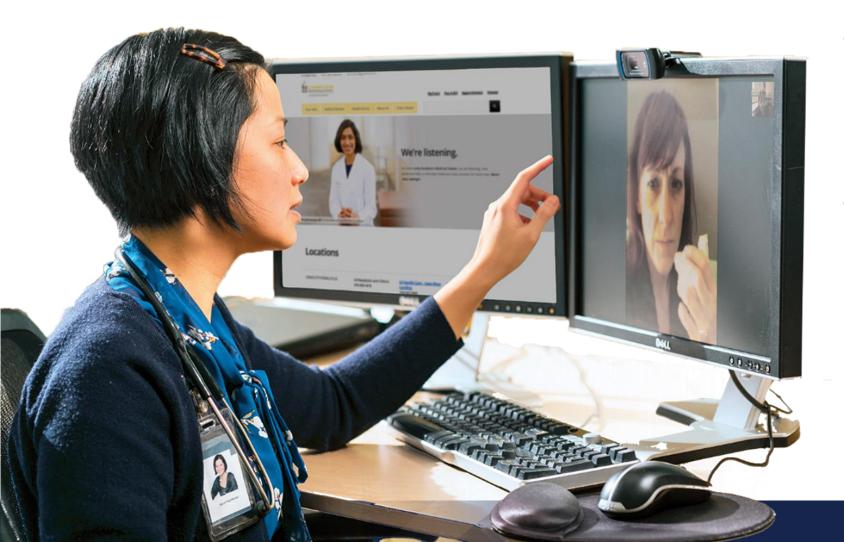
- 2 Year Principal Deferral
- Interest Rate at the Cost-Of-Money
- Loan Maturity Life of the Facilities Financed Plus 3 Years

Special Terms and Conditions may be requested if more than

### 50% of the households are unserved, including:

- Up to 4 Year Principal Deferral
- 25% extension to the amortization period of the loan up to 35 years

## Telecommunications Grant Programs



Community Connect Grants

 Distance Learning & Telemedicine Grants

#### Community Connect Grant Program

- Grants fund the costs of deploying service at the Broadband Grant Speed in rural areas of 20,000 or less
- Entire service area must be unserved (meaning no access to Broadband Service)
- 15% matching requirement
- Application windows are defined each fiscal year in a <u>Grants.gov</u> notice

Based on the funding announcement for FY 2019:

- Grants from \$100,000 to \$3 million
- Broadband Service was defined as 10 Mbps (download) and 1 Mbps (upload)
- Broadband Grant Speed was defined as 25 Mbps (download) and 3 Mbps (upload)

For more information, go to:

http://www.rd.usda.gov/programs-services/community-connect-grants

#### Distance Learning and Telemedicine Grant Program

- Grants fund equipment and some broadband facilities to provide distance learning or telemedicine services to students or patients in rural areas of 20,000 or less
- 15% matching requirement
- Application windows are defined each fiscal year in a <u>Grants.gov</u> notice

Based on the funding announcement for FY 2019:

- Grants from \$50,000 to \$500,000
- Special consideration areas focused on addressing the opioid epidemic or supporting STEM education

For more information, go to:

http://www.rd.usda.gov/programs-services/distance-learning-telemedicine-grants

Rural Broadband Pilot Program

Rural eConnectivity (ReConnect)
Program offers:

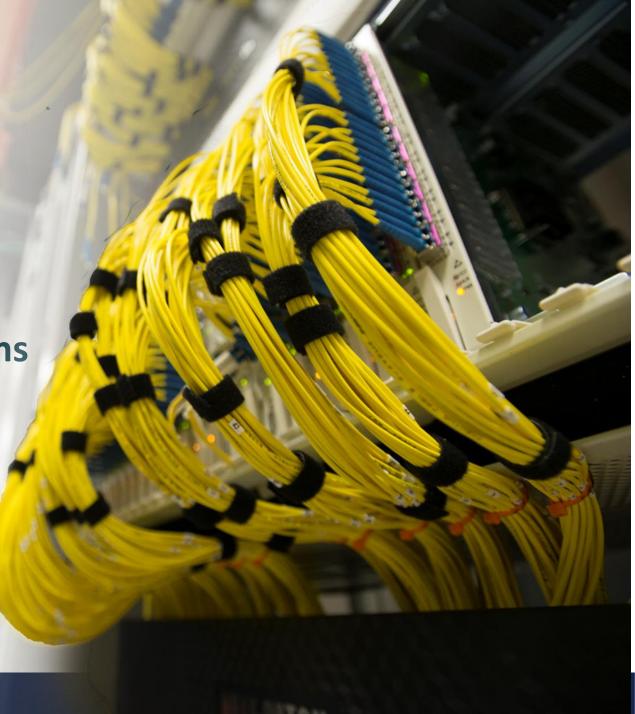
Loans

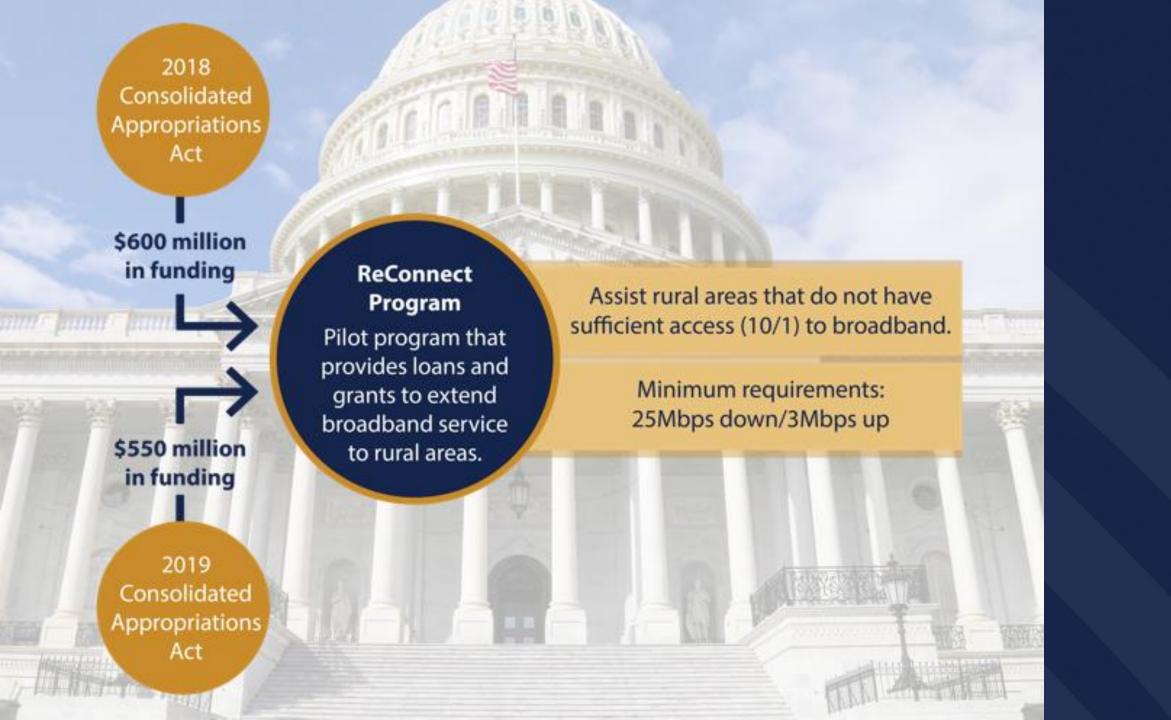
50 Loan/50 Grant Combinations

Grants

 RUS Webinar (Dec 18, 2019) 12PM CST

https://www.usda.gov/reconnect/education











Buildout Speed 25/3 Mbps minimum

25/3 Mbps minimum, incentive for higher speeds

25/3 Mbps minimum, incentive for higher speeds

Terms

Max award: \$50 million 2% Interest Rate Max award: \$50 million 50/50 Loan/Grant UST Rate Max award: \$25 million 25% match

Application Review

Open (non-competitive)

**Competitive Scoring** 

**Competitive Scoring** 

Round 2 Federal Funds

\$200 million

\$100 million grant + \$100 million loan

\$200 million

# Round 1 Application Summary

#### 100% Grant

- 78 applications submitted requesting \$522 million
- Representing 34 U.S. States and 151,000 households

#### • 50% Grant/50% Loan

- 53 applications submitted requesting \$637 million
  - \$342 million dollars for Grant
  - \$295 million dollars for Loan
- Representing 32 U.S. States and 148,000 households

#### 100% Loan

- 15 applications submitted requesting \$258 million
- Representing 22 U.S. States and 165,000 homes and businesses

#### Total: 146 applications submitted requesting over \$1.4 billion

• 41 U.S. States

# ReConnect Program Timeline



# ReConnect Program Outreach

• The Agency will host a series of webinars and workshops that will provide information and technical assistance specific to the ReConnect Program.

Register for upcoming events on the ReConnect website at <a href="https://www.usda.gov/reconnect/events">https://www.usda.gov/reconnect/events</a>.

# Special Provisions for Substantially Underserved Trust Areas (SUTA)

At the discretion of Administrator, RUS can modify certain loan terms or application requirements, which may include:

- 1. Interest rates as low as 2%, extended amortization period, and/or priority processing
- 2. Loan interest rates as low as 2 percent;
- 3. Waiver of certain documentation requirements regarding non-duplication of service;
- 4. Waiver of matching funds or credit support requirements for loans;
- 5. Extension of the time period in which loans are repaid; and
- 6. Providing the highest priority for funding to eligible projects that will serve trust areas.

For more information on SUTA, read 7 CFR 1700 Subpart D.

#### Highlighted Projects in Texas

- 2017: \$24.8 million Telecommunications Infrastructure Loan
  - **Central Texas Telephone Cooperative** is constructing 568.5 miles of Fiber-to-the Premises and install necessary attendant electronics in 7 of its 17 exchanges.
- 2018: \$391,000 Distance Learning and Telemedicine Grant
  - Info-Net Consortium is installing video-conferencing equipment to connect students and communities to colleges providing dual-credit courses, STEM-based education, and career skills. The project will impact approximately 1,200 students, their teachers, and thousands of residents across 5 central Texas counties.
- 2019: \$2.3 million Community Connect Grant
  - **Comcell, Inc.** is constructing a fiber to the premises network and a wireless broadband network in Newport, Texas. The proposed area covers 73 square miles and 150 households in Clay, Jack, and Montague counties. The project will also establish 6 computer access points with free internet access within the Newport community center.

#### Telecom Investments in Texas

Since 2010, RUS has invested over \$336 million in projects serving Texas rural residents:

Program	Funds Awarded
Telecommunications Infrastructure Program	\$125.8 Million
Distance Learning and Telemedicine Program	\$9.2 Million
Community Connect Grant Program	\$4.1 Million
Broadband Initiatives Program	\$197.8 Million
Grand Total	\$336.9 Million



#### **Program Investments in Texas**

Program	Projects Approved	Funds Awarded
Telecommunications Infrastructure Program	9	\$125,787,290
Distance Learning and Telemedicine Program	31	\$9,225,749
Community Connect Grant Program	3	\$4,148,250
Broadband Initiatives Program	12	\$197,783,773
Grand Total	55	\$336,945,062

#### **List of Projects Serving Texas**

#### **Telecommunications Infrastructure Program**

Awardee ID	Awardee Name	Award Amount	% Serving State	Estimated Funds Awarded	Fiscal Year
TX0549	Central Texas Telephone Cooperative, Inc.	\$24,789,000	100%	\$24,789,000	2017
TX0654	Alenco Communications, Inc.	\$14,261,000	100%	\$14,261,000	2016
TX0551	Brazos Telephone Cooperative, Inc.	\$13,450,000	100%	\$13,450,000	2015
TX0559	Santa Rosa Telephone Cooperative, Inc.	\$10,303,000	93%	\$9,581,790	2014
TX0576	Community Telephone Company, Inc.	\$26,396,000	100%	\$26,396,000	2014
TX0633	Ganado Telephone Co., Inc.	\$6,575,000	100%	\$6,575,000	2013
TX0522	Mid-Plains Rural Telephone Cooperative, Inc.	\$2,590,000	100%	\$2,590,000	2012
TX0578	Coleman County Telephone Cooperative, Inc.	\$22,540,000	100%	\$22,540,000	2011
AR0514	Southwest Arkansas Telephone Cooperative, Inc.	\$22,418,000	25%	\$5,604,500	2010
		ı	Total	\$125,787,290	

#### **Distance Learning and Telemedicine Program**

Awardee ID	Awardee Name	Award Amount	% Serving State	Estimated Funds Awarded	Fiscal Year
TX0780	Glen Oaks Hospital, Inc.	\$228,304	100%	\$228,304	2019
TX0781	Plainview Foundation for Rural Health Advancement, Inc.	\$112,926	100%	\$112,926	2019
TX0782	Shannon Clinic	\$74,709	100%	\$74,709	2019
TX0705	Southwest Texas Junior College	\$500,000	100%	\$500,000	2018
TX0705	Southwest Texas Junior College	\$473,177	100%	\$473,177	2018
TX0729	INFO-NET Consortium	\$391,000	100%	\$391,000	2018
TX0775	Texas Tech University Health Sciences Center	\$499,227	100%	\$499,227	2018
TX0779	Winters HC Operator LLC	\$358,975	92%	\$329,060	2018
TN0755	Quorum Health Corporation	\$485,395	10%	\$48,540	2017
TX0776	Northwest Texas Healthcare System	\$427,113	100%	\$427,113	2017
TX0777	Texas Rural Education Association	\$499,198	100%	\$499,198	2017
TX0777	Texas Rural Education Association	\$391,510	100%	\$391,510	2017
TX0775	Texas Tech University Health Sciences Center	\$430,780	100%	\$430,780	2016
NE0732	Virtual Periop Care, LLC	\$236,846	25%	\$59,212	2014
NY0728	Finger Lakes Migrant Health Care Project, Inc.	\$231,329	10%	\$23,133	2014
TX0729	INFO-NET Consortium	\$235,308	100%	\$235,308	2014
TX0745	Region XIV Education Service Center	\$288,192	100%	\$288,192	2014
TX0753	Education Service Center Region IX	\$277,035	100%	\$277,035	2014
TX0769	Region 4 Education Service Center	\$200,151	100%	\$200,151	2014
TX0774	Gonzales Healthcare Systems Foundation	\$299,370	100%	\$299,370	2014
TX0773	Ranger College	\$322,504	100%	\$322,504	2012
TX0729	INFO-NET Consortium	\$446,176	100%	\$446,176	2011
TX0742	Education Service Center Region XI	\$224,082	100%	\$224,082	2011
TX0747	Education Service Center Region XV	\$228,489	100%	\$228,489	2011
TX0747	Education Service Center Region XV	\$415,453	100%	\$415,453	2011
TX0758	Education Service Center Region 12	\$491,250	100%	\$491,250	2011
TX0768	Crane County Hospital District	\$101,500	100%	\$101,500	2011

#### **Distance Learning and Telemedicine Program**

Awardee ID	Awardee Name	Award Amount	% Serving State	Estimated Funds Awarded	Fiscal Year
TX0769	Region 4 Education Service Center	\$335,607	100%	\$335,607	2011
TX0770	12th Armored Division Memorial Museum Foundation, Inc.	\$238,633	75%	\$178,975	2011
TX0771	Education Service Center, Region 20	\$318,000	100%	\$318,000	2011
TX0772	Associated Builders & Contractors Merit Shop Training Program, Inc., dba Craft Training Center of the Coastal Bend	\$375,769	100%	\$375,769	2011
		,	Total	\$9,225,749	

#### **Community Connect Grant Program**

Awardee ID	Awardee Name	Award Amount	% Serving State	Estimated Funds Awarded	Fiscal Year
TX1412	Comcell, Inc.	\$2,307,250	100%	\$2,307,250	2019
OK1411	Texhoma Fiber, LLC	\$978,000	100%	\$978,000	2013
OK1411	Texhoma Fiber, LLC	\$863,000	100%	\$863,000	2013
			Total	\$4,148,250	

#### **Broadband Initiatives Program**

Awardee ID	Awardee Name	Award Amount	% Serving State	Estimated Funds Awarded	Fiscal Year
AR1102	Windstream Corporation	\$1,613,509	100%	\$1,613,509	2010
OK1118	Medicine Park Telephone Company	\$2,658,210	10%	\$265,821	2010
TX1113	Valley Telephone Cooperative, Inc.	\$78,614,021	100%	\$78,614,021	2010
TX1114	PRIDE Network, Inc.	\$44,207,986	100%	\$44,207,986	2010
TX1114	PRIDE Network, Inc.	\$18,714,859	100%	\$18,714,859	2010
TX1115	XIT Rural Telephone Cooperative, Inc.	\$2,112,950	100%	\$2,112,950	2010
TX1115	XIT Rural Telephone Cooperative, Inc.	\$2,991,106	100%	\$2,991,106	2010
TX1116	Wes-Tex Telephone Cooperative, Inc.	\$29,655,883	100%	\$29,655,883	2010
TX1117	Blossom Telephone Company, Inc.	\$2,673,240	100%	\$2,673,240	2010

USDA is an equal opportunity provider, employer, and lender.

#### **Broadband Initiatives Program**

Awardee ID	Awardee Name	Award Amount	% Serving State	Estimated Funds Awarded	Fiscal Year
TX1119	Mid-Plains Rural Telephone Cooperative, Inc.	\$2,809,000	100%	\$2,809,000	2010
TX1120	Electronic Corporate Pages, Inc.	\$1,891,181	100%	\$1,891,181	2010
TX1122	Hill Country Telephone Cooperative, Inc.	\$12,234,217	100%	\$12,234,217	2010
		,	Total	\$197,783,773	

.....

#### **Notes on the Numbers**

Dollar figures for all programs except the Broadband Initiatives Program (BIP) are shown as the original award amounts. Given the closeout of BIP in 2016, BIP awards that invested in broadband infrastructure are reported as the total funds that were advanced to the recipient. Fully rescinded, technical assistance, and satellite BIP projects are not reported here. In addition, any awards that were fully rescinded within the same fiscal year of obligation are not reported here.

If an awardee proposes to serve more than one state, we provide an estimate of the impact on each state. These estimates are based on the number of counties in the project's service area. For example, if a project serves three counties in Kentucky and one county in Tennessee, the award is estimated to invest 75 percent of funding in Kentucky and 25 percent in Tennessee. Therefore, on Kentucky's state report, only the portion invested in Kentucky is included in the totals.

Additional program information is available on the USDA Rural Development website at www.rd.usda.gov.



# Joe DeLeon Texas General Field Representative for the Telecommunications Program

Jose.Deleon@usda.gov

(512) 288-5820 Office

(512) 809-8524 Cell - - Preferred Contact Number





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**Jeff Reiman**Vice President of Business
Strategy
The Broadband Group

See all of CDFA's resources online at www.cdfa.net/resources



Presented by: Jeff Reiman

Principal

December 18, 2019

# Understanding the Utility Lease Model

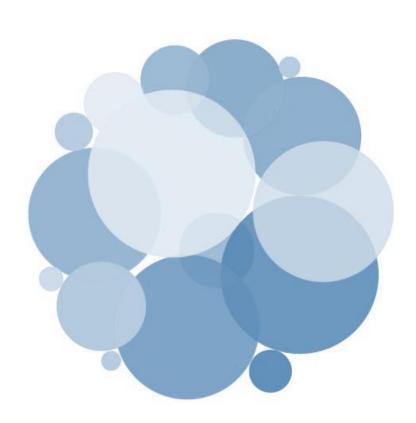
### The Reality of Today's Telecommunications Industry

Gigabit broadband Internet is now a sought after and increasingly expected amenity for residents and businesses,

#### But...

- Consolidation has reduced competition.
- Incumbent Providers (Cable and Telephone) have significant advantages and leverage.
- Providers deploy traditional networks that meet *their interests*, not always those of a community, utility, or municipality.

Broadband, properly planned, is this generation's most important amenity.



# If Broadband is so important, why aren't networks being upgraded?

How Networks Are Built Today

Telephone Company

Cable Company

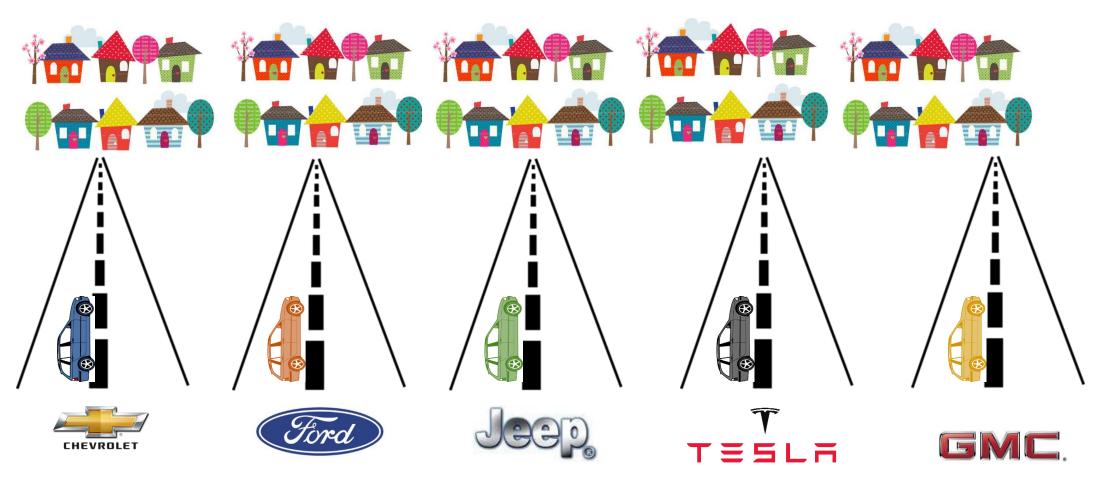
Electric Utility

An inefficient approach to network design and construction makes the economics of infrastructure expansion challenging.

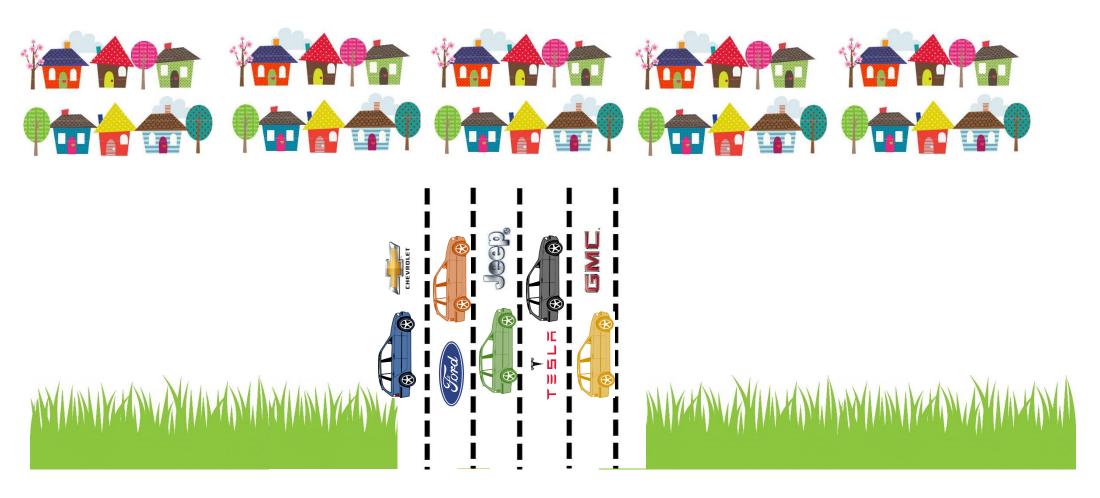




## The Old Way of Connecting to the Internet Different Providers on Different Roads



## A New Model for Connecting Different Providers on the Same Freeway





Utility constructs a fiber network for internal operational needs (e.g., grid modernization).

#### **Lease Excess Capacity**

The Utility leases purposefully engineered excess dark fiber capacity to network tenants (Service Providers).

#### **Tenants Provide Services**

Leasing Providers (Tenants) use leased capacity to provide Broadband services to residents and/or businesses.

#### **Citywide Broadband Achieved**

Gigabit Broadband becomes an important community amenity and economic development driver.



## Huntsville, Alabama





## <u>Huntsville Utilities Broadband Network</u> (with Google Fiber as Anchor Tenant)

- Constructing a Fiber Network for internal utility communication needs (e.g., Grid Modernization)
- Leasing excess capacity to bring new competitive providers to the market (such as Google Fiber).
- Google Fiber (leasing from HU) provides residential Gigabit Internet.
- Broadband as a community amenity and differentiator.

## Springfield, Missouri





#### <u>City Utilities Fiber Network</u> (with CenturyLink as Anchor Tenant)

- Constructing a Fiber Network for internal utility communication needs (e.g., Grid Modernization)
- Leasing excess capacity to bring new competitive providers to the market (such as CenturyLink).
- CenturyLink (leasing from City Utilities) provides residential Gigabit Internet.
- Broadband as a community amenity and differentiator.



## A Nationally Recognized & Replicable Model

#### **Multichannel** News

NEWS BLOGS EVENTS SLIDESHOWS TECHNOLOGY VIDEO PRIFEED NEED TO KNOW RESOURCES TV JOBS NEWSLETTER SUBSCRIB

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## Now What?

# Action Items for Municipalities & Utilities



Explore the interest of the electric utility in deploying fiber for their internal operational needs.



Evaluate existing infrastructure and identify connectivity gaps.



Design a **Network Expansion Plan** that meets Grid Modernization requirements.

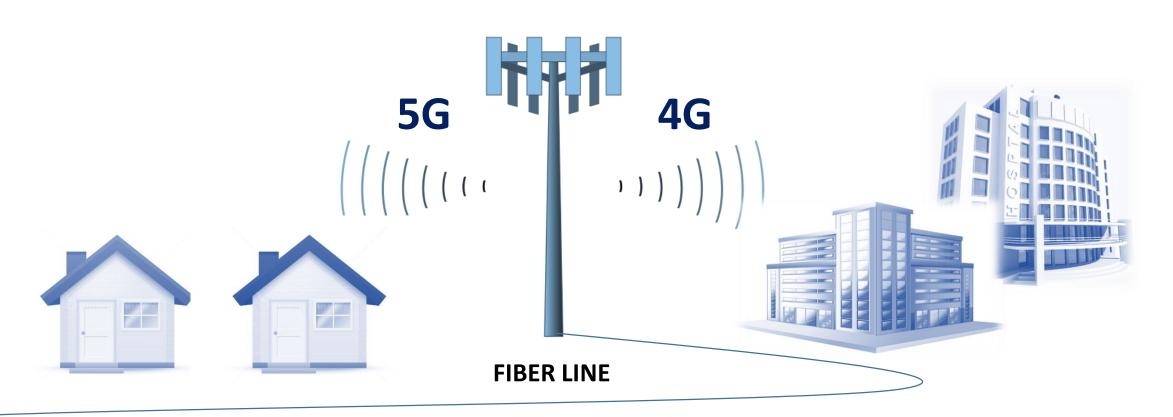


Explore **potential for lease of excess dark fiber** capacity to qualified
Anchor Tenants (non-exclusive).



Create the vision that **technology will be a cornerstone of the community**.

### What About Wireless?



### Innovative Thinking & Transformative Planning

The economics behind the Utility Lease Model have been carefully designed, turning a cost center into a revenue generating asset for a Utility, and lowering the traditional barrier of entry for Competitive Providers to serve a community.



JEFF REIMAN, PRINCIPAL



702.405.7000



jreiman@broadbandgroup.com



broadbandgroup.com



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## **John Padalino**General Counsel & Chief Administrative Officer Bandera Electric Cooperative

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## Bandera Electric Cooperative

CDFA-TEDC WEBINAR: RURAL BROADBAND - FINANCING THE LAST MILE

**DECEMBER 18, 2019** 

10:00 AM -11:30 AM CENTRAL

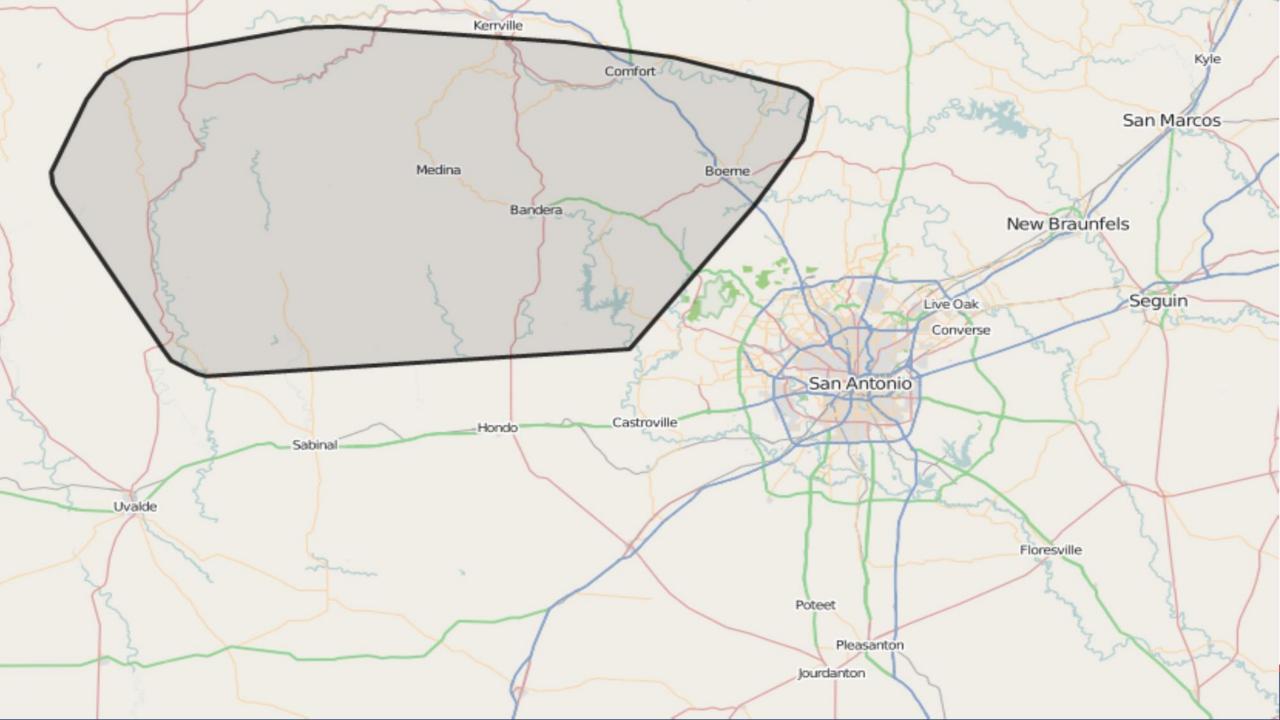


## Lighting the Grid to Empower our Members

REIMAGINING RURAL AMERICA

## Bandera Electric Cooperative

- Incorporated in 1938 more than 80 years in operation.
- Electric Customers 37,034, Internet Customers 4,200, Telephone(VOIP) Customers
   552 and 120 Solar customers across seven counties in Central Texas.
- Roughly 120 employees operate and maintain more than 4,536 miles of power lines, 1000 miles of fiber.
- Member owned, non-profit with focus on customer service and providing a variety of cost effective energy and electricity related products and services



### Vilification of Rural America

"They, as a group, are bad people who have made bad life decisions . . . Some, I assume, are good people. But this nostalgia for some imagined pastoral way of life is stupid and we should shame people who aren't pro-city."

- UC Berkeley graduate instructor on Twitter, November 2019

#### <u>According to Campus Reform</u>, the Twitter thread:

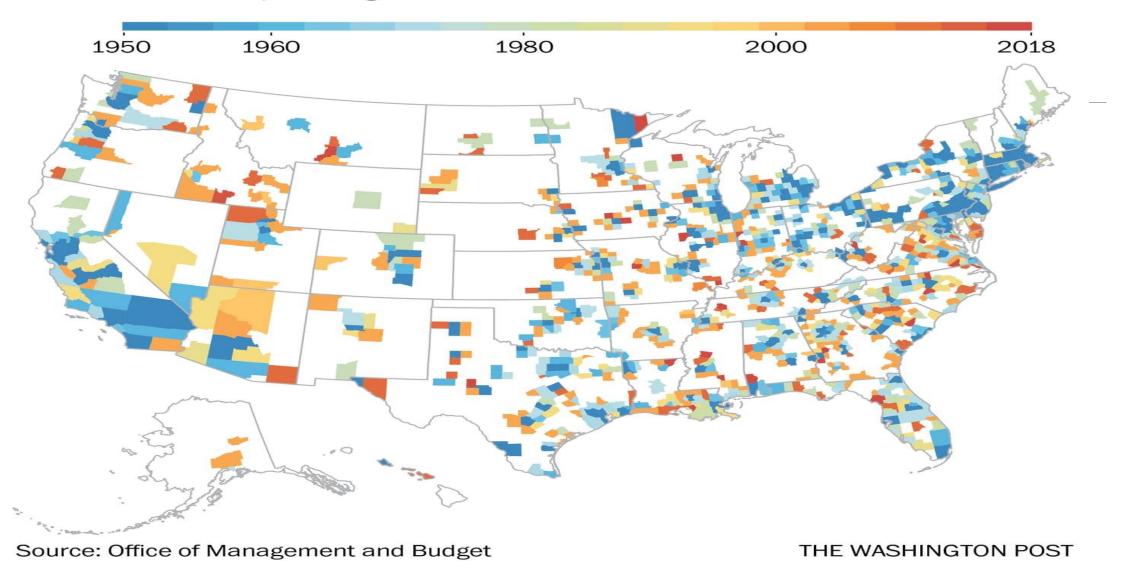
- Advocated against affordable health care solutions for rural Americans
- Same goes for rural broadband
- And gas taxes
- "It should be uncomfortable to live in rural America. It should be uncomfortable to move there."

## Vision: Reimagining Rural America

- Washington Post-Kaiser Family Foundation poll conducted in 2017 found:
  - About 6 in 10 U.S. adults who consider themselves "rural" live in an area classified as metropolitan.
  - ❖ 3 in 4 of the adults who say they live in a "small town" are also in a metro area.
- The line between urban and rural is getting blurred intentionally and expectations are the same no matter rural or urban.
- Bandera County is considered Urban in some definitions used by the federal government because people in Bandera commute to SA for work.
- Empowering people with the necessary infrastructure to work from home, get access to high quality education and healthcare; in their community with sustainable economic growth where they feel secure That's **Reimagining Rural America** and that is our **Vision**.

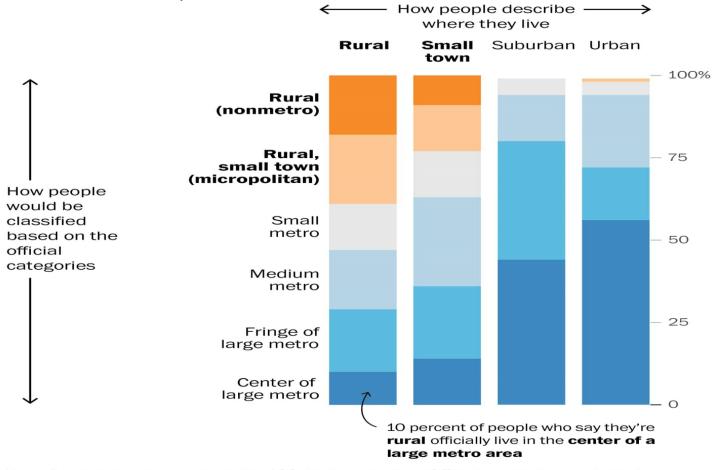
#### Year each county was classified as metro

Based on a widely used government definition first used in 1950.



#### Official classifications vs. people's perceptions

Where people who describe themselves as "rural" or "suburban" in a poll actually live, according to official statistics. (Percentages are based on columns)



Note: Percentages may not total to 100 due to rounding. Official categories are based on classifications from the National Center for Health Statistics

Source: Washington Post-Kaiser Family Foundation poll conducted in 2017 THE WASHINGTON POST

#### 2014 Member Survey



Products and services achieving a positive impact BEC would have with its members:

- High speed internet service
- Selling and installing cost competitive alternative or renewable electricity such as solar, wind or geothermal
- Financing alternative or renewable electricity such as solar, wind or geothermal.



Almost one half (48%) of respondents have considered solar power or wind turbines. Three-fourths (75%) of respondents think that Bandera Electric should offer energy generated from renewable sources.



Over three-fourths (77%) think that Bandera Electric should provide financial incentives such as rebates for their member owners who install renewable sources of electricity.

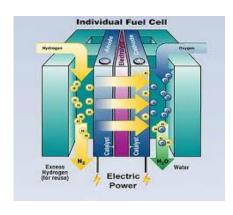
### The Adoption rate of Technology is increasing

REGARDLESS OF RURAL OR URBAN OUR FUTURE SUCCESS WILL BE BASED ON OUR ABILITY TO ADAPT AND MEET MEMBER EXPECTATIONS

## Adoption Rates of technology will create disruption to existing business models



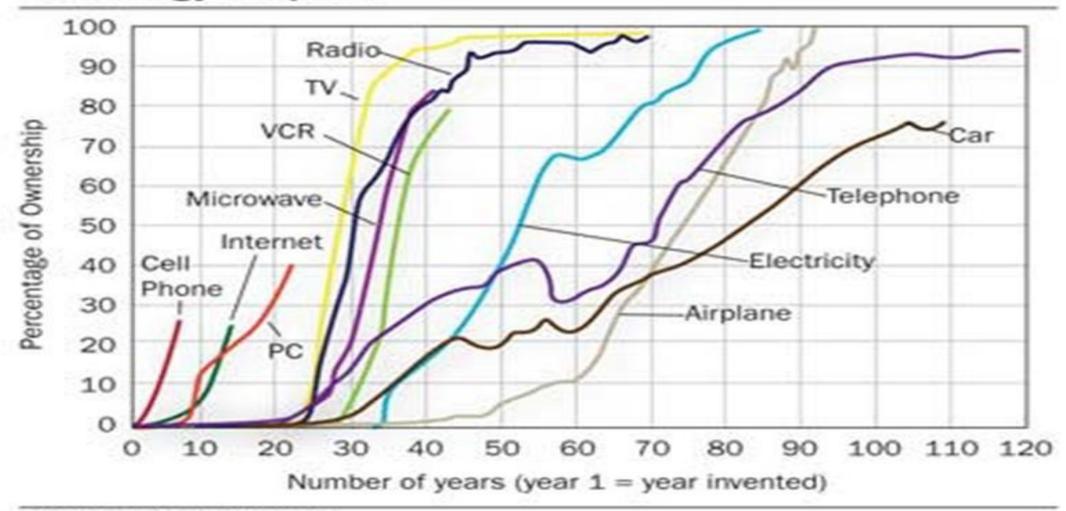




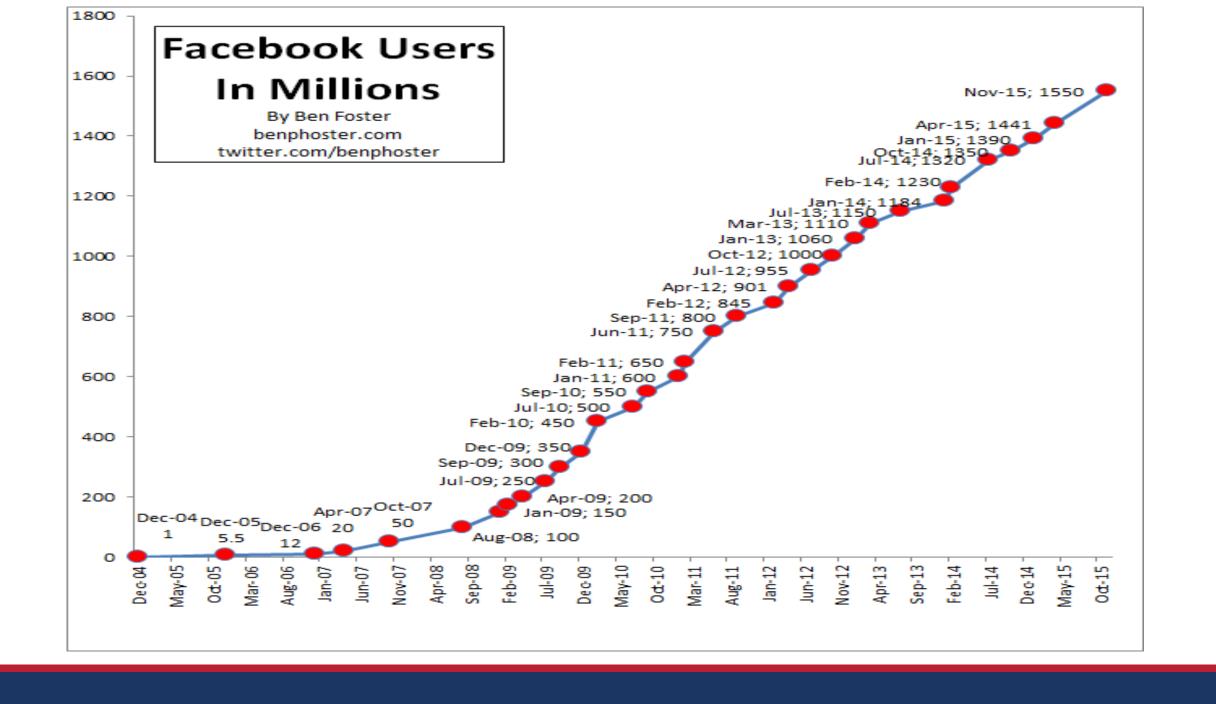




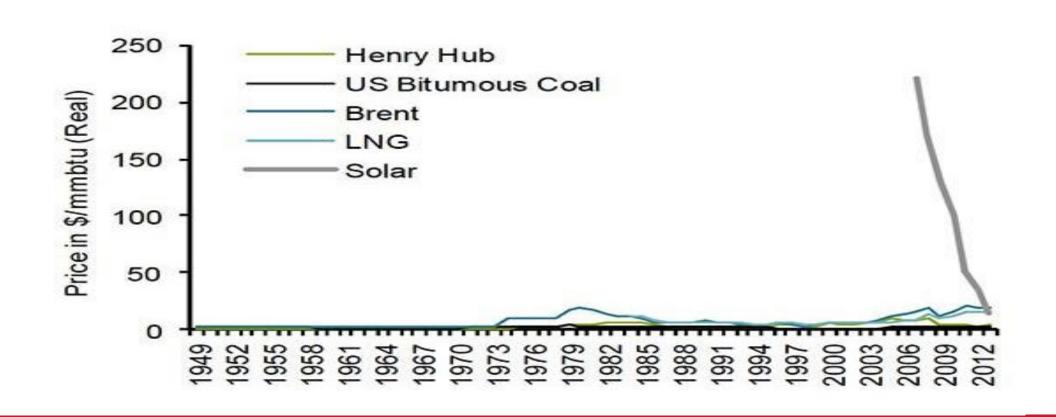
#### **Technology Adoption**



Source: Forbes Magazine



## Solar and Wind are Technologies -not Fuel



4. The cost of US residential rooftop solar installation dipped below \$3/watt.



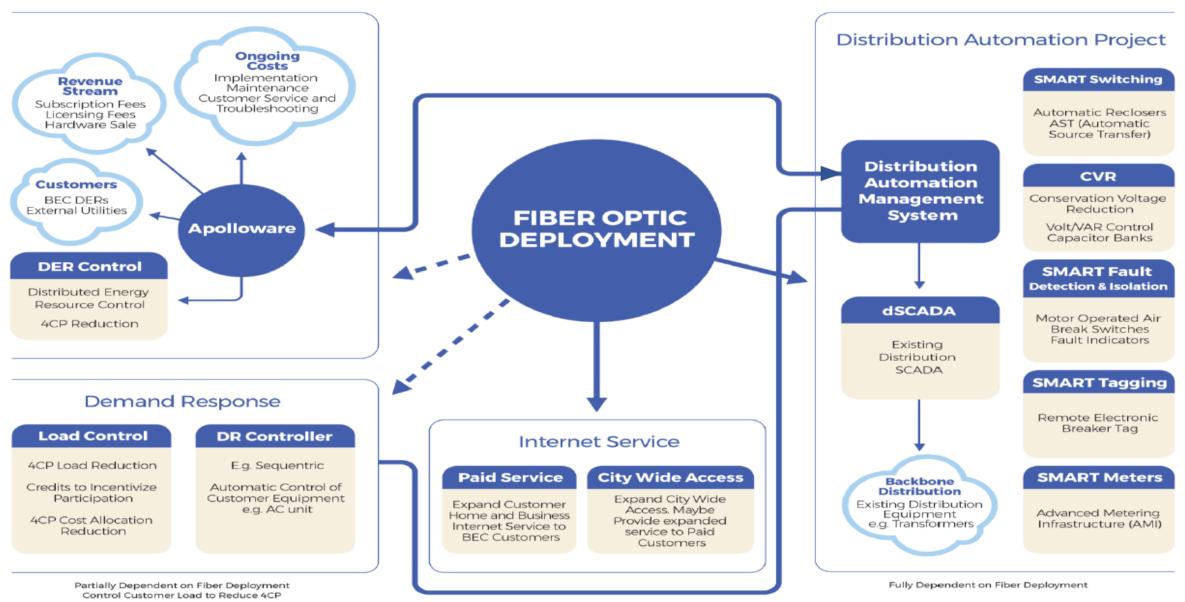
Source: @business; Read full article

## MISSION OF BEC: LIGHTING THE GRID TO EMPOWER OUR MEMBERS

- In 2017 BEC developed its Smart Grid Initiative to fully automate its electric system and provide Internet access to our members.
  - ✓ More than 4500 miles of electric lines connecting 36,507 electric accounts
  - ✓ More than **1000** miles of fiber optic network automating more than **16%** of our electric system and providing availability of high speed Internet access to more than **46%** of our members.
- By 2022 majority of the BEC electric system will be completely automated and Internet access will be available to 82% of our members.
- As a result of this capital expansion we are seeing increased electrical and economic growth that's Lighting the Grid to Empower Our Members

#### BEC Distribution Automation – SGI Analysis

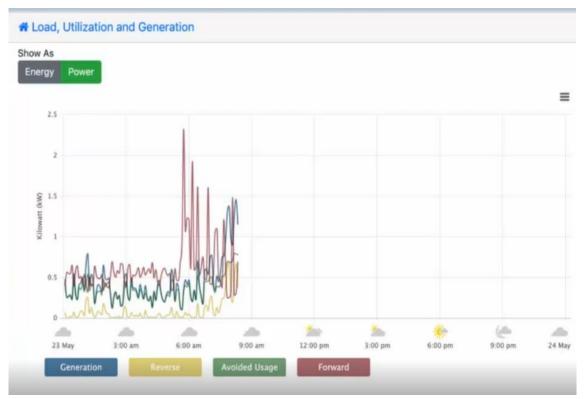
#### **SMART GRID INITIATIVE (SGI)**

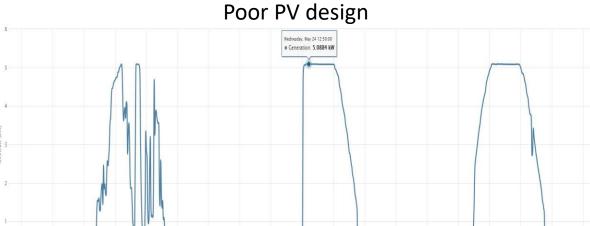


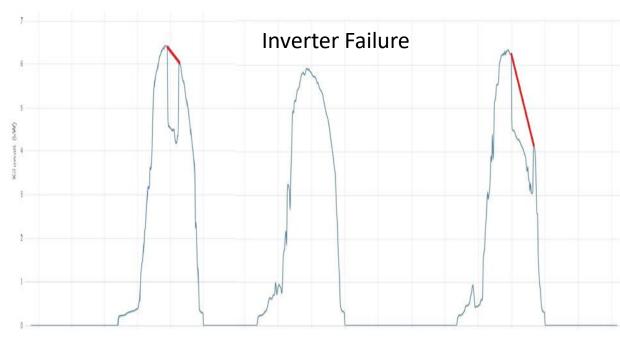
Fully Dependent on Fiber Deployment

## Energy Analytics

20% of all Solar installations are not performing due a variety of issues

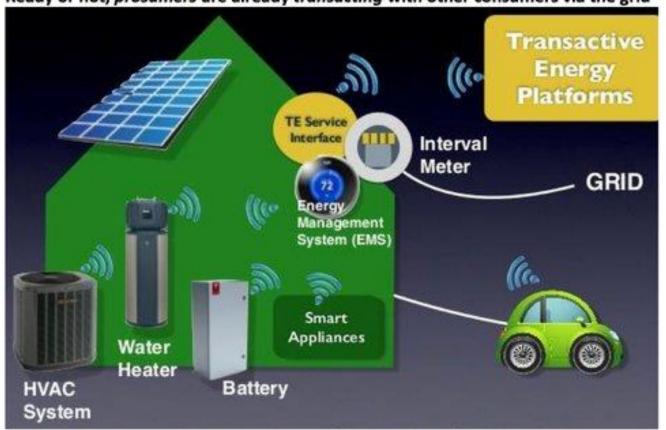






## Disruption can also provides opportunities

Ready or not, prosumers are already transacting with other consumers via the grid



EV – will improve energy sales

BEC Fiber – will allow us to improve electric system reliability and increase revenue

BEC Solar – will provide low cost alternatives for local sustainable generation and reduce BEC energy costs

Energy Storage – will improve energy efficiency and reliability and increase revenue

Apolloware – will allow our members to benefit from improve energy efficiency through Energy Analytics/Al and increase revenue

Source: Transactive Energy, S.Barrager & E. Cazalet, on Apple iBooks, 2014

### Economic Impact of Broadband in Rural Areas

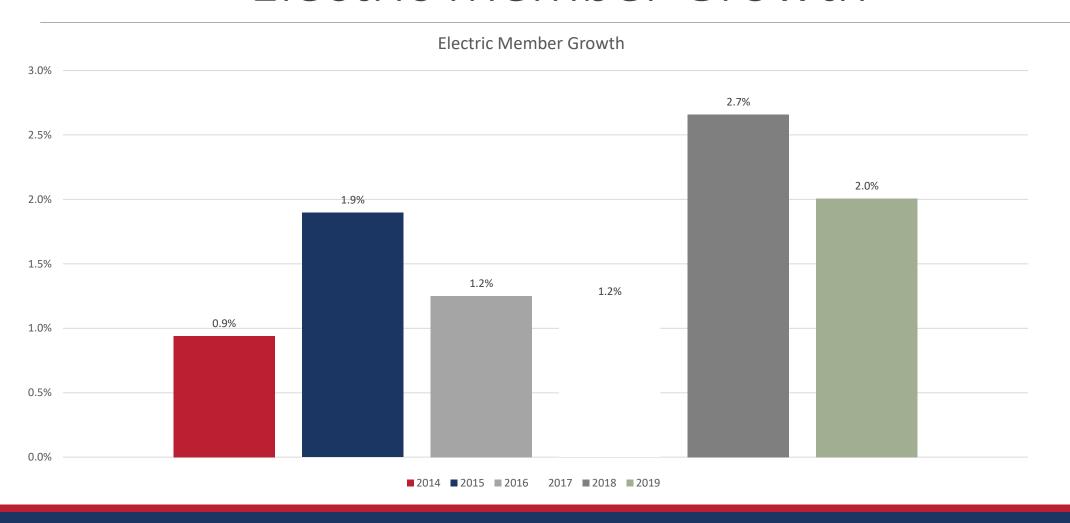
**TEXAS' RURAL SMALL BUSINESSES:** ECONOMIC IMPACT OF INCREASED ACCESS TO DIGITAL TOOLS



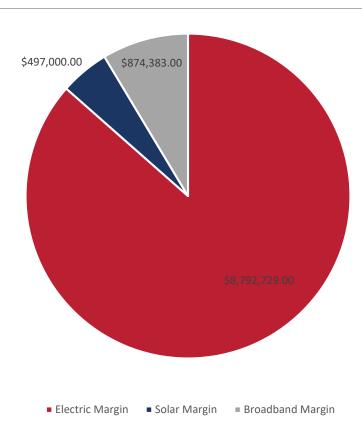
Digital technologies anchored by high-speed internet can help rural small businesses generate sales, expand their reach in the global marketplace and make purchases from larger vendor networks. The joint report estimated that increased access to digital tools over three years could generate nearly \$6.7 billion in increased annual sales for rural Texas businesses, while creating more than 23,000 additional Texas jobs

- Texas State Comptroller, Oct. 2019

## Electric Member Growth

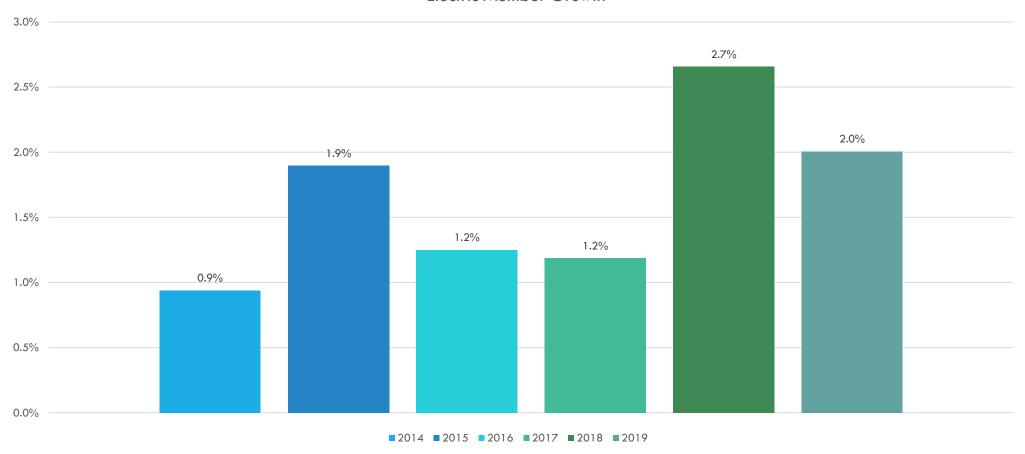


#### 2019 Net Margin



## ELECTRIC MEMBER GROWTH

Electric Member Growth



## BEC Adaptive Business Model based on SGI

- BEC Solar Provide Renewable options for members Community Solar, Roof Top and Ground Mount, Solar/Storage solutions.
- BEC Fiber Deploy Fiber infrastructure to improve electric operations(DA and DR) and provide Broadband access
- BEC Energy Analytics Using Apolloware to capture and analyze energy data as a subscription service for DER customers

- Improved relationship with PV customers-20% of non BEC solar installations have performance issues
- All Member Benefit by BEC Solar Reduced 4CP and Losses >\$250k annually
- PV customers use more kWh
- 50% of new PV customers want energy storage
- >\$1.5M annual Solar revenue
- >\$3.5M annual BB revenue
- More than 40% penetration rate
- Electric member growth rate doubles because of offering fiber BB service

## Bandera Electric Cooperative

#### **Contact information**

#### Mailing Address:

PO Box 667

Bandera, Texas

78003-0667

#### Phone:

Toll Free: 1.866.226.3372

Fax: 830.460.3030

#### Find BEC on Social Media



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for joining the conversation today. Send us your questions and comments!

### CDFA-TEDC Webinar: Rural Broadband-Financing the Last Mile

## **Questions?**



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# CDFA-TEDC Webinar: Rural Broadband-Financing the Last Mile Upcoming Events

#### Fundamentals of Economic Development Finance WebCourse

January 29-30, 2020 | 12-5 PM Eastern

#### **Intro Bond Finance WebCourse**

February 26-27, 2020 | 12-5 PM Eastern

#### Intro Tax Credit Finance WebCourse

March 25-26, 2020 | 12-5 PM Eastern

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