Connect America Fund Phase II Auction
NARUC
February 2018

About WISPA

- 800+ members
- Provide fixed wireless broadband service to more than 3,000,000 people in rural, suburban and rural communities
  - Average number of subscribers = 1,200
  - 75% of operators have 10 employees or fewer
- Often the *only* terrestrial provider in a community
- Unsubsidized service funded through private, at-risk capital investment

Fixed Wireless Deployment

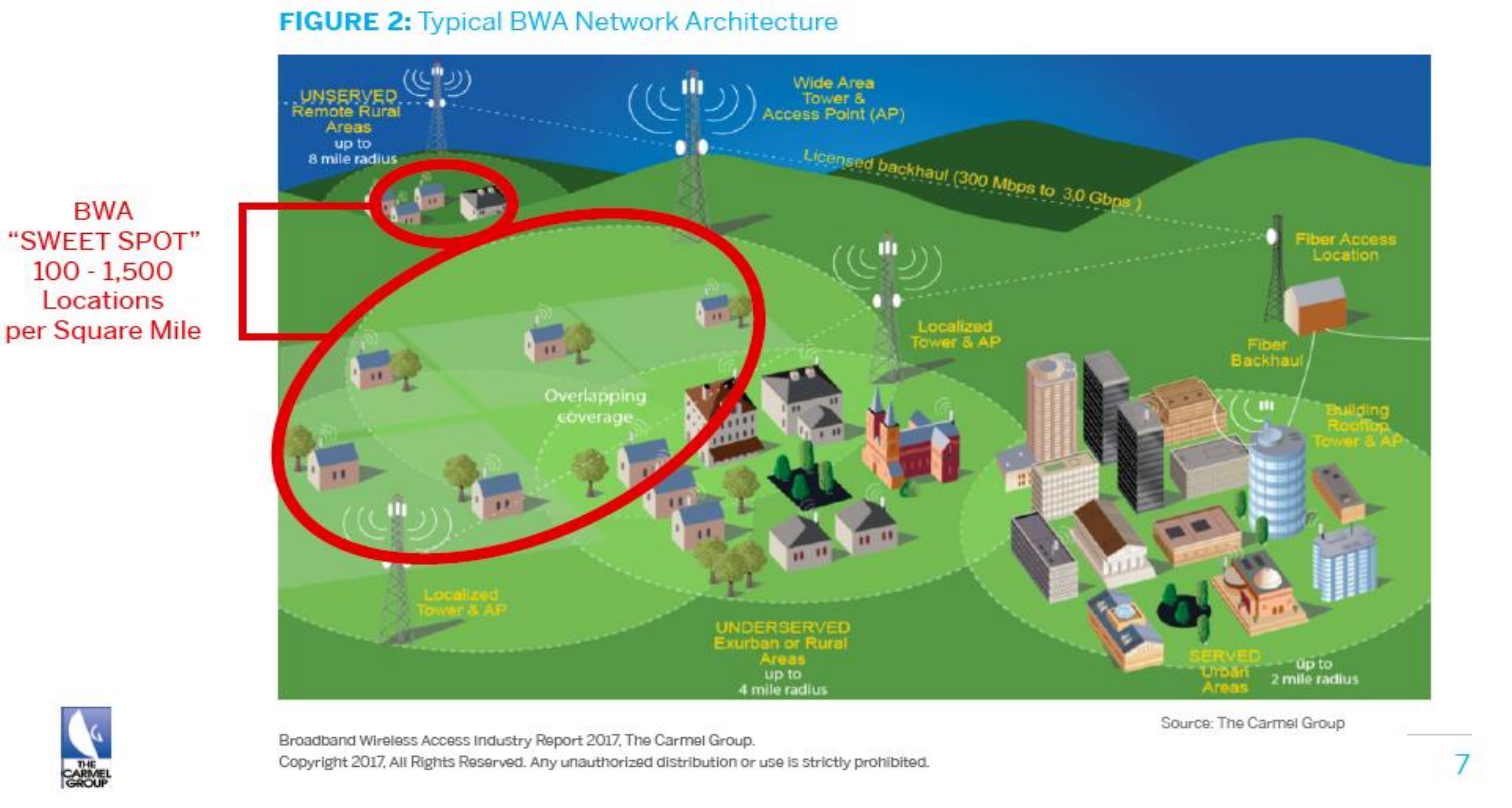

FIGURE 2: Typical BWA Network Architecture

Cost-Effective

FIGURE 6: Residential Consumer Broadband Comparative Economics

	FIBER	CABLE	SATELLITE	MOBILE	BWA
CAPEX/SUB RELATIVE TO BWA (1)	70	45	10.5 (2)	21	10
SPEED (3)	1 Gbps	150 Mbps	12-35 Mbps (4)	10–12 Mbps	100 Mbps
UPGRADE COSTS	MODEST Only the fiber remains the same	HIGH Complete CPE & network change	LOW/HIGH Incremental upgrades until the satellite fails	HIGH Complete device & network change	MODEST Incremental upgrades in CPE and network
BROADBAND ARPU	$69	$42	$61	$59	$51
PAYBACK PERIOD	60 months	38 months	12 months	21 months	11.5 months

Sources: Wisper ISP, National Rural Telecommunications Cooperative, and The Carmel Group.

(1) This is a relative presentation comparing all of the technologies to BWA, which is set to an index value of 10. See above for explanation.
(2) Does not include the cost of satellites.
(3) Max speeds; most service providers are not yet offering max speed. For cable, the DOCSIS 3.0 standard is capable of 1 Gbps. For BWA, point-to-point links and millimeter-wave, point-to-multipoint connections can provide more than 1 Gbps to end users.
(4) Anticipated typical speed.

CAF Priority:
Provide meaningful opportunity to participate in auction

1

Reduce “short-form” financial and gating criteria

2

Promote technology neutrality

3

Simplify auction process

The CAF Auction

Things we like

- Relaxed letter of credit and audited financial statement requirements
- Bidding by census block groups
- Nationwide auction that does not favor particular states
- Opportunity to reconcile location count

Things we don't like

- Gigabit Tier and over-weighting
- Interpretation of anti-collusion rules that can limit consulting
- Financial screen that injects uncertainty
- Package bidding that favors larger companies

A Step Forward or Unmet Expectations?

- Time has been both a friend and an enemy
  - The 2011 CAF order encouraged WISPs to deploy to more and more unserved areas so they would *not* be subject to CAF support and potential competition with larger, subsidized carriers
  - Process allowed FCC staff to become better educated
  - Fixed wireless technology advances has made CAF more accessible for WISPs
  - Use of year-old December 2016 Form 477 data means that subsequent deployment is not credited

Benefits of WISP Participation

- Combination of spectrum and CAF support will . . .
  - Stimulate deployment of affordable broadband solutions by the small companies that are poised to invest
  - Stimulate investment from capital resources not historically available to WISPs
  - Reduce support levels
  - Foster competition and market entry
  - Accelerate the country’s leadership in broadband deployment and innovation

But some will sit out

- Eligible census blocks not located near their operations
- Lack sufficient scale and resources to handle due diligence, application and reporting obligations
- Do not want the federal government to be their business partner
- Unable to retain knowledgeable attorneys and consultants
- Unwilling to cease M&A discussions during auction with third parties that might involve bidding and bidding strategies

Thanks!

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CONNECT AMERICA FUND PHASE II AUCTION

Chelsea Fallon

Rural Broadband Auctions Task Force

Federal Communications Commission

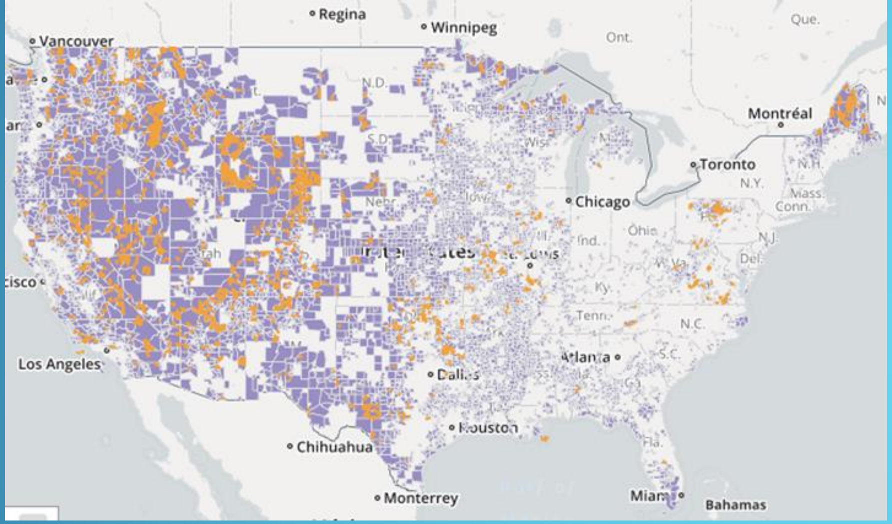
NARUC Winter Policy Summit

February 13, 2018

OVERVIEW

- Will award up to $1.98 billion over 10 years
- Support for fixed broadband and voice
- Open to different technologies
- Reverse auction
- Winning bidders must become ETCs and submit a Letter of Credit after the auction

ELIGIBLE AREAS



Map and list on FCC website: **https://www.fcc.gov/maps/caf2-auction-final-areas**

- Eligible census blocks grouped into census block groups (CBGs) for bidding
- 30k CBGs, 210k blocks, 975k locations
- Where price cap carriers declined model support and other areas
- Each CBG has reserve price and number of locations

SERVICE OBLIGATIONS

- Offer service to locations in the CBG
  - 40% of locations by year 3
  - Additional 20% in each subsequent year
  - 100% of locations by year 6
- Data on locations served filed with USAC
- Voice and broadband services rates must be reasonably comparable to those in urban areas
  - See Urban Rate Survey data

LOCATION SERVICE OBLIGATIONS

Example in Michigan

Census Block Groups (CBGs) Won in Michigan	Number of Eligible Census Blocks	Locations Determined by the Model	Actual Locations On The Ground
261450101001	2	5	3
261450101002	4	32	35
261450101005	1	1	1
261450108003	1	3	5
261450111001	3	5	4
261450112002	1	29	27
TOTAL	**12**	**75**	**75**
SERVICE OBLIGATION = 75 locations across 12 blocks			

- If actual is less than model, can use true-up process
- Guidance on what constitutes a "location" in DA 16-1363

SERVICE TIERS

Performance Tiers			
	<u>Speed</u>	<u>Usage Allowance</u>	<u>Weight</u>
Minimum	>= 10/1 Mbps	>= 150 GB	65
Baseline	>= 25/3 Mbps	>= 150 GB or U.S. median, whichever is greater	45
Above Baseline	>= 100/20 Mbps	>= 2 TB	15
Gigabit	>= 1 Gbps/500 Mbps	>= 2 TB	0

Latency Tiers		
Low	<= 100 ms	Weight = 0
High	<= 750 ms & MOS of 24	Weight = 25

Service tiers with slower speeds, lower usage levels, higher latencies receive less support.

NEXT STEPS

- ☑ Final eligible areas: December 2017
- ☑ Procedures Public Notice: January 2018
- ❑ Bidder education
- ❑ **Application filing window: March 19-30**
  - ❑ Initial Review & Status PN
  - ❑ Resubmission Window
  - ❑ Final Review
  - ❑ Qualified Bidders PN
- ❑ Mock auction: Week of July 16
- ❑ **Bidding begins: July 24**
- ❑ Closing Public Notice
- ❑ Long-Form filing window

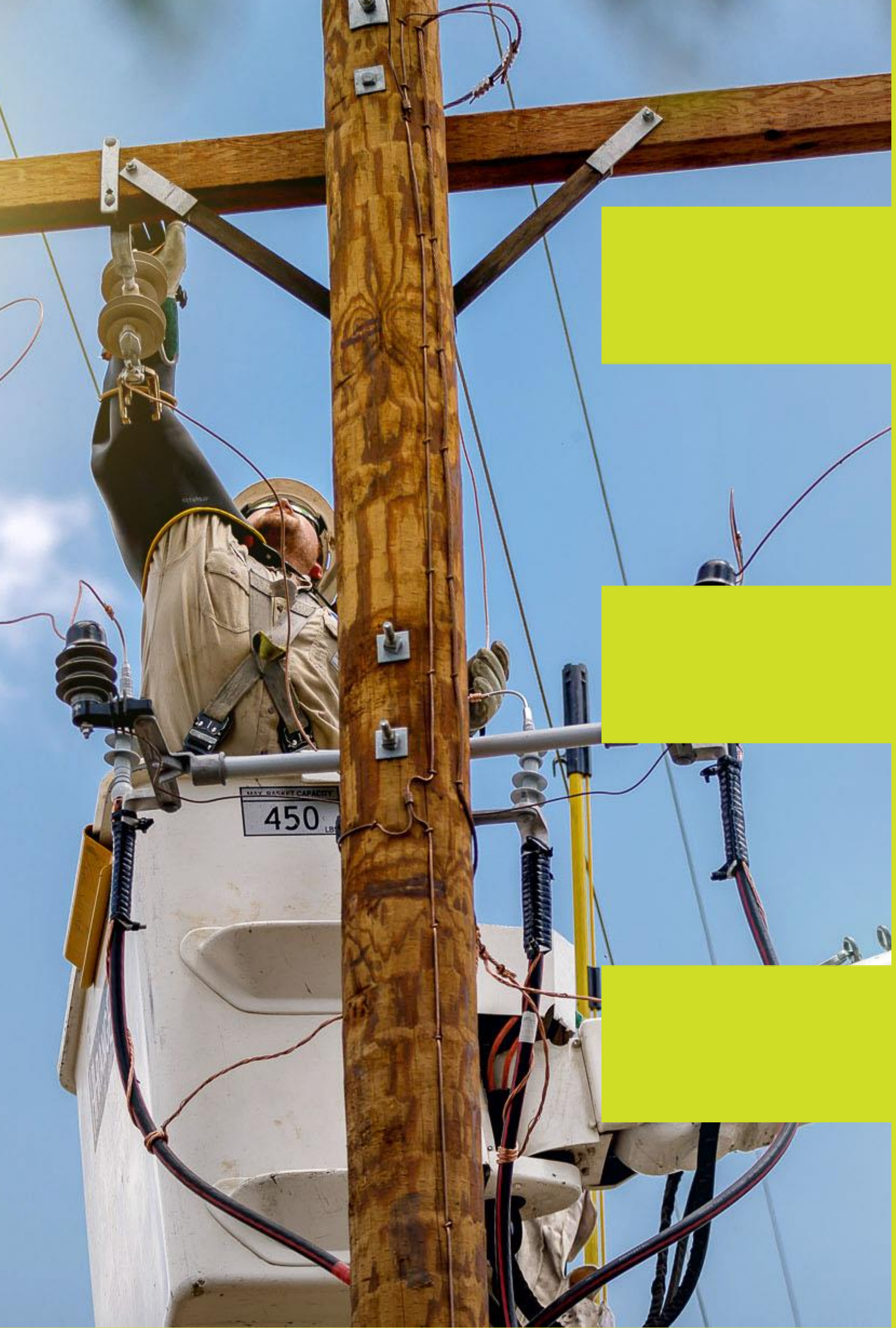
MORE INFORMATION

CAF-II Auction Website:

www.fcc.gov/connect-america-fund-phase-ii-auction

Questions?

Email auction903@fcc.gov



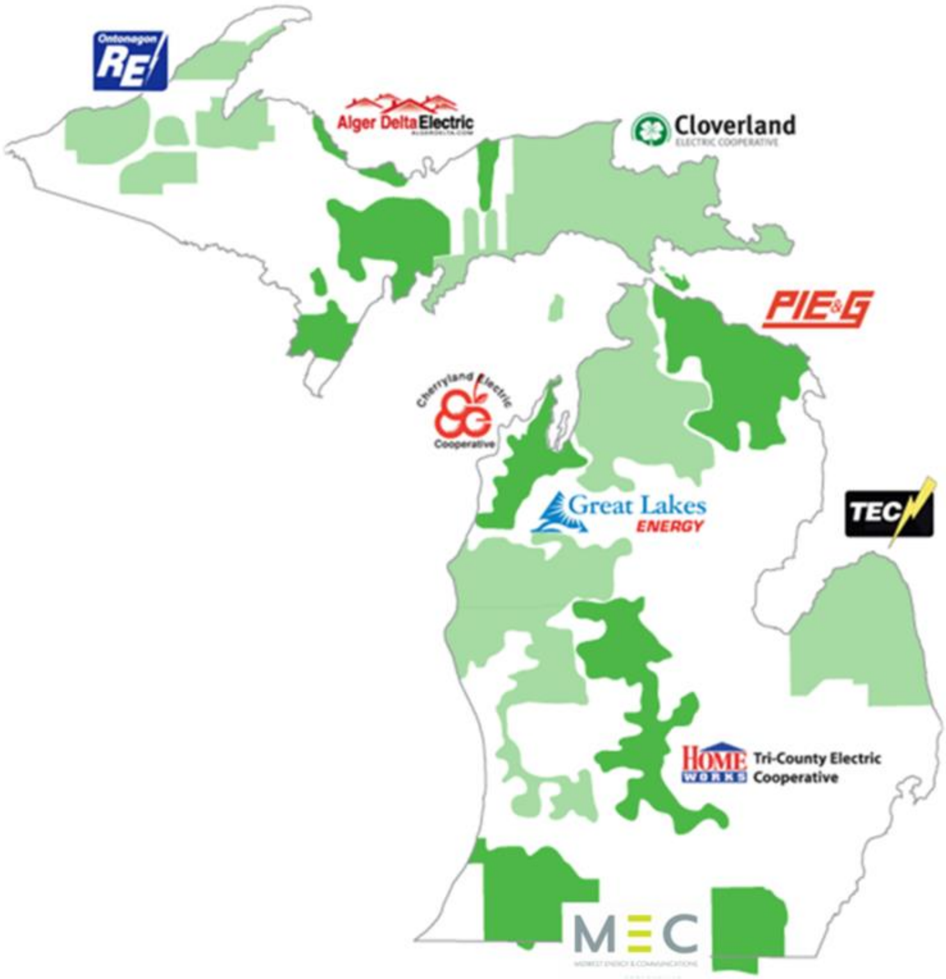
MEC
MIDWEST ENERGY & COMMUNICATIONS

2018 NARUC Winter Policy Summit February 13, 2018

Mr. Robert L. Hance
President & CEO
Midwest Energy & Communications

About Midwest Energy & Communications (MEC)

MEC



- **Member-owned electric cooperative with three primary lines of business**
  - **Electric Distribution** – Serves approximately 36,000 members in 11 counties in southern Michigan and norther Indiana and Ohio
  - **Propane Sales** – Provides service to 6,400 business and residential customers in 15 counties located in both Indiana and Michigan
  - **Telecommunications** – Provides broadband communications solutions including fiber internet, VoIP and local video to over 6,100 business and residential customers in southwest Michigan
- **Operating Statistics**
  - Consolidated Assets = $234M
  - Consolidated Revenue = $88M
  - Total Employees = 127

Success Through Failure

- **Dial-Up**
  - In 2000, MEC began offering 50 Kbps dial-up service through TransWorld Network
- **Satellite**
  - In 2004, WildBlue TeleSat Anik F2 launched (1.5 Mbps)
  - In 2007, WildBlue-1 launched (1.5 Mbps)
  - In 2009, WildBlue AMC-15 launched
  - In 2011, Exede ViaSat-1 launched
- **BPL** Broadband Over Power Lines
  - In 2008, MEC offered BPL through IBEC (1.5 Mbps)
  - IBEC files Chapter 11 in 2011

TWN TransWorldNetwork
Communication Beyond Wires

WILDBLUE
High-speed Internet. Out of the blue.

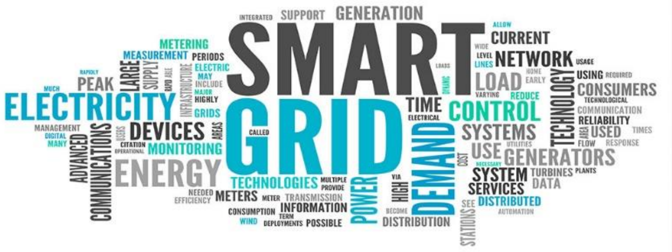
ibec
International Broadband Electric Communications

Our Solution

- **2012 – 2014**
  - USF Reform – FCC Visits
  - Network Planning
  - Soft Launch

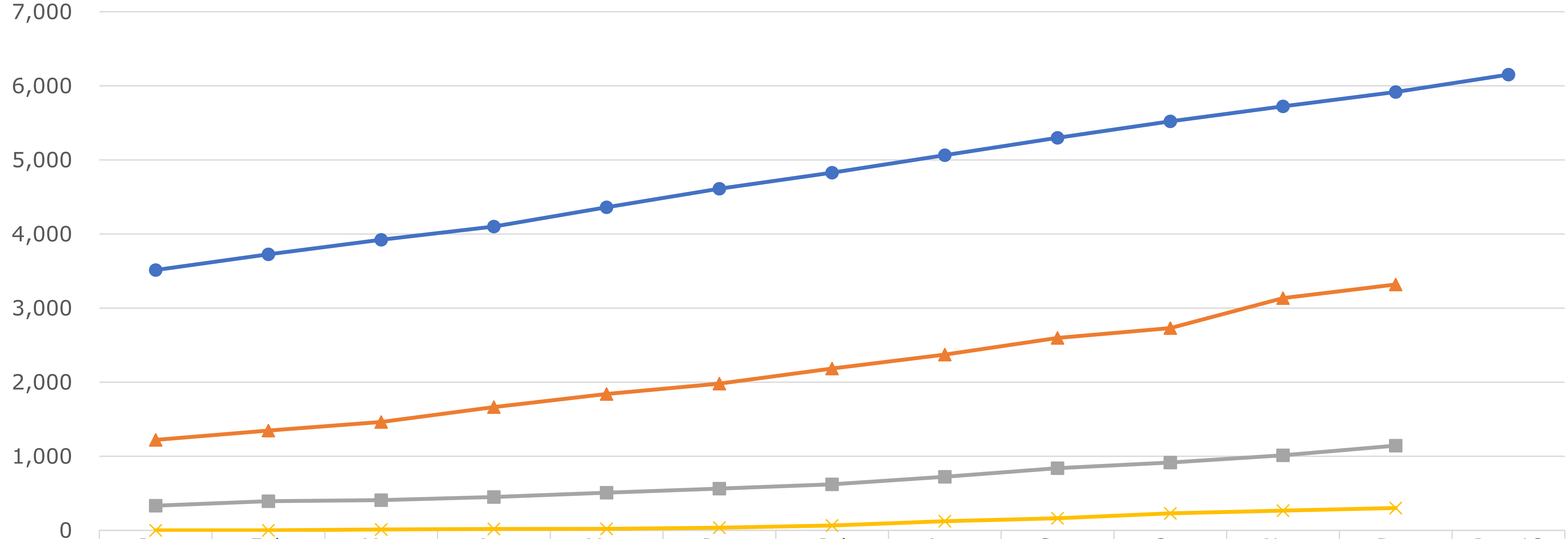
- **In 2014, our board approved investing in a robust, two-way fiber communications system across our distribution grid to power utility solutions into the future.**
  - Phase I: 243 miles through substations and facilities and 1,800 miles of primary lines.
  - Financed through a USDA-RUS work plan loan.

- **We don't know what's coming, but know it will be driven by technology across the grid and we need to be prepared.**
  - Distribution Automation – 2018
  - Dynamic Voltage Control
  - Integrated Distributed Generation
  - Smart Homes & IoT



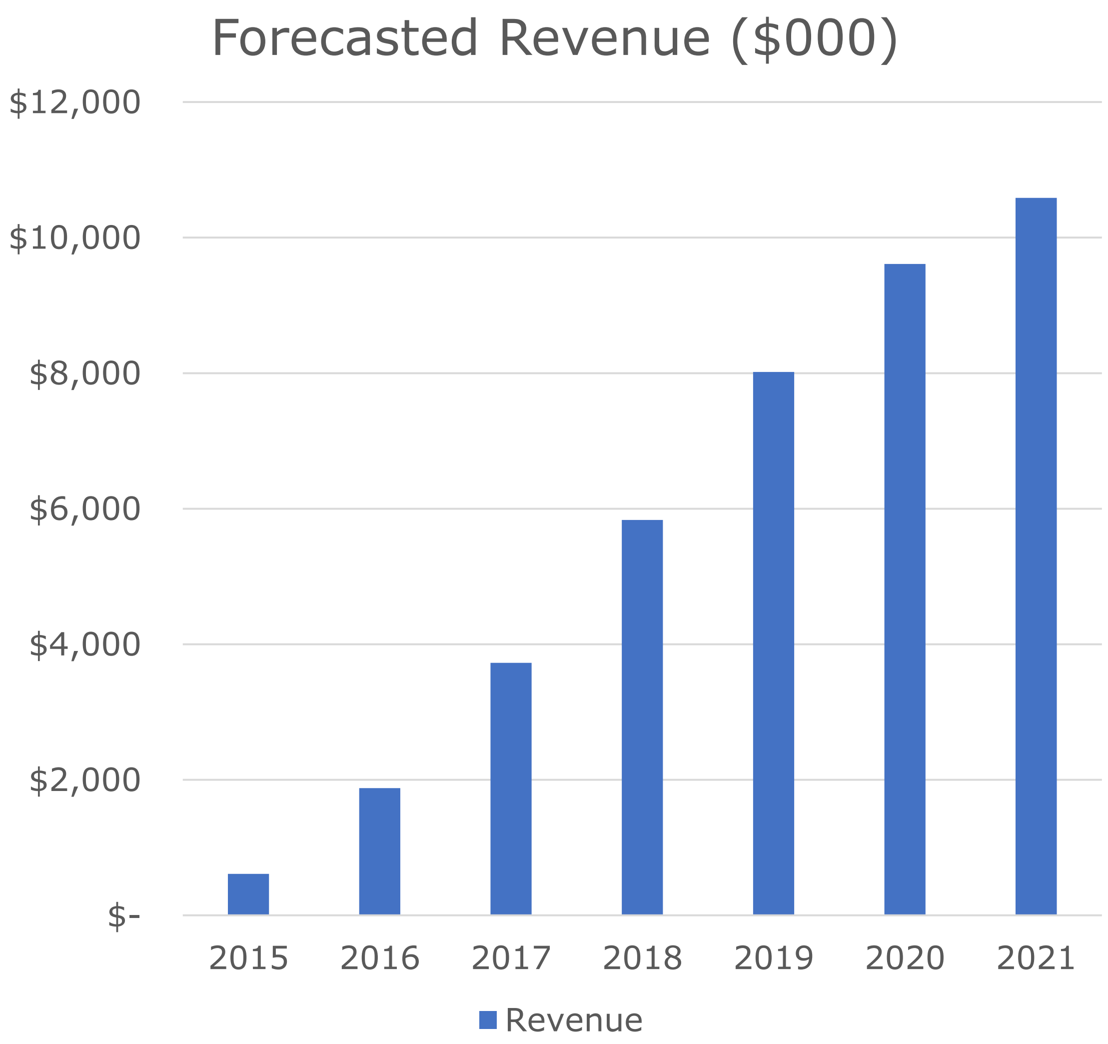
- **We are now leveraging our fiber network for voice, data and video services.**

Fiber Customers



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan-18
2017	3,515	3,727	3,923	4,101	4,361	4,612	4,828	5,065	5,300	5,521	5,724	5,918	6,152
2016	1,221	1,347	1,463	1,664	1,841	1,981	2,185	2,373	2,598	2,731	3,135	3,319	
2015	333	394	408	451	509	563	621	723	840	916	1,014	1,143	
2014	1	1	12	19	21	36	65	123	163	230	266	302	

Fiber Statistics



- **Average Revenue per User (ARPU)**
  Residential = $56.69
  Business = $58.43

- **Residential Customers** = 96%
- **Business Customers** = 4%

- **Year 5** = Cash Flow Positive
- **Year 5** = Net Income Positive

- **Take Rate By Year**

2014: 62.7%	2016: 41.9%	Overall: 36%
2015: 49.7%	2017: 31.2%	Target: 45%

Funding Considerations

- **Connect America Fund (CAF)**

  Phase I
  - 2012: $300 million offered to price cap carriers
    - $115 million accepted for 37 states
  - 2013: Remaining $185 offered with changes

  Rural Broadband Experiments (RBE)
  - 2013: $100 million to non-traditional providers of broadband
  - 2015: MEC awarded $211,532

Funding Considerations

- **Connect America Fund (CAF)**

Phase II

- 2016: $9 billion over six years to price cap carriers
  - AT&T: $428 million in annual support ($30 million in Michigan)
  - Frontier: $283 million in annual support ($22 million in Michigan)
  - CenturyLink: $506 million in annual support ($9 million in Michigan)
- 2016: $20 billion over ten years to rate of return carriers
- 2018: $1.98 billion over ten years to "others"

CAF Considerations

- **We are CAF eligible as a result of our participation with the RBE process.**
- **MEC has been very engaged in helping craft CAF Phase II auction rules.**
- **We intend to participate in the July 2018 CAF Reverse Auction.**
- **Our project is not dependent on a subsidy.**
- **CAF Issues & Concerns:**
  - $30 billion was awarded to price cap and rate of return carriers with questionable impact.
  - The CAF Phase II Reverse Auction for $1.98 billion has taken too long to materialize and remains a complex auction for small, non-traditional providers.
  - The potential for "gaming" remains high.
  - Efforts at remaining "technologically-neutral" in the auction will impede closure of the rural/urban digital divide.
  - In the last five years where data is available, USF has given $41,419,686,000 ($847,311,000 in Michigan) to telecommunication service providers. Why do we still have people un-or-underserved? Why is there a digital divide?

MEC

Vision

Vibrant, relevant, sustainable rural communities

Mission

To deliver first-in-class innovations and solutions where others won’t

ELECTRIC

INTERNET

PROPANE

NARUC
2018 Winter Policy Summit
Committee on Telecommunications

The CAF II Auction – A Step Forward or Unmet Expectations?

Carol Mattey

February 13, 2018

MATTEY
CONSULTING LLC

Key questions for Phase II auction

1. Who’s going to bid?
2. Who’s going to win?
3. How many areas will have winning bidders?
4. Will they perform as expected?

New NY Broadband Program:

What Can We Learn from the Phase 3 Awards?

Verizon turned down the Phase II statewide offer, but willing to serve some areas in NY State

Awards to a wide range of providers – electric, cable, wireless, ILECs large and small, satellite

More than half of the locations in Phase 3 will be served by Hughes

Too early to say how this will turn out

Winning bidders must be authorized to receive support

Financial & technical qualifications, Eligible Telecommunications Carrier designation by state or FCC, letters of credit

Potential adjustments to service obligations

Fewer actual locations in some areas

Annual reporting and compliance

Location reporting; performance testing; annual certifications

Service isn't coming overnight

Six years to meet deployment obligations

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