II. Project Narrative (Section 2.4 C)

Project Description

Applicant:	Mohave Electric Cooperative	(Not-For-Profit w/ 75+ Years Operating)
Partner:	MEC Communications	(Eligible Provider via ACC 2+ Years Operating)
Contractor / Broadband:	TWN Comms	(Contractor / Broadband w/ 20+ Years Operating)

Mohave Electric Cooperative (MEC) is building a fiber-optic network to its members in the western area of Bullhead City, AZ. Specifically, MEC is providing a fiber to the home (FTTH) system to improve electric service and provide broadband services including phone, internet, and tv streaming options.

NOFA - MEC acknowledges 1.1 & 1.2.

Project Timeline

Per the ABDG requirements, MEC would complete this project within a two-year period (August 2024) and provide the three years of reporting requirements.

NOFA 1.6
Western Project expected to begin: [redacted]

ABDG Funds used for infrastructure only.
Mohave Electric Cooperative is the lead on the project (point of contact).
MEC Cash Match: [redacted] Contractor Licensed & Bonded – See section VI. Key Personnel page 54.

List of Construction Infrastructure
- Network backbone (main fiber line connecting the network to HUT / not included in budget)
- Fiber HUT (central control office / not included in budget)
- Fiber distribution lines (fiber lines from the HUT to member premises)
- Fiber service lines (lines to the home)

List of Equipment Infrastructure
- NID
- ODN
- WiFi Router

See full list of infrastructure and equipment in MEC Budget – page 16.

Population, Member Info, Broadband Needs & Service

- 16,920 population (according to NTIA census tract info below – Jan. 2022)
- 8,465 members – 7,889 residential / 575 commercial (MEC Jan. 2022 data)
- 27 institutions (MEC Jan. 2022 data)
- 5,724 members anticipated to take TWN Broadband Service (based on 1% annual accumulation growth over 5 years)
- Area is Underserved, fluctuating w/i 25-100 Mbps download speed and 3 Mbps upload
- 333.5 miles of Fiber
  (Backbone, Distribution, and Service Lines – majority underground / some aerial)

Census Tract Information

Census Tract: 04015951602 Mohave County, Arizona	
Population (FCC 2019 Estimate):	3,892
ACS Percentage Households without Internet Access:	16.60%
ACS Percentage Households without Computer, Smartphone or Tablet:	13.80%
Ookla Speedtest Median (Mbps):	48.24/14.24

Census Tract Information

Census Tract: 04015951601 Mohave County, Arizona	
Population (FCC 2019 Estimate):	3,498
ACS Percentage Households without Internet Access:	21.80%
ACS Percentage Households without Computer, Smartphone or Tablet:	16.30%
Ookla Speedtest Median (Mbps):	82.70/20.68

Census Tract Information

Census Tract: 04015951800 Mohave County, Arizona	
Population (FCC 2019 Estimate):	3,595
ACS Percentage Households without Internet Access:	20.40%
ACS Percentage Households without Computer, Smartphone or Tablet:	14.70%
Ookla Speedtest Median (Mbps):	51.01/15.68

Census Tract Information

Census Tract: 04015951700 Mohave County, Arizona	
Population (FCC 2019 Estimate):	5,935
ACS Percentage Households without Internet Access:	22.20%
ACS Percentage Households without Computer, Smartphone or Tablet:	21.50%
Ookla Speedtest Median (Mbps):	89.41/23.44

NOFA 1.4

Project Area: Area is Underserved.
Although speeds fall within 25 – 100 mpbs, no provider networks are reliable.

Fiber Western Project: Provides "true" speeds of 100 mbps (not "up to" speeds)
Provides symmetrical speeds (equal upload and download)

Fiber Pricing: [redacted]

Middle Mile: Network interconnects to two feeds, Las Vegas & Phoenix, for further redundancy.

No Current Federal Grants or State Grants for MEC's Fiber-Optic Western Project (Project 3).
(MEC received an $805,000 ACA ABDG-Rural Grant for Project 1).
(MEC applied for an ACA ABDG-Rural Grant for Project 2).

MEC can execute a contract with ACA in 60 days or fewer. MEC is committed to operate and maintain the network for a minimum of 5 years.
MEC can demonstrate financial capacity. See audited financial statements beginning on page 19.
Submittal: January 31, 2022

Project Completion: July 2024 (or 2 years after award date)

Project Reporting: July 2025 (or 3 years after award date)

<u>Economic Development</u>

NOFA 1.5 A, B, & C Impact of Investment

Broadband services and the economy are interlinked. The economy in MEC's territory fluctuates especially when thriving businesses come to a screeching halt when the internet fails *again* and existing members (both businesses and customers) are forced to a cash only society unable to process debit/credit cards, use the atm, or make transactions online.

MEC member students are the future workforce and are currently disadvantaged when competing for jobs due to the digital divide. Members lack the ability and familiarity to use broadband services and technology. MEC's fiber network bridges this education gap and will prepare a better workforce for the future which will in turn strengthen the economy.

Quality of Life

When the internet fails in MEC's service territory, not only does it affect businesses and members negatively, the situation has major impacts to computers and operation systems for local emergency responders and hospitals. This is no longer an inconvenience but a crisis. MEC's fiber network will provide the most reliable broadband system with multiple points of redundancy to support public safety and telemedicine efforts, to allow teachers and students to conduct remote learning and use broadband equipment, for members to work remotely, and the simplicity for families to gather to watch movies with no interruption.

Quote #1

Quote #2

Quote #3

Major Businesses and Economic Institutions in Western Project:

- Wells Fargo Bank
- Safeway
- Terrible Herbst
- Big 5 Sporting Goods
- Irgen's Law Office
- National Bank of Arizona
- Trinity Allergy Asthma
- Harbor Freight
- Chase bank
- Daniel J Oehler Law Offices
- Bullhead Urgent Care
- Hanger Clinic: Prosthetics & Orthotics
- KRHS-FM Bullhead City
- Hiltop Hotel-Motel
- Colorado River Animal Medical Center
- WestCare
- Mohave Electric Co-Op – Member Service Office
- Smith's Food and Drug Store
- Mohave Accelerated Learning Center High School
- Mohave Accelerated Learning Center Elementary School
- Dollar General
- Family Dollar
- Western Arizona Regional Medical Center Imaging Center
- Tractor Supply
- Boys & Girls Club Teen Center & Thrift Store
- Hancock Medical Plaza
- Phoenix Cancer Institute

Major Economic Benefits for Members Include:

- Telemedicine
- Remote Learning
- Working Remotely
- Workforce Development

Economic Development Video
https://youtu.be/tUC5r2z5WWk

1st Business Connection Video

https://youtu.be/Q1Cwr8HcyKs

Fiber Broadband Residential Services & Pricing

NOFA 1.3 C

Residential Testimonials

Fiber Broadband Business & Enterprise Services & Pricing

Enterprise Solutions for 400 Gbps

LARGE ENTERPRISE SOLUTIONS

EDUCATION

ENERGY

AGRICULTURE

CONSTRUCTION

GOVERNMENT

HEALTHCARE

MULTI-UNIT DWELLINGS

TEMPORARY EVENTS

Superior reliability. State of the art connectivity. Sustained, symmetrical speeds.

TWN operates a fiber-optic, carrier-class network to provide reliable communication services to our business customers. The TWN network is monitored constantly by our Network Operations Center to achieve and maintain the service levels our customers demand.

We have the ability to control business critical factors such as latency, redundancy, carrier diversity, bandwidth allocation and quality of service.

Whether you need a 50 Mbps small business connection, or 100 Gbps of connectivity to multiple locations, TWN's Broadband Solutions offer customized plans for your business.

DATA SOLUTIONS

- Internet access
- Managed services
- Secure connectivity
- E-Line/E-Lan connectivity
- Optical transport

VOICE SOLUTIONS

- Multi-location solutions
- Hosted services
- Advanced calling features
- Simple billing
- Hand-off Options:
  - Business Lines
  - SIP Trunking
  - PRI
  - T1

STANDARD BUSINESS FIBER PRICING

[redacted]

Cash Match / Timing / Uses / Commitment

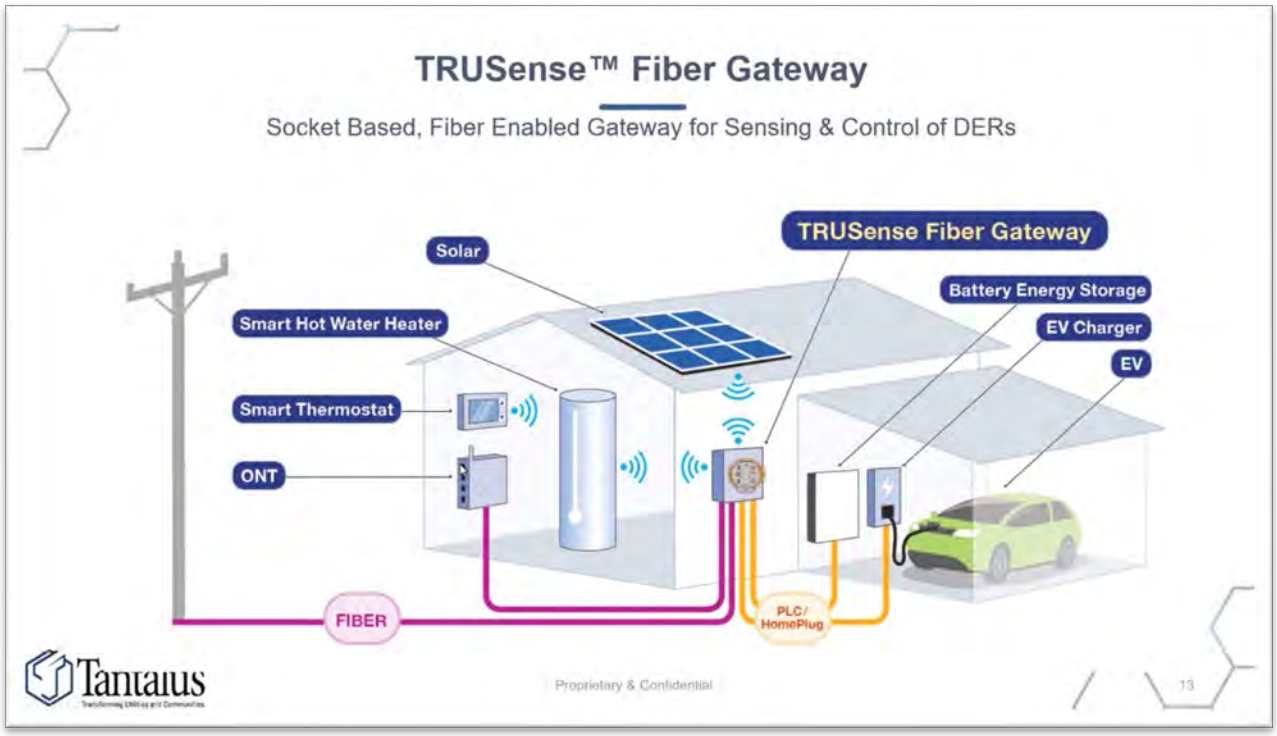
- MEC is matching [redacted]
- The Match will be Financed (draws) over the 2 Year Period.
- The Match covers all costs over the [redacted].
- MEC's commitment is binding.
- The ABDG grant has compound benefits - reduces the principal amount financed, reduces the total interest, and allows the project to begin sooner.
- MEC acknowledges funding is NOT for items in 1.7A. MEC acknowledges 1.8 – 2.3.

Project Description & Timeline - Development

[redacted]

Other Project Outcomes

MEC's fiber-optic project is not just designed to bring a rural area to par with urban areas for broadband services, but will also allow our rural area to be compatible with future technology over the next 30 years. Although not the standard today, fiber and broadband services paves the way for future smart homes.



Additionally, the network is designed to grow with the community, ultimately providing 10 mbps to each end point in the future. Also, the fiber construction brings four fiber strands to each end point. First strand is to provide broadband services. The additional three fiber strands will allow for smart home setup shown above and additionally for MEC electric infrastructure including two-way communications to MEC substations, meters, renewable energy facilities, and equipment.