New Mexico Indian Affairs Committee

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Overview

How MATI Started MATI Location MATI Network Today MATI RUS/NTIA Projects MATI Fiber to the home project MATI NTIA project Challenges in Tribal Lands Sustainability for NTIA Grants



How MATI started

- Mescalero Apache Telecom Inc. is owned and operated by the Mescalero Apache Tribe.
- We are a Tribally Chartered Corporation by the Mescalero Apache Tribe and registered in the State of New Mexico as a foreign Corporation
- Mescalero Apache Telecom Inc. voluntarily chose to be regulated by the State of New Mexico Public Regulatory Commission
- MATI has one exchange with 1300 access lines
- MATI started in 1997 and open it doors in 2001 with broadband deployment in 2003

MATI's Location

- Mescalero Apache Telecom Inc. is located in south central New Mexico on the Mescalero Apache Reservation
- Mescalero Apache Reservation is 500,000 acres or 781 square miles



MATI's Network today



Ribbon Genband C15 Softswitch VOIP Voice Switch Class 5



Adtran 2.5 Gigabit PON

MATI'S RUS/NTIA Projects NTIA \$43,943,116.00 GRANT RUS \$9,000,000.00 LOAN



MATI'S Fiber to the Home Project 2022 -2023



MATI'S NTIA Project 2022 -2025

The project proposes the following activities designed to improve access to, and use of, broadband services among Tribal members:

- Engage in outside plant design, engineering, underground and aerial construction, shelter installation, tower construction, and equipment configuration;
- Construct new middle mile fiber optic transport to Points of Presence (POP) at El Paso, TX COGENT etc.
- Install fixed wireless for mobile applications to be used;
- Add 14 towers to the 7 existing towers to deploy 2.5 GHz spectrum service, provide access to cellular services, and increase access to FirstNet - a dedicated public safety network;
- Build a new Data Center that is fault-tolerant with redundant and back-up systems. (Currently using a Tier 2 unfortified structure. Will construct a Tier 4 structure to withstand unpredictable weather (e.g., severe thunderstorms));
- Install a new Network Operations Center (NOC) within the new Data Center containing future proofed technologies;
- Establish a 400 MHz radio system.



MATI'S NTIA Project 2022 -2025

This project will:

- Provide reliable, affordable Internet access (up to 1 Gbps) to 835 unserved Native American households, 336 businesses, and 29 community anchor institutions such as the Boys & Girls Club, Early Childhood Education and Head Start programs, the Library, and the Mescalero Elderly Center.
- Improve emergency response times.
- Increase access to healthcare, economic development opportunities, telework, and distance education.
- Support a new SCADA (Supervisory Control and Data Acquisition System) to monitor and manage 12 water systems located on the Reservation to provide clean and safe drinking water.
- Increase participation in special Tribal ceremonial events and Tribal rituals.
- Connect Tribal Police, Conservation Law Enforcement, and Fire & Rescue.





Closing the digital divide FCC defines "broadband" as service providing at least 25/3 mbps

FCC 2021 Broadband Progress Report

Fig. 1 Deployment (Millions) of Fixed Terrestrial 25/3 Mbps Services

	2015		2016		2017		2018		2019	
	Pop.	%								
United States	287.853	89.9%	296.320	91.9%	304.473	93.5%	309.000	94.4%	313.749	95.6%
Rural Areas	38.271	61.5%	42.628	67.7%	46.982	73.7%	50.146	77.7%	53.834	82.7%
Urban Areas	249.582	96.7%	253.692	97.7%	257.491	98.3%	258.854	98.5%	259.915	98.8%
Tribal Lands	2.290	57.8%	2.520	63.1%	2.734	68.1%	2.922	72.3%	3.203	79.1%
Pop. Evaluated	320.289	100.0%	322.518	100.0%	325.716	100.0%	327.167	100.0%	328.210	100.0%

Population in millions



Fig. 9 Deployment (Millions) on Tribal Lands of Fixed Terrestrial 25/3 Mbps and Mobile 4G LTE with a Minimum Advertised Speed of 5/1 Mbps

	2015		2016		2017		2018		2019	
	Pop.	%								
Tribal Lands	2.258	57.0%	2.491	62.4%	2.722	67.8%	2.914	72.1%	3.196	78.9%
Rural Areas	0.614	30.1%	0.780	37.8%	0.954	45.7%	1.114	52.9%	1.364	64.5%
Urban Areas	1.644	85.6%	1.711	88.8%	1.768	91.6%	1.799	93.1%	1.831	94.5%
Alaskan Villages	0.110	42.7%	0.135	51.5%	0.151	57.0%	0.176	65.9%	0.185	69.3%
Rural Areas	0.039	23.7%	0.061	36.2%	0.073	42.4%	0.093	54.1%	0.102	59.3%
Urban Areas	0.071	76.7%	0.074	79.0%	0.079	83.3%	0.083	87.3%	0.083	87.5%
Hawaiian Home Lands	0.030	88.9%	0.030	88.6%	0.030	89.4%	0.030	89.1%	0.032	93.1%
Rural Areas	0.002	43.9%	0.002	43.5%	0.003	47.7%	0.003	47.8%	0.004	64.6%
Urban Areas	0.027	98.0%	0.027	98.0%	0.027	98.2%	0.027	98.2%	0.028	99.5%
Lower 48 States	0.452	41.5%	0.508	46.1%	0.595	53.3%	0.638	56.5%	0.758	66.8%
Rural Areas	0.207	28.4%	0.239	32.3%	0.311	41.3%	0.344	45.1%	0.434	56.5%
Urban Areas	0.245	67.8%	0.270	74.1%	0.284	78.1%	0.293	80.2%	0.324	88.4%
Tribal Statistical Areas	1.666	64.5%	1.818	70.2%	1.946	74.8%	2.070	79.4%	2.221	84.9%
Rural Areas	0.365	32.0%	0.478	41.5%	0.567	49.0%	0.674	57.9%	0.824	70.5%
Urban Areas	1.301	90.3%	1.341	93.0%	1.378	95.4%	1.396	96.6%	1.397	96.5%
Pop. Evaluated	3.964	100.0%	3.991	100.0%	4.017	100.0%	4.039	100.0%	4.052	100.0%



Recap:

- Based on 2019 data, 95.6% of the United States had access to 25/3 Mbps broadband speed compared to 79.1% of all Tribal lands
- In rural Tribal areas, however, only 64.5% had access to 25/3 Mbps
 - This is known as the Digital Divide (next slide)
 - Accordingly, this is unacceptable







Sustainability for NTIA Grants

- Sustainability and Tribal Telecommunications
 - Networks cannot simply be built...they must be maintained
- Affordability of Broadband on Tribal Lands
 - Tribal lands are the highest cost, lowest density, economically depressed areas of the U.S.
 - On average, it costs about \$2,587 per year to maintain a line on Tribal lands versus \$1,631 per year on non-Tribal lands
 - On average, over 50% of NTTA members' customers qualify for Lifeline support, with the high end being 90%
- Infrastructure vs. Sustainability Costs
 - About 14% of the annual cost of running a network pertains to infrastructure buildout (CapX) while about 86% relates maintaining and operating the network (Opex)
- Options for Funding Sustainability Costs
 - Funding options for sustainability costs: through Congressional Appropriations; through a fund like the Affordability Connectivity Fund; through Universal Service Funding
- Necessary Funding Levels
 - Funding necessary to sustain Tribal networks should fall between \$400 million and \$1.2 billion per year

Conclusion

NTIA Tribal Broadband Connectivity Program (TBCP)

Funds up to 100% of project

\$980M in first round of Congressional appropriations

NTIA just authorized another \$1 billion to this round
\$2B in forthcoming second round of funding

Several delays:
FCC maps must first be finalized
Supply chain issues continue to persist

Funding is almost exclusively for infrastructure

MATI recently received \$43 million in TBCP

Keep the faith!!

Questions & answers





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