



# Light Up Navajo

## Mutual Aid without a Storm



# Navajo Nation – Southwest USA

## Service territory larger than State of West Virginia

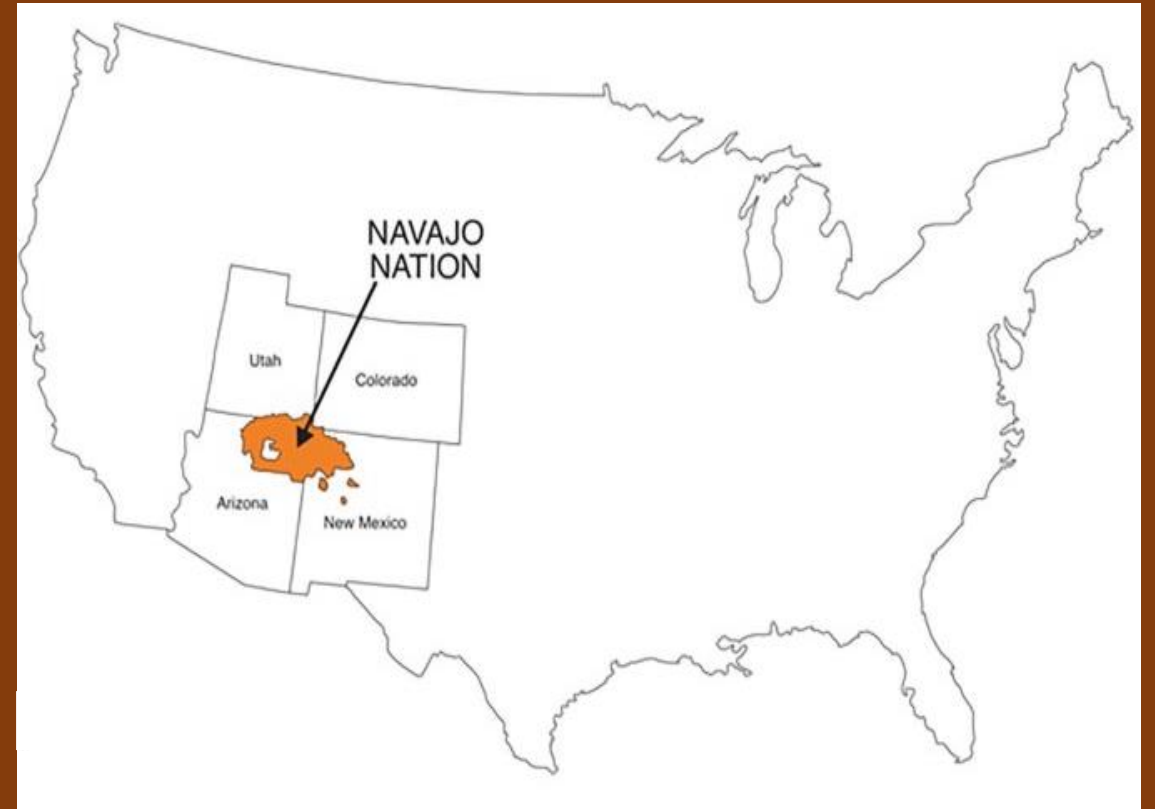
- **Out of approximately 400,000 Navajo citizens, about 186,500 live on the Navajo Nation**
- **Navajo Nation is among the lowest levels of socio-economic indicators for any geographic region in the United States**
- **Unemployment rate over 14.6% (3x times more than current U.S. average)**
- **37% of Navajo people live below poverty line**

## According to 2020 US Census

**Average per capita Navajo income    \$15,110**

**Medium Navajo household income    \$30,759**

**Average US median income            \$74,580**



**32% lack electricity**

**40% lack water**

**86% lack natural gas**

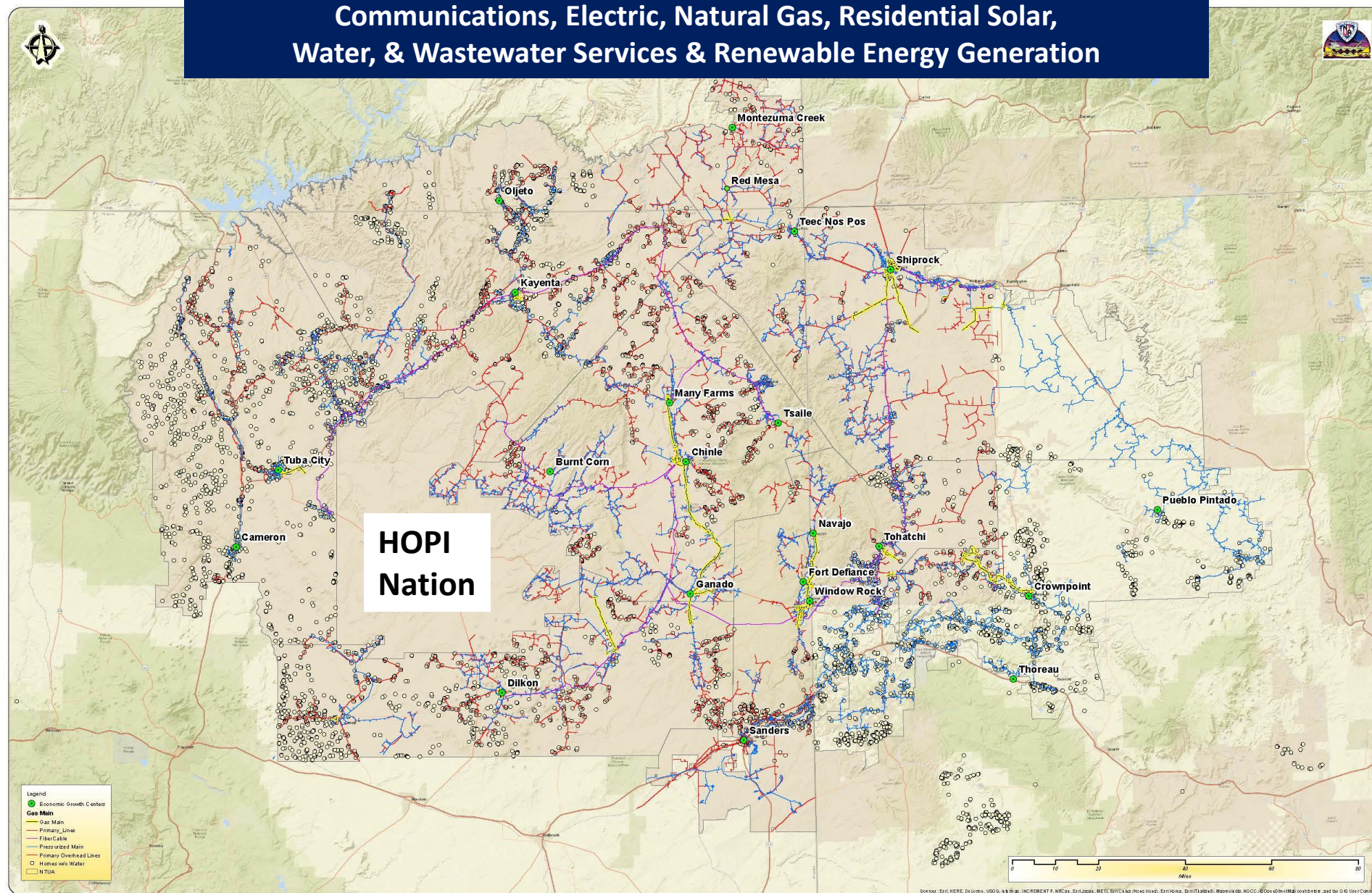
**31% of all Navajo homes lack plumbing**

**60% lack landline phone services**



# NTUA Utilities Service Area

Communications, Electric, Natural Gas, Residential Solar, Water, & Wastewater Services & Renewable Energy Generation







**There are still approximately 13,000 families that still do not have basic access to electricity**

**Refrigeration of fresh food is a constant challenge**



**Thousands of families haul water at least three times a week – often driving more than 20 miles one way**

**Without water connections - outhouses are very common throughout the region**



**Thousands more rely on chopped wood and coal for heating and cooking**

**Heavy winters from November - April**

**Elevation on Navajo is 6,000 to 7,000 feet**

**The average cost to connect one family in last several years has been approximately \$40,000**

- **Approximately 13,000 families are without electricity @ \$40k per home = \$540 million**
- **\$350 million for transmission lines and electric substations**
- **\$108 million for House wiring**

**\$998 million to \$1.0 Billion to extend electricity to all 13,000 families**

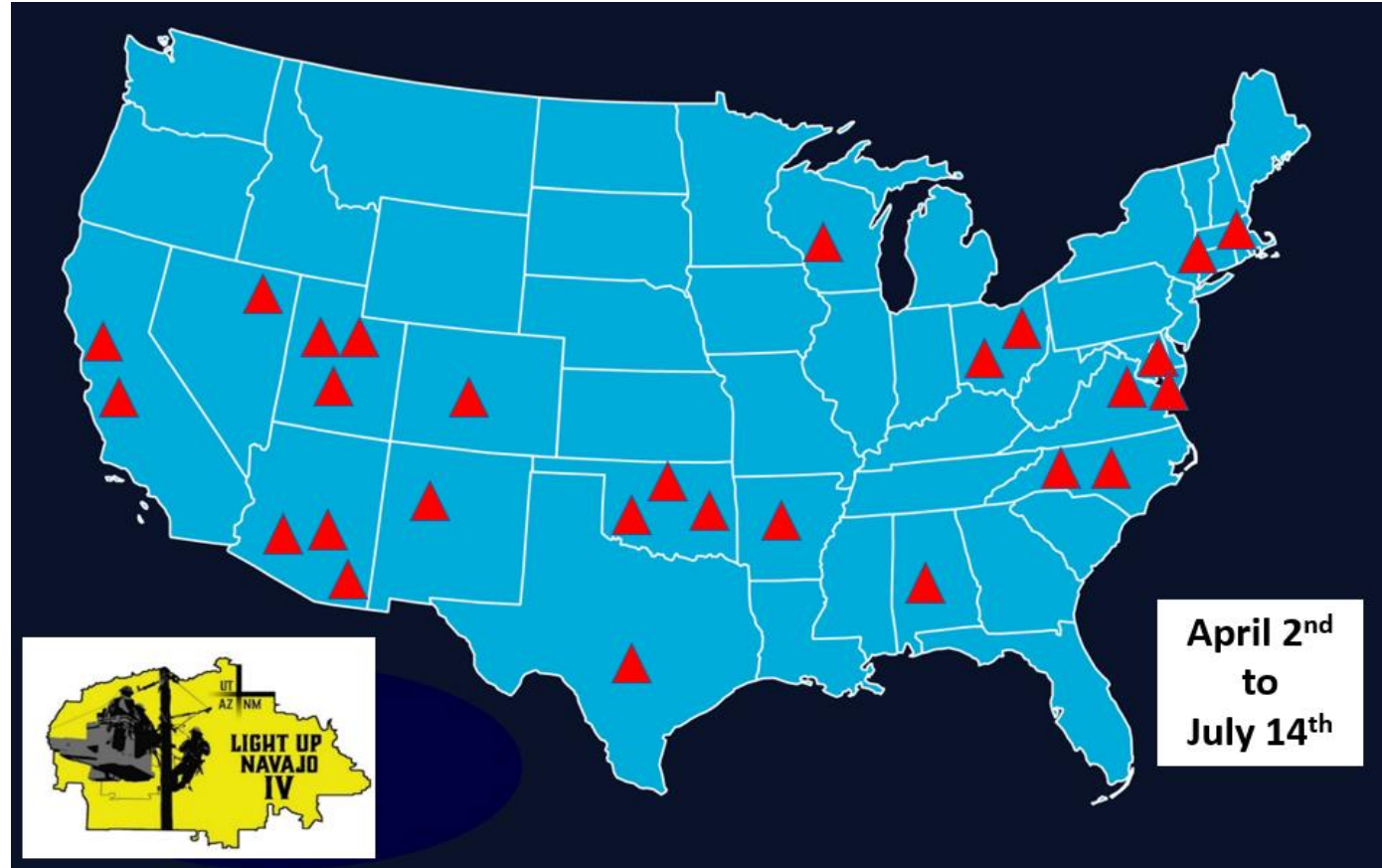
**To connect all families in 10 years with borrowed money from USDA over 40 years – @ zero interest rate - the average annual NTUA residential bill will go from \$945.17 per year to over \$6,000 per year**





# Light Up Navajo IV - 2023

- **Arizona Public Service - AZ**
- **Austin Energy - TX**
- **Central Wisconsin Electric Co-Op - WI**
- **City of Newark - DE**
- **City of Troy - AL**
- **City of Westerville - OH**
- **Conway Corporation - AR**
- **Delta-Montrose Electric Association - CO**
- **Edmond Electric - OK**
- **Fayetteville Public Utilities - NC**
- **Grand River Dam Authority - OK**
- **Greenville Utilities - NC**
- **Hamilton Utilities - OH**
- **Lehi City - UT**
- **Littleton Electric Light & Water - MA**
- **Murray City Power - UT**
- **North Central Tech - WI**
- **Norwich Public Utilities - CT**
- **Public Service Company of NM**
- **Roseville Electric Utility - CA**
- **Sacramento Municipal Utilities District - CA**
- **Salt River Project - AZ**
- **Spanish Fork Power & Light - UT**
- **Town of Smyrna - DE**
- **Trico Electric Cooperative, Inc. - AZ**
- **Wells Rural Electric Co-op - NV**



- **159 Homes Connected**
  - **26 utilities**
  - **176 Volunteers**
  - **51.68 miles of Powerline**
- representing 16 states

- **Alabama**
- **Arizona**
- **Arkansas**
- **California**
- **Colorado**
- **Connecticut**
- **Delaware**
- **Massachusetts**
- **Nevada**
- **New Mexico**
- **North Carolina**
- **Ohio**
- **Oklahoma**
- **Utah**
- **Texas**
- **Wisconsin**

# 2024 Light Up Navajo V – April 7 – July 13

## 38 - Utilities

- **Alabama Rural Electric Association – AL**
- **Arizona Public Service - AZ**
- **Austin Energy – TX**
- **Central Wisconsin Electric Co-op - WI**
- **City of Cuyahoga Falls Electric - OH**
- **Columbus Electric Co-op – NM**
- **CPS Energy - TX**
- **Delta-Montrose Electric Association – CO**
- **EAU Claire Energy Co-op - WI**
- **Edmond Electric - OK**
- **Fayetteville Public Utilities - NC**
- **Grand River Dam Authority – OK**
- **Gunnison Colorado Rural Electric – CO**
- **Lakeview Light & Power – WA**
- **Lehi City – UT**
- **Merrimac Municipal Light Dept. – MA**
- **Mountain Parks Colorado Rural Electric – CO**
- **Murray City Power - UT**
- **Northcentral Tech College - WI**
- **Norwich Public Utilities – CT**
- **Oklahoma Municipal Power - OK**
- **Parkland Light & Water - WA**
- **Provo Power – UT**
- **Poudre Valley Colorado Rural Electric – CO**
- **Public Service Company of NM**
- **Riverland Energy Cooperative – WI**
- **Roseville Electric Utility – CA**
- **Sacramento Municipal Utilities District – CA**
- **Salt River Project – AZ**
- **Sangre de Cristo Colorado Rural Electric – CO**
- **Santa Clara City - UT**

- **Spanish Fork Power & Light – UT**
- **Sulphur Springs Valley Electric Co-op – WI**
- **Tillamook People’s Utility - OR**
- **Town of Middleton – DE**
- **Tucson Electric Power - AZ**
- **Trico Electric Cooperative, Inc. – AZ**
- **United & Mountain View Rural Electric – CO**
- **Village of Yellow Springs - OH**

## 16 - States

- **Alabama**
- **Arizona**
- **California**
- **Colorado**
- **Connecticut**
- **Delaware**
- **Massachusetts**
- **New Mexico**
- **North Carolina**
- **Ohio**
- **Oklahoma**
- **Oregon**
- **Utah**
- **Texas**
- **Washington**
- **Wisconsin**

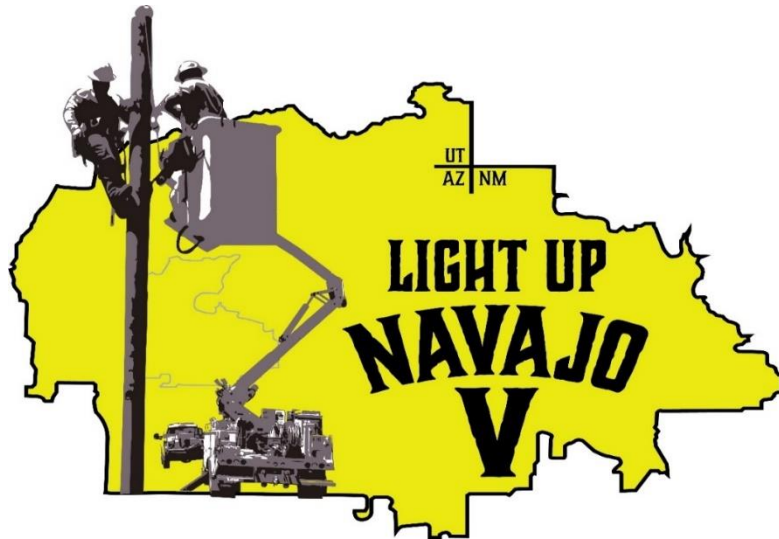
**GOAL - Connect 200 homes**



# Overall Summary – Light Up Navajo Initiative & Mutual Aid Training Programs

Electrification Campaign	Year & Season	No. of Families Connected	# of Volunteer Line Workers	# of Visiting Utilities # of States	Miles of Power Line
<b>LUN I – Pilot Project</b>	<b>2019 Spring/Summer</b>	<b>233</b>	<b>138</b>	<b>28 from 13 states</b>	<b>58.35</b>
<b>LADWP Mutual Aid Training</b>	<b>2021 Fall</b>	<b>80</b>	<b>65</b>	<b>1 from CA</b>	<b>16.03</b>
<b>LUN III</b>	<b>2022 Spring/Summer</b>	<b>137</b>	<b>69</b>	<b>14 from 10 states</b>	<b>25.02</b>
<b>LADWP Mutual Aid Training</b>	<b>2022 Fall</b>	<b>53</b>	<b>103</b>	<b>1 from CA</b>	<b>18.05</b>
<b>LUN IV</b>	<b>2023 Spring/Summer</b>	<b>159</b>	<b>176</b>	<b>26 from 16 states</b>	<b>51.68</b>
<b>LADWP Mutual Aid Training</b>	<b>2023 Fall</b>	<b>37</b>	<b>20</b>	<b>1 from CA</b>	<b>15.22</b>
<b>Austin Energy Mutual Aid Training</b>	<b>2023 Fall</b>	<b>13</b>	<b>20</b>	<b>1 from TX</b>	<b>8.38</b>
	<b>OVERALL</b>	<b>712</b>	<b>591</b>	<b>70 from 19 states</b>	<b>192.73</b>





**For More Info:**

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OVERHEAD DISTRIBUTION

### Mutual Aid Without a Storm: The Light Up Navajo Project

Sept. 21, 2023

Volunteer lineworkers bring first-time electricity to American homeowners through the Light Up Navajo project.

Amy Fischbach

When the lights go out in communities nationwide, crews join forces to rebuild infrastructure and restore power. Through the Light Up Navajo project, volunteer lineworkers provide mutual assistance — but without a storm.

The humanitarian project, which launched in 2019, brings the line trade together to illuminate the 13,500 homes without electricity on Navajo Nation. About 75% of all U.S. households without power live in this 27,000-square-mile region, which spans parts of Arizona, New Mexico and Utah, has 300,000 residents and a total of 55,000 homes.

