



**Kit Carson Electric
Cooperative, Inc.**

Water and Natural Resources Committee

Regional Transmission Organization 101 & Renewable Transmission Buildout in NM

July 10, 2023

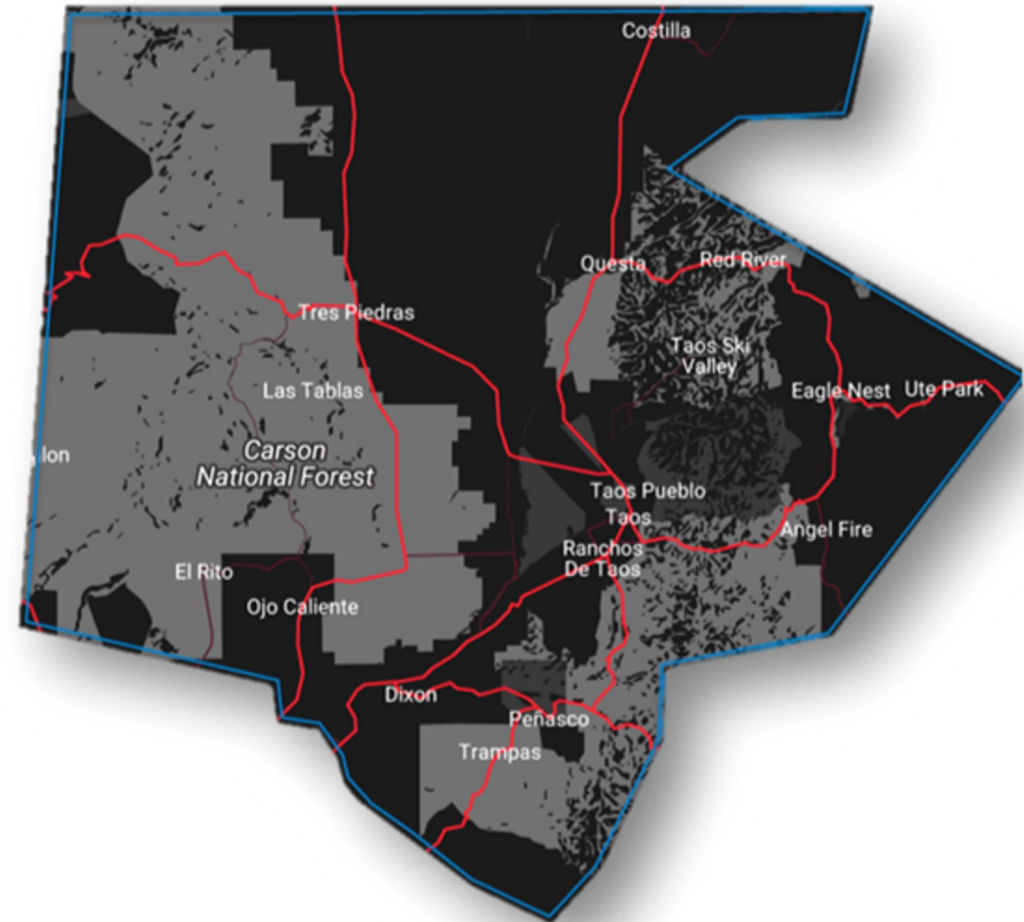
Luna Community College

Las Vegas, NM

Luis A. Reyes Jr., CEO, Kit Carson Electric Cooperative

Where We Serve

- Taos County
- Colfax County
- Rio Arriba
- Taos Pueblo
- Picuris Pueblo
- Six Municipalities (Taos, Angel Fire, Questa, Eagle Nest, Red River, Taos Ski Valley)





Kit Carson Electric Cooperative (KCEC)

- 30,400 Meters
- 3,007 Miles of Electric Line
 - 118 Miles of 69 kV Transmission Line
 - 10 Miles of 115 kV Transmission Line
- 100% Daytime Solar
 - 41.2 MW of Solar Generation
 - 16.25 MW of BESS
- 28 Electric Vehicle Charging Stations
 - Eight Level 3 Charging Stations installed by 2023
 - 46 EV Charging Points



KCEC Renewable Assets



All KCEC projects utilize local labor

KCEC Array	Operation Date	Size of Array
UNM Taos Array	11/1/2009	445 kW
KCEC Array (Canopy)	1/14/2010	82 kW
KTAO Array (Canopy)	2/13/2010	38 kW
Penasco Schools	12/30/2010	50 kW
Taos High School	12/30/2010	50 kW
Chevron	2/1/2010	1,050 kW
Amalia Array (RCCLA)	5/21/2012	1,250 kW
Taos Eco Park (Canopy)	12/30/2011	60 kW
Taos Charter School (Community Solar)	8/27/2012	100 kW
Blue Sky Energy	8/1/2012	1,250 kW
Eagle Nest Elementary	8/24/2015	100 kW
Tres Piedras Solar Array	8/1/2017	2,000 kW
Picuris Pueblo (Penasco, NM)	12/18/2017	1,000 kW
Eagle Nest Lake, NM	10/05/2018	1,040 kW
El Rito NM North Questa	01/02/20	1,500 kW
Northern NM College (EL Rito, NM)	12/19/19	1,500 kW
Town of Taos Wastewater Treatment (KCEC)	03/20/19	3,000 kW
Town of Taos Wastewater Treatment(TOT)	07/30/2021	1,000 kW
Net Metering (696)	Ongoing	3,160 kW
Taos Mesa Solar	06/09/2022	15, 000 kW
Taos Mesa Battery Storage	06/09/2022	12,500 kW
Angel Fire, NM Solar	06/29/2023	7,500 kW
Angel Fire, NM Battery Storage	06/29/2023	3,750kW
Total	Capacity	57.4 MW
Total		41.2 MW Solar 16.25 MW Battery

Electric Renewable Transmission Initiatives



- **115 kV Green Chile Transmission Line**

This project is a new 38-mile, 115 kV overhead transmission line that runs from the Ojo switching station (PNM) to the Taos Substation (Tri-State).

115 kV KCEC Green Chile Transmission Line (KCEC Project)



- **Rocky Mountain Region Transmission Coalition**

The Rocky Mountain Region Transmission Coalition (RMR-TC), a partnership of state agencies, communities, utilities, and industry groups, that will enhance coordination to study and build new transmission projects to access clean energy resources.

- - City
- - San Luis Valley
- ▲ - Mountainous
- - Grid Seam
- ↔ - DC Interties
- - Existing transmission
- - Proposed Transmission projects:
- 1 - SLV options
- 2 - Lamar intertie
- 3 - Colorado Springs line
- 4 - Eagle county line

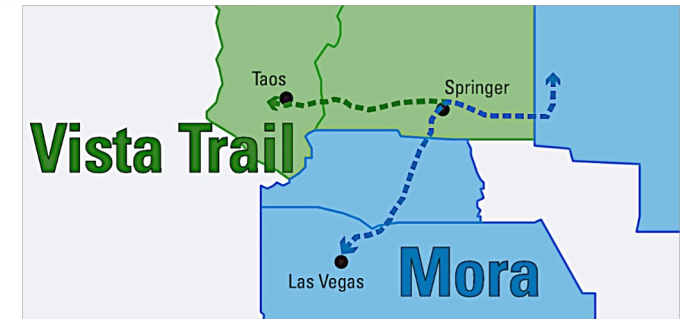


Rocky Mountain Region Transmission Coalition (KCEC Partner)

- **Vista Trail Transmission Project – Lucky Corridor**

The Vista Trail Transmission line project is an approximately 65-mile 345kV transmission line.

Vista Trail Transmission Project (Lucky Corridor) (Observation)



The Mora Transmission Line Project is an approximately 115-mile transmission line operating at 345kV and 115kV.



KCEC New Clean Energy Projects Benefitting from New Transmission

- **Questa Green Hydrogen Facility** (Questa, NM) – This project is expected to contain 17 MW of solar with 15 MW of green hydrogen energy storage.
- **Taos Pueblo Solar Array and Battery Facility** (Taos, NM) – Partnering with Taos Pueblo, this facility will have approximately 5 MW of solar and 5 MW of battery storage.
- **Amalia Solar Array and Battery Facility** (Amalia, NM) – Partnering with the Rio Costilla Cooperative Livestock Association (RCCLA), this project will add an additional 8 MW of solar and 7.5 MW of battery storage to the existing 1.25 MW solar facility.

Cont..



KCEC Microgrid Projects

- **Picuris Pueblo Solar Array and Battery Facility** (Penasco, NM) – Partnering with Picuris Pueblo, this project will add an additional 1 MW of solar and 1 MW of battery storage.
- **Taos Ski Valley Battery Storage Project** (Taos, NM) – The facility is 3.5 MW battery storage. This microgrid project is part of resilience and reliability. The facility will help keep critical infrastructure online during emergency events.
- **El Rito West Battery Storage Project** (El Rito, NM) – Currently, there is 1.5 MW of solar generation at the Northern NM College in El Rito, NM. KCEC is adding an additional 1 MW of solar and 3.75 MW of battery storage. This microgrid project is part of resilience and reliability.

Long Duration Energy Storage

- **Compressed Air Long-Term Duration Energy Facility** (TBD) – This facility is 5 MW of compressed air energy storage with 10 hours of dispersion (50 MWh). The project will help KCEC fill the energy requirements required during non-solar producing times.



**Currently, 1/3 of
KCEC's Cost of Power
is Transmission Costs**

Electric Transmission Opportunities & Challenges

Opportunities

- Helps Stabilize Local & Regional Electricity Rates
- Sell Excess Energy – Participating in the CAISO-EIM
- Ability to Export & Import Renewables Locally, Regionally & Nationally
- Control Costs & Lower Transmission Costs
- Fire Mitigation
- Resiliency, Security & Reliability
- Must Benefit KCEC Members
- Must Support KCEC Projects

Challenges

- Increased Transmission Costs
- Permitting
- Right of Way Easements
- Federal Agencies
- Tribal Lands
- State Lands
- Private Lands
- National Monument Lands
- BLM Lands
- Wilderness Lands
- Wild & Scenic Rivers Act
- Time Constraints
- NIMBY Effect
- Environmental Impact Mitigation





KIT CARSON

Electric Cooperative • Internet • Propane

KIT CARSON
ELECTRIC
COOPERATIVE
INC.

Questions?