



New Mexico Renewable Energy Transmission Authority

Annual Report

October 2023

www.nmreta.com

505-699-0599

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Executive Summary

- After a dozen years of hard work RETA is accomplishing what it was tasked to do.
- The Western Spirit Transmission Project is in commercial operation as of December 2021, because of the RETA-Pattern Energy relationship.
 - 800 megawatts (MW) of wind power are flowing through the Western Spirit transmission line, making powerful wind resources accessible to the electricity grid in New Mexico and the broader western markets.
 - This project represents billions of dollars of investment in renewable power projects that could not otherwise be built due to limitations of the existing electric transmission grid.
- The SunZia Transmission Line broke ground in September 2023 and is expected to be in commercial operation in 2026. The relationship between Pattern Energy and RETA is to co-develop the New Mexico portion of this 550-mile project.
- RETA has partnered with Southwest Power Group to co-develop the proposed RioSol transmission line, a 1,500 MW AC line that is expected to be in operation in 2028 and is co-located with the SunZia Transmission Line.
- RETA has partnered with Ameren Transmission Company to co-develop the proposed 114-mile Mora transmission line.
- RETA has partnered with Invenegy Transmission to co-develop the proposed 400-mile North Path transmission line.
- After a successful first year event, RETA organized and will soon host a second Energy Storage Workshop on October 23 & 24, titled Energy Storage and Reliability for Our Renewable Future.

NM RETA Background

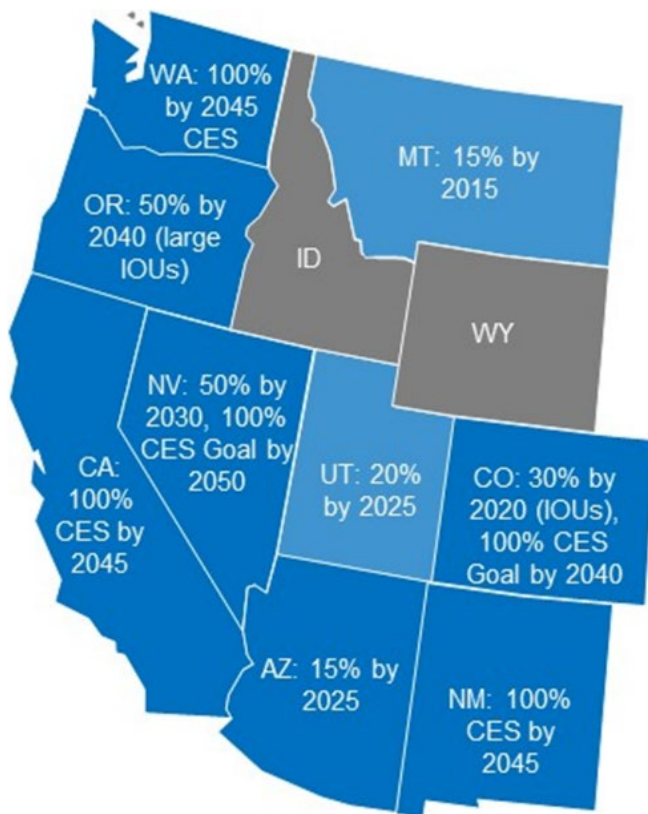
- RETA was established by the NM legislature in 2007 to plan, finance, develop and acquire high voltage transmission lines and storage projects to promote economic development in New Mexico.
- RETA is one of several state-level transmission authorities in the United States and only the second to have issued bonds. RETA-sponsored projects must transmit at least 30% of its power from renewable resources. Most of RETA's current projects are planned to carry 100% of their power from renewable resources.
- New Mexico has some of the most extensive and valuable wind and solar resources in the United States yet has little transmission capacity to access them. RETA was formed to aggressively help develop transmission and storage to cultivate this unique opportunity.
- RETA is working with developers to deliver clean electricity from wind and solar resources to both in-state and export markets.
- RETA's FY23 annual financial compliance audit has been submitted in a timely manner to the Office of the State Auditor.

Western Energy Policies Have Changed Rapidly

- RETA is an essential link in supporting New Mexico's Energy Transition Act (ETA), which requires 100% zero-carbon electricity for utilities by 2045 and rural electric cooperatives by 2050.
- The ETA drives the development of ~4 Gigawatts (GW)* of renewables by 2030, but renewables growth to 11.5 GW is possible by new transmission accessing export markets of Western states.
- ~78% of energy use in the West is now aligned on decarbonization.
- Similar policies in the West drive development of ~100 GW renewables by 2035.

* A Gigawatt is a unit of power equal to one billion watts and is enough energy to power about 750,000 homes.

Renewable Energy Demand Will Grow in the West



Clean Energy Goals by State - Many western U.S. states have aggressive clean energy goals:

- New Mexico, California, and Washington require 100% clean energy supply or zero carbon resources by 2045.
- Nevada and Oregon require 50% renewable supply by 2030 and 2040, respectively. Nevada further aims to reach 100% clean energy by 2050.
- Colorado has implemented a 30% Renewable Portfolio Standard (RPS) by 2030, with a goal of 100% clean energy by 2040.
- Montana and Arizona have near-term targets similar to New Mexico's 2020 RPS targets.
- Voluntary standards exist in Utah.

Great Economics Are Driving Wind & Solar

- Wind and solar are now cheaper than new gas and new coal, even without federal tax credit incentives.
- Wind and solar are a large part of new energy markets based solely on low costs.
- By the early 2030's new wind and solar will be cheaper than existing natural gas.
- An organized Western grid will require transmission upgrades and a flexible grid.

ICF study for NRDC

RETA Transmission Study, 2020. New Mexico Renewable Energy Transmission and Storage Study, consultant ICF Resources LLC.

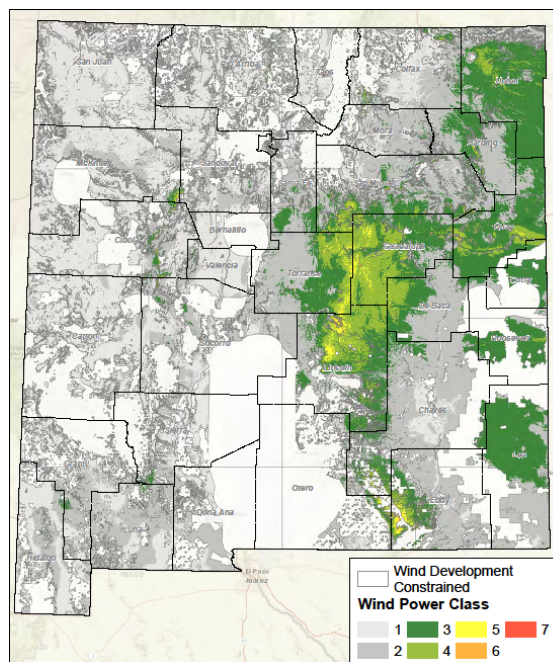
<https://nmreta.com/nm-reta-transmission-study/>

Sources: Energy Strategies, "Western Flexibility Assessment" (2019) and AWEA 2019 Q2 Market Report

Sources: Lazard, "Lazard's Levelized Cost of Energy Analysis" (2018); IRENA Future of Wind (2019)

Wind Development Potential

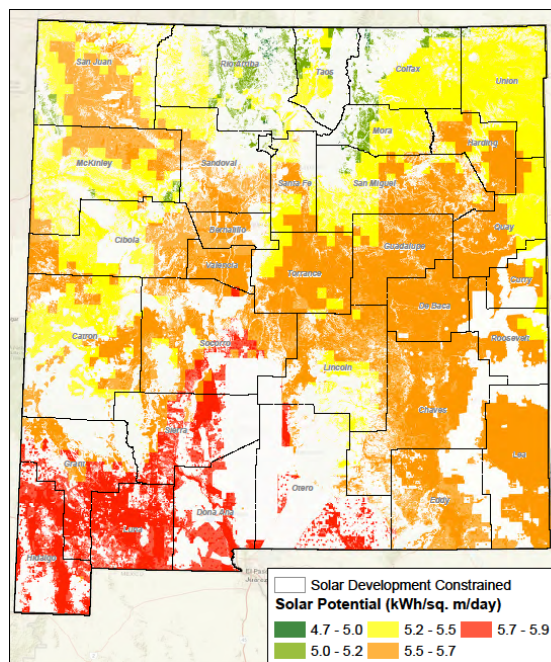
- Total developable land area for commercially viable wind equals 20,500 sq. mi.
- 18,500 sq. mi. on State Trust and private lands.



137,000 MW of highest quality wind potential on State Trust and private lands

Solar Development Potential

- Total developable solar land area equals 68,000 sq. mi.
- 49,000 sq. mi. on State Trust and private lands.
- Over 9,300 sq. mi. in highest output areas.

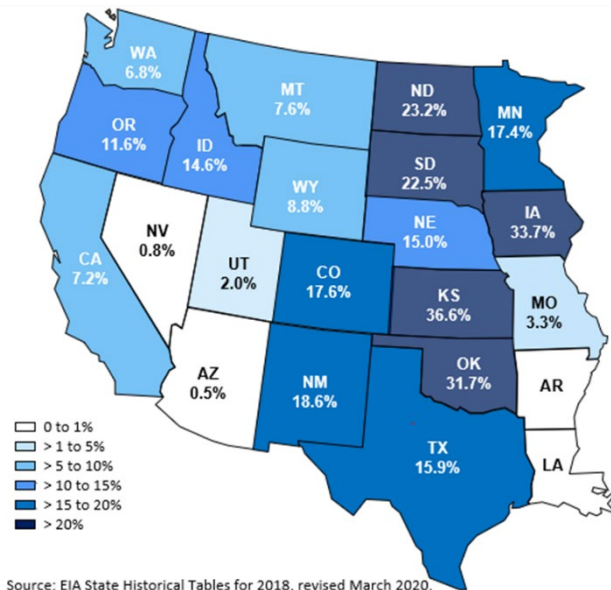


824,000 MW of highest quality solar potential on State Trust and private lands

Significant Opportunity to Provide Wind Resources to the West

- New Mexico has direct access to transmission grids supporting the western and midwestern U.S.
- Neighboring states in the Midwest like Texas and Oklahoma already have significant development of utility-scale wind energy.
- Wind energy development in the West has lagged behind the Midwest.
- The western markets provide a significant opportunity for New Mexico wind facilities.

Wind Energy's Share of Electricity Generation by State

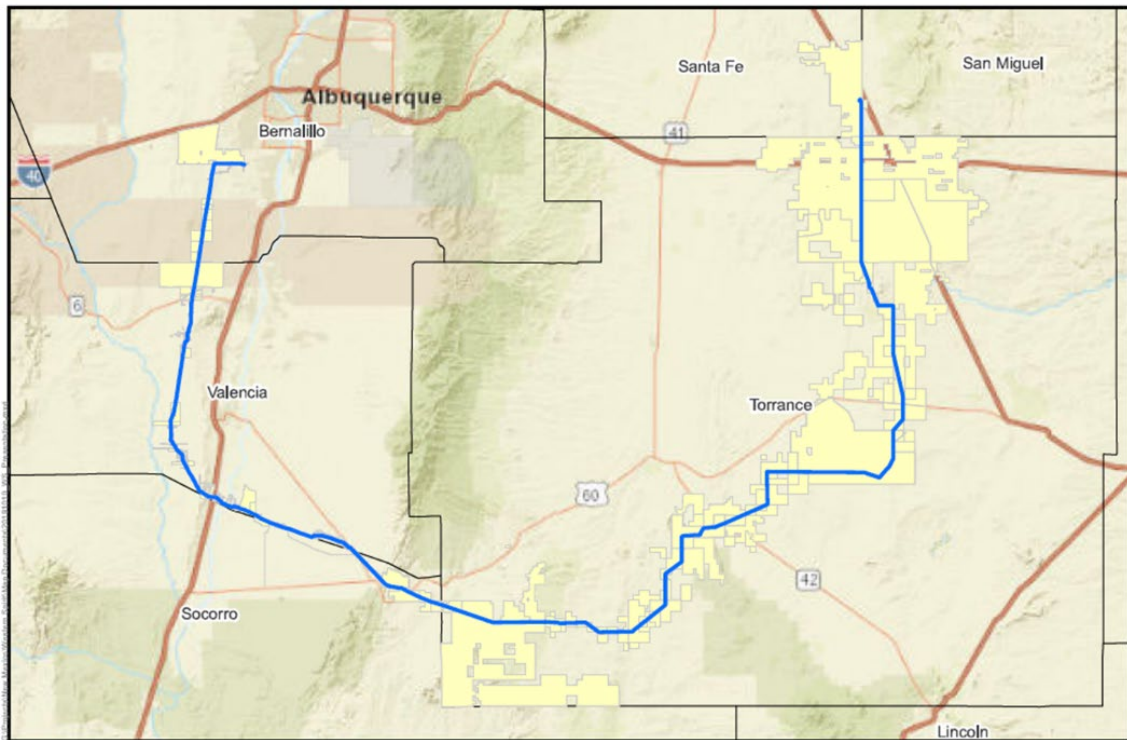


NM RETA Projects

- The RETA-Pattern Western Spirit project completed billions of dollars of financing for the transmission line and associated wind farms. It achieved commercial operation by the end of 2021 (800 MW of central NM renewable energy is being transmitted on the line).
- RETA entered into new development and lease agreements with SunZia and RioSol. SunZia is an HVDC 550-mile transmission line project in New Mexico and Arizona, with 315 miles located within New Mexico. SunZia is rated at a capacity of 3,000 MW. RioSol is an HVAC transmission line that is co-located with SunZia and is rated at a capacity of 1,500 MW.
- RETA entered into a development and lease agreement with Lucky Corridor, LLC (acquired by Ameren) for a project targeting the northeastern part of the state which has tremendous renewable resources.
- RETA entered into a development and lease agreement with Invenergy for co-development of 400 miles of an HVDC transmission line that is rated to carry 4,000 MW of renewable energy.
- RETA entered into an MOU with NextEra Energy Transmission for possible development of the Crossroads-Hobbs-Roadrunner project, a 135-mile transmission line that was solicited by the Southwest Power Pool, the Regional Transmission Organization that operates transmission in southeastern New Mexico. The operation of this project will improve service and save money for utility customers in the area and unlock renewable energy constrained by insufficient transmission capacity.
- There are other major developers working with RETA that are interested in forming a relationship with RETA. RETA is currently working on these agreements.
- Billions of dollars of transmission projects with thousands of jobs are some of the benefits of completed projects and others in development. RETA is the essential link in allowing our State to make renewables work and upgrading our transmission grid. RETA transmission projects are supporting renewable energy projects that will help meet the requirements of the Energy Transition Act.

Western Spirit Transmission Line Project

- Western Spirit is an approximately 150-mile, 345-kV AC transmission line.
- 100% of the power comes from renewable resources located in central New Mexico.
- A first of its kind public-private partnership.
- Jointly developed with Pattern Energy.
- The project was initially identified by RETA in a study of the NM transmission system by Los Alamos National Laboratories more than a decade ago.
- RETA began development of Western Spirit in 2010.
- After commercial operation was achieved in late 2021, the Project was sold to PNM in December 2021 and was added to their existing grid.
 - The PNM purchase of the Project did not impact New Mexico rate payers; 100% of the cost is borne by the wind farms that transmit electricity along the line.



— Western Spirit Transmission
■ Parcels

**Western Spirit Transmission
New Mexico**



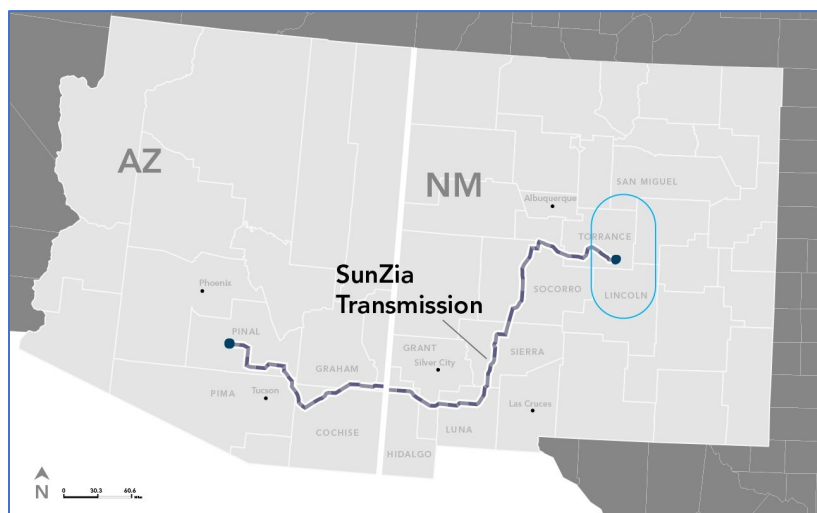
Western Spirit Project Map

Western Spirit Economic Benefits

- Made possible billions of dollars of investment in renewable power projects that could not otherwise be built due to limitations of the existing electric transmission grid. The project generated nearly two billion dollars in net economic impact.
- Provided over a thousand temporary construction jobs and over 30 permanent jobs to maintain and operate associated wind farms.
- Wind farms contribute approximately \$88 million in property tax payments to NM counties and schools over the first 30 years of operation.
- More than 590,000 homes are powered by the clean, renewable energy generated as a result of this project.

SunZia Transmission Line Project

- Transmission project under construction from central New Mexico to south-central Arizona will span 550 miles.
- Designed to bring high-quality renewable wind energy from New Mexico to western utilities and power markets.
- Project consists of a 525 kV HVDC line providing up to 3,000 MW of transfer capacity.
- The SunZia transmission line will unlock the development of the SunZia wind project, a 3,500 MW wind farm with 950 turbines in Torrance, San Miguel, and Lincoln Counties in central New Mexico.
- The SunZia line and SunZia wind projects total \$9 billion and are projected to create approximately 2,000 jobs for the construction phase and approximately 150 permanent jobs.
- Construction of SunZia began in September 2023 with targeted commercial operation in late 2025.



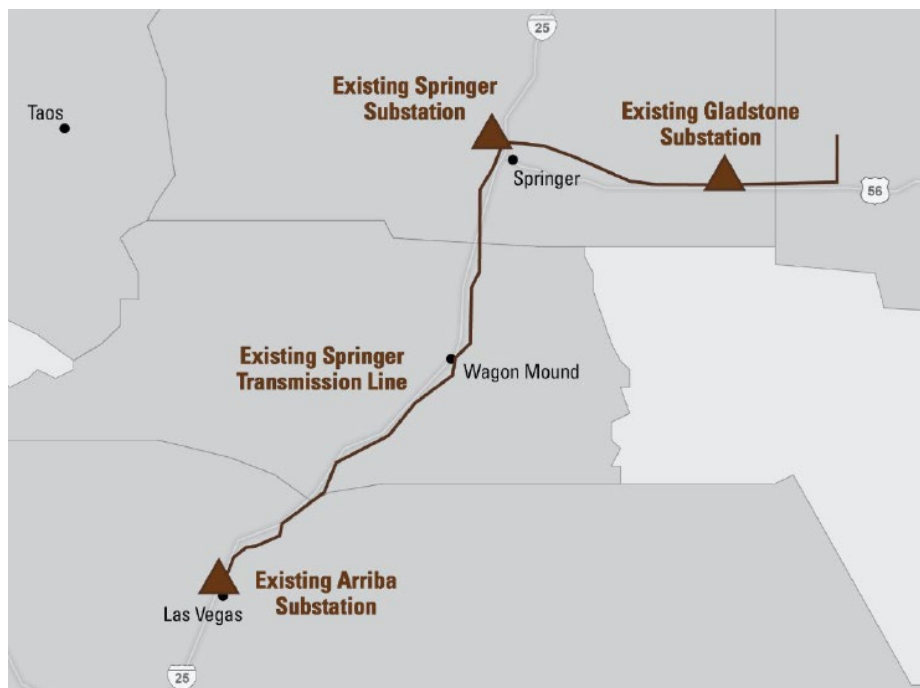
SunZia Project Map

RioSol Transmission Line Project

- Co-located with SunZia, the RioSol transmission line is being developed and permitted as an Alternating Current (AC) line rated at 1,500 MW.
- This 500 kV AC line is designed to interconnect with additional wind and solar renewable energy resources in New Mexico.
- The project is projected to be completed in 2028.

Mora Transmission Line Project

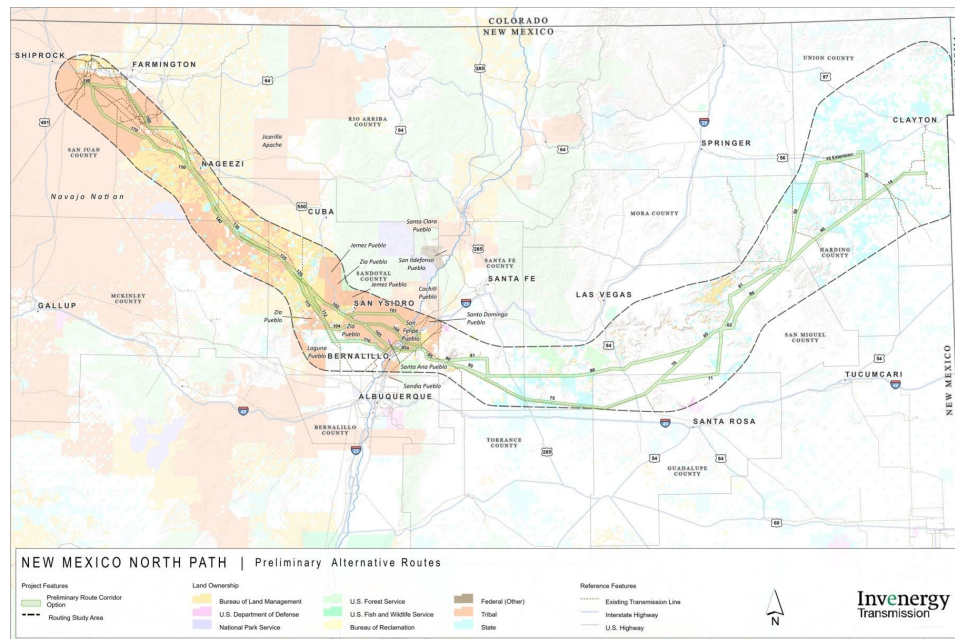
- Proposed 115-mile transmission project from Union County to interconnect with the PNM Arriba substation in San Miguel County
 - 49-mile 345 kV AC line from the Don Carlos Wind Farm to the Tri-State Springer substation
 - 66-mile 115 kV AC line from Springer substation to PNM substation
 - Combination of new route and co-location with existing transmission lines
- Designed to deliver high-quality wind generated electricity from northeastern New Mexico to an interconnection with the New Mexico grid
- Project developer Lucky Corridor LLC was acquired by Ameren Transmission Company in 2020
- Agreement with NM RETA signed in January 2022
- Currently securing real property site control and access
- NM Public Regulation Commission issued “Reliability Determination” approval November 2022



Mora Line Project Map

North Path Transmission Line Project

- The North Path transmission line is a proposed 400 mile, 525-kV HVDC project designed to carry 4,000 MW of renewable energy from northeastern New Mexico to interconnect to the Four Corners Substation in northwestern New Mexico.
- RETA entered into an agreement with Invenergy Transmission to develop the project which has an expected completion date of 2028.



North Path Transmission Line Project Map

RETA's 2022 & 2023 Energy Storage Workshops

- RETA hosted a two-day workshop, *500 MW for 5 Days – Utility Scale Storage – How do we get there?* in October 2022 at La Fonda Hotel in Santa Fe.
- About 150 people attended from New Mexico and across the nation.
- Twenty expert New Mexican and national speakers discussed existing and emerging energy storage technologies, as well as related permitting, policy, and financing challenges.
- The topic is critical – as we increase the use of renewable energy and decrease our reliance on coal and natural gas generation, our electrical transmission will require that we add significant energy storage capacity to reliably serve the public.
- Due to the enthusiastic response from the 2022 participants, RETA will host another workshop, *Energy Storage and Reliability for our Renewable Future* on October 23 & 24, 2023 at La Fonda. There is no cost to register.

RETA's Landmark Study of Renewable Energy in New Mexico

See 2020 New Mexico Renewable Energy Transmission & Storage Study, online at

<https://nmreta.com/nm-reta-transmission-study/>

The following individual documents are available at the link above.

- Executive Summary for the 2020 Study
- Synopsis of the 2020 Study
- The 2020 New Mexico Renewable Energy Transmission & Storage Study
- Executive Summary of the 2022 Study Update
- The 2022 Study Update
- The 2022 In-state Energy Storage report

Part of RETA's Core Mission is Collaboration on Policies

COMMUNICATION ON POLICIES

Maintain communication between local, state, and federal leaders, to implement energy policies that benefit New Mexico.

ENSURE LOCAL CONCERNS ARE THOUGHTFULLY ADDRESSED

Well-meaning local advocacy to prohibit all development could counter state renewable goals and damage critical projects.

PRUDENT FISCAL POLICIES

Care needs to be taken on taxation of renewable and transmission industries so as to not shift competition in favor of other western states.

ATTRACT INDUSTRY & INVESTMENT

Attracting renewable and transmission industries can lead to billions of dollars of investment.

NM RETA FY23 Financial Statement

**New Mexico Renewable Energy
Transmission Authority**
Statement of Revenues, Expenditures and Change in Fund Balance
Governmental Fund
For the Year Ended June 30, 2023
DRAFT

	<u>General Fund</u>
Revenues	
Project Development	\$ 1,100,000
Developer payments	531,703
Interest Income	23,200
Total Revenue	<u>1,654,903</u>
Expenditures	
Current	
Personnel	565,330
Contractual services	465,381
Other	42,837
Office	16,280
Telephone and internet	14,609
Insurance	13,865
Travel and meetings	7,410
Rent and Utilities	6,999
Capital outlay	6,110
Debt service - building lease	
Principal	37,881
Interest	1,419
Total Expenditures	<u>1,178,121</u>
Net change in fund balance	476,782
Fund balance, beginning of year	<u>957,502</u>
Fund balance, end of year	<u><u>\$ 1,434,284</u></u>

RETA's Action Plan

The following listed actions are selected as short term, actionable measures to be taken by RETA to address administrative, policy, and technical issues.

- **RETA's four priorities are:**
 - Continue and expand transmission and storage infrastructure for renewable energy in New Mexico
 - Encourage New Mexico utilities to join an existing Regional Transmission Organization to deliver power more efficiently and cost-effectively to New Mexicans
 - Explore the potential of adding a new export hub to the New Mexico transmission grid
 - Streamline the permitting process to reduce unnecessary delays while not cutting any corners
 - Continue and expand energy storage workshops

- **RETA will continue:**
 - working with our development partners
 - reaching out to the public and policy makers regarding the Transmission & Storage Study
 - collaborating with existing partners and expanding relationships
 - developing new agreements and partnerships with world-class developers in renewable energy and transmission
 - working with major participants in renewable energy development to prioritize transmission corridors and simplify siting
 - evaluating the delivery of renewable energy to in-state customers
 - monitoring technological advances of long-duration energy storage facilities and development of microgrids
 - participating in WestConnect and other transmission planning forums
 - studying regional efforts such as Regional Transmission Organizations (RTOs) that can be implemented and utilized
 - working with state and federal agencies to streamline permitting, creating a predictable regulatory landscape to build transmission in less time.

Conclusion: The Bottom Line

- It is clear the RETA Legislation is accomplishing what New Mexico set out to do in 2007.
- With the passage of the Energy Transition Act, New Mexico is becoming a national leader in generation and transmission of renewable energy.
- The Western energy market is demanding enormous amounts of renewable energy.
- RETA is the essential link for our State for upgrading our transmission grid and accessing renewable resources. Thus, continuing RETA's work is critical to New Mexico's future.