

New Mexico Finance Authority Oversight Committee Update

Fernando Martinez, Executive Director
NM RETA

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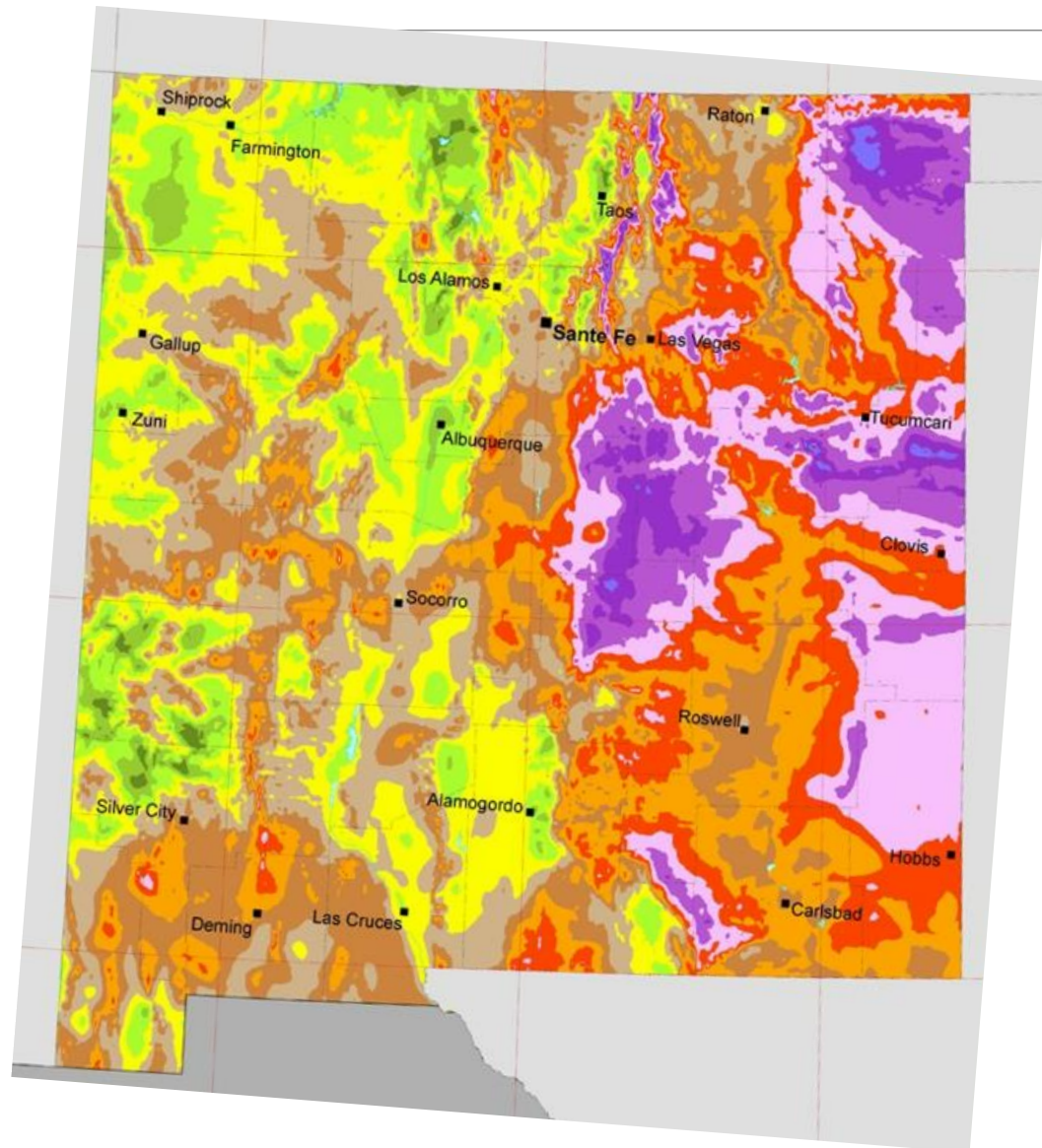


NM RETA Background

- New Mexico has some of the most extensive and valuable wind and solar resources in the United States yet has virtually no transmission capacity to access them. RETA was formed to aggressively help develop transmission and storage to cultivate this unique opportunity.
- RETA was established by the NM legislature in 2007 to plan, finance, develop and acquire high voltage transmission lines and storage projects in order 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. RETA's current projects are planned to have 100% of their power originate from renewable resources.
- RETA is working with developers to deliver clean electricity from wind and solar resources to both in-state and export markets.
- RETA has partnership agreements with three projects in development and MOUs with more.

Wind Development Potential

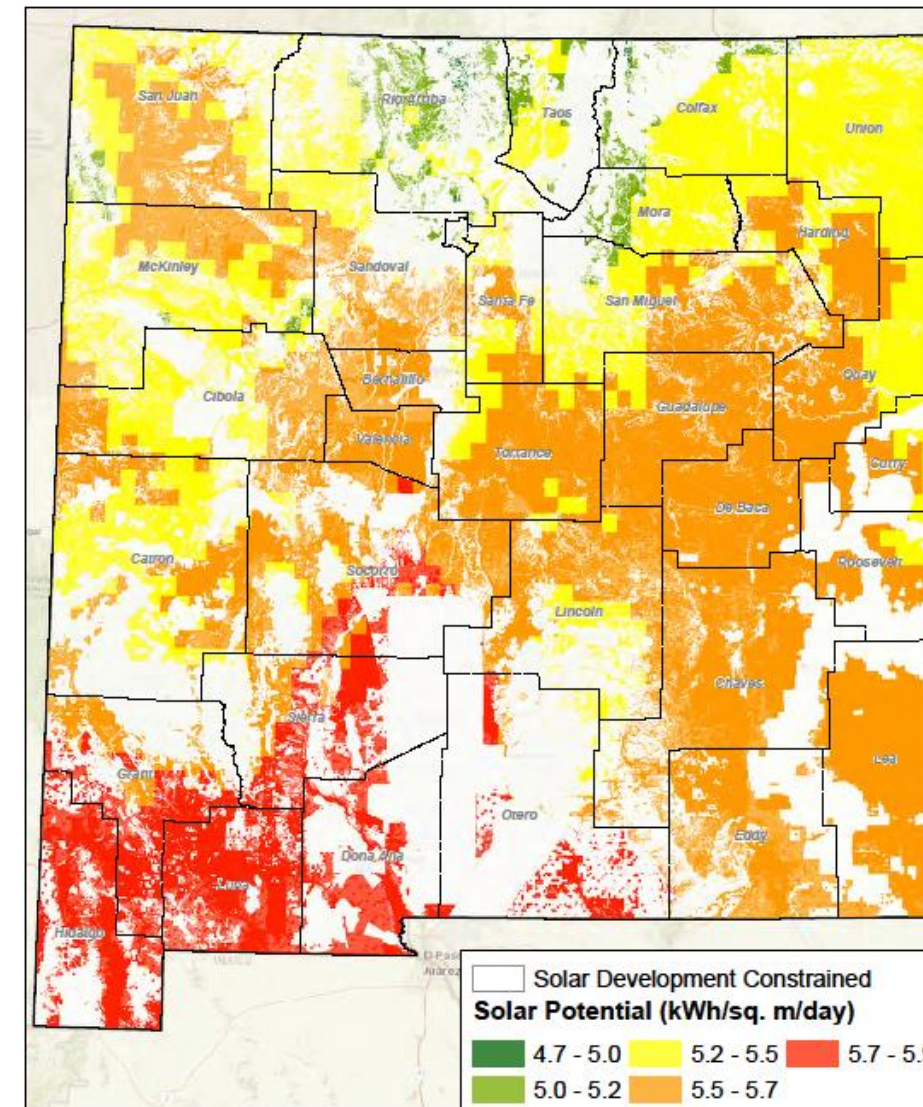
- Total developable land area for commercially viable wind equals 20,500 sq. mi.
- 18,500 sq. mi. on State Trust and private lands.



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.



Western Energy Policies Have Changed Rapidly in the Last Few Years

- 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 ~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 ~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.

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)

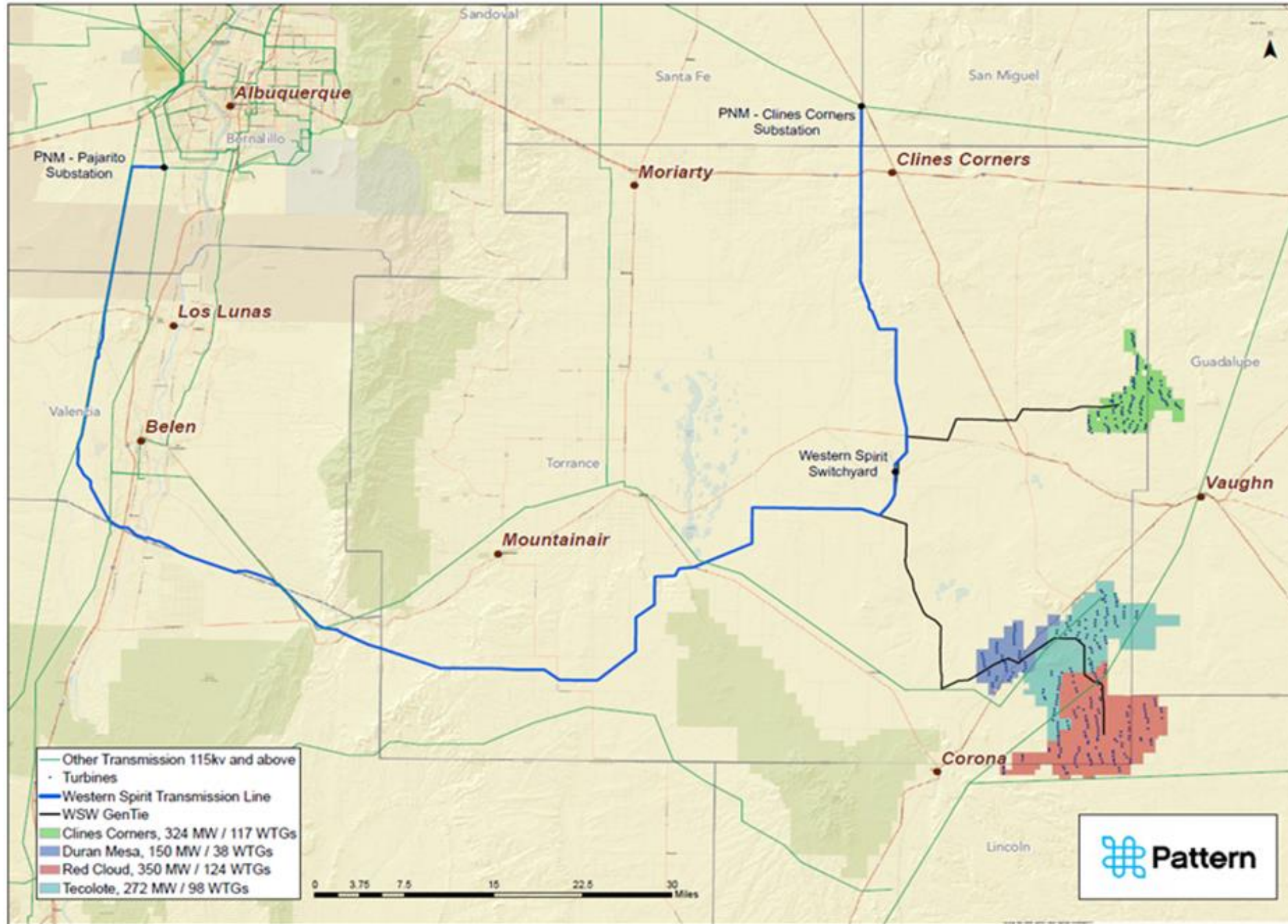
Ongoing NM RETA Projects

- RETA has a Co-Development relationship with SunZia Transmission, LLC. SunZia is a 550-mile transmission project in New Mexico and Arizona, with about 315 miles located within New Mexico. SunZia will make possible billions of dollars of wind development in Central New Mexico.
- RETA has a Co-Development relationship with Ameren (acquired Lucky Corridor, LLC.) for the Mora Line project from Union County, through Colfax, Mora, and San Miguel Counties to interconnect tremendous renewable resources of Northeastern New Mexico with PNM's transmission system.
- RETA has an MOU with Invenergy for possible development of several hundred miles of electric transmission lines from Northeastern New Mexico to the 4-Corners hub in Northwestern New Mexico unlocking thousands of MW of renewable resources.
- 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 moving towards the construction phase. RETA is the essential link in allowing our State to make renewables work and upgrading our transmission grid. RETA transmission projects are supporting more renewable energy projects that can help meet the requirements of the Energy Transition Act.

Western Spirit Transmission Line Project

- Western Spirit is an approximately 155-mile 345kV AC transmission line rated at 800 MW

- 100% of the power comes from renewable resources located in Central New Mexico
- A first of its kind public-private partnership
 - RETA jointly developed the project with Pattern Development
- The project was initially identified by RETA in a study of the NM Transmission System by Los Alamos National Labs more than a decade ago
 - Western Spirit was in active development by RETA starting in 2010
- Completed in 2021, the Project was acquired by PNM and is now a part of their grid
 - The purchase of the Project did **not** impact New Mexico rate payers, 100% of the cost is borne by the wind farms that transmit energy along the line



Western Spirit Project Map



SunZia and El Rio Sol Projects

- Pattern Energy Group LP (Pattern Energy) recently acquired the SunZia Transmission project from SouthWestern Power Group, a wholly owned subsidiary of MMR Group, Inc. SunZia Transmission consists of a 550-mile bi-directional \pm 525 kV high-voltage direct current (HVDC) transmission line between central New Mexico and south-central Arizona, with the capacity to transport up to 3,000 MW of clean, renewable energy.
- SunZia Transmission previously awarded the full 3,000 MW of capacity on the transmission line to Pattern Energy. Pattern Energy is developing the SunZia Wind project, a 3,000+ MW facility in New Mexico, which will utilize the SunZia transmission line to provide enough safe, affordable, and renewable electricity to power the needs of 2.5 million Americans annually.
- SouthWestern Power Group will maintain ownership of a second 500 kV high voltage-alternating current (HVAC) transmission line rated at 1,500 MW, El Rio Sol Transmission.
- SunZia Transmission and SunZia Wind together comprise the largest renewable energy infrastructure project in U.S. history with a total investment of over \$8 billion. Both projects are privately funded and will deliver widespread economic benefits across New Mexico and Arizona.



NM RETA Key Engagement with Efforts to Streamline Federal Permitting

Federal Permitting Improvement Steering Council

(previously known as “FAST-41”)

- Historic slow pace of transmission line development risks missing renewable electricity targets.
- The Council is a Federal agency; comprised of cabinet-level agency executives, ensures federal agencies cooperate on NEPA infrastructure projects.
- Council coordinated on SunZia project NEPA process beginning in May 2021.
- RETA engaged in 2022 with Council Executive Director Christine Harada (POTUS appointee) and her Team to continue joint efforts on newer projects.
- Council-developer collaboration aligns with RETA goal to expedite project timelines, while also meeting environmental standards.

NM RETA Key Engagement with Efforts to Streamline Federal Permitting

Military Bases in New Mexico

- Significant to economy; undeniable control of Base land properties and extensive air space.
- RETA engages with all Bases and Office of Military Base Planning and Support (attached to NM Economic Development Department).
- RETA works with all Bases affected by infrastructure ROW alignments; early engagement and NEPA Cooperating Agency status are key.
- Resolution has been achieved on significant SunZia ROW issues for White Sands Missile Range; NEPA process is moving forward on SunZia's Draft EIS.



NM RETA Key Engagement with Efforts to Streamline Federal Permitting

Streamlining the Development Process

- ...a significant way in which RETA contributes to formal development partnerships.
- RETA works with project stakeholders to streamline transmission siting development.
- Actively engaged with an array of parties at any one time:
 - NM utilities and transmission providers;
 - renewable energy and energy storage developers;
 - local, state, and federal agencies;
 - tribes, consumers, military installations, environmental groups;
 - private, state, federal, and tribal landowners.
- RETA absolutely does not skirt environmental or other state/federal requirements.
- RETA's growing efforts to streamline are now meeting the intent of the 2007 Act that created RETA.



IN 2020 RETA COMPLETED A LANDMARK STUDY OF RENEWABLE ENERGY IN NEW MEXICO UPDATED IN FEBRUARY 2022

See 2020 New Mexico Renewable Energy
Transmission & Storage Study and 2022 Update-

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

- Executive Summaries
- Synopsis
- The complete Study and Update



NM Renewable Energy Transmission and Storage Study Background and Results

The New Mexico Renewable Energy Transmission Authority (NM RETA) partnered with ICF, an international consulting firm, to evaluate the future potential for New Mexico's vast renewable energy resources and the needed electricity transmission system.

This work focused on four key areas of investigation into our state's energy future:

- Potential of renewable resources
- Renewable resources development for clean electricity
- Transmission to support renewable resources development
- Economic benefits of transmission and renewable resources development
- **Study period: 2020 to 2032**
- **Overall results:**
 - Renewables will need to be developed at unprecedented pace, 2,500 MW --> 11,500 MW
 - Will satisfy New Mexico's clean energy goals
 - Expanded transmission will enable substantial growth in clean energy exports
 - New Mexico's unique solar and wind resources are low-cost compared to other states

100 MW = power for 120,000 NM homes



RETA

2022 Energy Storage Study

- RETA's focus has been on building transmission to provide grid access to renewable energy projects, renewables cannot rely on transmission alone. We need long duration utility scale storage.
- *“Storage” in the RETA Act means energy storage technologies that convert, store, and return electricity to help alleviate disparities between electricity supply and demand, to facilitate the dispatching of electricity...*
- Renewables with storage will create firm capacity. Dispatchable power available 24/7 is what is required.



PART OF RETA'S CORE MISSION IS COLLABORATION ON POLICIES

COMMUNICATION ON POLICIES

- Maintain communication between local and state 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.



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.

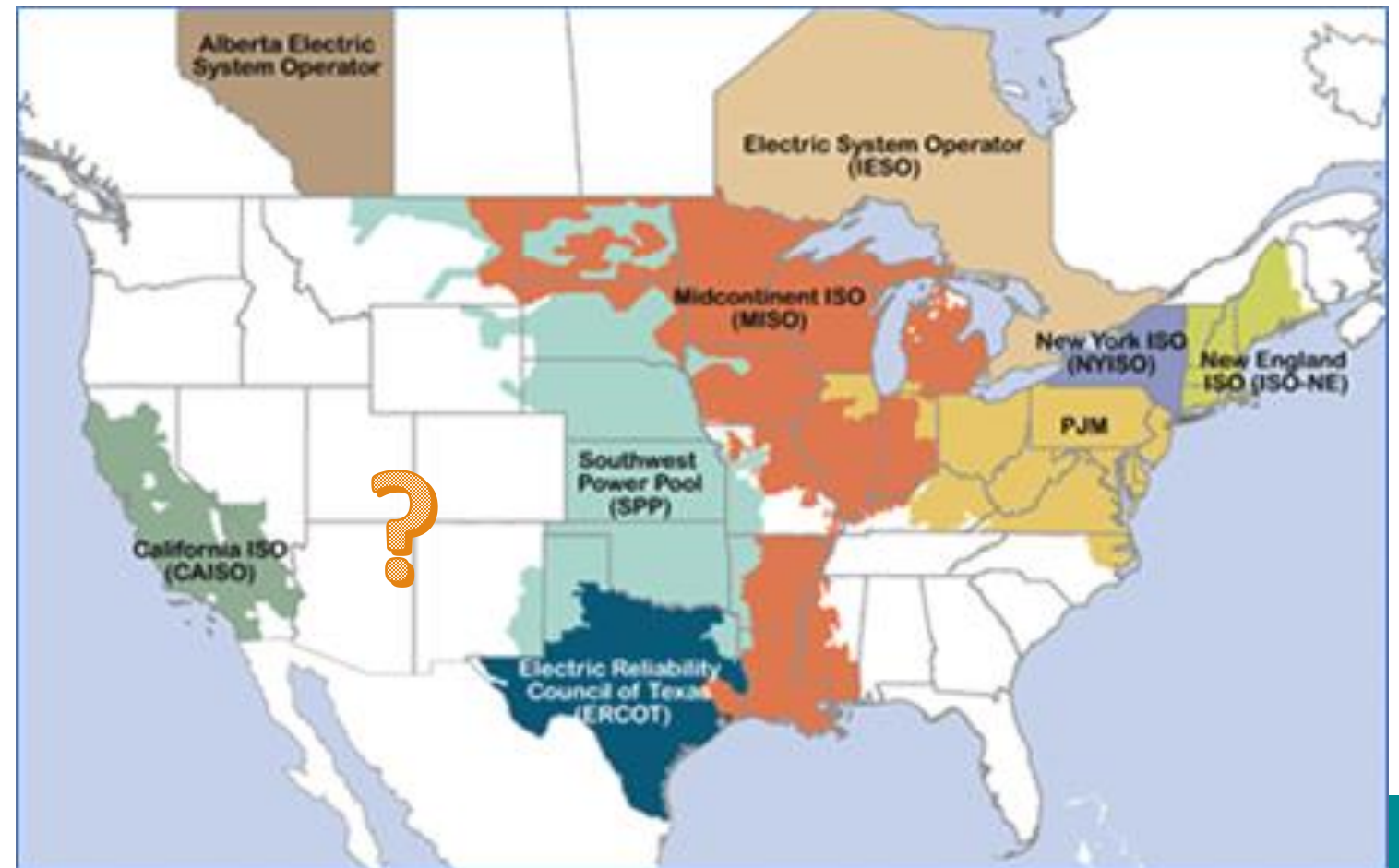
- **Continue our core mission of collaborating with existing partners and expanding relationships.**
- **Develop new partnerships with world class renewable energy and transmission developers to bring renewable energy to New Mexican customers and export markets.**
- **Promote another transmission corridor to connect New Mexico renewables to neighboring markets.**
- **Recently hosted a national workshop October 19-20 in Santa Fe – “500 Megawatts for 5 Days – Utility-Scale Storage – How do we get there?”**



RETA's Action Plan

Continued...

- Regional Transmission Organizations (RTOs) improve coordination and reliability and reduce consumer cost throughout most of the US.
- This coordination is lacking in the mountain west.
- RETA will work with New Mexico Utilities and policy makers to promote regional efforts to bring these benefits to the state.



RETA

NM RETA Energy Storage Workshop



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 renewable energy and will need renewable energy for our citizens.
- 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.





505.699.0651

Fernando@nmreta.net



www.nmreta.com

New Mexico Renewable Energy Transmission Authority



RETA