

# New Mexico Finance Authority Oversight Committee Update

Robert E. Busch, Chairman  
Fernando Martinez, Executive Director  
NM RETA

October 14, 2021



# Executive Summary

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- After over ten years of hard work RETA is accomplishing what it was tasked to do!
- The Western Spirit Transmission Project is expected to be in commercial operation by the end of this year.
- When in commercial operation, 800 megawatts (MW) of wind power will flow through the Western Spirit transmission line making powerful wind resources accessible to the electricity grid in New Mexico and the broader western markets.
- This is an important milestone for achieving the State of New Mexico's clean energy future of zero carbon emissions by 2040.
- 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.
- RETA completed a comprehensive study of how best to continue to develop renewable energy in New Mexico. It is available at the RETA website, <https://nmreta.com>.
- RETA's visible success is breeding more success: interest in RETA and New Mexico from major transmission developers.

# NM RETA Background

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- 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.
- 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 is working with developers to deliver clean electricity from wind and solar resources to both in-state and export markets.

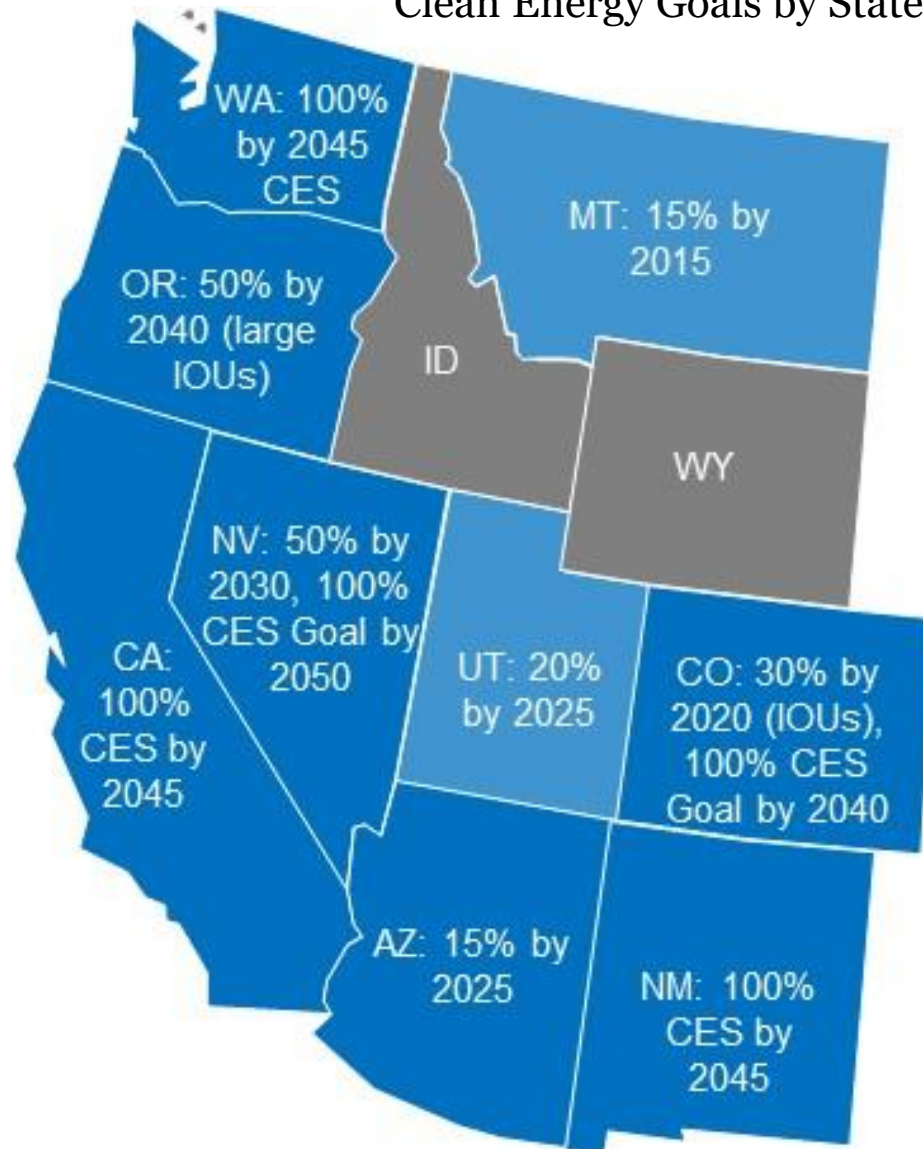
# Western Energy Policies Have Changed Rapidly in the Last Few Years

- 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.

# 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

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- 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/>

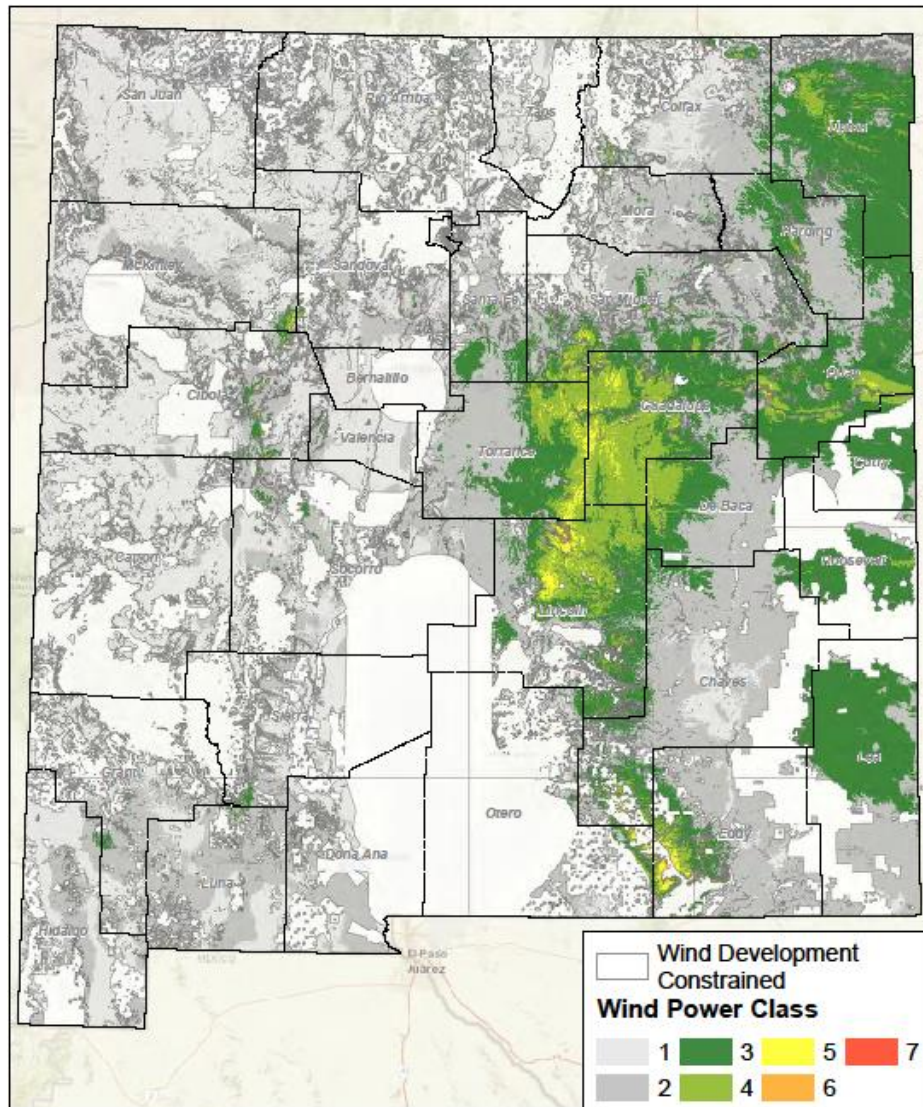
Sources: Energy Strategies, “Western Flexibility Assessment” (2019) and AWEA 2019 Q2 Market Report

Sources: Lazard, “Lazard’s Levelized Cost of Energy Analysis” (2018); IRENA Future of Wind (2019)



# Wind Development Potential

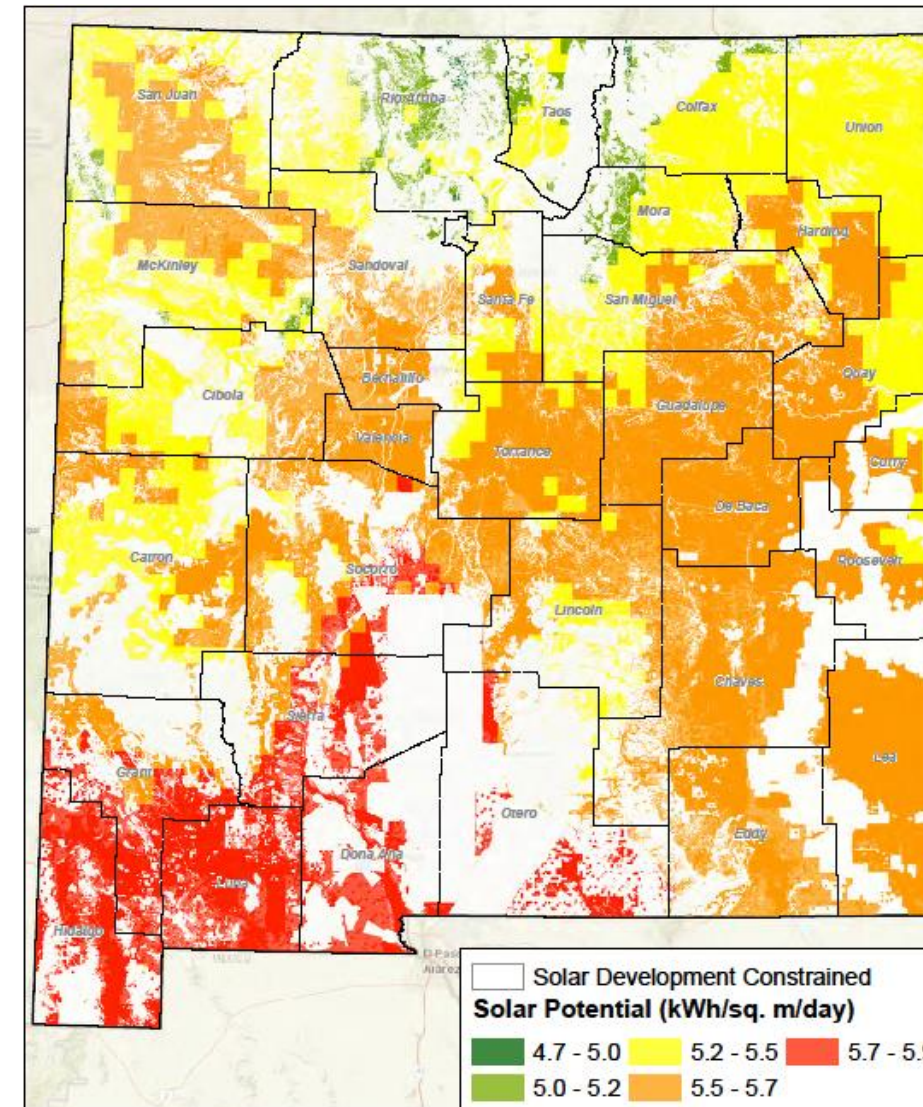
- Total developable land area for commercially viable wind equals 20,500 sq. mi.
- 18,500 sq. mi. on State Trust and private lands.



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.

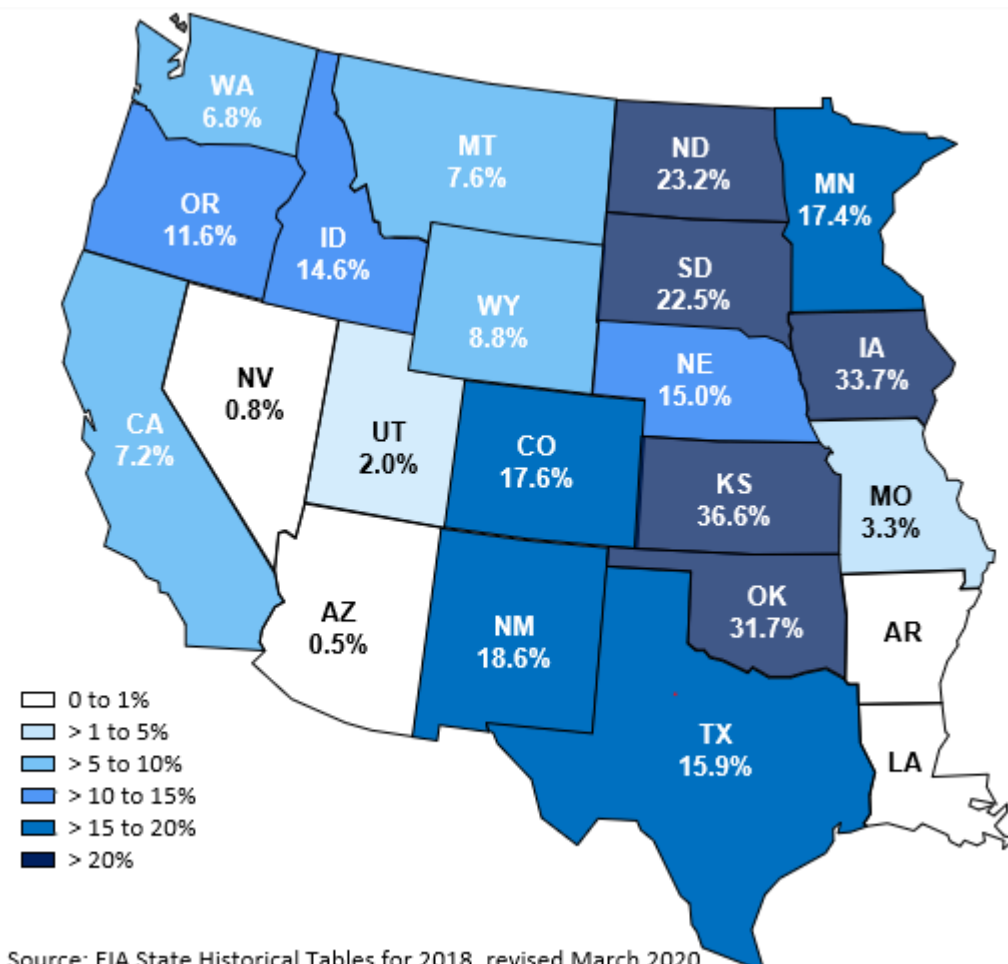


824,000 MW of highest quality solar potential on State Trust and private lands.



# Significant Opportunity to Provide Wind Resources to the West

*Wind Energy's Share of Electricity Generation by State*



Source: EIA State Historical Tables for 2018, revised March 2020.

- 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 wind penetration.
- Wind penetration in the West has lagged behind the Midwest.
- The western markets provide a significant opportunity for New Mexico wind facilities.





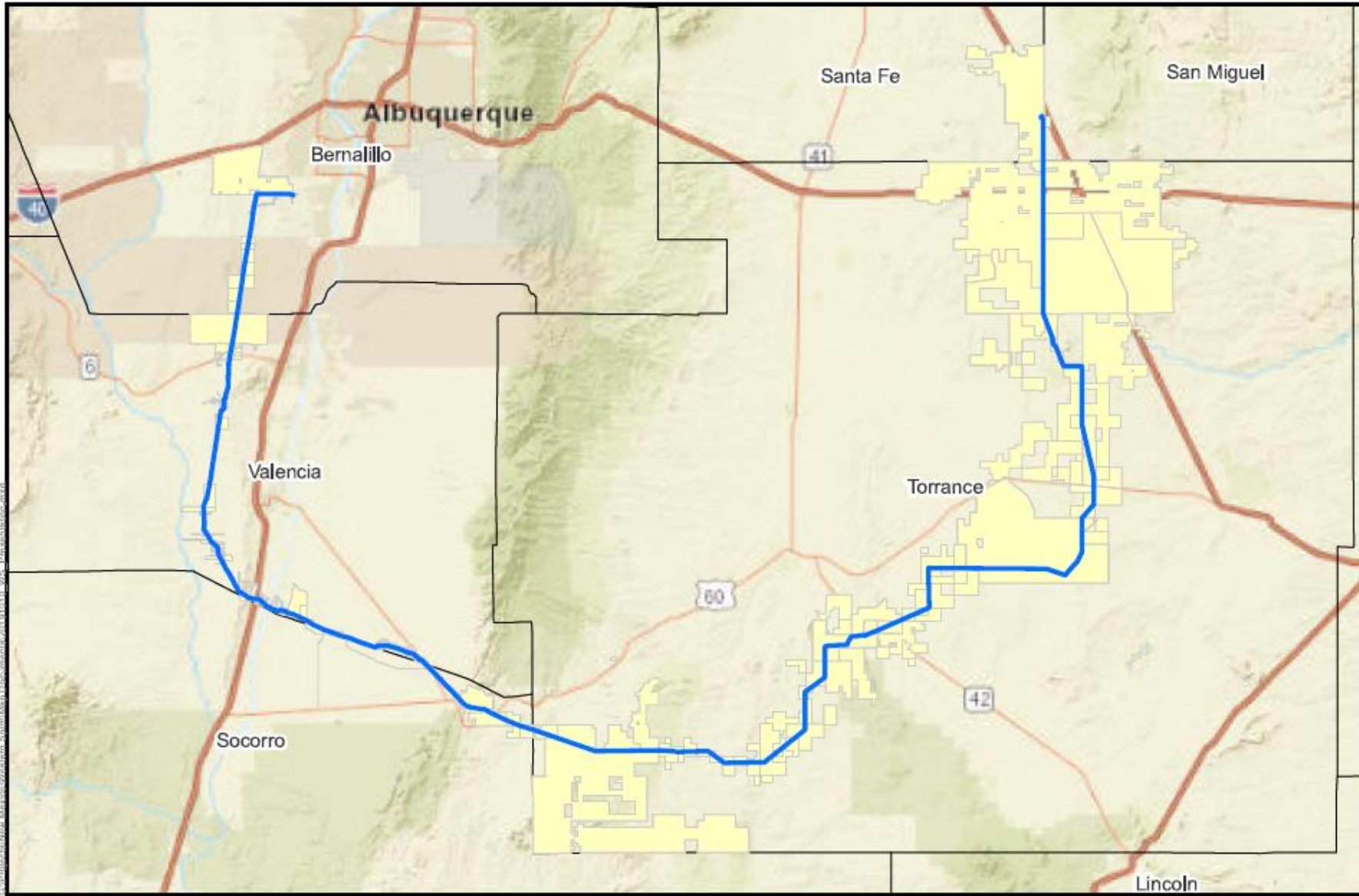
# NM RETA Projects

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- The RETA/Pattern Western Spirit project completed billions of dollars of financing for the transmission line and associated wind farms and is under full construction. It is expected to be in commercial operation by the end of 2021 (800 MW of central NM renewable energy will be transmitted on the line).
- RETA entered into a Co-Development relationship with SunZia. SunZia is a 520-mile transmission project in New Mexico and Arizona, with 315 miles located within New Mexico. SunZia is rated at a capacity of 4,500 MW.
- RETA is working with Ameren (acquired Lucky Corridor, LLC.) for projects targeting the NE part of the state which has tremendous renewable resources.
- RETA entered into an MOU with Invenergy for possible development of several hundred miles of electric transmission lines and the associated thousands of MW of possible renewable energy projects.
- 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 completion. 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 will help meet the requirements of the Energy Transition Act.

# Western Spirit Transmission Line Project

- Western Spirit is an approximately 150-mile 345kV AC transmission line
- 100% of the power will come from renewable resources located in Central New Mexico
- A first of its kind public-private partnership
  - Owned by RETA but jointly developed 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 has been under active development by RETA since 2010
- When complete the Project will be sold to PNM and added to their existing grid
  - The purchase of the Project will **not** impact New Mexico rate payers, 100% of the cost will be borne by the wind farms who will transmit energy along the line
  - Western Spirit is expected to be in commercial operation by the end of 2021



— Western Spirit Transmission  
■ Parcels

**Western Spirit Transmission  
New Mexico**



# Western Spirit Project Map



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Makes 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 will generate more than two billion dollars in net economic impact.



Estimated to provide over a thousand temporary construction jobs and over 100 permanent jobs to maintain and operate associated wind farms.



Wind farms are anticipated to 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 will be powered by the clean, renewable energy generated as a result of this project.

# Western Spirit Economic Benefits



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# SunZia Project

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- Proposed in New Mexico and Arizona and will exceed 500 miles in length
- Brings high-quality renewable energy to western utilities and power markets
- Two 500kV lines providing up to 4,500 MW of transfer capacity
- One line is permitted as Alternating Current (AC) and one line is being permitted as Direct Current (DC)
- SunZia's first customer is Pattern Energy, who will develop, own, and operate wind generation facilities in central New Mexico
- Currently in the Bureau of Land Management's Environmental Impact Statement (EIS) process with public comment and final EIS planning for late 2022.
- Construction start planned in 2022; Targeted commercial operation of the first 500kV line is 2025



# IN 2020 RETA COMPLETED A LANDMARK STUDY OF RENEWABLE ENERGY IN NEW MEXICO

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See 2020 New Mexico Renewable Energy  
Transmission & Storage Study

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

- Executive Summary
- Synopsis
- The complete Study



**RETA**

# 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



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# The RETA Study Demonstrates Benefits to New Mexico of Transmission Development & Expansion

Total Renewable Capacity

**11,500 MW**

**Operating in 2032**

- 11,500 MW comprised of 2,500 MW existing, 3,100 MW currently under development, and 5,900 MW identified in this study
- State renewable share reaches 54% (meets 2030 ETA milestone)
- Given current market conditions, by 2032, 5,900 MW of new renewables can be exported if vital new transmission lines are developed

Jobs per Year

Up to **3,700 / 800**

**Construction Phase / Beyond 2032**

- ⑩ Development, construction, and operation of new renewables and transmission result in an average of 3,300 to 3,700 jobs during the construction periods through 2032
- ⑩ 600 to 800 permanent jobs associated with this development will continue beyond 2032

Investment in New Mexico

Up to **\$11 B / \$190 M**

**2021-2032 / Beyond 2032**

- Total investment in the development, construction, and operation of new renewables and transmission ranges from \$9 billion to \$11 billion through 2032
- Additionally, annual operations and maintenance investments total \$155 million to \$190 million each year





# **PART OF RETA'S CORE MISSION IS COLLABORATION ON POLICIES**

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## **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.



# NM RETA Budget

FY 2023

	Developer Supported RETA Expenses	NM Govt Supported RETA Expenses	Total 2023
<b>Revenue</b>			
Government Appropriations		0	0
Total Government Appropriations		0	0
General Revenues			
Developer Advances & Contributions	1,525,000		1,525,000
Interest on Bank/ Inv. Accts.	1,000		1,000
Total General Revenues	1,526,000		1,526,000
Total Revenue	1,526,000	0	1,526,000
<b>Expenses</b>			
Contract Services			
Audit Fees	16,000		16,000
Legal Fees	425,000		425,000
Other Contract Sevices	125,000		125,000
Total Contract Services	566,000		566,000
Personnel			
Personnel Expenses	654,000		654,000
Health Benefits/Workers Comp	54,000		54,000
Total Personnel	708,000		708,000
Office			
Education	3,500		3,500
Office furniture, computers	10,000		10,000
Office Rent/Utilities	42,000		42,000
Supplies/software	5,000		5,000
Cell, Internet, IT Support	25,000		25,000
Postage, printing	2,000		2,000
Website	5,000		5,000
Total Office	92,500		92,500
Other Expenses			
Travel/mileage/meetings	10,000		10,000
Insurance - Liability, D & O	14,000		14,000
Total Other Expenses	24,000		24,000
Total Expenses	1,390,500		1,390,500
Net Income	135,500	0	135,500



# 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.*

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- **Expand RETA's public outreach regarding the transmission and energy storage study.**
- **Continue our core mission of collaborating with existing partners and expanding relationships.**
- **Develop new agreements and partnerships with world class renewable energy and transmission developers.**
- **Work with the major participants in renewable energy development to prioritize transmission corridors to simplify transmission siting.**
- **Continue to evaluate the delivery of renewable energy to in-state customers.**



# **RETA's Action Plan**

*Continued...*

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- **Monitor the technological advances and potential implementation of large-scale storage facilities in New Mexico and follow the development of microgrids.**
- **Participate in WestConnect / Southwest Area Transmission planning process to advocate for best-candidate transmission projects.**
- **Complete an update to the RETA Transmission and Energy Storage study to evaluate the following:**



**RETA**



# RETA's Action Plan

*Continued...*

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- Where is NM going with regards to evolving from isolated individual networks to regional upgraded and flexible grids? RETA will study regional efforts such as Regional Transmission Organizations (RTO's) that can be implemented and utilized.
- The update will explain what utility scale storage means and the need for dispatchable capacity.
- The update will also evaluate and make recommendations for how state and federal permitting processes can be streamlined without cutting corners to build transmission capacity in less time. For example, running permitting processes in parallel and creating a predictable regulatory landscape.



**RETA**

# The Bottom Line

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- 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.
- 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.





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[www.nmreta.com](http://www.nmreta.com)

New Mexico Renewable Energy Transmission Authority



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