New Mexico
Renewable Energy Transmission Authority

Presentation to
Science, Technology and Telecommunications Committee

Fernando Martinez
Executive Director

September 1, 2023

NM RETA Background

- 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.
  - A *"public body, separate and apart from the state, constituting a governmental instrumentality for the performance of essential public functions."*
  - Six-member Board, three appointed by the governor, one appointed by the speaker of the house, one appointed by the president pro-tempore of the senate and the state treasurer or designee. The secretary of the Energy, Minerals and Natural Resources Department serves as non-voting ex-officio member.
- Project selection process outlined in regulation - 17.8.2 NMAC (12/15/2011)
  - Relationship levels – all beyond NDA require Board approval
    - NDA
    - Letter of Support
    - MOU (this step triggers notice provisions to utilities, Public Regulation Commission and public)
    - Master Lease Agreement
      - Enables tax and eminent domain benefits for project
- RETA sponsored projects must transmit at least 30% of their energy from renewable resources. RETA's current projects are planned to have 100% of their energy originate from renewable resources.

RETA

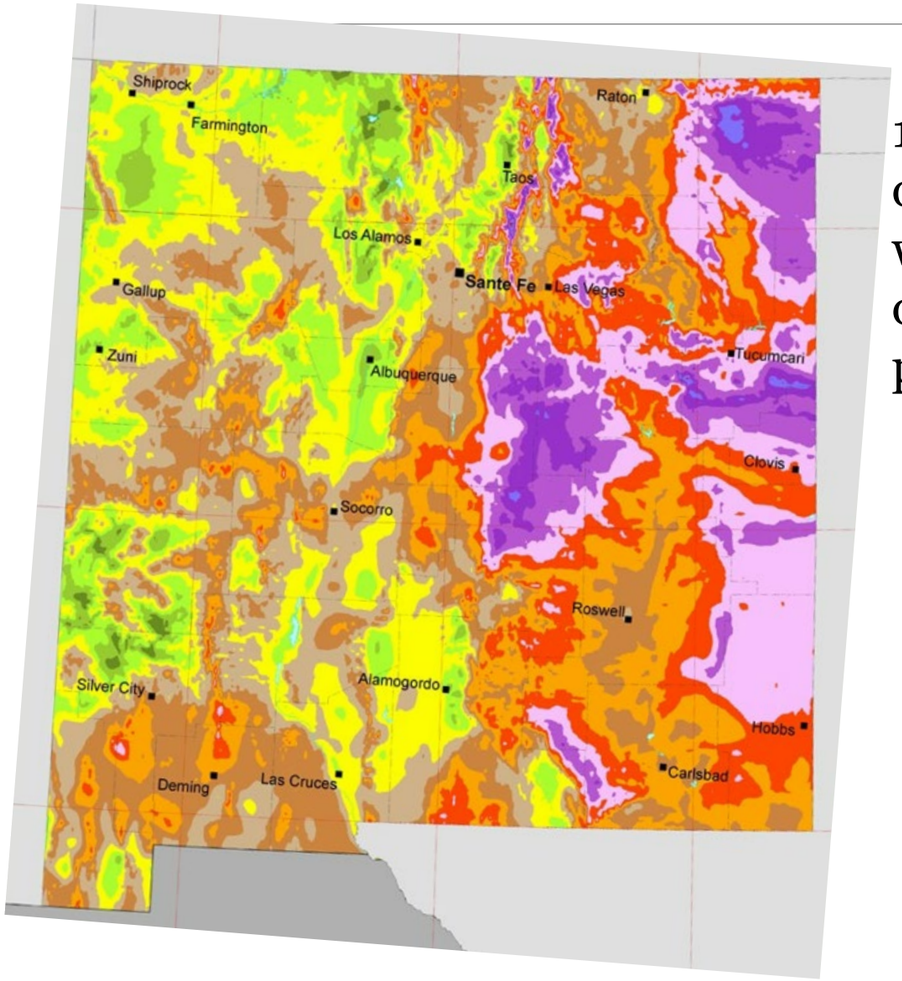
RETA's Benefits for Developers are Critical

- Private development partners:
  - Provide transmission design and construction expertise
  - Contribute to RETA administrative expenses via lease agreements.
- Tax incentives:
  - Property, gross receipts, and compensating tax.
- Assistance with permitting and siting:
  - Powers of eminent domain
  - Government-level relationships with State Land Office, Dept. of Transportation, Middle Rio Grande Conservancy District, other state and local agencies
  - Streamline permitting, but not skirting environmental requirements.
- Bond financing:
  - if developer needs financing support.

RETA

Wind Development Potential

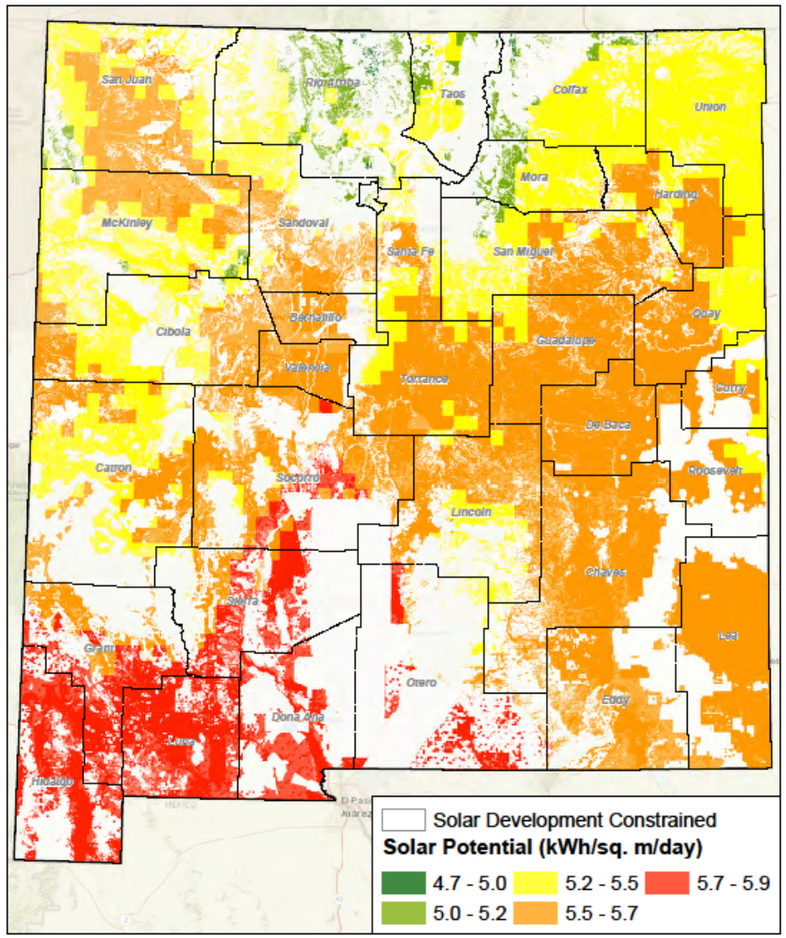
- **Total developable land area for commercially viable wind equals 20,500 sq. mi.**
- **18,500 sq. mi. on State Trust and private lands.**



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.

RETA

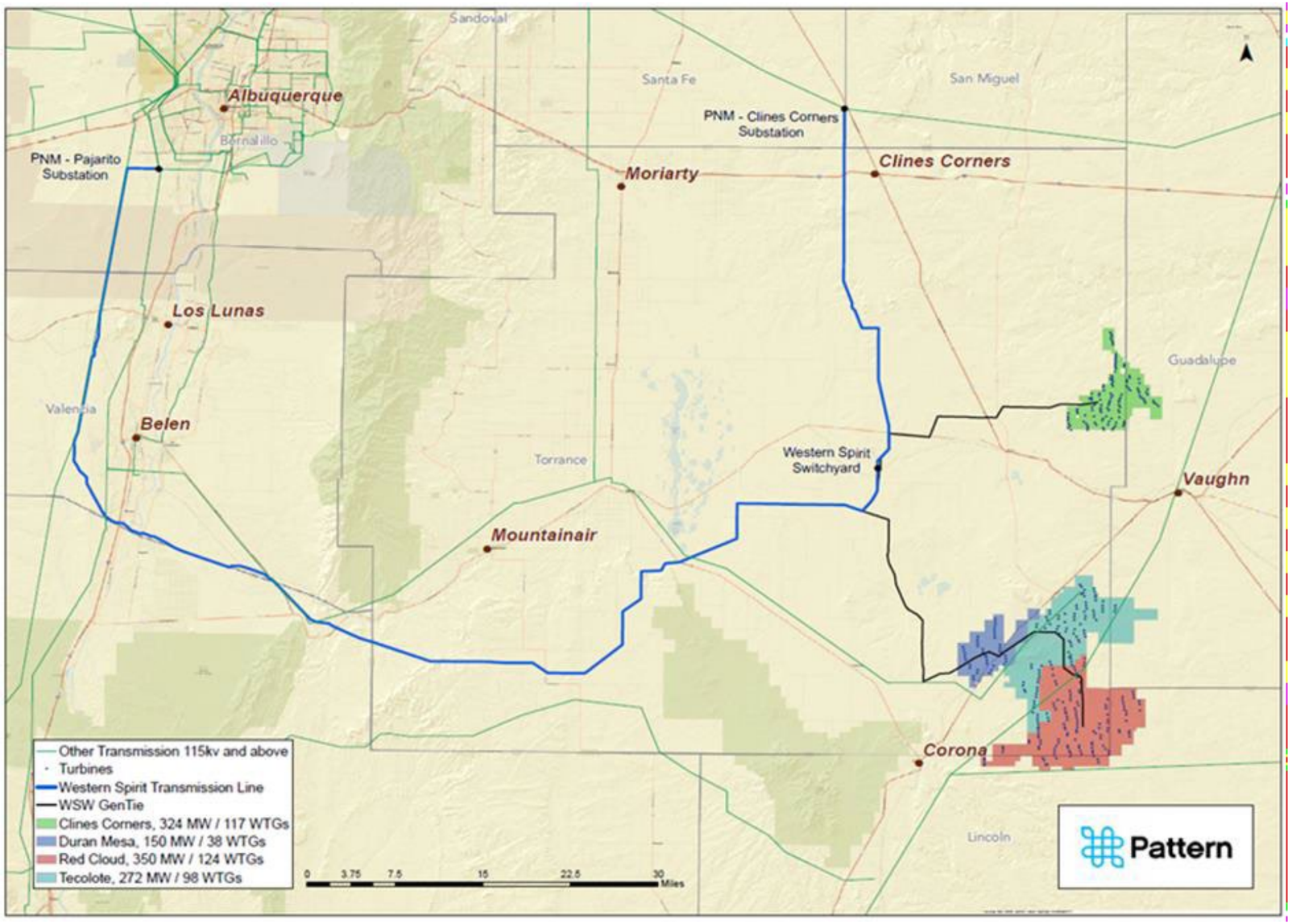
Four Projects Currently in Development Under Master Lease Agreement

- SunZia (Pattern Energy) – Central New Mexico to South Central Arizona
  - 550 miles, 525 kV HVDC – 3,000 MW capacity, 2026 completion date
- RioSol (Southwestern Power Group) – co-located with SunZia (NM to AZ)
  - 550 miles, 500kV AC – 1,500MW, 2028 completion date
- NM North Path (Invenergy) – Northeast to Northwest New Mexico
  - 400 miles, 525 kV HVDC – 4,000 MW, 2028 completion date
- Mora Line (Ameren) – Northeast New Mexico
  - 114 miles, 345 and 115 kV, 182 MW, 2025 completion date
- Links to project websites at https://nmreta.com/transmission-lines/

RETA

Western Spirit Transmission Line: Operating

- Western Spirit is a 155-mile 345-kV 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 relationship
  - Owned by RETA and jointly developed with Pattern Energy
- Initially identified by RETA in a study of the NM Transmission System by Los Alamos National Labs more than a decade ago
  - Western Spirit co-development started in 2010
- Completed in 2021, the Project was acquired by PNM and is now a part of their grid
  - No rate payers' impact
  - 100% of cost is borne by the wind farms delivering clean electricity



Western Spirit Project Map

SunZia Transmission Line Project

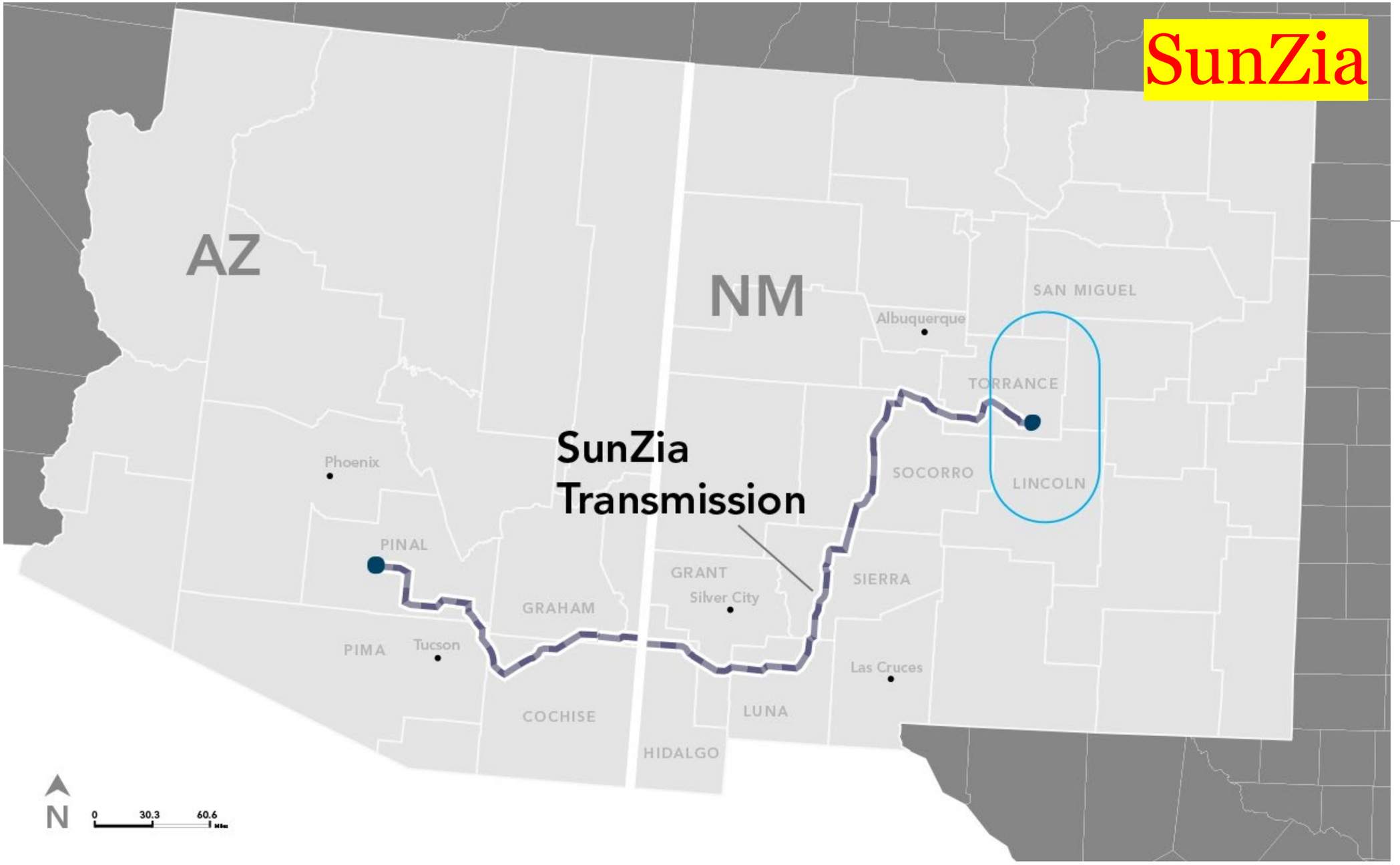
- 350-mile, 525-kV HVDC transmission line
  - New Mexico portion
  - 3,000 MW
  - Operating 2026

- 100% of the power comes from renewable resources located in Central New Mexico
  - Largest wind farm in the U.S.

- A public-private relationship
  - Owned by RETA and jointly developed with Pattern Energy

RioSol Transmission Line Project

- 350-mile, 500-kV AC transmission line
  - New Mexico portion, co-located with SunZia
  - 1,500 MW
  - Operating 2028
- 100% of the power comes from renewable resources located in Central New Mexico
  - Interconnection of NM wind and solar resources
- A public-private relationship
  - Owned by RETA and jointly developed with Southwestern Power Group


SunZia
AZ
NM
SAN MIGUEL
Albuquerque
TORRANCE
SunZia
Transmission
Phoenix
SOCORRO
LINCOLN
PINAL
GRANT
SIERRA
Silver City
GRAHAM
PIMA
Tucson
Las Cruces
COCHISE
LUNA
HIDALGO
N
0
30.3
60.6

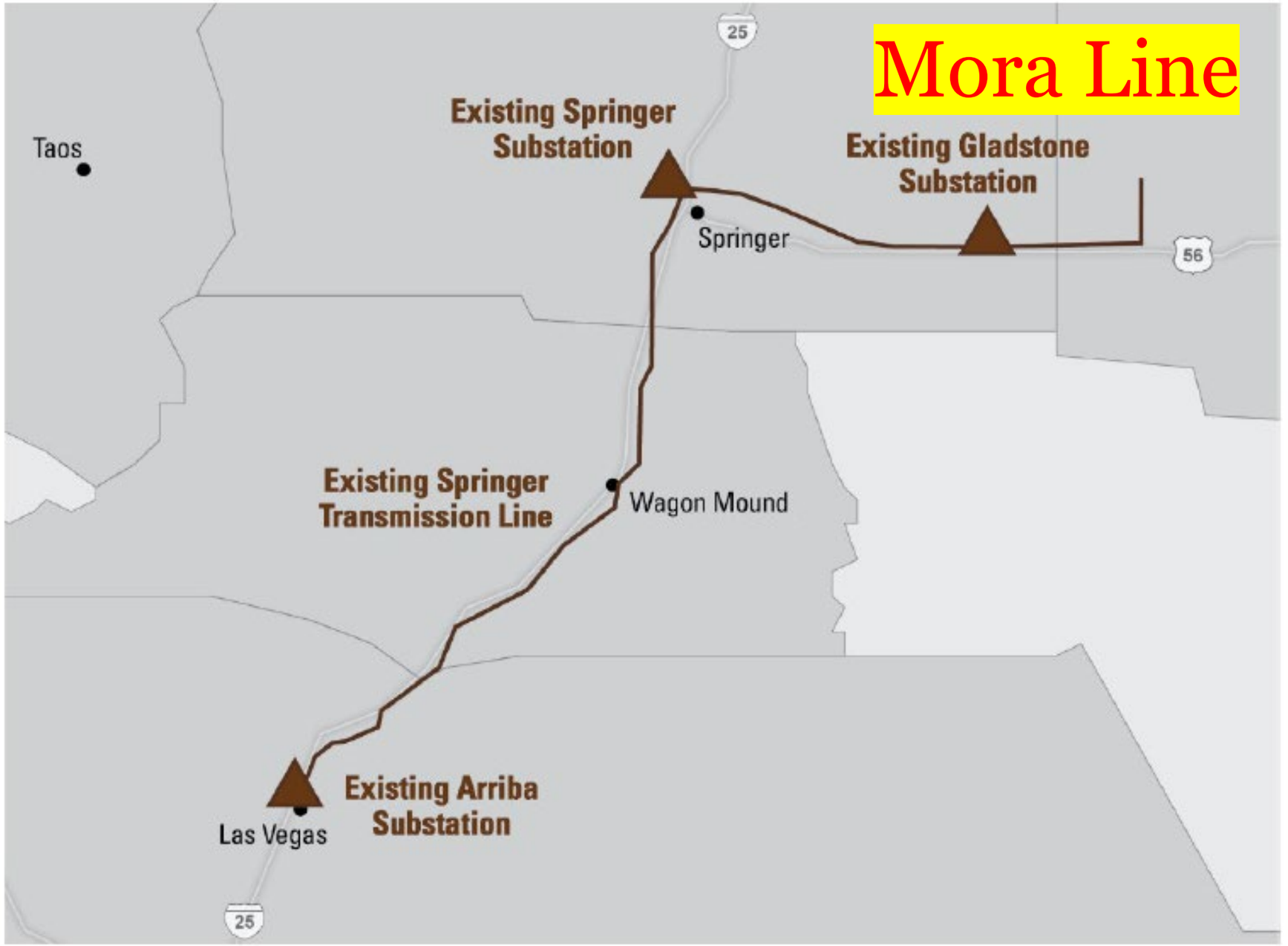
Mora Line Transmission Project

- 114-mile transmission line at 115 kV and 345 kV
  - 182 MW
  - Operating 2025

- 100% of the power comes from renewable resources located in Northeast New Mexico
  - Unlocks exceptional wind resources for in-state utilization
  - Strengthens New Mexico grid

- A public-private relationship
  - Owned by RETA and jointly developed with Ameren Transmission

Mora Line


25
Existing Springer Substation
Existing Gladstone Substation
Taos
Springer
56
Existing Springer Transmission Line
Wagon Mound
Existing Arriba Substation
Las Vegas
25

North Path Transmission Line Project

- 400-mile, 525-kV HVDC transmission line
  - 4,000 MW
  - Operating 2028

- 100% of the power comes from renewable resources located in Northeast New Mexico
  - Unlocks exceptional wind resources

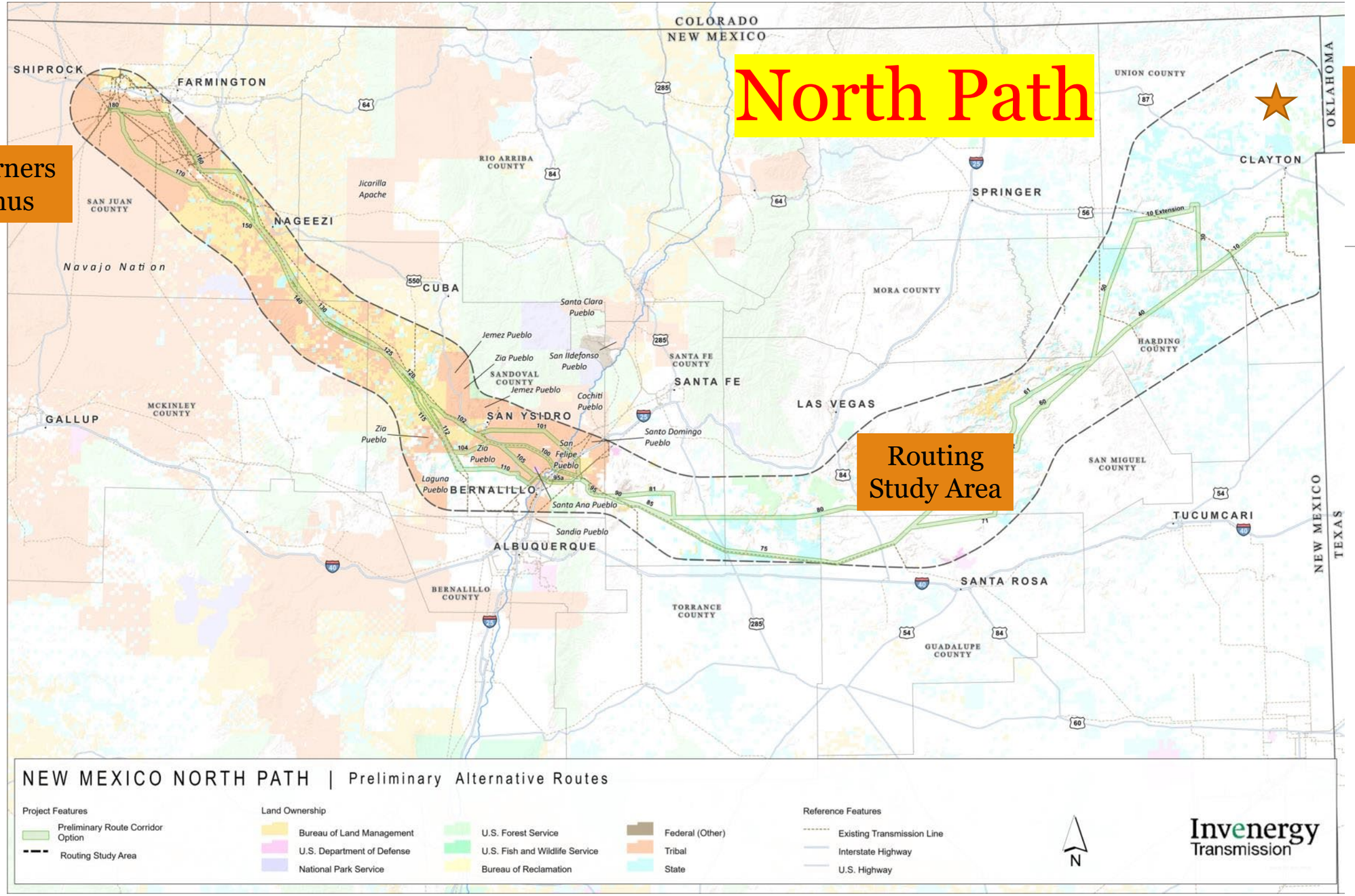
- A public-private relationship
  - Owned by RETA and jointly developed with Invenergy

North Path

Four Corners Terminus

Union County Terminus

Routing Study Area



Transmission Planning in New Mexico

As directed by NM statute or policies…

- Integrated Resource Plans
  - Three IOUs: PNM, El Paso Electric, Southwestern Public Service
  - 3-year action plan: RFP process requirements
  - 20-year planning period: forecasting and generation
  - Long-range transmission plans not required
- Energy Transition Act
  - Increasing RPS targets, 80% in 2040
  - No transmission planning required

Neighboring jurisdictions…

- 10-year Transmission Planning
  - States: Arizona and Colorado
  - RTO: Southwest Power Pool, eastern NM
  - Not applicable, western and central NM:
    - PNM
    - El Paso Electric

Independent, Federal, and Regional actions…

- Independent Transmission Studies
  - 2022 RETA transmission study update
  - 2020 RETA transmission study
  - 2010 LANL transmission study
- FERC Orders
  - Require NM utilities' coordination across Southwest US
  - Southwest US region: WestConnect, includes NM
- WestConnect
  - PNM and El Paso Electric are Members, convene biannual public meetings
  - RETA is a stakeholder, RETA partners are Members
  - Member utilities and developers navigate 2-year process to establish transmission priorities
  - NM utilities' participation level in WestConnect process is discretionary

New Mexico's Benefits from Transmission Development are Staggering

Put the projects together…

- North Path Project
  - Invenergy
    - $2B in transmission investment unlocks
    - $5B in renewables investment
- SunZia Project
  - Pattern
    - $1.8B in transmission investment unlocks
    - $6.2B in renewables investment
- RioSol Project
  - Southwestern Power Group
    - $1.3B in transmission investment unlocks
    - even more $Billions in renewables investment

…$16+ BILLION total investment opportunity

➔by 2030

➔unlocks wind and solar

➔relationships may exceed RETA Study projections

Study Projections…

- 2022 RETA Study Update projects significant economic benefits:
  - Line construction
    - **$1-2 billion** of capital spending
    - 3,600 jobs
  - Wind and solar plant construction
    - **$8 billion** in capital spending
    - 20,000 jobs

NM RETA Contracted with ICF to Study Renewable Energy Potential in New Mexico

- New Mexico Renewable Energy Transmission & Storage Study
  - Completed in 2020
  - Updated in 2022

- Study elicited significant interest by developers in bringing renewable energy and transmission projects to NM

- Executive summaries attempt to describe the issues and challenges in an easily understandable form

- Study, Study Update, and Executive Summaries available online
  https://nmreta.com/nm-reta-transmission-study/

RETA

505-699-0651

fernando@nmreta.net

www.nmreta.com

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

New Mexico Renewable Energy Transmission Authority

RETA