Objective:
To position New Mexico as a national leader in energy and natural resources management.

Energy, Minerals & Natural Resources Department

Sarah Cottrell Propst, Cabinet Secretary

New Mexico's Clean Energy Future:

Key Partnerships and Strategic Vision

Today's NM electricity policy objectives

Provide clean, affordable, resilient, reliable electricity.

- Decarbonize electricity generation.
- Strategic investments in grid modernization and transmission.
- Increase regional coordination & cooperation
  - Western Energy Imbalance Market
  - Day-ahead market
  - Regional Transmission Organization (RTO)
  - Transmission planning
- **+ Today's Topic:** Grid (or capacity) firming to keep the grid stable while integrating high levels of intermittent resources.

We set the stage in 2019, with the Governor's Executive Order 2019-003:

- Established a goal of reducing statewide greenhouse gas emissions by at least 45% by 2030 compared to 2005 levels.
- Committed New Mexico to joining the US Climate Alliance.
- Created the New Mexico Climate Change Task Force.
- Directed multiple agency climate regulatory actions.
- Laid the foundation for the Energy Transition Act (ETA).

Energy Transition Act (2019)

- Securitization
- Replacement power
- Renewable energy and zero-carbon standards
- Apprenticeships
- Community assistance funding from bond proceeds

Energy Transition Act – Portfolio Standards

- **40% renewable energy by 2025**
- **50% renewable energy by 2030**
- **Public Regulation Commission oversees compliance**

FOR UTILITIES:

- 80% renewable energy by 2040
- 100% zero carbon resources by 2045 as long as safety, reliability and impacts to customer bills are considered.
- PNM has already stated publicly that it will meet the zero-carbon requirement by 2040.

FOR RURAL ELECTRIC COOPERATIVES:

- 100% zero-carbon resources by 2050
- Resources composed of at least 80% renewable energy, as long as it is technically feasible, the system is reliable, and is not unaffordable.

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Results: Renewables are powering NM

- In 2022, renewable resources provided 42% of New Mexico's in-state electricity generation.
- That is a five-fold increase since 2015, according the U.S. Energy Information Administration (EIA).

SunZia:
The largest clean energy infrastructure project in United States history.

- The SunZia Wind and Transmission Projects, both led by Pattern Energy, highlight New Mexico's wind energy capacity.
- The SunZia Wind project, which broke ground last year, encompasses wind farms in Lincoln, and San Miguel counties with more than 3,500 MW of generation capacity.
- The SunZia Transmission project, a 550-mile HVDC project stretching from central New Mexico into Arizona that broke ground in August of 2023, can move more than 3,000 MW of energy.
- Over $8 billion investment
- 150 permanent jobs + over 2,000 construction jobs during peak construction

Interior Secretary Deb Haaland speaking at the SunZia transmission groundbreaking. Sept. 1, 2023

Clean Energy is Powering Economic Development

- Meta's Data Center in Los Lunas
  - ~$2 billion data center investment in New Mexico
  - Broke ground in 2016
  - 400+ operational jobs supported once completed
  - $4 million+ direct funding to Valencia County area schools and nonprofits
  - Added 635 MW new renewables in NM
- Arcosa's wind-tower manufacturing plant in Belen
  - Announced in March 2023
  - Anticipates 250 NM employees

"We look forward to expanding our manufacturing capacity to New Mexico, where market demand for new wind projects is robust," Antonio Carrillo, President and CEO of Arcosa, Inc., said. "Our new facility will strengthen our position in the wind-tower market and enable Arcosa to benefit from growing wind investment in the Southwest. We are pleased to create new jobs in the State of New Mexico, which has been a supportive partner and a strong proponent of wind-energy development."

Arcosa towers. Source: NM Economic Development Dept.

NM's Clean Energy Policy Environment

- Grid Modernization Roadmap Act
- Community Solar Act
  - 30% carve-out for low-income customers and service orgs
- Solar Market Development Tax Credit
- The Sustainable Building Tax Credit

We Need a Modern Power Grid

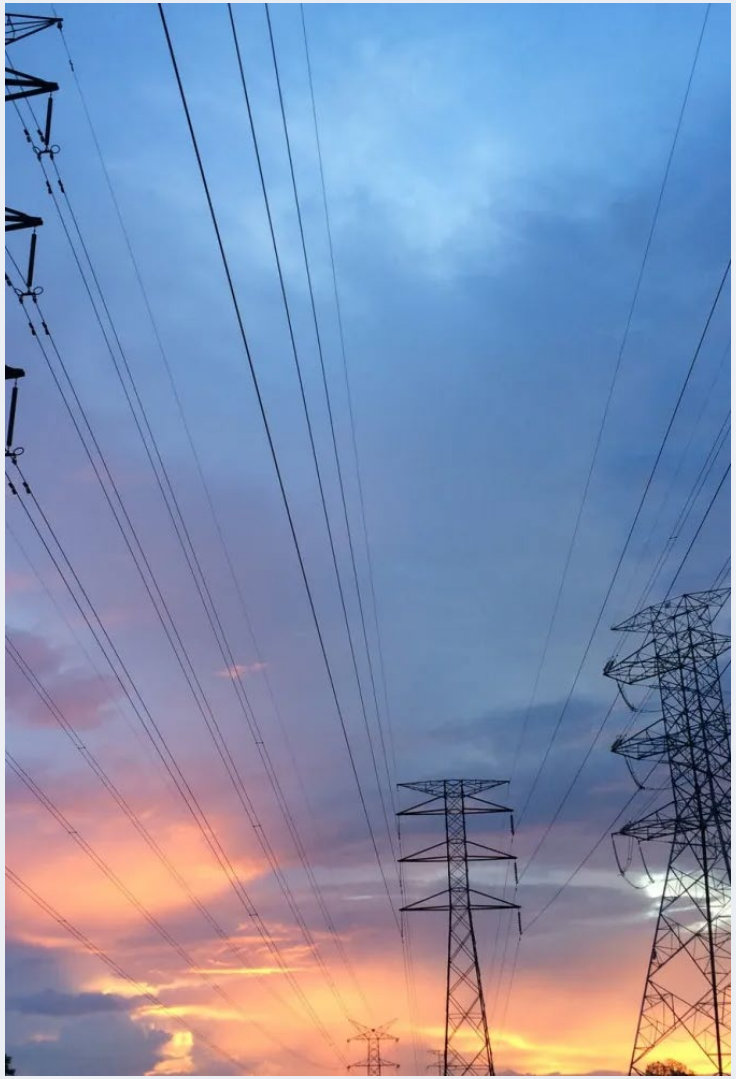
The International Energy Agency issued a report this week that says nations across the world need to build or upgrade 50 million miles of power lines by 2040 to meet their stated goals for:

- Adding renewable energy
- Adopting electric vehicles
- Replacing gas furnaces with electric heat pumps.

The report also says this modern grid will have to be more resilient and flexible, which includes accommodating energy storage.

We Need a Modern Power Grid

- The Legislature passed the Electric Grid Modernization Roadmap Act of 2020.
- A provision of the act directed EMNRD to establish a grant program to fund Grid Modernization Pilot Projects.
- These projects should demonstrate how a modern grid can:
  - Integrate renewable electric generation resources and/or
  - Enhance electric distribution or transmission grid reliability, grid security, demand response capability, customer service or energy efficiency or conservation.



We Need a Modern Power Grid

New Mexico is addressing this issue:

- The PRC requires investor-owned utilities to incorporate long duration energy storage (LDES) into their 2020 - 2040 Integrated Resource Plans.

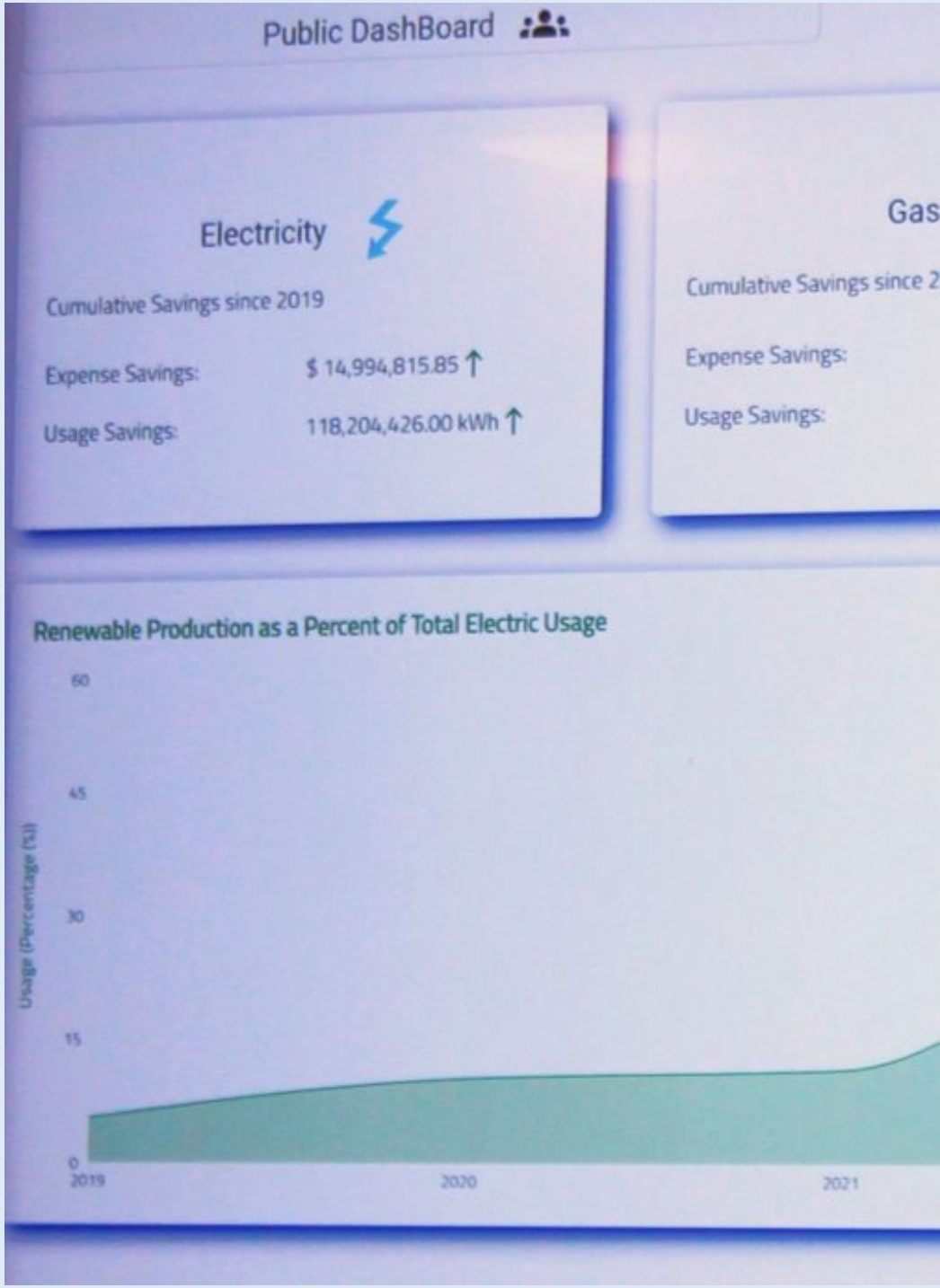
Grid Modernization Pilots

EMNRD combined federal (Bipartisan Infrastructure Law), state, and local dollars to fund multiple grid modernization pilot projects.

EMNRD Grant Awards FY22-23

- City of Albuquerque - Total Award: $301K
  Total Project: $600K
  - 'BRAIN' - ***B**alanced **R**esource **A**cquisition and **I**nformation **N**etwork*
  - Energy database
  - Real-time demand response

- Northern New Mexico College - Total Award: $220K
  - *Resilient El Rito* project, El Rito campus
  - Microgrid feasibility and design studies
  - 1.5 MW solar + 2 MWh battery storage



Grid Modernization Pilots

EMNRD Grant Awards FY24

- City of Aztec Total Award: $170K
  Total Project: $360K
  - *Solar PV + Energy Storage* project
  - **Supports San Juan County energy transition**
  - 2 MW solar + 4 MWh battery storage

- New Mexico State Univ. - Total Award: $118K

  - *Statewide Customer Choice Survey*
  - Transportation electrification
  - Identify utility customer choice factors

Public Regulation Commission

Partnership on Regional Transmission Organizations (RTOs) and Grid Modernization

Regional Transmission Organization Inquiry

- PRC Case No. 23-00268-UT
- NM investor-owned utilities
- Stakeholders and Cooperatives invited
- Workshop held September 21st
- IOUs, RETA, and other Stakeholders provided comments

An RTO could have many benefits like cost savings and efficiencies, while implementing two important market functions: a Single Balancing Authority and Centralized Transmission Planning.

Grid Modernization Workshop Series

- PRC workshops in 2022
- Participation by IOUs, EMNRD, RETA, and other Stakeholders
- EMNRD initiated action on Grid Modernization, 2020-2021:
  - Convened Advisory Group
  - Issued Roadmap and Baseline reports
- Workshops documented in Gridworks Report (2022)

Partnership with DOE and EPA

Bipartisan Infrastructure Law (BIL) and Inflation Reduction Act (IRA)

- Electric Grid Resilience Upgrades
  - New Mexico award: $35 million
  - BIL Section 40101(D) formula grant
  - State & Local funds/in-kind match
  - Managed by EMNRD Energy Conservation and Management Division (ECMD)
  - State/local governments & tribal organizations
  - RFP expected November 2023
- Project Goals
  - Reduce outages caused by natural hazards
  - Resilience measures using renewables and grid modernization
  - Strengthen community resilience
  - Grow resilience and sustainability workforce

- More Opportunities Coming!
  - $250 million Solar For All application
  - IRA funding
  - Managed by EMNRD's Energy Office

EMNRD has $500 million in BIL and IRA funding applications.
More innovation for New Mexico.

Renewable Energy Transmission Authority

Partnership on Transmission & Storage Development

Regional Participation

- EMNRD and RETA
  - Recognized leaders in grid development
  - Input sought frequently for grid forums

Joint Expertise for New Mexico

- EMNRD
  - Broad clean energy innovation
  - State DOE conduit - *Funding*
- RETA
  - Transmission development facilitator
  - Renewable energy developer conduit – *Economic Development*

RETA transmission development: 800 MW of wind interconnected. A *staggering* 8,500 MW of new renewable transmission capacity is next.

RETA has facilitated $2 billion in renewables and grid infrastructure, with $16 billion more in construction or advanced development. *Tremendous economic development for New Mexico.*

Looking Ahead

- Additional regional cooperation work
  - CREPC (Committee on Regional Electric Power Cooperation)
  - WIEB (Western Interstate Energy Board)
  - EMNRD, PRC, RETA
- Energy storage next steps from this conference
- Decarbonizing the transportation sector, starting with:
  - Governor's Clean Car and Truck Rule
  - Hydrogen development
  - Zero-emission executive order for the state vehicle fleet
- Training programs to prepare New Mexicans for the renewable and energy efficient economy.
- Administering lots of BIL/IRA funding for grid modernization and clean energy transition

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Thank you

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