



Grid Modernization in New Mexico

Water and Natural Resources
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Key Questions

What is Grid Modernization?

Why is Grid Modernization important for New Mexico?

Is New Mexico alone in grid modernization?



► Power flows in one direction from electricity supplier to electricity consumer

► Electricity consumers become electricity producers – power flows happen in both directions – Distributed Energy Resources (DER); Microgrids

► Greater penetration of renewables – customer-owned and Utility-owned

► Growth of electric vehicle ownership

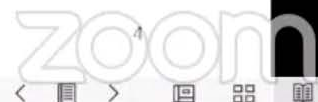
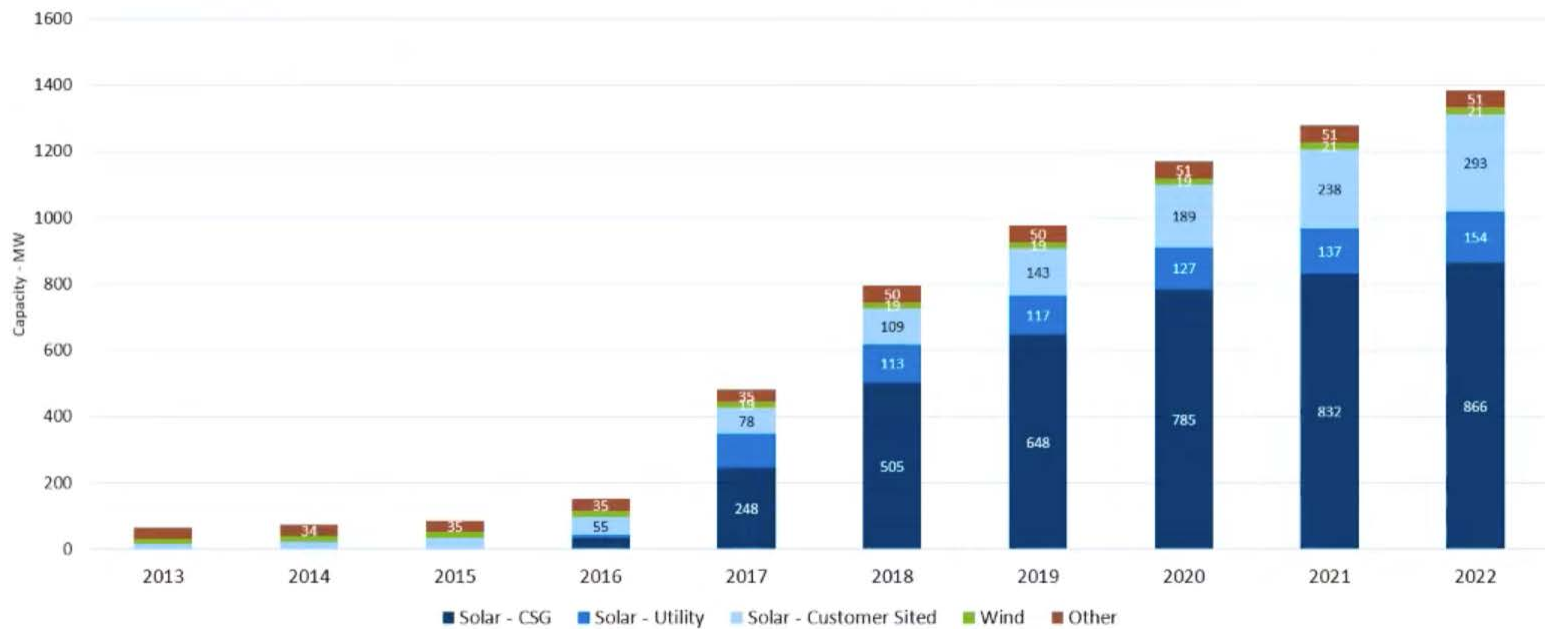
► Greater need for resiliency and security of the electric grid – natural disasters, cyber attacks

► Enhanced communication and control – Smart meters; Wifi enabled refrigerators, water heaters, thermostats....

► *All this is on the distribution side of the utility grid*



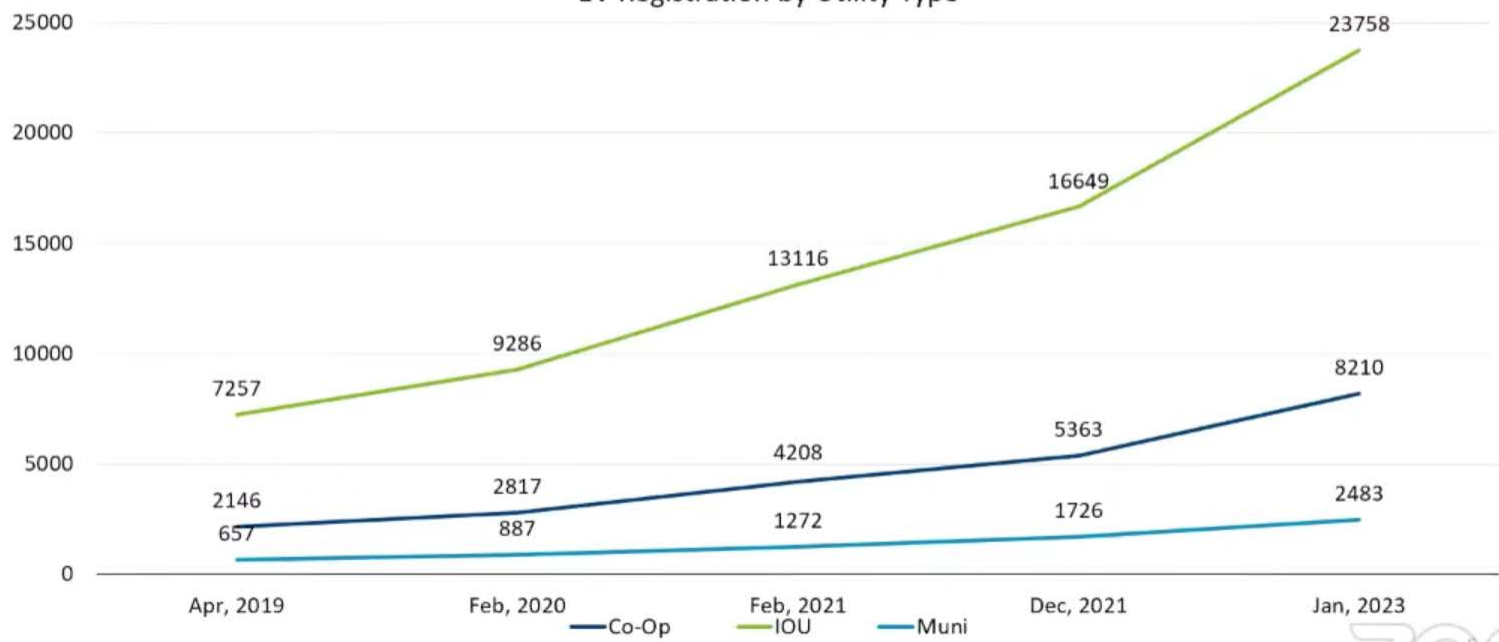
Minnesota Cumulative Installed DER Capacity (MW)





EVs in Minnesota

EV Registration by Utility Type



Why is it important for New Mexico?

- ▶ Rapid growth of customer-owned rooftop solar and utility scale solar farms; Community Solar Act; Kit Carson is 100% daytime solar
- ▶ Adoption of electric vehicles in urban centers, and plans for transportation electrification statewide
- ▶ Rural communities are seeking resilient solutions - Picuris Pueblo vision for resiliency and sustainability
- ▶ Greater awareness and demand for smart meters
- ▶ Grid Modernization is a key element of decarbonization of the electric grid
- ▶ Genesis of grid modernization in New Mexico: HB 233 (2020)

HB 233 Actions in New Mexico

- ▶ EMNRD developed a roadmap for grid modernization through the Grid Modernization Advisory Group
 - ▶ 40 electricity sector representatives, National Labs, academics, renewable energy experts, environmental and consumer advocates
- ▶ EMNRD established a Grid Modernization Grant Program
 - ▶ 2021-2022 City of Albuquerque
 - ▶ 2022-2023 Northern New Mexico College
- ▶ PRC is conducting information hearings on other state's grid mod programs and plans stakeholder engagement prior to rulemaking
- ▶ New Mexico has three investor-owned utilities and about 20 rural cooperatives – HB 233 is non-prescriptive

Are We Alone?

- ▶ NO! At least 14 other states have grid modernization plans in place
- ▶ New York, California, Massachusetts, Nevada, Michigan, Minnesota, Texas, Illinois....
- ▶ US DOE has and continues to invest in grid modernization
 - ▶ Recent awards to National Labs for grid modernization studies and projects