



# Solar In New Mexico

Mark Gaiser Program Manager  
New Mexico State Energy Office

US Senator Martin Heinrich's  
Energy Summit

Albuquerque, NM  
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Energy, Minerals and Natural Resources Department

# The promise of Solar Energy

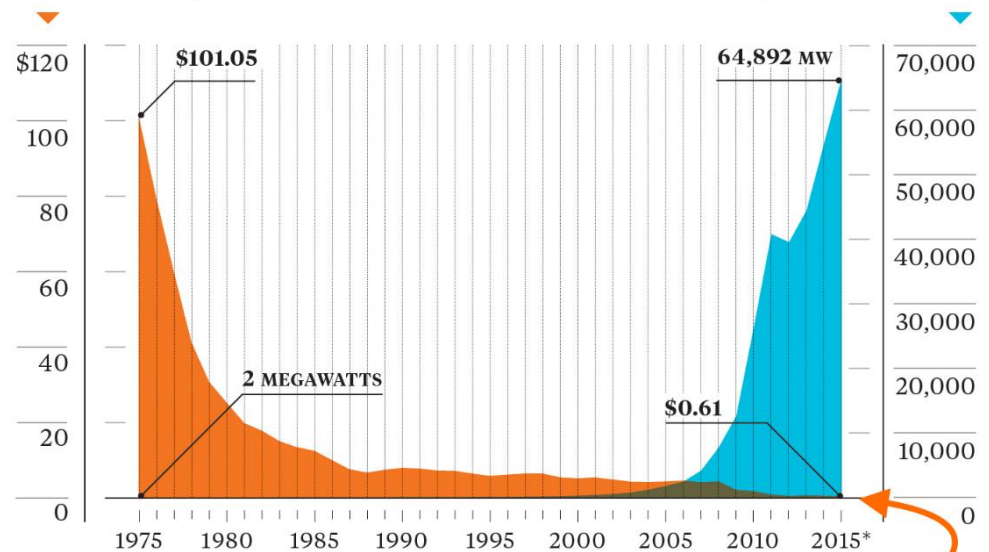
- Solar power growth
- Expanding installations
- Cost reductions
- Leaving low to moderate income (LMI) communities behind:
  - Negligible use in bottom 76% of economic strata in New Mexico (NM LFC report 2017)
  - NM Solar policies reward high-earning households. (Communication, J. Kaminsky, NM T&R 2018)

## Solar on Fire

As prices have dropped, installations have skyrocketed.

Price of a solar panel per watt

Global solar panel installations



\*Estimate. Sources: Bloomberg, Earth Policy Institute, [www.earth-policy.org](http://www.earth-policy.org)

**Down to \$0.447 in August 2016**

# New Mexico Solar and Income

- Large LMI community in New Mexico
  - 76% of the households have income under \$50,000 per year
  - 17% mobile homes
  - For some communities, mobile homes represent over 30% of the housing stock
  - Number of total households in New Mexico = 677,971 (US Census)



Mobile home in Las Cruces, NM

- Solar Installations in New Mexico:
  - 2016 average value of solar installation was \$27,700. Most common size was 4 kW dc
  - 2016 average household income where solar was installed was greater than \$170,000 (upper 5%)
  - The New Mexico and Federal tax credits rely on tax liability - which does not apply to families earning < \$50,000



T or C Mobile Home Park – 23 Spaces  
google earth

# Action Areas for New Mexico

## Financing of Solar and Energy Efficiency

- R-PACE and C-PACE laws and implementation

- On-bill financing

- Community Solar

- Tax incentives – RE, EE and Storage

## Utility structure

- Advanced Metering Infrastructure

- Net Metering

- Value of Solar and Storage

- Demand rate structures

- Interconnection rule updates – include storage

- Effective Time of Use rates

- Distribution planning for solar additions

- EV charging and planning support

## Local Government

- Latest Energy Codes

- Permitting and fees

- Zoning exclusions

- Overlay restrictions

- HOA restrictions

- EV support

- Business support

- Net Zero government buildings

# Action Areas for New Mexico continued

## Transmission and distribution

- RTO or ISO overlay for New Mexico utilities

- Robust and resilient transmission and distribution supporting solar-powered industry

- G&T contractual help for Coop contract negotiations

## Business Diversification

- Promote our lowest cost renewable energy for businesses

- Hunt for high-energy usage firms that can use low-cost energy

- Leverage the National Labs research to provide better production methods for high-energy content materials (silicon, glass, cement, aluminum, steel refining)

## Education

- Educate and train our workforce for future energy careers – kindergarten to college

- Provide world class education for all in Net Zero buildings

# Supporting slides follow

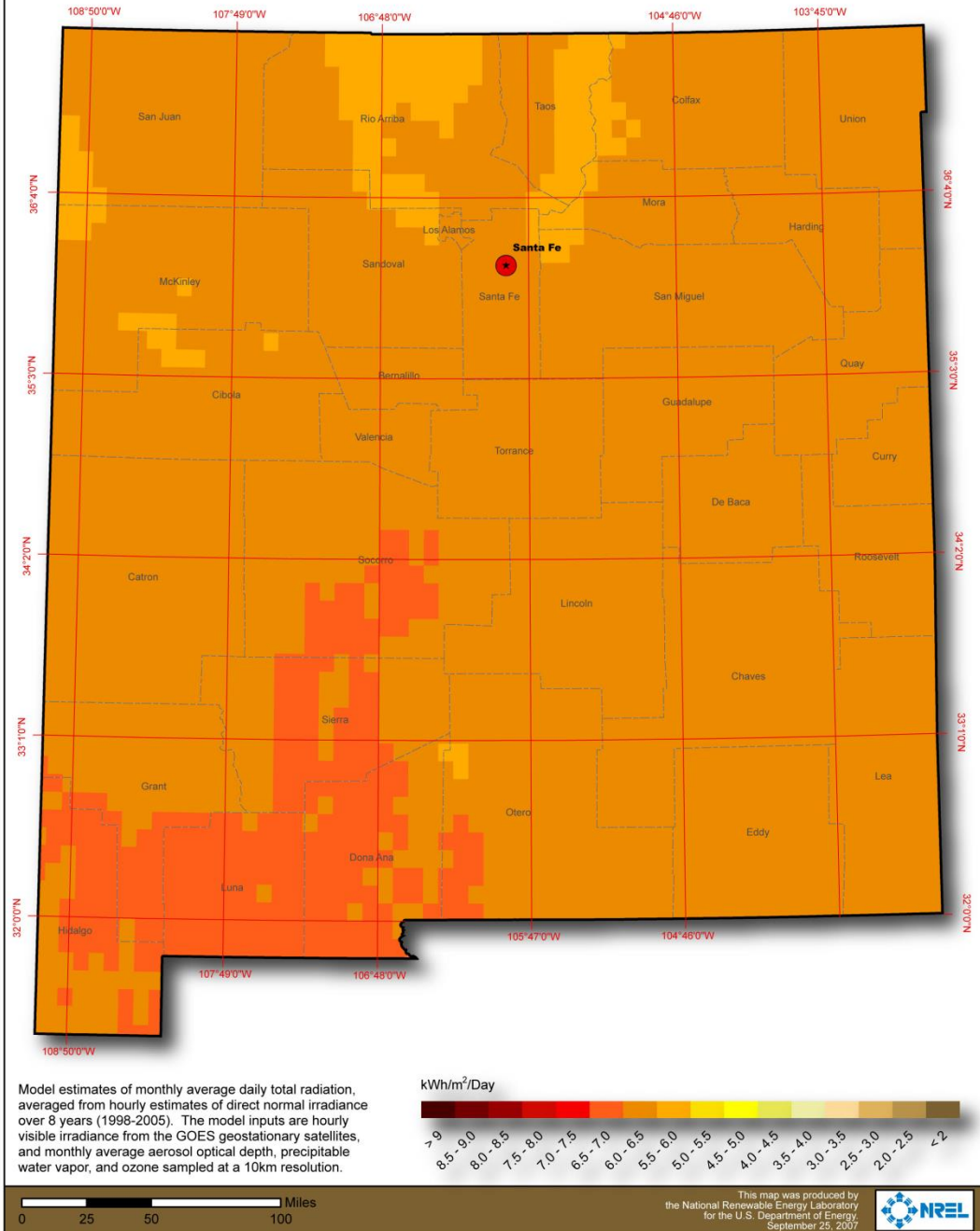


2018 New Mexico State Energy Office with Clean Energy States Alliance, Jemez Mountains Electric Coop, and Cornerstone Communities second PV on a Pole installation for low income household in Nambe Pueblo.

# Global Solar Radiation at Latitude Tilt - Annual *New Mexico*

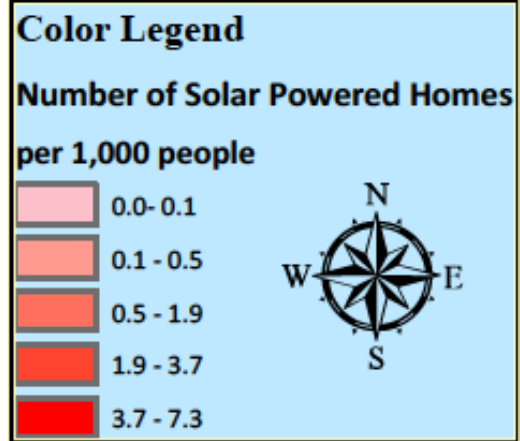
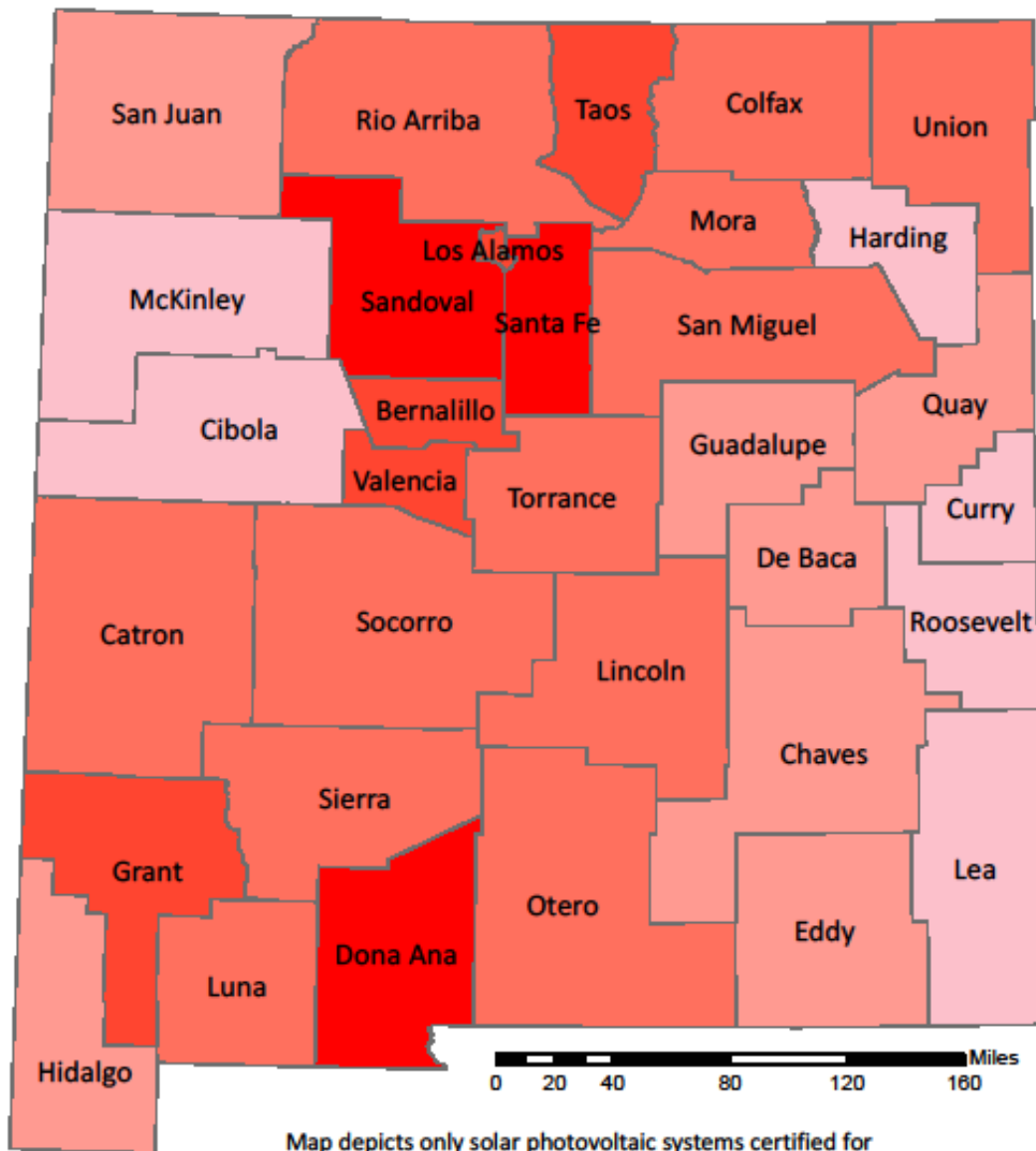
New Mexico's Solar Resource: Not Restricted to a Few Counties.

Number Two in the Nation.



# NM Residential Solar Power Installed 2008 - 2015

Based on Population



U.S. Census 2010

**New Mexico Residential Solar Statistics Summary:**  
**28 Megawatts Installed Capacity**  
**5733 Homes with Solar Power**



Energy, Minerals and Natural Resources Department  
 Energy Conservation and Management Division  
 1220 South Saint Francis Drive  
 Santa Fe, NM 87505

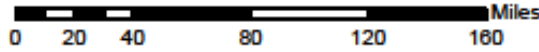


505-476-3310

[www.CleanEnergyNM.org](http://www.CleanEnergyNM.org)

July 2015

Map depicts only solar photovoltaic systems certified for the New Mexico Solar Market Development Tax Credit.





# TOP 12 COUNTIES IN 2016

Residential Solar Installations in New Mexico				
Tax Year 2016		January 1, 2016 through June 15, 2016		
Counties Ranked by Number of Solar Installations	Projects Approved by ECMD for Calendar Year 2016	County population - 2010 census	Systems per 1000 capita	Sum of System Dollars Spent by Owners
Bernalillo	441	662,564	0.67	\$12,100,080.08
Santa Fe	172	144,170	1.19	\$5,148,480.94
Sandoval	156	131,561	1.19	\$4,312,514.25
Dona Ana	150	209,233	0.72	\$3,964,005.40
Otero	30	63,797	0.47	\$969,175.73
Grant	27	29,514	0.91	\$678,586.41
Valencia	26	76,569	0.34	\$806,633.98
Taos	23	32,937	0.70	\$507,150.67
Rio Arriba	10	40,246	0.25	\$265,316.50
San Juan	8	130,044	0.06	\$179,269.16
Los Alamos	6	17,950	0.33	\$162,570.60
Torrance	6	16,383	0.37	\$182,029.92

Data is complete as of August 01, 2016.

Census data from NM Economic Development site: [www.gonm.biz/Census\\_2010.aspx](http://www.gonm.biz/Census_2010.aspx)

Statistics and Economic data from NM ECMD Solar Tax Credit Database August 01, 2016

# Where to find Solar PV information, and regulatory info:

Greentech Media – Trade Journal

<https://www.greentechmedia.com/>

Home Power Magazine

<https://www.homepower.com/>

New Mexico EMNRD/ECMD website

[www.CleanEnergyNM.org](http://www.CleanEnergyNM.org)

New Mexico Solar Energy Association

<http://nmsolar.org/>

New Mexico Public Regulatory Commission

<http://www.nmprc.state.nm.us/>

- Bernalillo County District 1 – [Cynthia.Hall@state.nm.us](mailto:Cynthia.Hall@state.nm.us)
- Sandoval County District 3 -- [Valerie.Espinoza@state.nm.us](mailto:Valerie.Espinoza@state.nm.us)

PNM Solar Energy Program

<https://www.pnm.com/solar>

State Renewable Energy Incentives - DSIRE

<http://www.dsireusa.org/>

Solar Energy Industries Association

<http://www.seia.org/policy/consumer-protection>

Solar Laws – Lex Helius by Stoel Rives, LLP 5<sup>th</sup> edition

<https://stoel.com/lawofsolar>

Utility -- Smart Electric Power Alliance

<https://sepapower.org/decarbonization-tracker/>