



The Energy Economy

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NM Energy, Minerals and Natural Resources Department
(EMNRD)

Economic and Rural Development Committee

New Mexico Legislature

Grants, NM

July 13, 2016



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Energy, Minerals and Natural Resources Department

2015 Governor's Energy Policy & Implementation Plan

- Focus: State Revenue & Private Sector Jobs
 - Infrastructure Needs
 - Federal
 - Access to Lands
 - Collaboration
 - Clarify & Streamline Regulations
 - Carbon Standards
 - Energy and Water Nexus
 - Energy Education and Training



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New Mexico Energy Resource Rankings

	U.S. Ranking
Proven oil reserves	5
Proven natural gas reserves	8
Recoverable coal reserves	9
Wind potential	11
Solar potential	3
Geothermal resources	6
Uranium reserves	2

New Mexico Energy Production Rankings

	U.S. Ranking
Net energy supplier to nation	3
Total energy production	10
Oil production	5
Natural gas production	7
Coal production	12
Wind installed capacity	19
Solar installed capacity	10
Renewable power* generation	24

* Excluding hydropower

Note: Rankings out of 51 and include the District of Columbia



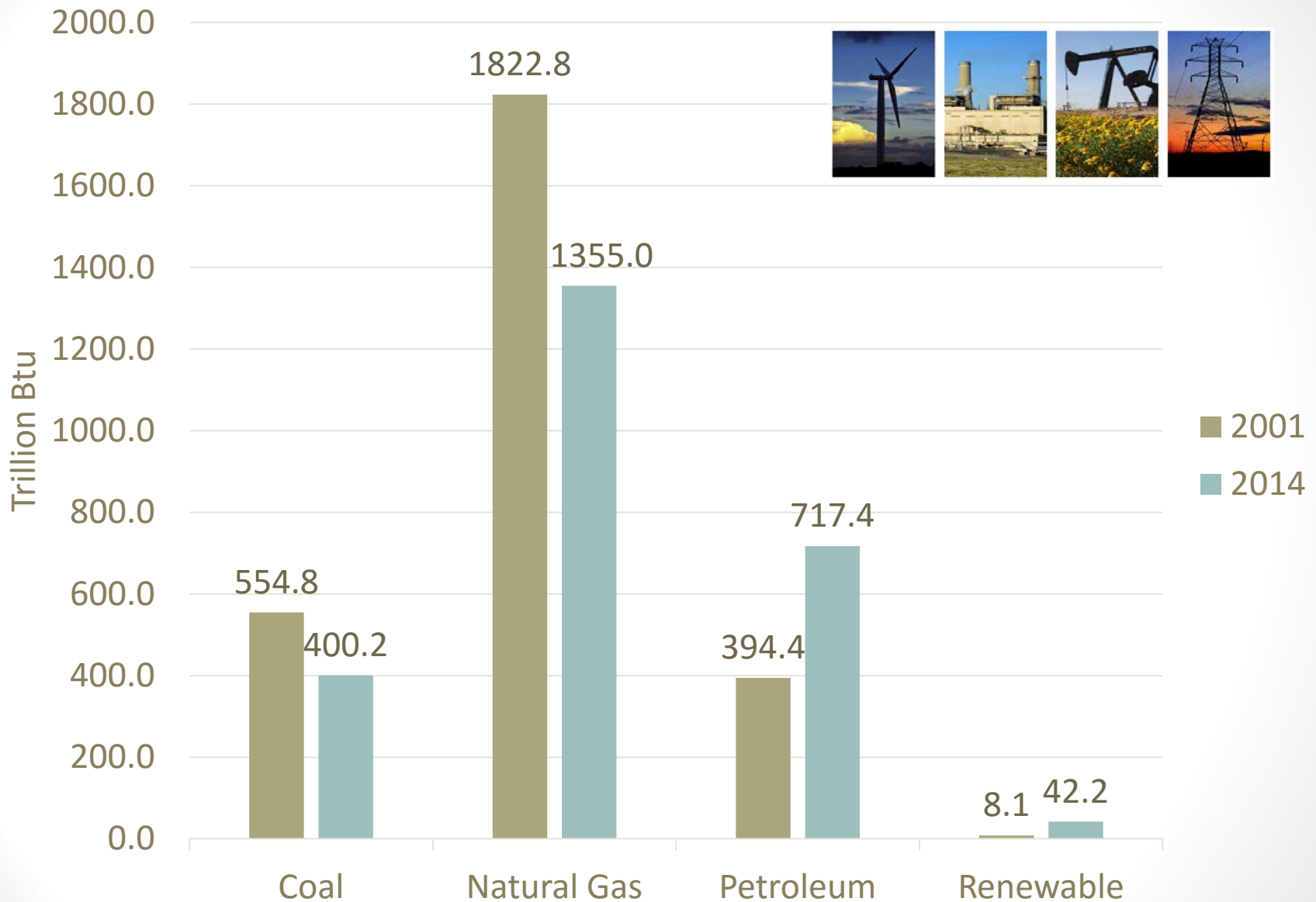
Sources: EIA, AWEA, NREL, UNM BBER, BLS

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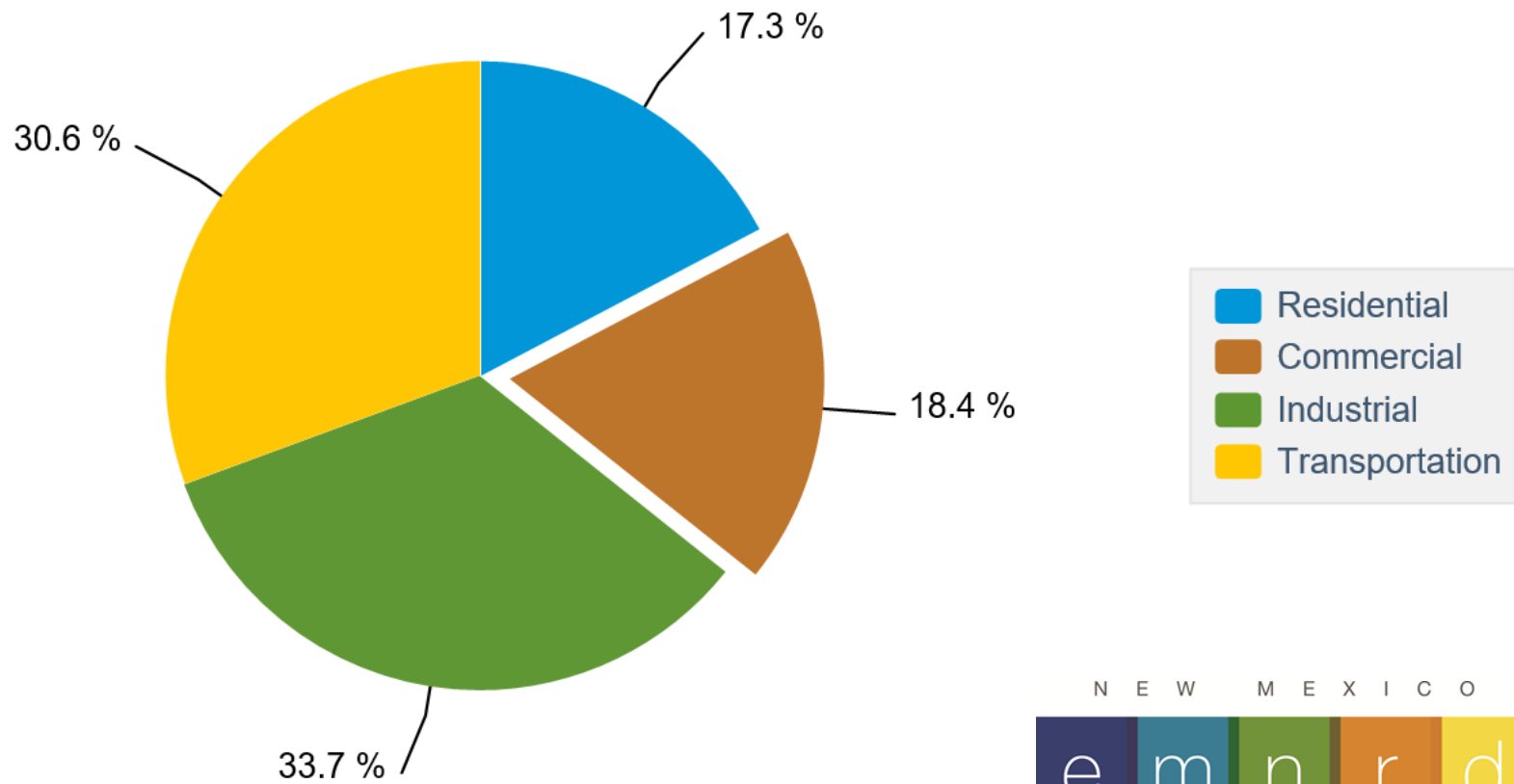
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New Mexico Energy Production 2001 vs. 2014



Source: DOE Energy Information Administration

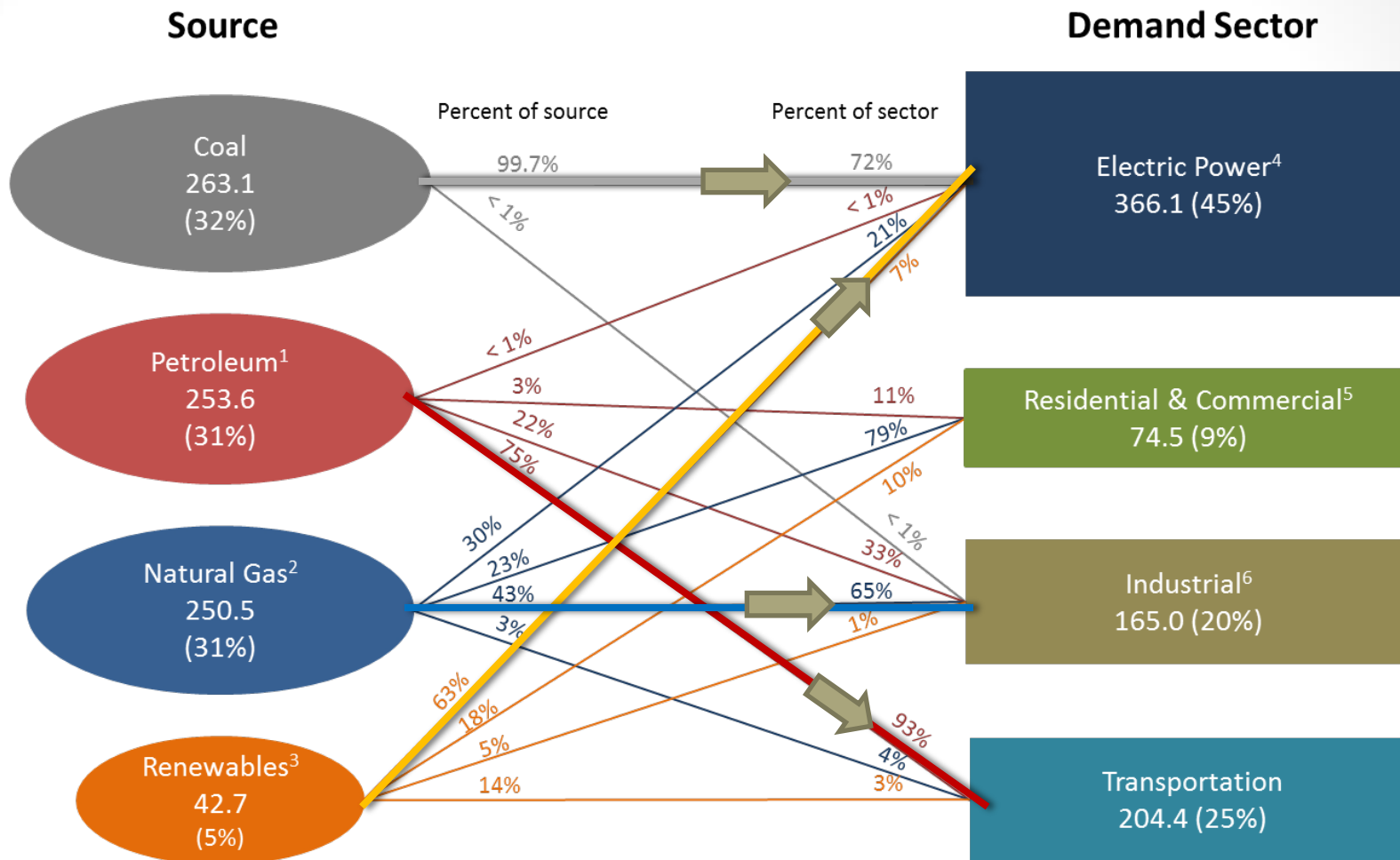
New Mexico Energy Consumption by End-Use Sector 2014





New Mexico Primary Energy Consumption by Source and Sector, 2012

(all numbers in Trillion Btu, excluding percentages; total = 809.9 trillion Btu)



Source: U.S. Energy Information Administration State Energy Data Through 2012, Tables C1–C9

¹ Does not include biofuels (e.g., corn ethanol) that have been blended with petroleum—biofuels are included in “Renewables.”

⁴ Electricity-only plants whose primary business is to sell electricity, or electricity and heat, to the public.

² Excludes supplemental gaseous fuels.

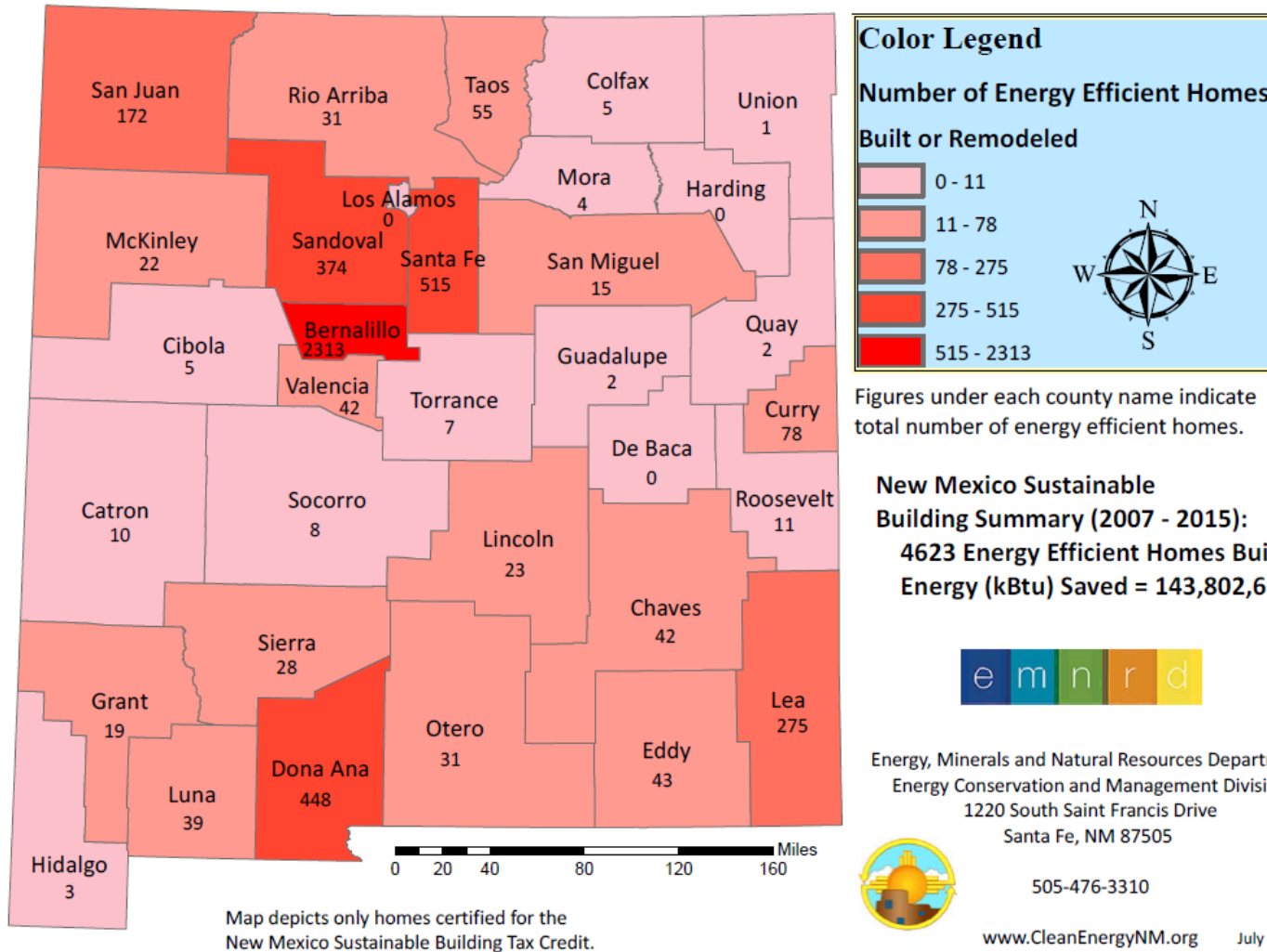
⁵ Includes commercial combined-heat-and-power (CHP) and commercial electricity-only plants.

³ Conventional hydroelectric power, geothermal, solar/photovoltaic, wind, and biomass.

⁶ Includes industrial combined-heat-and-power (CHP) and industrial electricity-only plants.

4,623 Energy Efficient Homes Built from 2007 - 2015

Energy Efficient Homes Built in New Mexico 2007 - 2015



Map depicts only homes certified for the New Mexico Sustainable Building Tax Credit.

Energy Efficiency in Public Buildings

~\$2 Million Annual Savings

ENERGY SAVINGS PERFORMANCE CONTRACTS

ENTITY	PROJECT COST	MONETARY SAVINGS/YEAR	ENERGY SAVINGS/YEAR (MMBtu)	PAYBACK (Years)
New Mexico State University	\$15,734,306	\$1,316,662	16,024	13
Santa Fe Public Schools	\$2,962,734	\$193,810	6,653	25
McKinley County	\$2,401,017	\$333,581	12,700	10
City of Bloomfield	\$453,762	\$30,062	827	14.8
City of Sunland Park	\$175,718	\$14,498	380	12

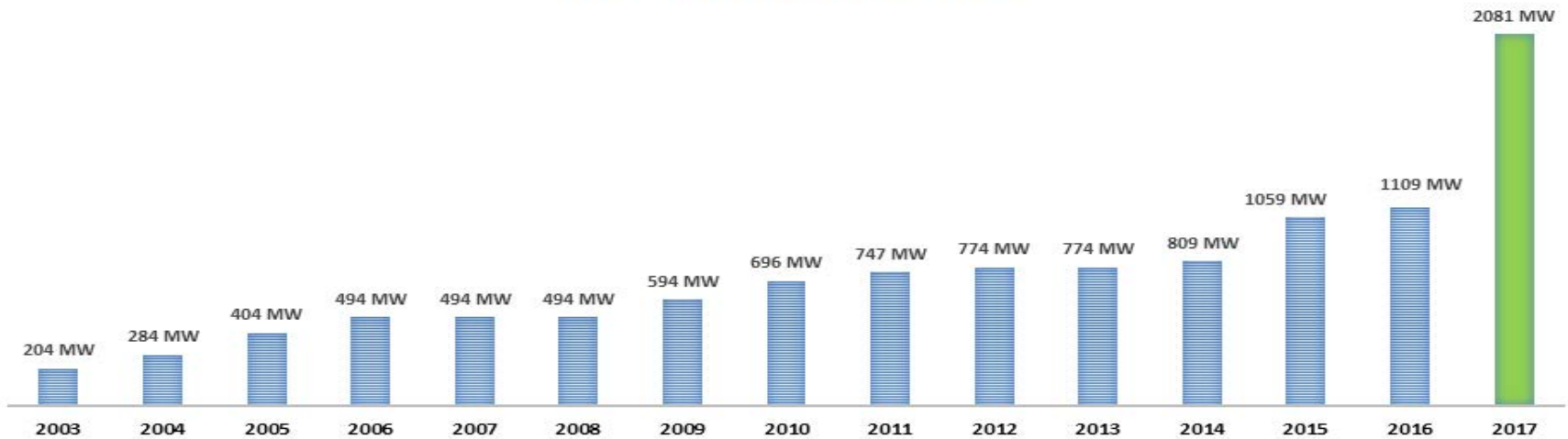
UPCOMING PROJECTS

Aztec Public Schools	Pojoaque Public Schools
Western New Mexico University	City of Farmington
San Juan College	Clovis Community College
Monte Del Sol Charter School	Bernalillo County Metro Detention Center
Mountainair Public Schools	City of Las Cruces
City of Gallup	Sandoval County
Eastern New Mexico University	New Mexico Military Institute

Wind and Solar Power Plant Capacity ~3,000 MW by 2017

New Mexico Renewable Energy Production Tax Credit (REPTC)

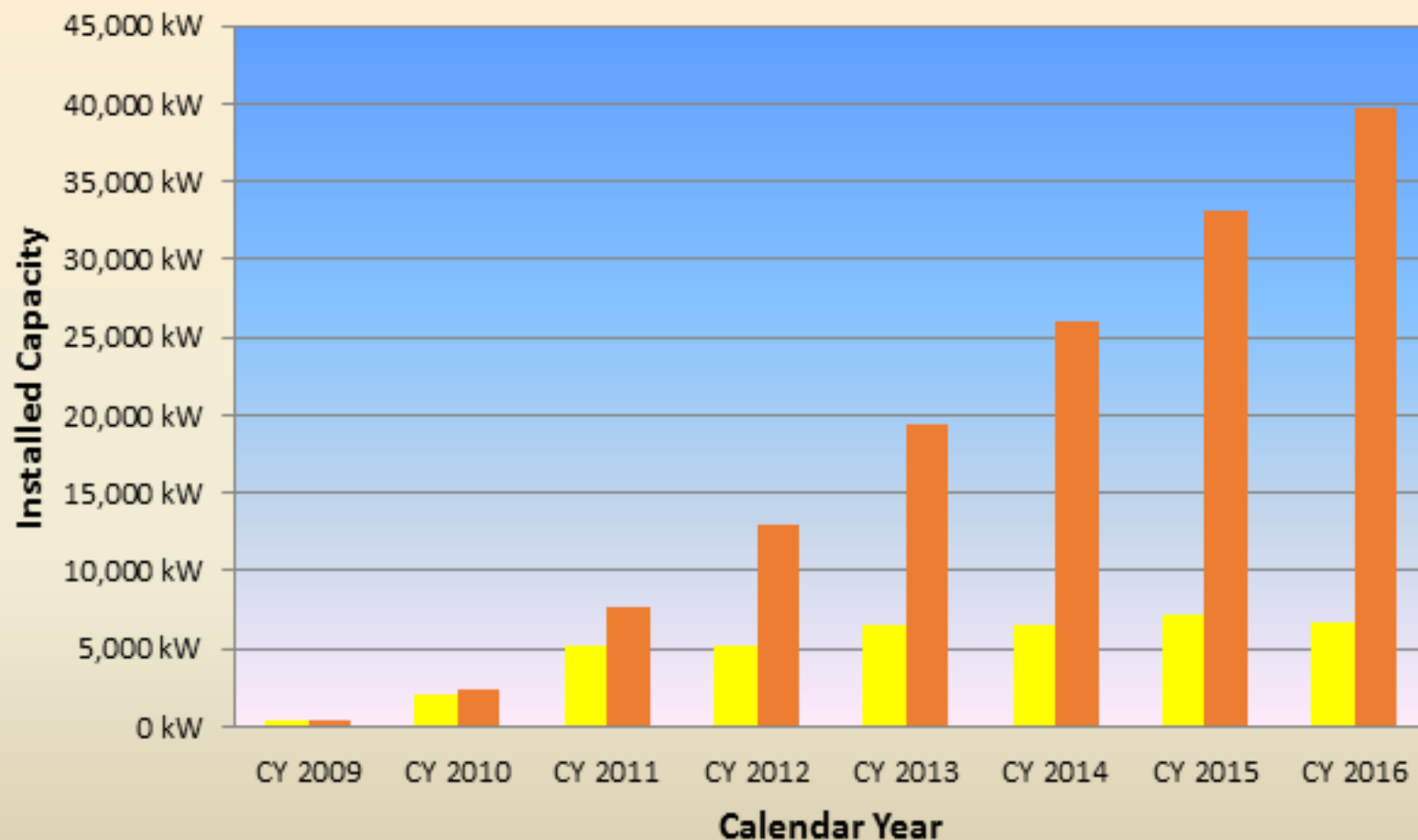
REPTC WIND CAPACITY



REPTC SOLAR CAPACITY



New Mexico Residential Solar Installed Capacity 2009 through 2016

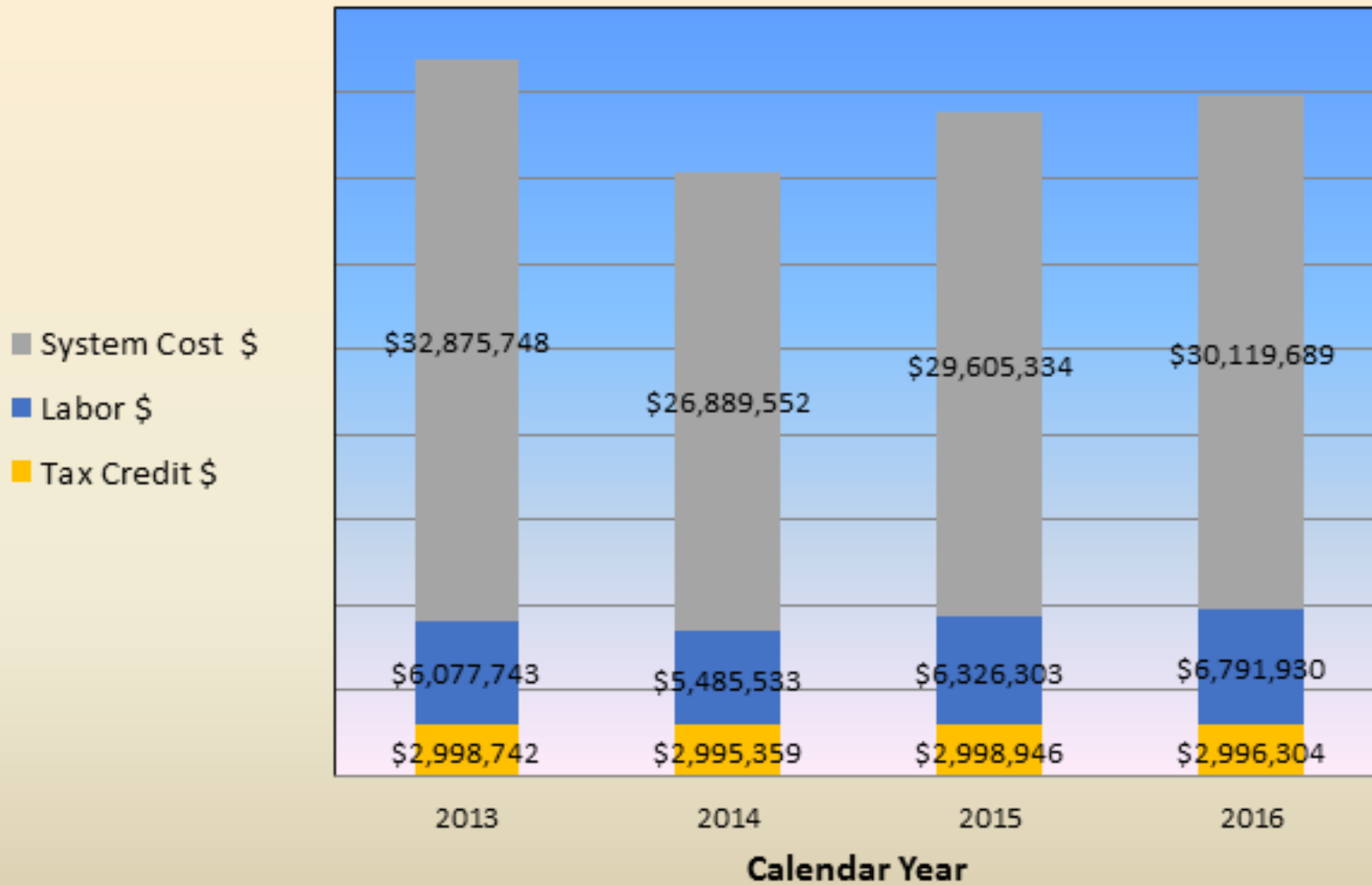


■ Annual DC Power Installed

■ Cumulative DC Power Installed

Data from NM ECMD Solar Tax Credit Database - July 7, 2016

New Mexico Residential PV Solar Monetary Statistics 2013 through 2016



Data from NM ECMD Solar Tax Credit Database - July 7, 2016

Reducing Public Electricity Bill Costs

POWER PURCHASE AGREEMENTS

ENTITY	Capacity (MW)	MONETARY SAVINGS / YEAR
Bernalillo County	1.084	\$240,431
City of Silver City	1.149	\$169,779
City of Truth or Consequences	1.878	\$325,628
City of Alamogordo	0.938	\$156,433
City of Deming	1.004	\$157,010

UPCOMING PROJECTS

ENTITY	Capacity (MW)	MONETARY SAVINGS / YEAR
Albuquerque Waste Water Authority	1.877	\$262,283



Methane Emissions

Last year, Governor Martinez directed EMNRD to develop plans to reduce flaring of natural gas for all new drilling permits and well recompletions.



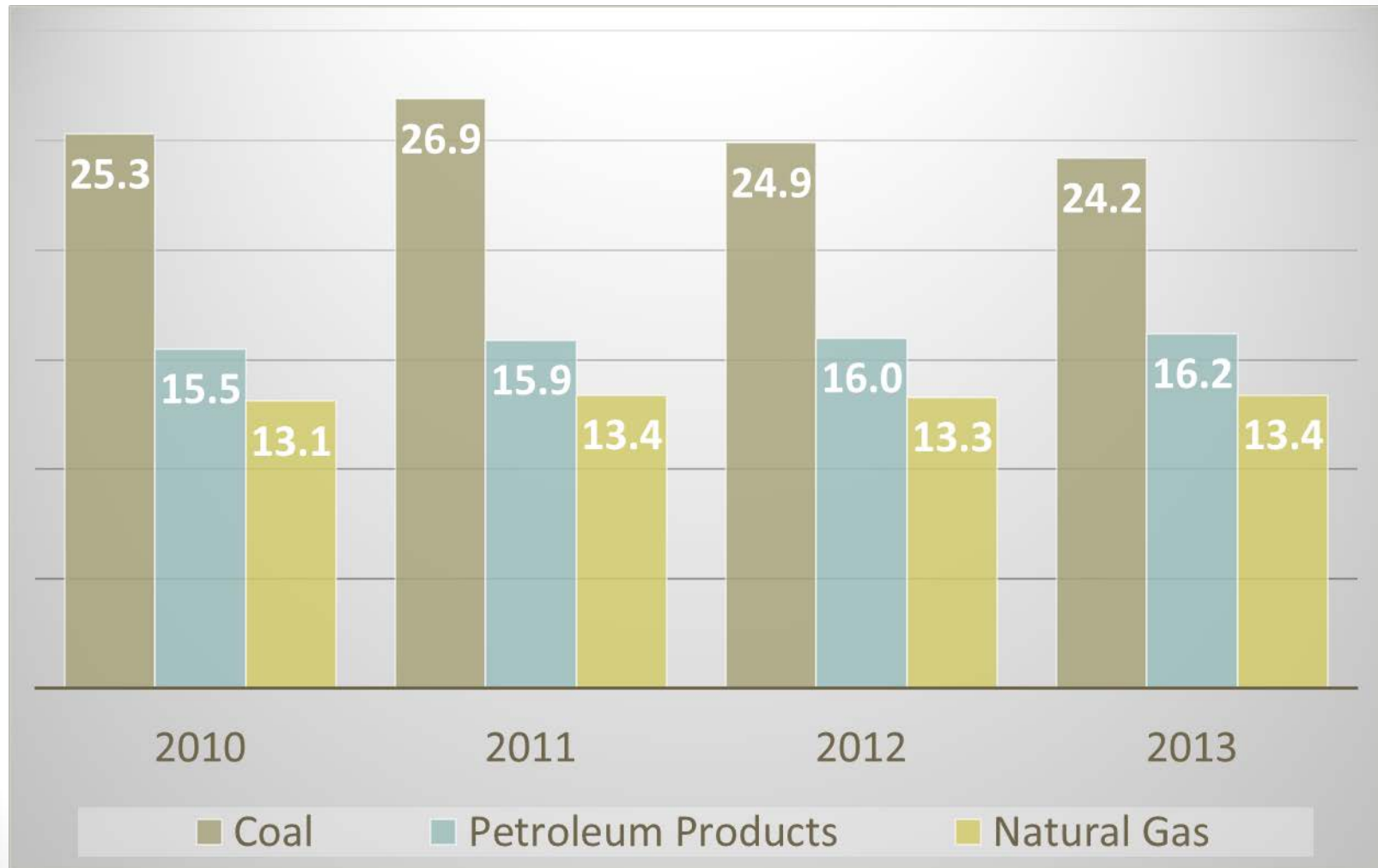
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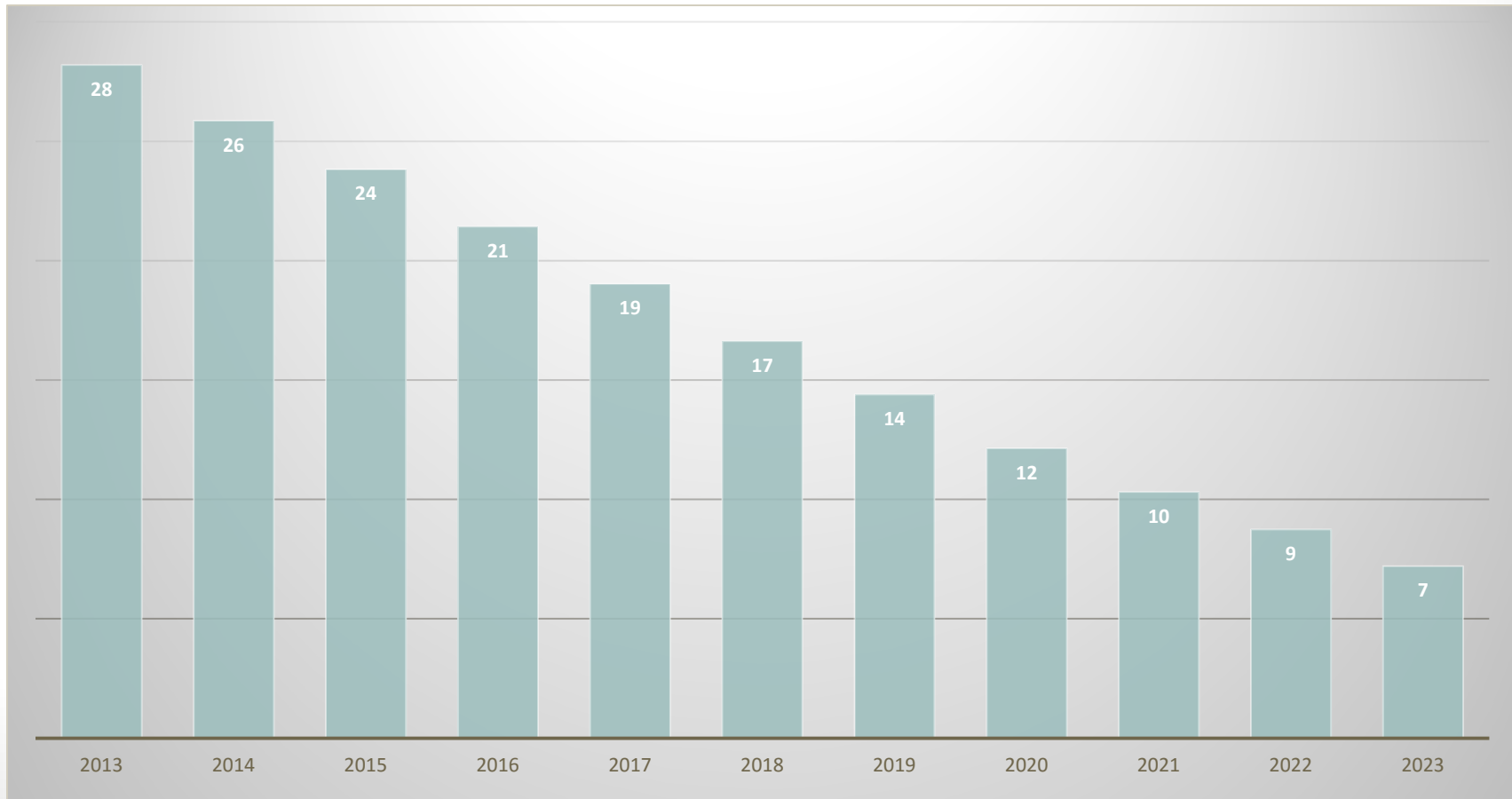
New Mexico Carbon Dioxide (CO₂) Fossil Fuel Emissions (Million Metric Tons)



Source EIA

Carbon Dioxide Emissions Reduced with wind and solar (Million Metric Tons)

New Mexico Renewable Energy Production



Current Renewable Portfolio Standard (RPS)

	<u>2020</u>
IOU	20%
Coops	10%



- Planning for post-2020 (when requirements for the state's RPS ends)
- Considering low carbon portfolio standard concept

Low Carbon Portfolio Standard

- Establishing a carbon portfolio standard that encourages more low-carbon energy production and provides more flexibility in meeting clean energy demand
- Wind, Solar, Geothermal, Biomass, or SMRs
- Overall goal is 32% carbon reduction by 2030

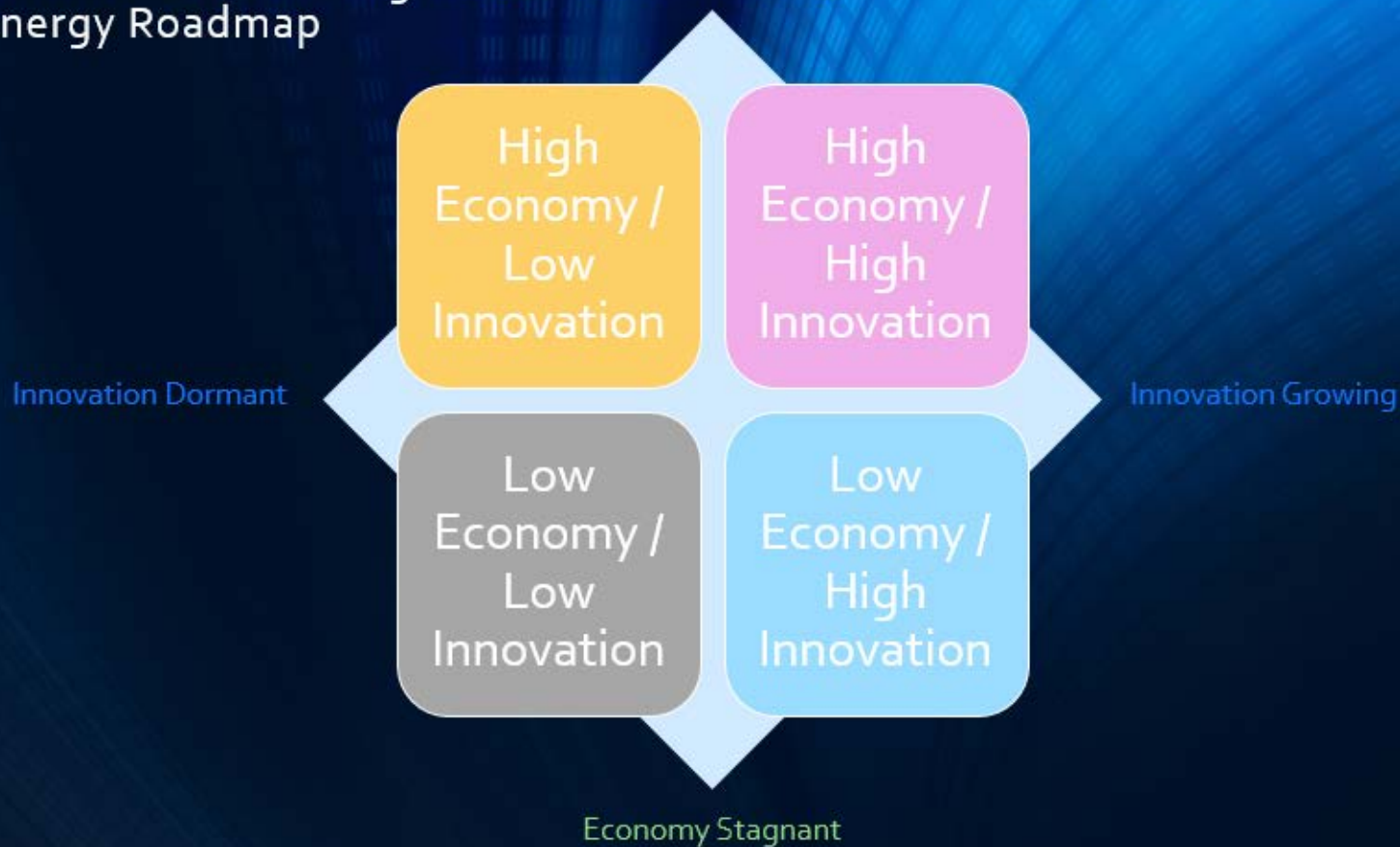
Energy Roadmap

US DOE Grant Proposal
to Build on the 2015 New Mexico Energy Policy and Implementation Plan
for Economic Development in New Mexico

New Mexico Energy Office
Scenario-Based Planning Model
for Energy Roadmap

Economy Growing

SCENARIO VISUALIZATION



Thank You for Your Interest

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