Renewable Energy Development in New Mexico

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Renewable Energy Act History

- 2004 Act established the “Renewable Portfolio Standard” or “RPS”
  - Promotes NM energy self-sufficiency
  - Requires “diversity” of renewables (e.g., solar, wind, biomass, etc.)
  - Allows utilities to recover “reasonable costs” of compliance
  - Provides protections against costs above a reasonable cost threshold
  - Required utilities to provide 5 % of retail sales with renewables by 2006; increasing to 10% by 2011
- 2007 Statutory Amendments
  - Increased RPS requirements to 20% renewables in 2020
  - Added RPS for Cooperatives - 5% renewables by 2015

Renewable Energy Developments in New Mexico

Rule 572 Revised, 2007 RPS

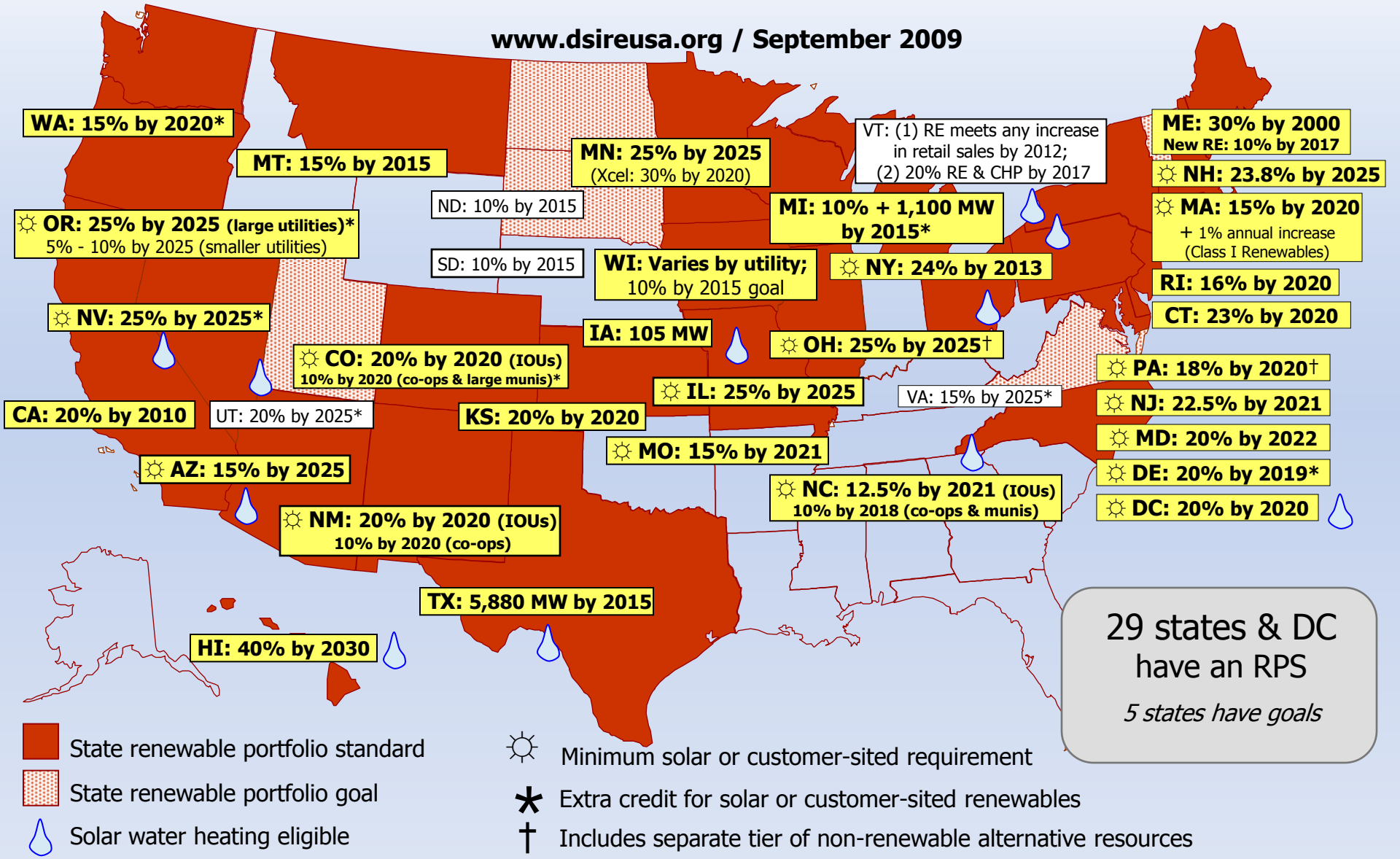
(17.9.572 NMAC Revised)

- 10% by 2011, 15% by 2015, 20% by 2020
- Requires "Diversity" of Renewables:
    - Wind: at least 20% of total renewables
    - Solar: at least 20% of total renewables
    - Biomass/Other: at least 10% of total renewables
    - Distributed Generation: at least 1.5% (2011 – 2014), 3.0% by 2015
- Includes Co-ops
  - Not less than 5% renewable energy in 2015
  - Increases 1% Annually until 2020 (10%)

Renewable Energy Developments in New Mexico

State Renewable Portfolio Standards

www.dsireusa.org / September 2009



29 states & DC
have an RPS

5 states have goals

State renewable portfolio standard

State renewable portfolio goal

Solar water heating eligible

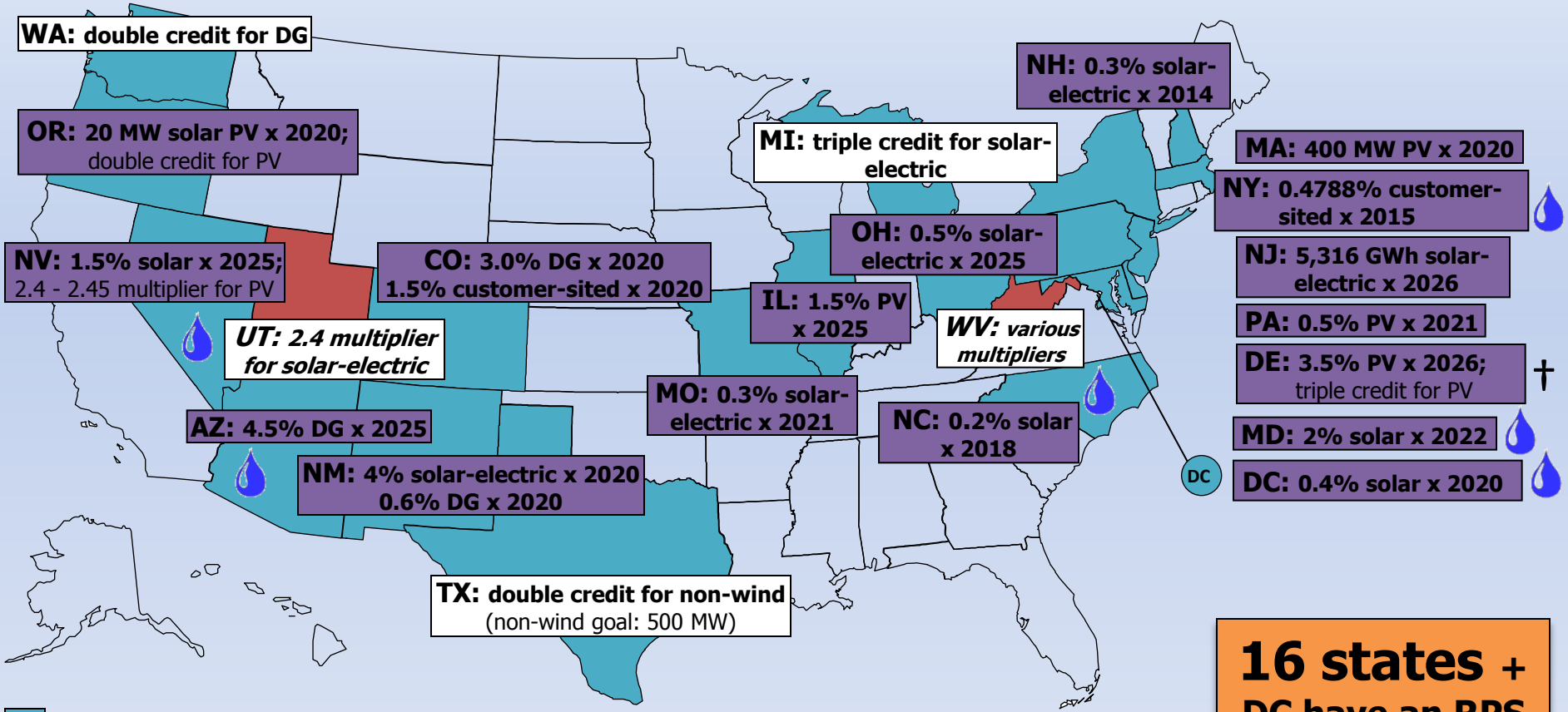
Minimum solar or customer-sited requirement

* Extra credit for solar or customer-sited renewables

† Includes separate tier of non-renewable alternative resources

RPS Policies with Solar Diversity/DG Provisions

www.dsireusa.org / August 2011



Renewable portfolio standard with solar / distributed generation (DG) provision

Renewable portfolio goal with solar / DG provision

Solar water heating counts toward solar / DG provision

† Delaware allows certain fuel cell systems to qualify for the PV carve-out

16 states + DC have an RPS with solar/DG provisions

How NM's Solar Diversity Requirement Compares to Other States

Solar Set-Aside	MW (2025)	Rank	% Retail Sales (2025)	Rank
Arizona	1,037	4	2.0%	3
District of Columbia	48	13	0.4%	10
Delaware	144	11	1.4%	5
Illinois	1,736	1	1.0%	6
Maryland	1,248	3	1.9%	4
Missouri	183	9	0.2%	13
North Carolina	236	8	0.2%	14
New Jersey	1,649	2	2.1%	2
★ **New Mexico**	**357**	**7**	**3.1%**	**1**
Nevada	173	10	0.9%	7
Ohio	710	6	0.4%	9
Pennsylvania	723	5	0.5%	8

Source: Lawrence Berkeley National Lab

RPS Filing Requirements

- Annual Program Plan Filings
  - Two of the three IOUs currently in “quantity” compliance for 2011
    - PNM’s compliance still pending in Case 10-00373
  - 2011 compliance required diversity for first time
  - Biomass standards difficult to meet for PNM and SPS
  - EPE will meet solar requirements with three projects
  - PNM & SPS have solar RFPs out to bid
  - EPE, PNM & SPS have biomass RFPs out to bid
- All three utilities have voluntary programs (green pricing)

PNM's 2010 RPS Filing

- PNM proposed to purchase NM wind renewable energy certificates ("RECs") for quantity RPS compliance in 2011
- PNM sought variance from the solar diversity requirement
- Disagreements among parties about definition of "reasonable cost threshold."
- Commission rejected PNM's purchase of wind RECs
- Commission granted variance on solar and "other" diversity until April 2013
- PNM and PRC staff moved for rehearing on REC question
- Commission granted motion for rehearing and is currently considering the matter further

PNM's 2010 Proposed Wind REC Purchases

NMPRC Case No. 10-00373 – Motion for Rehearing Granted

Seller	Quantity (in MWh)	Total Cost	Vintage Year	Generation Location
SPS	45,000		2008	New Mexico
SPS	250,000		2008	New Mexico
Farmer's	2,537		2008/2009	New Mexico
Farmer's	8,979		2008/2009/2010	New Mexico
Golden Spread	3,171		2008	New Mexico
Golden Spread	73,549		2009	New Mexico
Lea County Coop	8,567		2008	New Mexico
Lea County Coop	26,961		2009	New Mexico
Lea County Coop	11,790		2010	New Mexico
TOTALS	**430,554**	**$5,493,139**		

2011 RPS Filings – July 1, 2011

- EPE: Docket No. 11-00263
- SPS: Docket No 11-00264
- PNM: Docket No. 11-00265

Current & Proposed Solar Projects

- TriState/FirstSolar 30 MW PV in Colfax County
- Kit Carson 1 MW DG/ 1MW CPV
- SPS/Sun Edison 5 x 10 MW PV
- PNM/FirstSolar 22 MW Dist. PV
- EPE/NRG 20 MW PV
- EPE/SunEdison 24 MW PV
- EPE/City of Hatch 5 MW PV

PNM's 22 MW of Solar Projects
(NMPRC Case No. 10-00037)

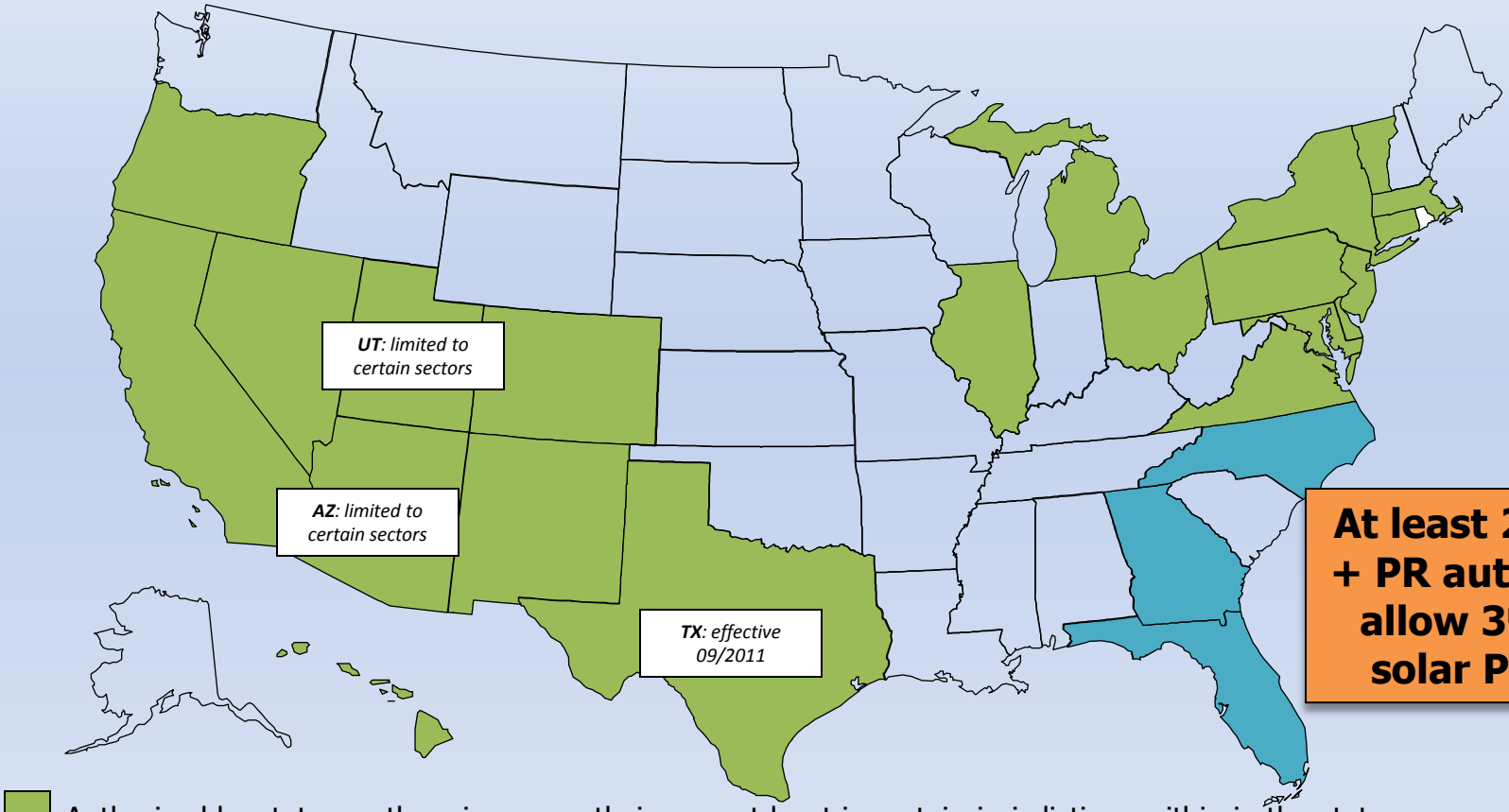
- Albuquerque/Reeves: 2 MW, began operations April 2011
- Los Lunas: 5 MW, began operations June, 2011
- Deming: 5 MW, commercial operations expected this month
- Alamogordo: 5 MW, under construction after changing site options due to FAA concerns
- Las Vegas: 5 MW, site grading has started; expected completion in December 2011

HB 180 & SB 191 (2010): Third-Party Solar

- Third-party ownership is basically a long-term contract between a property owner and a third party — typically a solar company — that installs, owns and operates the solar electric system on the property.
- Authorization for 3rd-party solar PV PPAs lies in the definition of a "utility" in state statute
- PNM and SPS have published tariffs for third-party solar PV; EPE has not.

Third-Party Solar Nationwide

Source: www.dsireusa.org / July 2011



At least 21 states + PR authorize or allow 3rd-party solar PV PPAs

Authorized by state or otherwise currently in use, at least in certain jurisdictions within in the state

Apparently disallowed by state or otherwise restricted by legal barriers

Status unclear or unknown

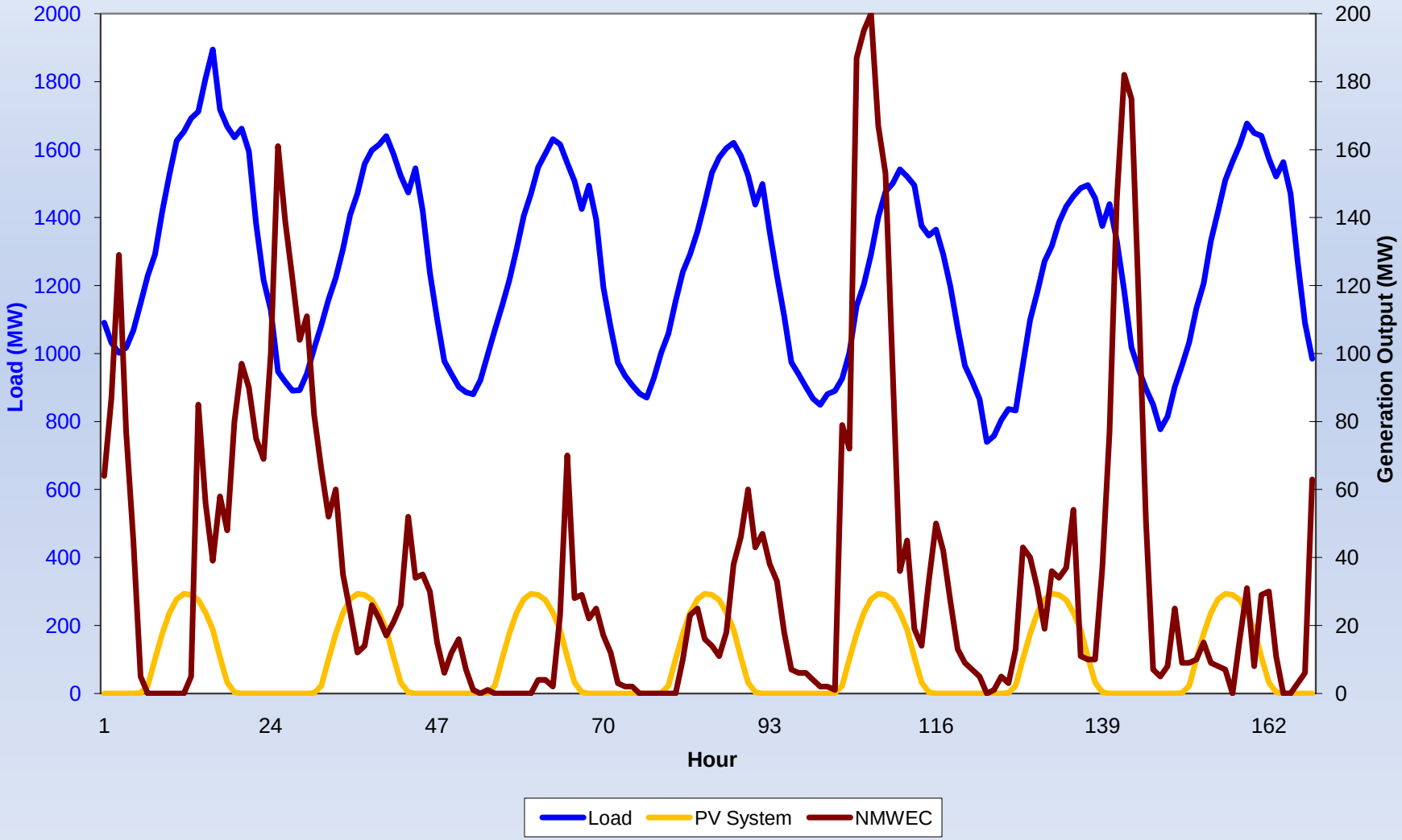
Current Wind Projects*

Project	Utility*	Date Online	MW
Clovis	Xcel	1999	0.66
N.M. Wind Energy Ctr	PNM	2003	204
White Deer - TX	Xcel	2004	80
Caprock	Xcel	2004	60
Caprock II	Xcel	2005	20
San Jon	Xcel	2005	120
Wildorado - TX	Xcel	2007	160
Aragonne Mesa	APS	2007	90
High Lonesome	APS	2009	100
Red Mesa		2010	102

*All projects are via PPAs.

Load vs. Wind and Solar Generation

(for a typical week)
August 2011



Few observations on load profiles

- Wind generation doesn't match peak load well
- Wind generation does not match seasonal demand well
- Wind is most available during "valleys"

Net Metering Rule

(17.9.570 NMAC)

- Customer in effect stores any excess electricity generated in the form of a kWh credit, on the grid for later use
- January 2007, clarified the applicability for systems to 80 MW
  - this limit is relevant to customers with very large loads, such as military bases, universities or corporate campuses.
- Previously, net metering in NM was limited to 10 kW systems
- Net metering is available to all qualifying facilities (QFs), as defined by PURPA
- Rule 17.9.571 NMAC was not changed
- Rule 17.9.571 NMAC was consolidated into 17.9.570 NMAC in 2008

Net Metering Rule

(Revised17.9.570 NMAC)

- New Rule provides expedited treatment of systems 10kW to 100kW – currently being reviewed
- All utilities subject to PRC jurisdiction must offer net metering
- Time-of-use tariff are permitted to net meter

Renewable Incentives

- Rate Treatment Paradigm Shift
  - Regulatory treatment of costs is changing
  - Traditional Cost of Service ratemaking unseated by renewable approvals by statute
  - “Riders” pass through approved program costs
  - Traditional ratemaking shifting to tariff riders
  - Incentives (clean technologies), includes REC purchases
  - Energy efficiency funding through tariff riders
- Clean (Advanced) Energy Technology Tax Credits - State & Federal

Renewable Energy Developments in New Mexico

CURRENT RENEWABLE ISSUES

- Solar: development cost & reasonable cost threshold
  - Docket 11-00218-UT just opened to address RCT Rule and Diversity Issues
- Biomass: immature technology, development cost
  - Limited development and application of “Other” renewable resources
- Transmission constraints
- Intermittency and integration of renewables

Efficient Use of Energy Act History

- 2005 Efficient Use of Energy Act ("EUEA")
  - Mandates cost-effective energy efficiency and load management
  - Required Commission to identify and remove utility "disincentives
  - Established integrated resource planning
  - Allowed utilities to recover costs through a rate rider
- 2007 EUEA amendments
  - Mandated energy savings goals & requires utilities receive financial incentives

EUEA History, Continued

- 2008 EUEA amendment
  - Added low income programs
  - Added energy savings targets for Cooperatives
  - Requires removal of utility “disincentives” to energy efficiency in addition to provision of incentives
  - Commission promulgated amendments to Rule 17.7.2 to implement the 2008 EUEA amendments last year
  - Rulemaking was recently overturned by Supreme Court
  - Issue was cost justification for disincentive and incentives to utilities for energy efficiency

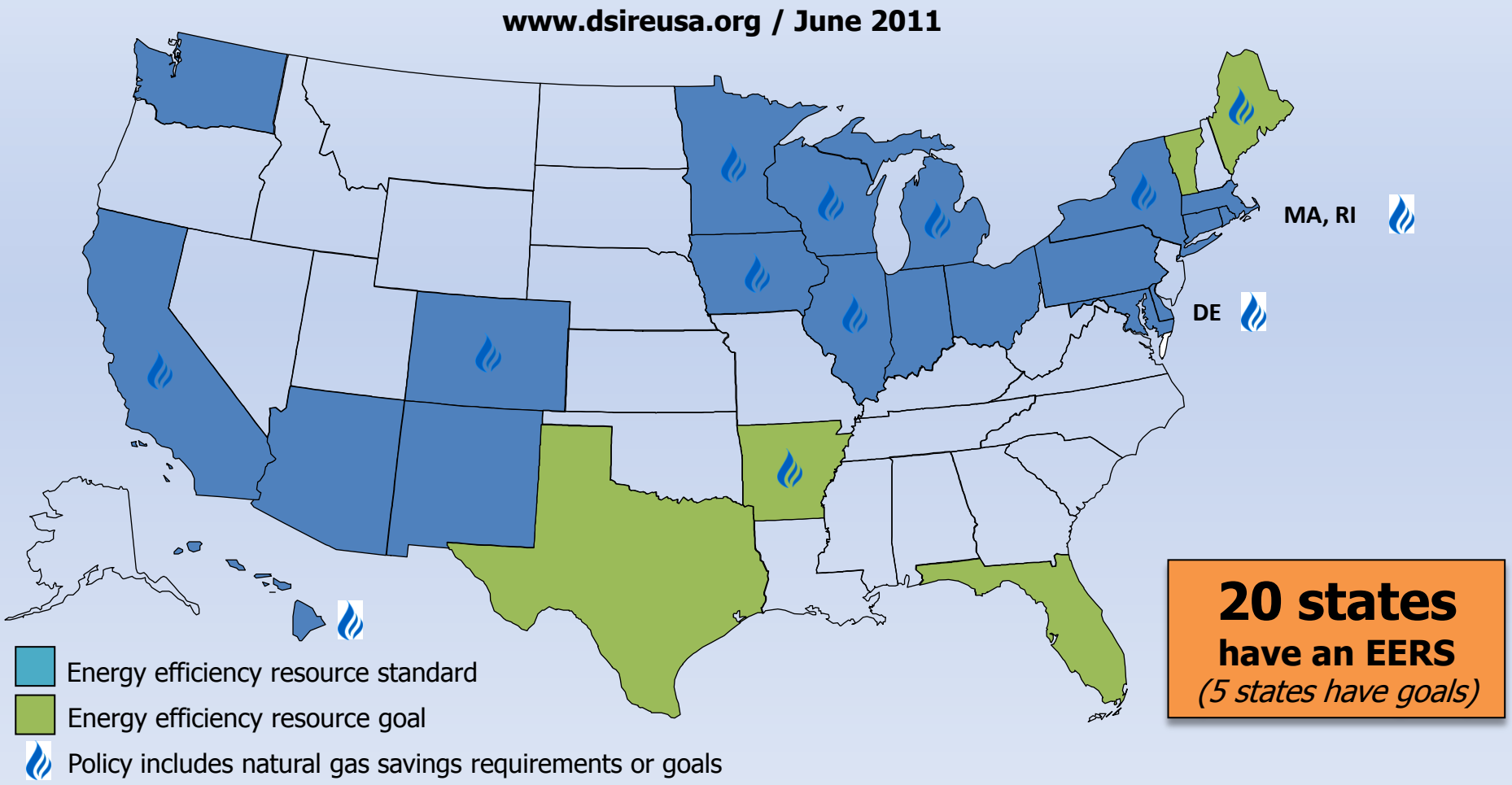
Energy Savings Targets Mandated by EUEA

- **NM:** Utilities must achieve 10% energy savings from baseline of 2005 total retail kWh sales by 2020

Compare to:

- **AZ:** 22% cumulative electricity savings by 2020
- **TX:** 25% reduction in annual growth in demand 2012; 30% reduction in annual growth in demand 2013
- **CO:** Electricity sales and demand reduction of 5% of 2006 numbers by 2018 (statutory requirement); natural gas savings requirements vary by utility

States with Energy Efficiency Resource Standards



Note: See following slide for a brief summary of policy details. For more details on EERS policies, see www.dsireusa.org and www.aceee.org/topics/eers.

Integrated Resource Plan Rule

(Rules 17.7.3 NMAC and 17.7.4 NMAC)

- IRP Rule Adopted March 2007
  - Requires utilities to file IRPs every 3 years
  - Short Term action plan
  - Long Term resource plan
- PNM completed IRP and filed with PRC in July, 2011
- EPE & SPS actively preparing their IRP filings for 2012
  - Public sessions monthly

Questions?

- Staff contacts:
  - R. Dwight Lamberson, Utility Economist, 505-827-4001 (Renewable energy matters)
  - John Reynolds, Utility Economist, 505-827-4112 (energy efficiency matters)
  - Leslie Padilla, Staff Counsel, 505-827-6972