

# LS Power



## Mandatory vs Voluntary Renewable Portfolio Standard

November 2009

*Bringing Energy Forward*



# About LS Power

- LS Power is a power generation and transmission group

## Power Generation

- Over 20,000 MW of development, construction, or operations experience
- Active development of renewable and fossil generation resources

## Transmission

- Advanced development of Southwest Intertie Project and Wyoming-Colorado Intertie Project
- Designated to build 200+ miles of 2-345 kV in Texas to support renewable resources
- Active development of transmission infrastructure

## Acquisition

- Over \$4 billion in private equity capital dedicated to energy sector
- Acquired ~ 12,000 MW of power generation

## Functional Expertise

Project Development

Licensing & Environmental

Regulatory & Transmission

Power Marketing

Project Finance

Construction & Operations

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# Project Portfolio



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# Development Philosophy

- Meet the needs of our customers
  - Safe, reliable and competitive energy
  - Renewable and fossil power generation
  - Transmission infrastructure
- Safe and protective of the environment
  - Modern designs with advanced technologies
  - Tailor projects sensitive to the locality and region
- Work with communities
  - Projects that fit with community plans and goals
  - Encourage using local subcontractors and hiring local workers



**Plum Point Groundbreaking Ceremony**



# Renewable Energy in the US

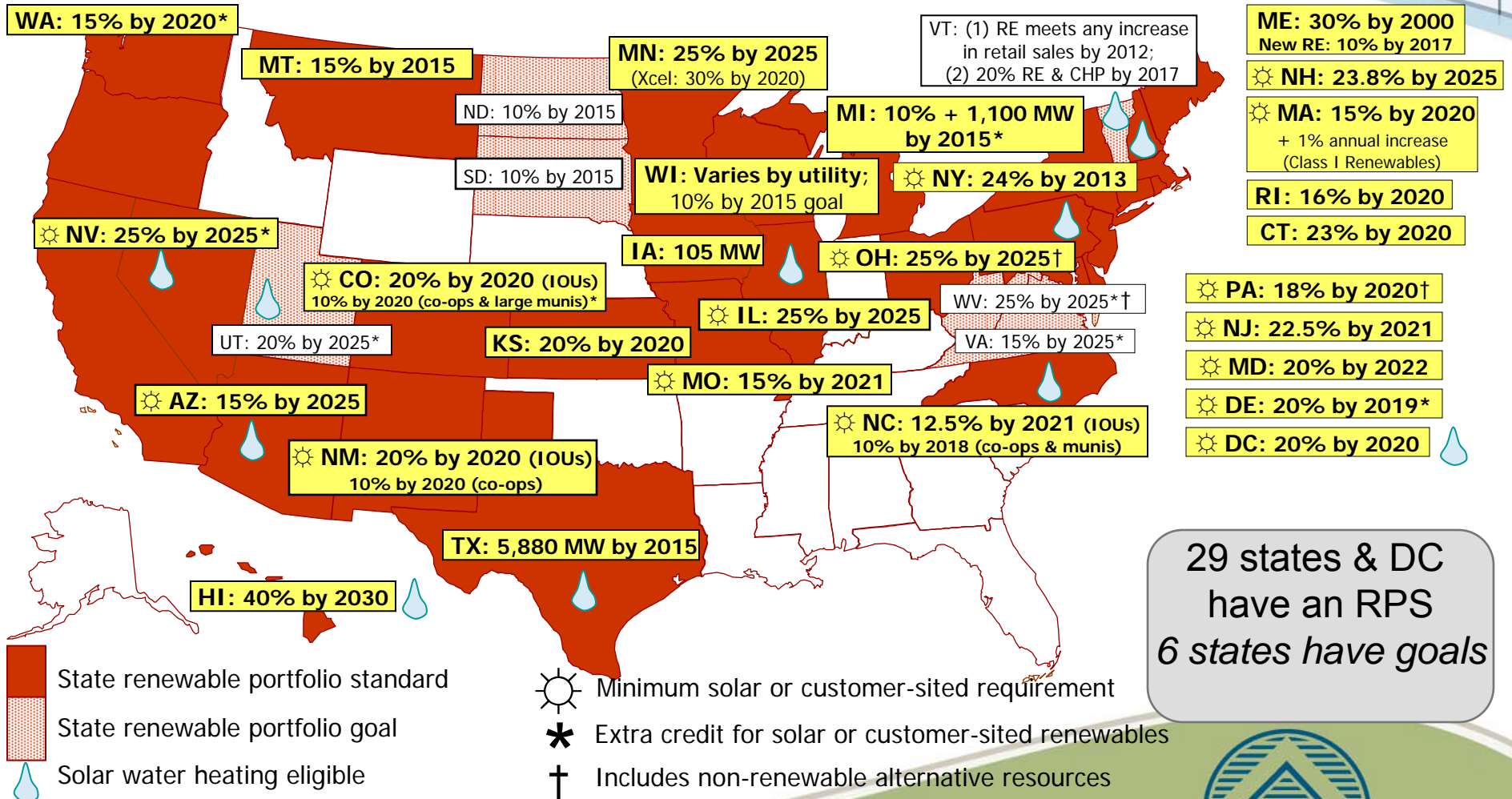
- Renewable Energy Credits (RECs)
  - Facilitate renewable energy markets
  - Differentiate between energy and environmental attributes
  - Create liquidity in markets and put a market value on attributes
  - Use as a financing mechanism for new renewable energy facilities
- Voluntary Market
  - Purchased by retail customers (residential and non-residential)
  - Bundled renewable energy or renewable energy certificates
  - “Green” marketing of businesses
  - GHG/Environmental support from customers
- Feed In Tariff
- Net Meter- “States that implemented net-metering legislation in 2005 had significantly more renewable energy generation by 2007 than states without such a policy.”<sup>1</sup>

<sup>1</sup> State of the States 2009: Renewable Energy Development and the Role of Policy, NREL



# Renewable Portfolio Standards

[www.dsireusa.org](http://www.dsireusa.org) / November 2009



29 states & DC  
 have an RPS  
 6 states have goals

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# Key RPS Criteria

- Renewable Portfolio Standard (RPS)
  - Target percentage of renewable energy or capacity
  - Existing vs new generation
  - Technology specific
  - Supply/Demand balance
  - Carrot & Stick – incentives/penalties
  - Energy Efficiency/Demand Response
- Key RPS Design Criteria
  - Stationary and balanced RPS objectives – long enough for develop, contracting and financing
  - Annual compliance periods – allows for seasonality in resources
  - Long-term contracting standards created and encouraged.
  - Strong political and regulatory support for successful RPS program.
  - Regulatory certainty = lower risk/lower cost



# Renewable Energy Market

- Financing new generation- current market dynamics
  - Markets- Debt and Equity
  - Require stable market structure for longer period of time (eg NJ)
  - Trade off between higher price short term market and lower long term contract market
  - Tax credits/tax equity availability and incentive programs- important but insufficient without other funding
- Are voluntary REC markets bankable?
  - Cash flow (un)certainty- will not attract significant capital
  - Regulatory risk
  - Higher price long term- risk vs reward
- Competitive Procurement Process
  - Lower costs
  - Risk allocation- developer vs rate payer
- Siting, Permitting and Transmission limitations





# Recommendations

- Define clear objectives
  - Job growth/employment
  - Climate Change/GHG reduction
  - Clean Energy/Renewable generation/Supply Diversity
  - Energy pricing
- Mandatory Program to attract new generation
  - Program diversity
  - Achievable targets
  - Competitive Procurement
  - Long term contracts or mature markets – financing, viability, lower costs
  - Noncompliance triggers
- Consistent and stable Legislative, Regulatory and Tax policies
- Duration sufficient to successfully enact and implement program
- Feed in Tariff

