

DOE OFFICE OF INDIAN ENERGY

State Incentives and Project Impacts

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■ Main Points – Market Context

- State Renewable Portfolio Standards (RPS)
 - What are they?
 - How can they help your project?
 - Potential gap means more market demand for RE projects

Starting a Renewable Energy Project

- What renewable resources exist?
- What sites with resources do you own?
- To whom will you sell the electricity?
- How will federal and state incentives or policies impact your project?
- Access to transmission
- Other policies
 - Interconnection standards
 - Environmental standards



Renewable Portfolio Standard (RPS)

- A requirement set by a state for utilities to generate $x\%$ of electricity from renewables by a specific date
- **Set-asides** (or carve-outs): require that a % of the RPS requirement is met by generation from a specific technology (e.g., solar)
- **Multipliers**: give “bonus” credit for generation from specific technologies (e.g., solar or distributed generation)

RPS and project economics


- State incentives
 - Tax credits or rebates for capital equipment
 - Sales tax incentives
 - Production tax credits
 - $X\$/\text{kWh}$ for energy production, paid for a given number of years
 - Upper limits on incentive by project size or incentive for a company
 - Sometimes minimum limits on project size
 - Property tax incentives
 - Credit for additional value of renewable energy equipment, e.g. rooftop solar panels

Local and Utility Incentives

- Local Incentives
 - Rebates on equipment purchases
 - Typically for energy efficiency equipment
- Utility Incentives
 - Loan programs
 - Provide low-interest loans for equipment purchases
 - Typically for energy efficiency projects
 - Production-based incentive
 - \$x/kWh of generation
 - Typically utility will take ownership of RECs

Renewable Energy Credits (RECs)

- 1 REC = 1 MWh of renewable energy generation
- Different technologies have different value for RECs
 - Solar RECs > Wind RECs
- Sold on regulated and voluntary markets



Western Region Renewable Energy Markets: Implications for the Bureau of Land Management

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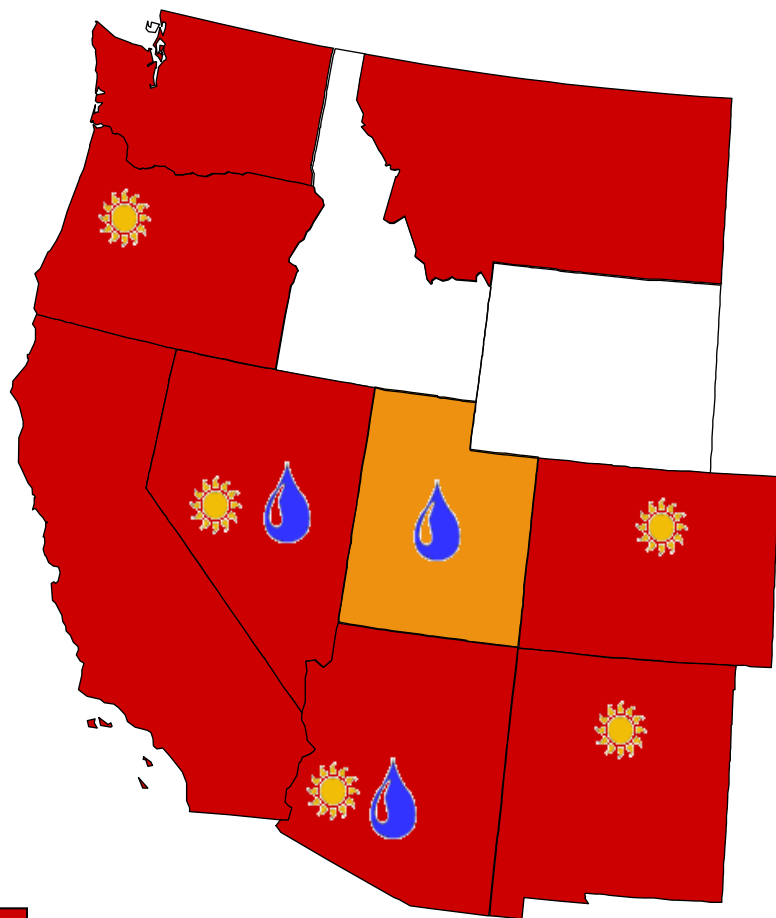
Technical Report
NREL/TP-6A20-53540
January 2012
Contract No. DE-AC36-08GQ28308

WESTERN REGION RENEWABLE ENERGY MARKETS

Projected Demand from Policy

- State Renewable Portfolio Standards (RPS) are likely to be key drivers in RE development
 - Without new state or national policies
 - Without extension of special Federal programs
- Potentially large RE capacity gaps in western states by 2020
- CA is the main driver for RE development


Western States' RPS Policies




State	RPS
AZ	15% by 2025
CA	33% by 2020
CO	30% by 2020 (IOUs) 10% by 2020 (co-ops/municipals)*
MT	15% by 2015
NM	20% by 2020 (IOUs) 10% by 2020 (co-ops)
NV	25% by 2025*
OR	25% by 2025 (large utilities)* 5%-10% by 2025 (small utilities)
WA	15% by 2020*
UT	GOAL: 20% by 2025

 Renewable portfolio standard

 Renewable portfolio goal

 Solar water heating eligible

 Minimum solar or customer-sited requirement

 Extra credit for solar or customer-sited renewables

Who's on Track to Meet their RPS...

...and who isn't.

State	Projected 2020 Capacity Gap or Excess
AZ	141-905 MW
CA	406-13,107 MW
CO	1,279 MW
ID	1,005 MW
MT	42-379 MW
NV	542-1,005 MW
NM	28-117 MW
OR	343-1,689 MW
UT	287 MW
WA	554-1,985 MW
WY	4,260 MW
WECC Total	8,286 MW - 8,756 MW

Take Aways

- State RPS
 - Continue to be key drivers for RE development
 - State RPS incentive help project economics
 - Projected gaps between state goal and planned RE projects indicate potential appetite for additional RE projects

Resources

- Database of State Incentives for Renewables and Efficiency (DSIRE)
 - www.dsireusa.org
- BLM Energy Corridors
 - <http://www.blm.gov/wo/st/en/prog/energy/transmission.html>
- WECC 10-Year Regional Study
 - <http://www.wecc.biz/library/StudyReport/Wiki%20Pages/Home.aspx>
- Western Region Renewable Energy Markets: Implications for the Bureau of Land Management
 - www.nrel.gov/docs/fy12osti/53540.pdf

 Thank You!

Questions?

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