



Renewable Portfolio Standards: Key Elements to Consider

Bill Drumheller, Oregon Dept. of Energy

Oregon Renewable Energy Working Group
Bend Meeting, March 22, 2006



Renewable Portfolio Standard

- A law, policy, order, rule, or otherwise that prescribes that a certain amount of the electrical energy produced or purchased in a state, locality, or region must be derived from renewable energy resources.
- Depending on how you count them there are about 21 RPS policies in place at the state level (and a few local ones in cities).

RPS Discussion: Some Context

- A renewable portfolio standard is fundamentally only two things:
 - **A date.**
 - **A target.** (normally energy, not capacity)
- Clearly the REWG has been given a date and a target by the Governor.
- However, the mechanisms used to achieve the target within the mandated time frame can vary substantially.
- The REAP makes clear that the REWG has wide discretion to investigate the full range of available options to meet target.

Reaching a Renewable Energy Goal with Market-Based Policy Instruments

Option 1: Set the price for renewable energy projects and lower over time to achieve target.

"feed-in tariff" is
Price-based

Middle Ground: Combination of price caps and floors, credit trading schemes, and penalties.

"traditional" RPS is
Quantity-based

Option 2: Set the target and mandate progress toward that target.



Elements to Consider in a RPS

- Mid-term targets, start and end dates
- What is a renewable resource?
- Types of utilities affected, scope of impact
- Existing versus new renewable sources
- Carve outs for resources, sizes, regions?
- In-state or out-of-state generation?
- Enforcement and off ramps
- Cost caps and cost floors
- REC trading – flexibility mechanisms
- Impacts on green pricing schemes
- Contracting standards or incentives
- Cost recovery mechanisms



Structure of the RPS

- End Target
 - Already a Given? (25% by 2025)
- Mid-term targets
 - 10% by 2015 in REAP
 - Others needed?
- Start date
- End date
 - Market stability requires policy stability



What is a Renewable Resource?

- Substantial differences between states -- no clear pattern.
- Usual suspects – biogas (landfill and digesters), wind, geothermal, solar electric, ocean and wave (coastal)
- Often included but qualified – biomass, hydro (small or incremental upgrades), municipal solid waste, fuel cells (usually renewable-fueled)
- Rare – solar thermal (converted), energy efficiency & conservation



Which Utilities are Affected?

- Generally investor-owned utilities have been subject to RPS
- Consumer-owned utilities have been:
 - Exempted entirely
 - Asked or for “good faith” effort to provide similar programs or results
 - Subjected if over given population
 - Exempted if they have no load growth
- Coverage of self-generators varies



Existing versus New Renewables

- Some states have chosen to protect their existing base of renewable energy supply by incorporating existing renewable energy into RPS.
- Extent to which the state wants to drive new renewable development.
- How far back should existing renewable be counted (if at all)?



Impacts of Tiers and Carve Outs

- Common to have “carve outs” (percentage devoted to a given resource, size, or type of project).
- Many states group resources by “tiers”, usually low to high cost.
- Others have used multipliers to differentiate resource/size types.
- Can have a large impact on costs.



In-State or Out-of-State Generation?

- Constitutional issues regarding interstate commerce are huge.
- Some require in-state generation, others use multipliers to create preference for in-state.
- Some use “sold and metered” in state requirement, which basically means out-of-state not eligible.
- Regional requirement is common.



Enforcement of RPS Provisions

- Penalties can be:
 - Fines, normally not recoverable
 - Alternative Compliance Payments (ACPs), which often are used to fund project grant entities (like ETO).
 - Requirements for make-up power purchasing through some planning process or mandated schedule.
 - Loss of license as last resort.



Cost Caps and Cost Floors

- Increasing number of RPS policies are including a rate 'cost cap', which freezes compliance if costs exceed a given percentage increase in a year.
- Cost "floors" can also be used to guarantee pricing for market stability. Standard offer contracts in PURPA have may have this effect.



Renewable Energy Certificate (REC) Trading -- Flexibility Mechanisms

- Renewable Energy Certificate definitions vary state to state.
- Compliance of standard with RECs has become commonplace.
- Many states allow banking of RECs.
- Some states allow borrowing of RECs, with qualifications.
- Unbundled RECs current trend.



Inclusion or Exclusion of Power Funded by Green Pricing Programs

- The majority of states do not allow power purchased through voluntary green power programs to count toward RPS compliance.
- Some states silent on the issue.
- AZ only state that does (may be changing in current updates)
- OR state power announcement adds a new policy wrinkle to consider ...



Contracting Standards or Incentives

- Lack of long-term contracts is killing the New England RPS policies.
- Major new trend is to include a requirement for long-term contracting (generally 10+ years).
- Could also be approached from an incentive point of view.
- Similar to “feed-in” tariffs or PURPA.



Cost Recovery Mechanisms

- Generally utilities allowed to recover costs of compliance with RPS if those costs are prudently incurred.
- Additional room for incentives:
 - Tax credits for renewable purchases??
 - Allow utilities to obtain an extra return on investment in renewable energy if net economic benefits result?? (similar to precedent for efficiency investments)



Conclusion (for now)

- Lots of questions
- But no answers!
- side note: credit for much of what has been summarized here is owed to the many reports and presentations of Ryan Wiser and his colleagues at Lawrence Berkeley National Laboratory.