



Crafting an RPS for New York: An Orientation to State RPS Policy Experience and Design

Robert C. Grace

Sustainable Energy Advantage, LLC

New York RPS Collaborative Forum

April 7, 2003



RPS Orientation

- RPS Experience Overview (Wiser)
 - RPS Definition
 - Experience in Other States
 - Lessons Learned from RPS Experience to Date
- First Steps in RPS Design
 - Agree on Objectives
 - Understanding the Baseline (Paul Agresta)
 - Consider Design Principles
 - Identify Key RPS Design Features and Options
- NY-Specific Factors: Constraints & Opportunities
- Criteria for a Well-Designed RPS



First Steps in RPS Design



Objectives of RPS

- Objectives dictate design (e.g. target, eligibility, geography)
- Lack of clear objectives hinders creating effective design
- Objectives may conflict, require balance – prioritization helps
- Potential Objectives to Consider
 - Substantial greenhouse gas reductions
 - Local and regional air emission reductions
 - Providing a hedge against electric price volatility or increases in fossil fuel costs
 - Enhancing energy security
 - Economic development
 - Stimulating renewables markets
 - Fish/water quality benefits
- Goals balanced against limiting cost impacts to NY customers



Policy Design Principles...

- Provide a touchstone for culling design options
- *A successful RPS policy will be...*
 - Socially Beneficial
 - Cost-Effective and Flexible
 - Predictable
 - Nondiscriminatory
 - Enforceable
 - Consistent with Market Structure
 - Compatible with Other Policies
- ➔ *Sometimes a balance will need to be achieved between competing principles*



Socially Beneficial

- *A well-designed RPS should support new renewable energy development, thereby contributing to an improvement in environmental quality, to increased diversity in energy supply, and to other politically chosen objectives.*



Cost Effective and Flexible

- *A well-designed RPS should be implemented and administered in a straightforward, flexible, and cost-effective manner*



Predictable

- *A well-designed RPS should provide market stability for all participants, reducing regulatory risk for generators and obligated entities and improving the ability of renewable developers to obtain financeable long-term contracts*



Nondiscriminatory

- *A well-designed RPS should be applied fairly, consistently, and proportionately to all market participants and customers*



Enforceable

- *A well-designed RPS should be enforceable, ensuring that the policy's renewable energy targets and broader goals are achieved*



Consistent with Market Structure

- *A well-designed RPS should be consistent with and complement the structure of a state's electricity market*



Compatible With Other Policies

- *A well-designed RPS should be compatible with other applicable policies and regulations in the state and, where possible, the broader region*



RPS Design Features: Structure, Size, Application

- Basis:
 - **energy** vs. capacity obligation
- Structure
 - e.g., single tier or multiple tiers (growth vs. maintenance, existing vs., incremental, or by technology)
- Percentage purchase obligation targets
 - What are objectives?
 - “Glide path”
 - Pros & Cons of Flexibility
- Start date
 - Sufficient lead time for feasibility



RPS Design Features: Structure, Size, & Application

- Duration of purchase obligation
 - Create environment of regulatory stability
- Resource diversity requirements or incentives
 - What are objectives?
- Who must meet targets?
 - All suppliers at retail?
 - All potential suppliers to any covered retail load?
 - **Centralized procurement?**
- Application to:
 - Product-based (or each customer)?
 - Company-based (aggregate)?



RPS Design Features: Eligibility

- Geographic eligibility
 - Local vs. distant?
 - Deliverability/displacement?
 - What are objectives? What is credible?
- Examples:
 - In-state requirement: AZ (partial), IA, MN (partial),
 - In-state encouragement: AZ (partial), NM,
 - In-state interconnection requirement: CA, NV, TX
 - Broader Regional (of various types): CT, ME, MA, NJ, PA, WI



Resource Eligibility – Resource Types

Almost Always Eligible

wind, solar, LFG, geothermal where available, ocean where considered

- **Hydropower**
 - Not eligible: MA, MN, NV, PA
 - Eligibility Limitations: < 30 MW for Class II in NJ, < 5MW for NM, < 60 MW in WI, <30 MW in CA and only eligible as new if does not require incremental diversions of water
 - Broadly eligible: TX, Class II in CT, ME
- **Biomass**
 - Broadly eligible: AZ, CA, IA, ME, MN, NV, NM, TX, WI, CT (Class II)
 - Detailed technology, emissions and/or fuel requirements: MA
 - Sustainability requirements: CT (Class I), NJ, PA
- **Waste to Energy** -Only eligible in NV, ME, Class II in NJ and CT, limited in CA
- **Fuel Cells using Non-Renewable Fuels** -Eligible in CT, NJ, NM, ME



RPS Design Features: Eligibility

- Eligibility of existing renewable generation
 - Included or excluded? *Does it need the extra revenue?*
 - By type? vintage? market exposure?
- Definition of new/incremental generation
- Treatment of multi-fuel facilities
 - Verifiability
 - with exception of trivial use of fossil fuel for start-up in biomass plants, typically only renewable energy fraction of multi-fuel facilities is eligible



RPS Design Features: Eligibility

- Treatment of off-grid & customer-sited facilities
 - Objectives vs. fairness vs. complexity
 - Ex: Renewable electricity production used on-site is clearly eligible in MA, NV, TX, AZ
 - Solar-Thermal Applications: Solar hot water is some times eligible: e.g., AZ, NV, TX



RPS Design Features: Administration

- Regulatory oversight body(ies) – **NY PSC**
- Verifying compliance
 - RECs? contract-path? Conversion transactions? Financial?
 - RPS Examples:
 - Full Unbundled REC System - today (TX, MA, ME, CT)
 - Partial Unbundled REC System (WI, AZ, NV) – no electronic registry
 - Contract-Path Accounting of Bundled Electricity Purchases (MN, IA, NJ today)
- Certification of eligible generators
 - Process
 - Powers of enforcement
- Compliance filing requirements



RPS Design Features: Administration

- Enforcement mechanisms
 - Sanctions? Financial? Market access? Compliance plans?
 - Examples:
 - Administrative Fines: NV, TX, WI
 - License Suspension or Revocation: many states as last resort
 - Shortfall Make-Up: NJ
 - Compliance Plans: MA, NJ
 - Flexible Set of Alternative Penalties: CA, CT, ME, NJ



RPS Design Features: Administration

- Cost caps
 - Pros & cons of caps
 - Level of a cap?
 - Examples:
 - Alternative compliance mechanisms (MA)
 - effective caps due to penalty (TX)
 - SBC limitation: CA, AZ
 - overall cost increase limit: PA



RPS Design Features: Administration

- Flexibility mechanisms
 - Settlement or averaging period
 - Banking or borrowing
- Implementing future changes to the RPS
 - Pros & cons of flexibility
- Contracting standards for regulated utilities?
- Conditions for cost recovery for regulated utilities



RPS Design Features: Interactions Between the RPS and Other Policies

- Interaction with state system-benefits charges
 - Complementary or combined?
 - Competitive neutrality
 - Right tool for the job – what are objectives?
- Treatment of emission credits
 - Do objectives suggest restrictions?
- Interaction with a future federal RPS



NY-Specific Factors: Constraints & Opportunities

- Each existing RPS is different
 - some poorly designed, others lacked benefit of experience of others to identify best practices
 - some for good reason – reflecting specific characteristics unique to the state and market.
- New York has several defining characteristics that will suggest or constrain design features, choices



NY-Specific Factors: Constraints & Opportunities

- Competitive retail market, but utilities still have role
 - Mix of regulatory control
 - LIPA
- Well-developed competitive wholesale market
- Lack of direct legislative RPS mandate
 - More challenging to create atmosphere of predictability for supporting financing than with well-written legislation



NY-Specific Factors: Constraints & Opportunities

- Generation Divestiture
 - Role of distribution utilities, control over existing renewable assets
- New resources generally available
- Substantial stock of existing resources, locally and in neighboring regions
- Mix of credit-worthy and thinly-capitalized ESCOs
- Close integration with their neighbors



NY-Specific Factors: Constraints & Opportunities

- Unique role of NYPA as...
 - supplier at wholesale and part of retail supply to select customers
 - as state agency
 - as owner of massive hydro that does not need RPS revenues to keep operating
- Disclosure requirement in place
 - constrains options for verification, banking, etc.
- Pressure from many fronts for RECs and registry
- Existence of SBC – will interact in some ways



Policy Design Criteria



Design Criteria (1)

- Broad applicability
 - Apply equally and fairly to all load-serving entities
- Carefully-Balanced Supply-Demand Conditions
 - RPS be large enough to ensure new renewable development
 - Not be so large as to make compliance very difficult
- Sufficient Duration and Stability of Targets
 - Of sufficient duration to allow long-term contracting and financing
 - Stable and not subject to sudden or uncertain shifts
- Well-Defined and Stable Resource Eligibility Rules
 - Eligibility of renewable resources should be well defined
 - Ambiguity creates market uncertainty



Design Criteria (2)

- Well-defined and Stable Treatment of Out-of-State Resources
 - Design may affect the impact of the RPS
 - Should be well-defined and not subject to sudden change.
- Credible and Effective Enforcement
 - RPS should be mandatory and include well-defined penalties
- Flexible Verification Mechanisms
 - TRC approach preferred because it simplifies verification, reduces risk of double counting, increases contracting flexibility and lowers compliance costs.
- Adequate Compliance Flexibility
 - Flexibility can help ease RPS compliance, but too much flexibility may increase gaming and non-compliance



Design Criteria (3)

- Contracting Standards and Cost Recovery Mechanisms for Regulated Utilities and Standard Offer and Default Service Providers
 - Long-term contracts necessary for renewable generators to attract financing
 - Load-serving entities must be able to recover prudently incurred RPS compliance costs
- Product-Based Compliance Mechanisms
 - Ensures that customer demand for green power is incremental to the RPS
 - RPS costs shared equitably among all electricity consumers
 - Green power customers not misled as to the effect of their purchases
- Compatibility with other policies
 - Disclosure, SBC, emissions cap & trade, Federal RPS...



Even a Well-Designed RPS May Fail if Market Context Is Not Supportive

- Presence of Credit-Worthy Long-Term Power Purchasers
 - Particular issue in restructured markets; has led some in MA to consider centralized procurement model or at least contracting standards; even in TX, only certain suppliers are going long
- Stable Political and Regulatory Support
 - Legislative and regulatory uncertainty is too high in many states, including AZ, ME, CT, NM
- Adequate and Accessible Developable Resource Potential
 - Concerns in MA, CA



Select Resource List for Reading on State RPS Policies

- **Grace and Wiser RI RPS Design Best Practices Report:**
 - <http://righg.raabassociates.org/Articles/RPS%20Chapter.doc>
- **Wiser TX RPS Report:**
 - <http://eetd.lbl.gov/ea/EMS/reports/49107.pdf>
- **Massachusetts RPS Design White Papers:**
 - <http://www.state.ma.us/doer/rps/delproc.htm>
- **Rader and Hempling NARUC Report:**
 - <http://www.naruc.org/committees/ere/rps.pdf>
- **REPP Links to State RPS Regulation and Legislation:**
 - http://www.repp.org/rps_map.html



Sustainable Energy Advantage, LLC

**4 Lodge Lane
Natick, MA 01760
tel. 508.653.6737
fax 508.653-6443**

bgrace@seadvantage.com
www.seadvantage.com