New York State Renewable Portfolio Standard

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NYSERDA

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Topical Outline

- New York RPS Program Description
  - Key Features / Structure / Funding
- Main Tier Cumulative Outcomes
- Scale of Development & Economic Implications
- Tools for Towns
NYSERDA Snapshot

- A Public Benefit Corporation established in 1975
- Mission: to identify solutions to State’s energy challenges in ways that benefit the State’s economy and environment
- Broad definition of “energy challenges”
- Public/private partnerships – strategic engagement
- Competitive and market-oriented approach resulting in risk reduction investments
NYS Renewable Portfolio Standard (RPS)

- Public Service Commission (PSC) adopts Renewable Portfolio Standard in September of 2004
- Goal is to have 25% of the power consumed at retail to come from renewable generation by 2013
- Program objectives:
  - Environmental improvement
  - Fuel diversity
  - Economic development
  - Energy price suppression

Alfred University Turbine
New York State Renewable Portfolio Standard (RPS)

- **Existing** resources account for about 19.5%
- **Incremental** requirement to be satisfied by:
  - **Main Tier** (NYSERDA)...............( 9,800,000 MWH )
  - Customer-Sited Tier (NYSERDA)... ( 200,000 MWH )
  - Voluntary Green Retailing ..........( 1,800,000 MWH )
  - State Agency Purchases.................( 300,000 MWH )

Note: Voluntary Market 15% of incremental target!
NYSERDA as Central Procurement Agent

NYSERDA procurement obligation is broken out into two components:

Grid –Connected Generation sells energy into the power grid for resale via the utility or an energy service provider.....referred to as the **Main - Tier Program**

Behind the meter generation is that which is situated on the customer’s side of the electric meter and the energy produced is used by that customer to serve its own load...referred to as the **Customer - Sited Tier Program**
RPS Program Funding

- RPS funding mechanism (similar to SBC funding protocols)
- PSC orders utilities to assess surcharge on deliveries (basis of non-bypassable wires charge)
- $764.4 M total funding through 2013 (collections + interest)

All figures are approximations
RPS Main-Tier Features

- NYSERDA is central buyer on behalf of ratepayers of all IOUs in state
- Projects in service/using new eligible fuels after 1/1/2003 are eligible
- NYSERDA pays fixed production incentive ($/MWh)
  - Prices set competitively
  - Secure property rights to Renewable Energy Certificates
  - Secure product claims of environmental improvement
- NYSERDA does not purchase energy; however,
  - Energy must be delivered to New York ISO on hourly-scheduled basis
- Out-of-state resources currently eligible
- Project selection now a function of REC price and NYS economic benefits
2\textsuperscript{nd} Main Tier Solicitation (RFP 1037- RPS 2)

- **Step One: Qualification to submit Bid Proposal**
  - 44 Application Packages received; 6 facilities outside NY
  - 38 facilities qualified for Bid Proposals
    - 19 Wind, 8 Biomass, and 10 hydroelectric in NYS

- **Step Two: Competitive Bid Proposal Submission**
  - Participation rose while costs have come down
  - 34 bid facilities involved; a 54% increase in participation!
  - Bid Prices compared dropped approximately 30%

- *Contract execution pending*
Noble: Altona, Clinton, Ellenburg, Chateaugay Projects (Wind)

US Renewables Group: Niagara Generating (Biomass)

UPC: Cohocton, Dutch Hill, Prattsburgh Projects (Wind)

Noble: Bliss Project (Wind)

From PA and NJ: PPL Bear Creek (Wind), Comm. Energy (Wind)

Iberdrola: Jordanville (Wind)

Lyonsdale (Biomass)

Spiers Falls (Hydro)

Maple Ridge (Wind)

Brookfield: Raymondville, East Norfolk, Norwood, Norfolk, Eagle, Colton, Higley, Oswego Falls, Allens Falls, Browns Falls (Hydro) and Boralex (Biomass)

Cumulative Main Tier Procurement Outcomes¹
(Expected outcomes for RFP 1037; RPS 2 contracts are pending)
### Cumulative Development Since Inception of SBC and RPS

<table>
<thead>
<tr>
<th>WIND Nameplate Capacity</th>
<th>HYDROPOWER Incremental Capacity</th>
<th>BIOMASS Nameplate Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>In operation or under construction in New York State</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RPS 2</td>
<td>828.0 ¹</td>
<td>8.0</td>
</tr>
<tr>
<td>RPS 1</td>
<td>231.0 ²</td>
<td>.8</td>
</tr>
<tr>
<td>SBC</td>
<td>48.5</td>
<td>0</td>
</tr>
<tr>
<td>Merchant</td>
<td>110.0</td>
<td>0</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>1217.5</strong></td>
<td><strong>8.8</strong></td>
</tr>
</tbody>
</table>

¹ 549.0 supported directly through RPS payments; balance supported on merchant basis

² Excludes 29.5 MW from Bear Creek (PA) and Atlantic City (NJ) wind farms

**Execution of RPS 2 Contracts is pending**
RPS Customer-Sited Tier Structure

- Modeled after New York Energy $mart SM incentive program currently administered by NYSERDA

- Accelerate development of photovoltaic systems, fuel cells, small wind turbines and digesters
- Combination of incentive packages, performance incentives and competitive procurement
- In general, participation will be limited to customers paying the RPS surcharge
Wind Development by County

Available for future contracting
Excludes about 635 MW in PA that could apply for contracts

<table>
<thead>
<tr>
<th>County</th>
<th># of Projects</th>
<th>MW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattaraugus</td>
<td>2</td>
<td>178</td>
</tr>
<tr>
<td>Chautauqua</td>
<td>4</td>
<td>328</td>
</tr>
<tr>
<td>Clinton</td>
<td>4</td>
<td>354</td>
</tr>
<tr>
<td>Delaware</td>
<td>1</td>
<td>129</td>
</tr>
<tr>
<td>Franklin</td>
<td>3</td>
<td>477</td>
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<tr>
<td>Genesee</td>
<td>2</td>
<td>558</td>
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<tr>
<td>Herkimer</td>
<td>2</td>
<td>234</td>
</tr>
<tr>
<td>Jefferson</td>
<td>3</td>
<td>472</td>
</tr>
<tr>
<td>Lewis</td>
<td>1</td>
<td>80</td>
</tr>
<tr>
<td>Erie</td>
<td>1</td>
<td>60</td>
</tr>
<tr>
<td>Madison</td>
<td>2</td>
<td>80</td>
</tr>
<tr>
<td>Otsego</td>
<td>1</td>
<td>80</td>
</tr>
<tr>
<td>Steuben</td>
<td>5</td>
<td>472</td>
</tr>
<tr>
<td>Suffolk</td>
<td>1</td>
<td>140</td>
</tr>
<tr>
<td>Wyoming</td>
<td>4</td>
<td>392</td>
</tr>
<tr>
<td>Yates</td>
<td>2</td>
<td>155</td>
</tr>
<tr>
<td>Orleans</td>
<td>1</td>
<td>120</td>
</tr>
<tr>
<td>Total:</td>
<td>39</td>
<td>4309</td>
</tr>
</tbody>
</table>

Legend

ISO Wind (as of Dec. 2005)
- 50 - 100 MW
- 101 - 200 MW
- 201 - 500 MW
- > 500 MW
- No Generation

Available for future contracting
Excludes about 635 MW in PA that could apply for contracts
Wind Related Economic Impacts

- Economic impacts to New York include direct, indirect and induced economic activities:
  - purchase of goods/materials and related services
  - revenue associated with land use/wind rights
  - taxes/payments in lieu of taxes/other
  - temporary/permanent employment
  - manufacture of energy/price suppression
Wind Related Economic Impacts

- Benefits approx. $10/MWh\(^1\) (project-life basis of 20 years)

- 100 MW project results in benefits approaching $2.6 million annually; or about $50+ million over project life

- Benefits associated with cumulative RPS procurements approach $600 million dollars on a project-life basis

- Expected benefits on total program basis likely exceed $1 billion (assuming current procurement objectives are fully funded through 2013)

\(^1\)http://www.powernaturally.org/Programs/Wind/MajorEcoImpactsUtilityScaleWind.pdf (excludes indirect benefits and price suppression effects)
Wind Energy Toolkit to Help Municipalities

- Comprehensive Plan
- Sample Ordinance Standards
- Avian, Bat, and Biological Impacts
- Other Potential Environmental Impacts
- Electrical Grid and Wind Generation
- Wind Turbine Technology Overview
- Wind Project Lifecycle Overview
- Current Wind Development in New York
- Legal Guidebook for Landowners
- Lease Agreements
- Sample Annotated Land Lease Agreement
- Site Identification & Land Requirements
- Meteorological Poles and Towers
- Government Agencies’ Role in Approval Process
- Types of Permits and Approvals Often Needed
- Public Health and Safety
- Property Tax: Exemptions and PILOT
- School District Tax Impacts
- Economic and Socioeconomic Impacts
- Property Values
- Property Tax Exemption, Project Improvements, and State School Aid
- Small Wind Fact Sheet
- Large Wind Fact Sheet
- Frequently Asked Questions
- Myth Busters
- How to Critically Evaluate Information

www.powernaturally.org/Programs/Wind/toolkit.asp or www.nyserda.org
For More Information

NYSERDA’s Renewables Programs

- www.nyserda.org/rps
- www.PowerNaturally.org
- NYSERDA Wind Energy Toolkit
  www.powernaturally.com/Programs/Wind/toolkit.asp
- www.dps.state.ny.us
- www.nyiso.com (interconnection governance)

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