Delaware’s CO\textsubscript{2} Budget Trading Program
Regulation 1147

RGGI Rule Development Workgroup
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Overview of Presentation

• Background
• RGGI Design Process
• 10-State Memorandum of Understanding (MOU)
• Model Rule Process
Goal

• Design a Regional Cap and Trade Program Covering CO$_2$ Emissions from Power Plants
• Develop a “model rule” for adoption in each state
Statistics

- 3rd Largest World Economy
- 14% of US GHG Emissions
- 3.2% of World GHG Emissions (≈ Germany)
Background

• April 2003 Invitation from NY Governor Pataki
• July 2003 Launch
• September 2003 Action Plan
• August 2005 Staff Working Group Package Proposal
• December 2005 Memorandum of Understanding signed by Governors
• August 2006 Model Rule
RGGEI Design Principles

• Reduce CO$_2$ with flexible, market-based program to achieve least cost reductions.
• Create model for federal program.
• Maintain electricity affordability, reliability and fuel diversity.
• Make expandable to other states.
• Build on programs in place.
Designing RGGI:
A Cap-and-Trade Program

1. Identify Sources to be Covered
2. Determine Total Emissions from Covered Sources & Set Cap
3. Issue Allowances (1 per ton) & Distribute
4. Trade
5. Sources Cover Emissions with Allowances and/or Offsets

+ Offsets
RGGI Program Components

• Start Date of January 1, 2009.
• Electric Generating Units 25 Megawatts+
• Two-Phase Cap
  – Stabilize Emissions through 2015
  – Reduce 10% by 2019.
• Comprehensive Review of Program in 2012.
• Offsets allowed to provide some flexibility.
• Price trigger safety valves to control costs.
RGGI State Allocations

Connecticut: 10,695,036 tons
Delaware: 7,559,787
Maine: 5,948,902
Maryland: 37,503,983
Massachusetts: 26,660,204
New Hampshire: 8,620,460
New Jersey: 22,892,730
New York: 64,310,805
Rhode Island: 2,659,239
Vermont: 1,225,830

188,076,976 tons

*Based on adjusted actual annual average emissions from all affected facilities (2000-2002)
Delaware's RGGI CO₂ Emissions Allocation
7,559,787 tons

- Stabilize emissions
- Reduce emissions by 10% by 2018
## Delaware Power Plant Specifics

<table>
<thead>
<tr>
<th>Facility (units)</th>
<th>Unit types</th>
<th>Generation (MGW)</th>
<th>Installation Year</th>
<th>Fuel type</th>
<th>2000-2002 Average CO₂ Emissions (Tons/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NRG Indian River (4)</td>
<td>ST</td>
<td>82, 82, 177, 442</td>
<td>1957, 1959, 1970, 1980</td>
<td>Coal</td>
<td>3,063,258</td>
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<tr>
<td>Conectiv Edge Moor (3)</td>
<td>ST</td>
<td>75, 177, 446</td>
<td>1954, 1966, 1973</td>
<td>Coal (Residual Oil)</td>
<td>2,293,849</td>
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<tr>
<td>Dover - McKee Run (1)</td>
<td>ST</td>
<td>114</td>
<td>1975</td>
<td>Residual Oil</td>
<td>154,711</td>
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<tr>
<td>Dover - Van Sant (1)</td>
<td>CT</td>
<td>45</td>
<td>1991</td>
<td>Diesel Oil</td>
<td>5,290</td>
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<tr>
<td>DEMEC - W. Beasley (1)</td>
<td>CT</td>
<td>45</td>
<td>2002*</td>
<td>Natural Gas</td>
<td>13,946</td>
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<tr>
<td>NRG Dover (2)</td>
<td>CT</td>
<td>50, 50</td>
<td>2001*</td>
<td>Natural Gas</td>
<td>19,726</td>
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<tr>
<td>Premcor Refinery (6)</td>
<td>ST, CT</td>
<td>28, 28, 63, 63, 90, 90</td>
<td>1956, 1961, 2000*</td>
<td>Residual Oil, Syn Gas</td>
<td>1,207,544</td>
</tr>
</tbody>
</table>

- Units over 25 MGW – nameplate capacity  
- CC – Combined Cycle  
- CT – Combustion Turbine  
- WH – Waste Heat  
- ST – Steam Turbine  

*Non-Acid Rain Units
CO₂ emissions 2000-2002 from Delaware EGU’s

<table>
<thead>
<tr>
<th>Company</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conectiv EM</td>
<td>30.98%</td>
</tr>
<tr>
<td>Indian River</td>
<td>41.37%</td>
</tr>
<tr>
<td>McKee Run</td>
<td>2.09%</td>
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<tr>
<td>Conectiv HR</td>
<td>13.37%</td>
</tr>
<tr>
<td>Van Sant</td>
<td>0.07%</td>
</tr>
<tr>
<td>Beasley</td>
<td>0.27%</td>
</tr>
<tr>
<td>Premcor</td>
<td>16.31%</td>
</tr>
</tbody>
</table>
RGGI Program Components

• Allocations:
  – 25% for Consumer Benefit and/or Strategic Energy Purpose
  – Remaining 75% of the allocations left to each state to allocate
• 3-Year Compliance Period
• Banking Allowed
RGGI Program Components

• Offsets—project-based reductions:
  – Types:
    1. Landfill methane capture & destruction.
    2. Reduction in emissions of sulfur hexafluoride (SF6)
    3. Reduction/avoidance of CO2 emissions from natural gas, oil or propane end-use combustion due to end use energy efficiency.
    4. Sequestration of carbon due afforestation
    5. Avoided methane emissions from agricultural manure management.
MOU Program Components

• Safety Valves
  – $7.00 Trigger
    • Limit on offset use increased from 3.3% to 5% of a source’s reported emissions
  – $10.00 trigger
    • Offset limit goes to 10%
    • Retirement of international credits allowed
    • Compliance period may be extended 1 year
  – No program suspension, alternative compliance payments or additional allowances
Model Rule


• States have begun to initiate state-specific legislative and/or rulemaking processes.
# RGGI States and Their Rulemaking Status, 1/24/08

<table>
<thead>
<tr>
<th>State</th>
<th>Cap &amp; Trade Rule Status</th>
<th>Auction Rule Status</th>
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<tbody>
<tr>
<td>Connecticut</td>
<td>1/2008</td>
<td></td>
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<tr>
<td>Delaware</td>
<td></td>
<td>To propose 6/2008</td>
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<tr>
<td>Maryland</td>
<td>2/2008</td>
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<tr>
<td>Massachusetts</td>
<td>8/2007</td>
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<tr>
<td>New Hampshire</td>
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<td>New Jersey</td>
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</tr>
<tr>
<td>New York</td>
<td>10/2007</td>
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</tr>
<tr>
<td>Rhode Island</td>
<td>1/2008</td>
<td></td>
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<tr>
<td>Vermont</td>
<td>10/2007</td>
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Delaware Rule Development

- Workgroup meetings
  - February 27th
  - March 26th
  - (April) May 1st
  - May 28th
- June ?? Public Workshop
- Proposed Rule
  - July 1, 2008 Delaware Register Public Notice
- Public Hearing
  - Sep 1, 2008 Delaware Register Public Notice
  - Sep 30, 2008
- Response to Comments
  - November 1, 2008 Final Document
- Final Rule
  - December 1, 2008 Delaware Register
RGGI Model Rule Sections

- Section 1 – General Provisions
- Section 2 – Authorized Account Representative
- Section 3 – Permits
- Section 4 – Compliance Certification
- Section 5 – Allowance Allocations
- Section 6 – Allowance Tracking System
- Section 7 – Allowance Transfers
- Section 8 – Monitoring and Reporting
- Section 9 – RESERVED
- Section 10 – Emission Offset Projects
- Section 11 – Auction
Section 1- General Provisions

1. Purpose.
2. Definitions.
3. Measurements, abbreviations, and acronyms.
4. Applicability.
5. Standard Requirements.
7. Severability.
Section 2 – Authorized Account Representative

1. Authorization and responsibilities.
2. Alternate authorized account representative.
4. Account certificate of representation.
5. Objections concerning account representative.
6. Delegation by account representative and alternate account representative.
Section 3 - Permits

1. Permit requirements.
2. Submission of permit applications.
3. Information requirements for permit applications.
Section 4 – Compliance Certification

1. Compliance certification report.
2. Action on compliance certifications.
Section 5 – Allowance Allocations

1. Base Budget.
2. Timing requirements for allowance allocations.
3. Allowance allocations.
Section 6 – Allowance Tracking System

1. Allowance Tracking System accounts.
2. Establishment of accounts.
3. Allowance Tracking System responsibilities of authorized account representative.
4. Recordation of allowance allocations.
5. Compliance.
7. Account error.
8. Closing of general accounts.
Section 7 – Allowance Transfers

1. Submission of allowance transfers.
2. Recordation.
3. Notification.
Section 8 – Monitoring and Reporting

1. General requirements.
2. Initial certification and recertification procedures.
3. Out-of-control periods.
5. Recordkeeping and reporting.
6. Petitions.
7. Budget units that co-fire eligible biomass.
8. Additional requirements to provide output data.
Section 9 - Reserved
Section 10 – Offset Projects

1. Purpose.
2. Definitions.
5. Emission offset project standards.
6. Accreditation of independent verifiers.
7. Award of emissions offset allowances.
Section 11 – Delaware Auction Language

To be determined