

REGIONAL GREENHOUSE GAS INITIATIVE

Memorandum of Understanding

WHEREAS, the States of Connecticut, Delaware, Maine, New Hampshire, New Jersey, New York, and Vermont (the "Signatory States") each individually have a policy to conserve, improve, and protect their natural resources and environment in order to enhance the health, safety, and welfare of their residents consistent with continued overall economic growth and to maintain a safe and reliable electric power supply system; and

WHEREAS, there is a growing scientific consensus that the increase in anthropogenic emissions of greenhouse gases is enhancing the natural greenhouse effect resulting in changes in the Earth's climate; and

WHEREAS, climate change poses serious potential risks to human health and terrestrial and aquatic ecosystems globally and in the Signatory States including: more severe droughts and floods; atmospheric warming resulting in increased concentrations of ground-level ozone (smog) and associated adverse health effects; changes in forest composition as dominant plant species change; increases in habitat for disease-carrying insects like mosquitos and other vectors; increases in algal blooms that damage shellfish nurseries and can be toxic to humans; sea level rise that threatens coastal communities and infrastructure, saltwater contamination of drinking water and the destruction of coastal wetlands; increased incidence of storm surges and flooding of low-lying coastal areas which would lead to the erosion of beaches; and

WHEREAS, a carbon constraint on fossil fuel-fired electricity generation and the development of a CO₂ allowance trading mechanism will create a strong incentive for the creation, development, and deployment of more efficient fuel burning technologies and processes, as well as renewable energy supplies, demand-side management practices and actions to increase energy efficiency, and will lead to less dependence on the import of fossil fuels; and

WHEREAS, reducing our dependence on imported fossil fuels will enhance the region's economy by augmenting the region's energy security and by retaining energy spending and investments in the region; and

WHEREAS, the Signatory States wish to establish themselves and their industries as world leaders in the creation, development, and deployment of carbon emission control technologies, renewable energy supplies, and energy-efficient technologies, demand-side management practices, and increase the share of energy

used within the Signatory States that is derived from secure and reliable supplies of energy; and

WHEREAS, climate change is occurring now, and continued delay in taking action to address the emissions that cause climate change will make any later necessary investments in mitigation and adaptive infrastructure much more difficult and costly; and

WHEREAS, to address global climate change and in order to do their fair share in addressing their contribution to this collective problem while preserving and enhancing the economic welfare of their residents, the Signatory States find it imperative to act together to control emissions of greenhouse gases, particularly carbon dioxide, into the Earth's atmosphere from within their region.

NOW THEREFORE, the Signatory States express their mutual understandings and commitments as follows:

1. **OVERALL ENVIRONMENTAL GOAL**

The Signatory States commit to propose for legislative and/or regulatory approval a CO₂ Budget Trading Program (the "Program") aimed at stabilizing and then reducing CO₂ emissions within the Signatory States, and implementing a regional CO₂ emissions budget and allowance trading program that will regulate CO₂ emissions from fossil fuel-fired electricity generating units having a rated capacity equal to or greater than 25 megawatts.

2. **CO₂ BUDGET TRADING PROGRAM**

- A. **Program Adoption.** Each of the Signatory States commits to propose, for legislative and/or regulatory approval, the Program substantially as reflected in a Model Rule that will reflect the understandings and commitments of the states contained herein. The Program launch date will be January 1, 2009 as provided in 3.C. below.
- B. **Regional Emissions Cap.** The regional base annual CO₂ emissions budget will be equal to 121,253,550 short tons.
- C. **State Emissions Caps.** The regional base annual CO₂ emissions budget will be apportioned to the States so that each state's initial base annual CO₂ emissions budget is as follows:

Connecticut:	10,695,036 short tons
Delaware:	7,559,787 short tons
Maine:	5,948,902 short tons
New Hampshire:	8,620,460 short tons
New Jersey:	22,892,730 short tons
New York:	64,310,805 short tons
Vermont:	1,225,830 short tons

For the years 2009 through 2014, each state's base annual CO₂ emissions budget shall remain unchanged.

- D. Scheduled Reductions. Beginning with the annual allocations for the year 2015, each state's base annual CO₂ emissions budget will decline by 2.5% per year so that each state's base annual emissions budget for 2018 will be 10% below its initial base annual CO₂ emissions budget.
- E. Compliance Period and Safety Valve.
- (1) Compliance Period. The compliance period shall be a minimum of three (3) years, unless extended after a Safety Valve Trigger Event (described below). A subject facility must have a sufficient number of allowances at the end of each compliance period to cover its emissions during that period.
 - (2) Safety Valve Trigger.
 - (a) Safety Valve Trigger. If, after the Market Settling Period (as defined below), the average regional spot price for CO₂ allowances equals or exceeds the Safety Valve Threshold (defined below) for a period of twelve months on a rolling average (a "Safety Valve Trigger Event"), then the compliance period may be extended by up to 3 one-year periods.
 - (b) Safety Valve Threshold. The Safety Valve Threshold shall be equal to \$10.00 (2005\$), as adjusted by the Consumer Price Index (CPI) plus 2% per year beginning January 1, 2006.
 - (c) Market Settling Period. The Market Settling Period is the first 14 months of each compliance period.

F. Offsets. The Program will provide for the award of offset allowances to sponsors of approved CO₂ (or CO₂ equivalent) emissions offset projects for reductions that are realized on or after the date of this MOU. Offset allowances may be used for compliance by units subject to the Program. Among the key features of the offset component of the Program are:

(1) General Requirements.

- (a) Minimum Eligibility Requirements. At a minimum, eligible offsets shall consist of actions that are real, surplus, verifiable, permanent and enforceable.
- (b) Initial Offset Types. The initial offset project types that may be approved by a Signatory State are: landfill gas (methane) capture and combustion; sulfur hexafluoride (SF₆) capture and recycling; afforestation (transition of land from non-forested to forested state); end-use efficiency for natural gas, propane and heating oil; methane capture from farming operations; and projects to reduce fugitive methane emissions from natural gas transmission and distribution. The measurement and verification protocols and certification processes will be consistent across the Signatory States and incorporated into each State's program.
- (c) Additional Offset Types. The Signatory States agree to continue to cooperate on the development of additional offset categories and types, including other types of forestry projects, and grassland re-vegetation projects. Additional offset types will be added to the Program upon approval of the Signatory States.

(2) Initial Offsets Geography and Limits.

- (a) Geographic Location of Offset Projects. Offset allowances may be awarded to projects located anywhere inside the United States, provided:
 - (1) allowances for projects located inside a Signatory State shall be awarded on the basis of one allowance for each CO₂-equivalent ton of certified reduction; and
 - (2) allowances for projects located outside the Signatory States shall be awarded one allowance for every two CO₂-equivalent tons of certified reduction.

(b) Limit on Offsets Use. In each compliance period, a source may cover up to 3.3% of its reported emissions with offset allowances.

(3) Offsets Trigger and Reset.

(a) Offsets Trigger. If, after the Market Settling Period (defined above), the average regional spot price for CO₂ allowances equals or exceeds \$7.00 (2005\$) per ton for a period of twelve months on a rolling average (an "Offsets Trigger Event"), then:

- (1) offset allowances may be awarded to projects located anywhere in North America; and
- (2) offset allowances will be awarded on the basis of one allowance for each CO₂-equivalent ton of certified reduction; and
- (3) the percentage of offsets that a source may use to cover its emissions shall increase to 5.0% of its reported emissions for the compliance period in which the Offsets Trigger Event occurs.

(b) Offsets Reset. After an Offset Trigger Event, the limits on geography and use of offsets set forth in Section F.2. shall once again apply commencing at the start of the subsequent compliance period.

(4) Safety Valve Offsets Trigger and Reset.

(a) Safety Valve Offsets Trigger. If a Safety Valve Trigger Event has occurred twice in two consecutive 12-month periods (a "Safety Valve Offsets Trigger Event"), then:

- (1) offset allowances may be awarded to projects located anywhere in North America or from international trading programs; and
- (2) offset allowances may be awarded to projects located anywhere in North America or credits from international trading programs shall be awarded on the basis of one allowance for each CO₂-equivalent ton of certified reduction; and

- (3) the percentage of offsets that a source may use to cover its emissions shall increase to 5.0% of its reported emissions for the first three years of the compliance period and 20% of its reported emissions for the period beginning with the fourth year of the compliance period and continuing through the end of the compliance period.
 - (b) Safety Valve Offsets Reset. After a Safety Valve Offsets Trigger Event, the limits on geography and use of offsets set forth in Section F.2. shall once again apply commencing at the start of the subsequent compliance period.
 - G. Allocations of Allowances. Each Signatory State may allocate allowances from its CO₂ emissions budget as determined appropriate by each Signatory State, provided:
 - (1) each Signatory State agrees that 25% of the allowances will be allocated for a consumer benefit or strategic energy purpose. Consumer benefit or strategic energy purposes include the use of the allowances to promote energy efficiency, to directly mitigate electricity ratepayer impacts, to promote renewable or non-carbon-emitting energy technologies, to stimulate or reward investment in the development of innovative carbon emissions abatement technologies with significant carbon reduction potential, and/or to fund administration of this Program; and
 - (2) the Signatory States recognize that, in order to provide regulatory certainty to covered sources, state-specific rules for allocations should be completed as far in advance of the launch of the Program as practicable.
 - H. Early Reduction Credits. Each Signatory State may grant early reduction credits for projects undertaken after the date this Memorandum is signed and prior to the launch of the Program as defined in 3.C. at facilities subject to the Program, which projects have the effect of reducing emissions from the facility by (a) an absolute reduction of emissions through emission rate improvements; or (b) permanently reducing utilization of one or more units at the facility.
 - I. Banking. The banking of allowances, offset allowances and early reduction credits will be allowed without limitation.
3. MODEL RULE FOR ESTABLISHMENT OF THE CO₂ BUDGET TRADING PROGRAM
- A. Model Rule. The Signatory States are collectively developing a draft Model Rule to serve as the framework for the creation of necessary statutory and/or

regulatory authority to establish the Program. The Signatory States will use their best efforts to collectively release this draft Model Rule within 90 days after the execution of this MOU for a 60-day public review and comment period. Comments received during this comment period shall be reviewed by the Signatory States, and revisions to the draft Model Rule will be considered. A revised Model Rule will be developed and released within 45 days of the close of the public comment period after consultation among the Signatory States.

- B. Legislation and/or Rulemaking. Each Signatory State commits to seek to establish in statute and/or regulation the Program and have that State's component of the regional Program effective as soon as practicable but no later than December 31, 2008.
- C. Launch of Program. The Signatory States intend that the first compliance period of the Program will commence January 1, 2009.

4. REGIONAL ORGANIZATION

In order to facilitate the ongoing administration of the Program, the Signatory States agree to create and maintain a regional organization ("RO") with a primary office in New York City. The RO will be a non-profit entity incorporated in New York and will operate pursuant to by-laws agreed upon by the Signatory States. The RO shall have an Executive Board comprised of two representatives from each Signatory State. The RO may employ staff and acquire and dispose of assets in order to perform its functions.

- A. RO Functions. The RO will have the following functions:
 - (1) Deliberative Forum. Act as the forum for collective deliberation and action among the Signatory States in implementing the Program. The by-laws of the RO shall specify the process for deliberation and arriving at agreement to take collective action.
 - (2) Emissions and Allowance Tracking. Act on behalf of each of the Signatory States in developing, implementing and maintaining the system to receive and store reported emissions data from sources and track allowance accounts for the Program.
 - (3) Offsets Development. Provide technical support to the States for the development of new offset standards to be added to state rules.
 - (4) Offsets Implementation. Provide technical assistance to the States in reviewing and assessing applications for offsets projects. Such technical assistance may include the development of model guidance documents for use by the States for potential sponsors of offset projects. At the

request of any Signatory State, the RO may assist in the review of any application for the award of offsets credits.

- (5) Limitation on Powers. The RO is a technical assistance organization only. The RO shall have no regulatory or enforcement authority with respect to the Program, and such authority is reserved to each Signatory State for the implementation of its rule.

- B. Funding for the RO. The Signatory States agree that the RO shall be funded at least in part through payments from each Signatory State in proportion to the State's annual base CO2 Emissions Budget. The RO's budget shall be determined and approved by the RO's Executive Board.

5. ADDITION OR REMOVAL OF SIGNATORY STATES

A. New Signatory States.

- (1) New Signatories. A Non-Signatory State may become a Signatory State by agreement of the Signatory States as reflected in an amendment to this MOU.
- (2) Expansion. The Signatory States shall work together to encourage Non-Signatory States to become Signatory States and shall welcome expressions of interest from Non-Signatory States with a goal to expand the geographic reach of the Program.
- (3) Massachusetts and Rhode Island. The Signatory States recognize the contributions of Massachusetts and Rhode Island to the design and development of the Program and the negotiation of this MOU. The Signatory States agree that Massachusetts and Rhode Island may become signatories to this MOU at any time prior to January 1, 2008, without any amendment to the terms of this MOU. In the event that authorized representatives of Massachusetts and/or Rhode Island execute this MOU before such date, they shall receive the following CO₂ emissions budgets:

Massachusetts: 26,660,204 short tons

Rhode Island: 2,659,239 short tons

In the event that Massachusetts and/or Rhode Island become Signatory States under this paragraph, then the regional emissions budget set forth in Section 2.B. of this MOU shall be increased to include the allowance budgets of Massachusetts and/or Rhode Island.

- B. Withdrawal of a Signatory State. A Signatory State may, upon 30 days written notice, withdraw its agreement to this MOU and become a Non-Signatory State. In this event, the remaining Signatory States would execute measures to appropriately adjust allowance usage to account for the corresponding subtraction of units from the Program.
- C. Removal of Signatory State. Removal of a Signatory State shall be handled in the by-laws of the Regional Organization.

6. PROGRAM MONITORING AND REVIEW

The Signatory States agree to monitor the progress of the Program on an ongoing basis.

- A. Imports and Associated Emissions Leakage. The Signatory States recognize the potential that the Program may lead to increased electricity imports and associated emissions leakage. To address this potential, the Signatory States:
 - (1) agree to promptly, but no later than April 1, 2006, establish a multi-state working group consisting of representatives from the energy regulatory and environmental agencies in the Signatory States. The multi-state working group shall:
 - (a) consider potential options for addressing leakage. Attention shall be paid not only to the potential effectiveness of a particular option to address leakage, but also to the potential impacts that option may have on energy prices, allowance prices, electric system reliability and on the economies of the RGGI states. In considering potential options, the working group shall consult with a panel of experts, stakeholders and representatives of the regional transmission organizations.
 - (b) issue its findings and conclusions by December 2007.
 - (2) agree to consider, after taking into account the analyses and findings called for under Section 6(a)(1), what actions should be taken to address potential leakage prior to the launch of the program in January 2009.
 - (3) monitor electricity imports into the Signatory States on an ongoing basis commencing from the start of the program, and report the results of the monitoring on an annual basis beginning in 2010.
 - (4) immediately following the first three-year compliance period and at any time thereafter, determine whether and to what extent any increase in emissions

from electric generating units outside the Signatory States is attributable to the Program.

- (5) if at any point after the launch of the program there is a determination that the Program has led to a significant increase in emissions from electric generating units outside the Signatory States, the Signatory States shall, after taking into account the analyses and findings called for under Section 6(a)(1), implement appropriate measures to mitigate such emissions.
 - (6) The Signatory States agree to pursue technically sound measures to prevent leakage from undermining the integrity of the Program.
- B. Monitoring of Reliability Impacts. The Signatory States recognize the paramount importance of maintaining a reliable electrical system in the region, and are committed to monitoring the Program on an ongoing basis to ensure that the Program will not result in electricity supply interruptions.
- C. Federal Program. When a federal program is proposed, the Signatory States will advocate for a federal program that rewards states that are first movers. If such a federal program is adopted, and it is determined to be comparable to this Program, the Signatory States will transition into the federal program.
- D. Comprehensive 2012 Review. In 2012, the Signatory States will commence a comprehensive review of all components of the Program, including but not limited to:
- (1) Program Success. The Signatory States will review whether the Program has been successful in meeting its goals.
 - (2) Program Impacts. The Signatory States will review the impacts of the Program as to price and system reliability.
 - (3) Additional Reductions. The Signatory States will consider whether additional reductions after 2018 should be implemented.
 - (4) Imports and Emissions Leakage. The Signatory States will consider the effectiveness of any measures put in place to control emissions leakage.
 - (5) Offsets. The Signatory States will evaluate the offsets component of the Program, with attention to price, availability, and environmental integrity, and recommend whether changes to the Program are warranted.

7. COMPLEMENTARY ENERGY POLICIES

Each state will maintain and, where feasible, expand energy policies to decrease the use of less efficient or relatively higher polluting generation while maintaining economic growth. These may include such measures as: end-use efficiency programs, demand response programs, distributed generation policies, electricity rate designs, appliance efficiency standards and building codes. Also, each state will maintain and, where feasible, expand programs that encourage development of non-carbon emitting electric generation and related technologies.

8. AMENDMENT

This MOU may be amended in writing upon the collective agreement of the authorized representatives of the Signatory States.

[Signatures on Next Page]