STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

HEARING REPORT

Prepared Pursuant to Section 4-168(d)
of the Connecticut General Statutes and
Section 22a-3a-3(d)(5) of the Department of Environmental Protection Rules of Practice

Regarding Regulations for the Abatement of Air Pollution:
Proposed Adoption of Section 22a-174-31 and
Proposed Adoption of Section 22a-174-31(a) of the
Regulations of Connecticut State Agencies

Hearing Officer: Paul E. Farrell

Date of Hearing: February 8, 2008

Introduction

On December 20, 2005, Governor Rell signed the Regional Greenhouse Gas Initiative ("RGGI") Memorandum of Understanding ("MOU"), along with the Governors of New York, New Jersey, Delaware, Vermont, New Hampshire and Maine. The Governor pledged Connecticut's cooperation in the development and establishment of a regional carbon dioxide ("CO_2") cap-and-trade program aimed at stabilizing and then reducing CO_2 emissions from large fossil-fuel-fired electricity generating units in the region as substantially reflected in the RGGI Model Rule.

On June 4, 2007 the Governor signed into law Public Act 07-242, An Act Concerning Electricity and Energy Efficiency ("the Act"), which the General Assembly adopted on June 2, 2007. Section 93 of the Act, now section 22a-200c of the Connecticut General Statutes ("C.G.S."), directs the Department of Environmental Protection ("DEP" or "Department") to adopt regulations to implement RGGI, in accordance with the provisions of chapter 54 of the Connecticut General Statutes. Section 22a-200c of the C.G.S. also requires DEP, in consultation with the Department of Public Utility Control ("DPUC"), to distribute most of Connecticut's annual carbon dioxide allowance budget by auction. Furthermore, section 22a-200c of the C.G.S. directs DEP to use the revenue generated from such auctions for the benefit of ratepayers through investments in energy efficiency and renewable energy, adaptation program planning, and to cover the administration of the RGGI program in Connecticut.

Following section 22a-200c of the C.G.S. requirements, DEP used the RGGI Model Rule as a guide in the creation of the two new regulatory sections: 22a-174-31 ("section 31") and 22a-174-31a ("section 31a") of the Regulations of Connecticut State Agencies ("R.C.S.A.").

On January 8, 2008, the Commissioner of the DEP published a notice of intent to adopt sections 31 and 31a of the R.C.S.A. implementing RGGI. Pursuant to such notice, a public hearing was held on February 8, 2008. The public comment period for the proposed adoptions also closed on February 8, 2008. The Department received one set of written comments after the close of the public comment period. While not addressing this comment specifically, this report addresses many of the issues raised therein.

I. Hearing Report Content

As required by section 4-168(d) of the C.G.S., this report describes the regulations proposed for hearing; the principal reasons in support of the Department's proposed amendment and adoption; the principal considerations presented in oral and written comments in opposition to the Department's proposed adoption and amendment; all comments and responses thereto on the proposed adoption and amendment; and the final wording of the proposed adoption and amendment. Commenters are identified in Attachment 1.

This report also includes a statement pursuant to C.G.S. section 22a-6(h).

II. Compliance with Section 22a-6(h) of the Connecticut General Statutes

Section 22a-6(h) of the C.G.S. requires the Commissioner to distinguish clearly, at the time of notice, all provisions of a proposed regulation or amendment thereto that differ from adopted federal standards and procedures, provided: (1) such proposed amendment pertains to activities addressed by adopted federal standards and procedures; and (2) such adopted federal standards and procedures apply to persons subject to the provisions of such proposed amendment. In addition, the Commissioner must provide an explanation for all such provisions in the regulation-making record required under chapter 54 of the C.G.S.

In accordance with the requirements of C.G.S. section 22a-6(h), the Hearing Officer made a written statement available upon publication of the public notice and at the public hearing. Such statement, incorporated into the administrative record for this matter, indicated that the requirements of section 22a-6(h) of the C.G.S are not applicable to the proposed adoption of sections 31 and 31a because there are currently no mandatory federal requirements in place relative to greenhouse gas emission reductions.

III. Background on the Development of the Proposed Regulations

As stated above, Governor Rell committed Connecticut's support to a regional effort to establish a CO_2 cap-and-trade program. To develop a regionally consistent platform, technical staff from the Department and the other states in the RGGI region worked to develop a RGGI Model Rule

in an open and transparent process that included numerous opportunities for public and stakeholder input. The goal of the model rule development process was to provide guidance and promote programmatic consistency among the RGGI states.

In addition to this regional effort, the Department has been working for many months to develop a regulatory framework to implement RGGI in Connecticut. The Department's proposed regulations underwent an intense stakeholder process, which included three stakeholder meetings since December 2006. During this time, the Department shared pre-proposal draft regulations with the regulated community and received thoughtful comments in return. The proposed regulations are also based on a model rule, which itself was subject to development in an open and transparent process with multiple stakeholder meetings that were also open to the regulated community and other interested parties in Connecticut.

For administrative simplicity DEP split the Model Rule and developed two new regulatory sections: 22a-174-31 (section 31) and 22a-174-31a (section 31a) of the Regulations of Connecticut State Agencies (R.C.S.A.). Section 31, Control of Carbon Dioxide Emissions/Carbon Dioxide Budget Trading Program, is a cap and trade program under which CO_2 emissions from electric power generators will be regulated. Affected sources will be required to purchase on the open market or otherwise obtain CO_2 allowances and surrender an amount of allowances equivalent to the tons of carbon dioxide emitted over a three year compliance period.

Beginning on January 1, 2009, the Connecticut CO_2 Budget Trading Program will regulate CO_2 emissions from fossil-fuel-fired units (CO_2 budget units) that serve an electric generator with a nameplate capacity of 25 megawatts (MW) or greater. As of December 2007, there were 14 power generation facilities in Connecticut with 36 CO_2 budget units subject to the proposed Connecticut CO_2 Budget Trading Program. To demonstrate compliance with the CO_2 Budget Trading Program, CO_2 budget units must surrender one CO_2 allowance for each ton of CO_2 emitted during each compliance period. The program establishes a state budget for Connecticut of 10.7 million CO_2 allowances (or 10.7 million tons of CO_2) for each year 2009 through 2014. Beginning in 2015, the Connecticut budget will decrease by 2.5 percent per year through 2018.

Section 31a, Greenhouse Gas Emission Offset Projects, is a potential mechanism to authorize the creation and use of emission reductions from outside the power-generating sector to be counted towards compliance with the requirements of section 31. Specifically, section 31a establishes model regional protocols and procedures under which such offsets may be created for five categories: landfill methane (CH4) capture and destruction; sulfur hexafluoride (SF6) reductions; sequestration of carbon due to afforestation; reduced or avoided carbon dioxide emissions due to end-use energy efficiency; and avoided methane emissions from agricultural manure management operations.

IV. Summary and Text of the Regulatory Amendments as Proposed

A. Section 22a-174-31, Control of Carbon Dioxide Emissions/ Carbon Dioxide Budget Trading Program. This proposed new regulation will establish a cap and trade program to regulate CO_2 emissions from electric power generators greater than 25 MW. Affected sources will be required to purchase carbon dioxide allowances on the open market and surrender an amount of allowances equivalent to the tons of carbon dioxide emitted over a three year compliance period. The first compliance period will begin on January 1, 2009. Section 31 also requires record keeping, monitoring and reporting of emissions. The text of the regulation as proposed for public hearing is as follows:

Section 22a-174-31. Control of Carbon Dioxides Emissions

(a) Definitions and Abbreviations. For the purposes of this section and section 22a-174-31a of the Regulations of Connecticut State Agencies:

(1) "Account number" means the identification number given by the commissioner to each CO_2 Allowance Tracking System account.

(2) "Allocate" or "allocation" means the determination by the commissioner of the number of CO_2 allowances to be recorded in the compliance account of a CO_2 budget source, an allocation set-aside account, the consumer benefit or strategic energy purpose account, the general account of the sponsor of an approved CO_2 emissions offset project or any other person.

(3) "Allocation year" means a calendar year for which the commissioner allocates CO_2 allowances pursuant to subsection (f) of this section. The allocation year of each CO_2 allowance is reflected in the unique identification number given to the allowance pursuant to subsection (g)(4)(C) of this section.

(4) "Attribute" means a characteristic associated with electricity generated using a particular renewable fuel, such as its generation date, facility geographic location, source vintage, emissions output, fuel, state program eligibility, or other characteristic that can be identified, accounted for, and tracked.

(5) "Automated data acquisition and handling system" or "DAHS" means that component of the continuous emissions monitoring system, or other emissions monitoring system approved for use under subsection (i) of this section, designed to interpret and convert individual output signals from pollutant concentration monitors, flow monitors, diluent gas monitors, and other component parts of the monitoring system to produce a continuous record of the measured parameters in the measurement units required by subsection (i) of this section.

(6) "Award" means the determination by the commissioner of the number of CO_2 allowances to be recorded in the compliance account of a CO_2 budget unit for Early Reduction CO_2 Allowances pursuant to subsection (f)(6) of this section, or the determination by the

commissioner of the number of CO_2 offset allowances to be recorded in the general account of a project sponsor pursuant to section 22a-174-31a of the Regulations of Connecticut State Agencies. Award is a type of allocation.

(7) "Billing meter" means the measurement device used to measure electric or thermal output for commercial billing under a contract where the facility selling the electric or thermal output has different owners from the owners of the party purchasing the electric or thermal output.

(8) "Boiler" means a fossil or other fuel-fired device that produces steam or heats water or any other heat transfer medium.

(9) "CO_2" means carbon dioxide.

(10) "CO_2 allowance" means a limited authorization by the commissioner or a participatory state under the CO_2 Budget Trading Program to emit up to one ton of CO_2, subject to all the applicable conditions contained in this section.

(11) "CO_2 allowance deduction" or "deduct CO_2 allowances" means the permanent withdrawal of CO_2 allowances by the commissioner from a CO_2 Allowance Tracking System compliance account.

(12) "CO_2 allowances held" or "hold CO_2 allowances" means the CO_2 allowances recorded by the commissioner, or submitted to the commissioner, in accordance with subsections (g) and (h) of this section, in a CO_2 Allowance Tracking System account.

(13) "CO_2 allowance price" means the price for CO_2 allowances across all participating states for a particular month as determined by the commissioner, calculated based on a volume-weighted average of transaction prices reported to the department, and taking into account publicly reported prices.

(14) "CO_2 Allowance Tracking System" means the system by which the commissioner records allocations, deductions, and transfers of CO_2 allowances under the CO_2 Budget Trading Program under this section, the system used to track CO_2 offset allowance projects under section 22a-174-31a of the Regulations of Connecticut State Agencies, and the system used to track CO_2 allowance prices and emissions from affected sources.

(15) "CO_2 Allowance Tracking System account" means an account in the CO_2 Allowance Tracking System established by the commissioner for purposes of recording the allocation, holding, transferring, or deducting of CO_2 allowances.

(16) "CO_2 allowance transfer deadline" means midnight of March 1 occurring after the end of the relevant control period or, if that March 1 is not a business day, midnight of the first business day thereafter and is the deadline by which CO_2 allowances must be submitted

for recordation in a CO_2 budget source's compliance account in order to meet the source's CO_2 budget emissions limitation for the control period immediately preceding such deadline.

(17) "CO_2 authorized account representative" means the individual who is authorized by the owners or operators of the source and all CO_2 budget sources at the source, in accordance with subsection (c) of this section, to represent and legally bind each owner or operator in matters pertaining to the CO_2 Budget Trading Program or, for a general account, the individual who is authorized, in accordance with subsection (g) of this section, to transfer or otherwise dispose of CO_2 allowances held in the general account.

(18) "CO_2 budget emissions limitation" means the tonnage equivalent, in CO_2 emissions in a control period, of the CO_2 allowances available for compliance deduction for the CO_2 budget source for a control period.

(19) "CO_2 budget source" means a facility that includes one or more CO_2 budget units.

(20) "CO_2 Budget Trading Program" means the multi-state CO_2 air pollution control and emissions reduction program established pursuant to this section and corresponding regulations in other states as a means of reducing emissions of CO_2 from CO_2 budget sources.

(21) "CO_2 budget unit" means an emissions unit that is subject to the CO_2 Budget Trading Program requirements under subsection (b) of this section.

(22) "CO_2 equivalent" means a metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential (GWP).

(23) "CO_2 offset allowance" means a CO_2 allowance that is awarded to the sponsor of a CO_2 emissions offset project pursuant to section 22a-174-31a of the Regulations of Connecticut State Agencies and is subject to the relevant compliance deduction limitations of this section.

(24) "Combined cycle system" means a system comprised of one or more combustion turbines, heat recovery steam generators, and steam turbines configured to improve overall efficiency of electricity generation or steam production.

(25) "Combined Heat and Power (CHP) Set-aside Account" means a general account established by the commissioner to hold CO_2 allowances that are allocated pursuant to subsection (f)(3) of this section.

(26) "Combustion turbine" means an enclosed fossil or other fuel-fired device that is comprised of a compressor, if applicable, a combustor, and a turbine, and in which the

flue gas resulting from the combustion of fuel in the combustor passes through the turbine, rotating the turbine.

(27) "Commence commercial operation" means, with regard to a unit that serves a generator, to have begun to produce steam, gas, or other heated medium used to generate electricity for sale or use, including test generation. For a unit that is a CO_2 budget unit on the date the unit commences commercial operation, such date shall remain the unit's date of commencement of commercial operation even if the unit is subsequently modified, reconstructed, or repowered. For a unit that is not a CO_2 budget unit on the date the unit commences commercial operation, the date the unit becomes a CO_2 budget unit for the purposes of this section shall be the unit's date of commencement of commercial operation.

(28) "Commence operation" means to have begun any mechanical, chemical, or electronic process, including, with regard to a unit, start-up of a unit's combustion chamber. For a unit that is a CO_2 budget unit on the date of commencement of operation, such date shall remain the unit's date of commencement of operation even if the unit is subsequently modified, reconstructed, or repowered. For a unit that is not a CO_2 budget unit on the date of commencement of operation, the date the unit becomes a CO_2 budget unit shall be the unit's date of commencement of operation.

(29) "Commissioner" means "commissioner" as defined in section 22a-174-1 of the Regulations of Connecticut State Agencies.

(30) "Compliance account" means a CO_2 Allowance Tracking System account, established by the commissioner for a CO_2 budget source under subsection (g) of this section, in which the CO_2 allowance allocations for the source are initially recorded and in which are held CO_2 allowances available for use by the source for a control period for the purpose of meeting the CO_2 requirements of subsection (b)(3) of this section.

(31) "Connecticut Auction Account" means a general account established by the commissioner to hold CO_2 allowances that are allocated pursuant to subsection (f)(3) of this section.

(32) "Connecticut CO_2 Allowance Retirement Account" means a general account established by the commissioner to hold CO_2 allowances that have been permanently retired.

(33) "Connecticut CO_2 Trading Program Base Budget" means the annual amount of CO_2 tons available in Connecticut for allocation in a given allocation year, in accordance with the CO_2 Budget Trading Program. CO_2 offset allowances allocated to project sponsors are separate from and additional to CO_2 allowances allocated from the Connecticut CO_2 Trading Program Base Budget.

(34) "Consumer benefit or strategic energy purpose account" means a general account established by the commissioner pursuant to subsection (f) of this section from which allowances may be sold or distributed in order to provide funds to encourage and foster the promotion of energy efficiency measures, direct mitigation of electricity ratepayer impacts attributable to the implementation of the CO_2 Budget Trading Program, promotion of clean and renewable and low-carbon-emitting energy technologies, stimulation or reward of investment in the development of innovative carbon emissions abatement technologies with significant carbon reduction potential, or the administration of Connecticut component of the CO_2 Budget Trading Program.

(35) "Consumer Price Index" or "CPI" means the United States Department of Labor, Bureau of Labor Statistics, unadjusted Consumer Price Index for All Urban Consumers: U.S. city average, for All Items on the latest reference base, or if such index is no longer published, such other index as the commissioner determines is appropriate. The CPI for any calendar year is the twelve-month average of the CPI published by the United States Department of Labor, as of the close of the twelve-month period ending on August thirty-first of each calendar year.

(36) "Continuous emissions monitoring system" or "CEMS" means the equipment required under subsection (i) of this section to sample, analyze, measure, and provide, by means of readings recorded at least once every 15 minutes, using an automated data acquisition and handling system, a permanent record of stack gas volumetric flow rate, stack gas moisture content, and oxygen or carbon dioxide concentration as applicable, in a manner consistent with 40 CFR 75.

(37) "Control period" means a three calendar-year period, unless extended to four years upon occurrence of a Stage Two Trigger Event. The first control period is from January 1, 2009 to December 31, 2011, inclusive, provided if a Stage Two Trigger Event occurs during the first control period, then the first control period will be extended one year to December 31, 2012, inclusive. Each subsequent sequential three calendar year period is a separate control period that may be subject to a single one year extension upon occurrence of a Stage Two Trigger Event during the control period.

(38) "Customer-side distributed resources" or "CDR" means "customer-side distributed resources" as defined in Section 16-1(a)(40) of the Connecticut General Statutes.

(39) "Customer-side Distributed Resources (CDR) Set-aside Account" means a general account established by the commissioner to hold CO_2 allowances that are allocated pursuant to subsection (f)(3) of this section.

(40) "Eligible biomass" means sustainably harvested, as determined by the commissioner, woody and herbaceous fuel sources that are available on a renewable or recurring basis, excluding old-growth timber, but including dedicated energy crops and trees, agricultural food and feed crop residues, aquatic plants, unadulterated wood and wood residues,

animal wastes, other clean organic wastes not mixed with other solid wastes, biogas, and other neat liquid biofuels derived from such fuel sources.

(41) "Excess emissions" means any tonnage of CO_2 emitted by a CO_2 budget source during a control period that exceeds the CO_2 budget emissions limitation for the source.

(42) "Fossil fuel" means natural gas, petroleum, coal, or any form of solid, liquid, or gaseous fuel derived from such material, except that fossil fuel does not include tire-derived fuel.

(43) "Fossil fuel-fired" means, with regard to an emissions unit that commenced operation prior to January 1, 2005, the combustion of fossil fuel, alone or in combination with any other fuel, where the fossil fuel combusted comprises, or is projected to comprise, more than fifty percent of the annual heat input on a Btu basis during any year, or, with respect to an emissions unit that commences operation on or after January 1, 2005, the combustion of fossil fuel, alone or in combination with any other fuel, where the fossil fuel combusted comprises, or is projected to comprise, more than five percent of the annual heat input on a Btu basis during any year.

(44) "General account" means a CO_2 Allowance Tracking System account, established under subsection (g) of this section, which is not a compliance account.

(45) "Global warming potential" or "GWP" means a measure consistent with the values used in the Intergovernmental Panel on Climate Change (IPCC), Third Assessment Report of the radiative efficiency or heat-absorbing ability, of a particular gas relative to that of CO_2 after taking into account the decay rate of each gas, the amount removed from the atmosphere over a given number of years, relative to that of CO_2.

(46) "Gross generation" means the electrical output in MWe at the terminals of the generator.

(47) "H_2O" means water.

(48) "Hr" means hour.

(49) "Lb" means pound.

(50) "Life-of-the-unit contractual arrangement" means a power sales agreement under which a utility or industrial customer reserves, or is entitled to receive, a specified amount or percentage of the participating unit's nameplate capacity and energy associated therewith while agreeing to pay the proportional amount of such unit's total costs for either:

(A) The economic useful life of the unit,

(B) A cumulative term of no less than 25 years, including agreements that permit an election for early termination, or

(C) A period equal to or greater than 20 years or seventy percent of the economic useful life of the unit determined as of the time the unit is built, with option rights to purchase or release some portion of the nameplate capacity and associated energy generated by the unit at the end of the period.

(51) "Market settling period" means the first fourteen months of any control period.

(52) "Maximum design heat input" means the ability of a unit to combust a stated maximum amount of fuel per hour on a steady state basis, as determined by the physical design and physical characteristics of the unit.

(53) "Maximum potential hourly heat input" means an hourly heat input used for reporting purposes when a unit lacks certified monitors to report heat input calculated in accordance with 40 CFR 75.

(54) "Monitoring system" means any monitoring system that meets the requirements of subsection (i) of this section, including a continuous emissions monitoring system, an excepted monitoring system, or an alternative monitoring system.

(55) "MWe" means megawatt electrical.

(56) "MWh" means megawatt-hour.

(57) "Nameplate capacity" means the maximum electrical output in MWe that an electric generating unit can sustain over a specified period of time when not restricted by seasonal or other deratings as measured in accordance with the United States Department of Energy Standards.

(58) "NOx" means oxides of nitrogen.

(59) "O_2" mean oxygen.

(60) "Operator" means any person who operates, controls, or supervises a CO_2 budget unit or a CO_2 budget source and shall include, but not be limited to, any holding company, utility system, or plant manager of such a unit or source.

(61) "Owner" means any of the following persons:

(A) Any holder of any portion of the legal or equitable title in a CO_2 budget unit,

(B) Any holder of a leasehold interest in a CO_2 budget unit, other than a passive lessor, or a person who has an equitable interest through such lessor, whose rental payments are not based, either directly or indirectly, upon the revenues or income

from the CO_2 budget unit,

(C) Any purchaser of power from a CO_2 budget unit under a life-of-the-unit contractual arrangement in which the purchaser controls the dispatch of the unit, or

(D) With respect to any general account, any person who has an ownership interest in the CO_2 allowances held in the general account and who is subject to the binding agreement for the CO_2 authorized account representative to represent that person's ownership interest with respect to the CO_2 allowances.

(62) "Participating state" means a state that has established a corresponding regulation as part of the CO_2 Budget Trading Program.

(63) "Receive" or "receipt of" means, when referring to the commissioner, to come into possession of a document, information, or correspondence, as indicated in an official correspondence log, or by a notation made on the document, information, or correspondence, by the commissioner in the regular course of business.

(64) "Recordation", "record" or "recorded" means, with regard to CO_2 allowances, the movement of CO_2 allowances by the commissioner from one CO_2 Allowance Tracking System account to another, for purposes of allocation, transfer or deduction.

(65) "Renewable energy" means electricity generated from eligible biomass, wind, solar thermal, photovoltaic, geothermal, hydroelectric facilities certified by the Low Impact Hydropower Institute, wave and tidal action, and fuel cells powered by renewable fuels.

(66) "Renewable Energy Certificate" or "REC" means a certificate that represents the attributes related to one megawatt-hour of electricity generation.

(67) "Serial number" means, when referring to CO_2 allowances, the unique identification number assigned to each CO_2 allowance by the commissioner.

(68) "Short ton" means a measure of weight equal to two thousand pounds or 0.9072 metric tons.

(69) "SO_2" means sulfur dioxide.

(70) "Source" means "source" as defined in section 22a-174-1(101) of the Regulations of Connecticut State Agencies, provided that a source with multiple units, shall be considered a single facility.

(71) "Stage one threshold price" means the product, in dollars, resulting from the multiplication of seven dollars by an annual adjustment factor, where the annual adjustment factor is determined as follows:

Annual adjustment factor = 1 + {[CPI (year) – CPI (2005)] / CPI (2005)}, where:

(A) CPI means, for purposes of the CO_2 Budget Trading Program, the United States Department of Labor, Bureau of Labor Statistics unadjusted Consumer Price Index for All Urban Consumers: U.S. city average, for all items on the latest reference base, or if such index is no longer published, such other index as the commissioner determines is appropriate;

(B) CPI (year) means the CPI for all urban consumers for August of the year in which the adjustment is made; and

(C) CPI (2005) means the CPI for all urban consumers for the month of August 2005. The CPI (2005) is 196.4 (with 1982-84=100). Beginning in the month for which a new reference base is established, CPI (2005) will be the CPI value for August 2005 on the new reference base.

(72) "Stage two threshold price" means the product, in dollars, resulting from the multiplication of ten dollars by an annual adjustment factor, where the annual adjustment factor is determined as follows:

Annual adjustment factor = 1.02 + {[CPI (year) – CPI (2005)] / CPI (2005)}, where:

(A) CPI means, for purposes of the CO_2 Budget Trading Program, the United States Department of Labor, Bureau of Labor Statistics unadjusted Consumer Price Index for All Urban Consumers: U.S. city average, for All Items on the latest reference base, or if such index is no longer published, such other index as the commissioner determines is appropriate;

(B) CPI (year) means the CPI for all urban consumers for August of the year in which the adjustment is made; and

(C) CPI (2005) means the CPI for all urban consumers for the month of August 2005. The CPI (2005) is 196.4 (with 1982-84=100). Beginning in the month for which a new reference base is established, CPI (2005) will be the CPI value for August 2005 on the new reference base.

(73) "Stage One Trigger Event" means any complete twelve month period following the market settling period during which average CO_2 allowance prices are equal to or greater than the stage one threshold price.

(74) "Stage Two Trigger Event" means any complete twelve month period following the market settling period during which average CO_2 allowance prices are equal to or greater than the stage two threshold price.

(75) "State" means, notwithstanding the definition set forth in section 22a-174-1(104) of the Regulations of Connecticut State Agencies, any state of the United States of America, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa and the Commonwealth of the Northern Mariana Islands.

(76) "Submit" means to send or transmit a document, information, or correspondence to the person specified in accordance with the applicable regulation either in person, by United States Postal Service, or by other means of dispatch or transmission and delivery. The date of dispatch, transmission or mailing, and not the date of receipt shall determine compliance with any submission deadline.

(77) "Ton" or "tonnage" means any short tons, calculated as the sum of all recorded hourly emissions, or the tonnage equivalent of the recorded hourly emissions rates, in accordance with subsection (i) of this section, with any remaining fraction of a ton equal to or greater than 0.50 ton deemed to equal one ton and any fraction of a ton less than 0.50 ton deemed to equal zero tons.

(78) "Twelve month period" means a period of twelve consecutive months determined on a rolling basis where a new twelve month period begins on the first day of each calendar month.

(79) "Unit" means a fossil fuel-fired stationary boiler, combustion turbine or combined cycle system.

(80) "Unit operating day" means a calendar day in which a unit combusts any fuel.

(81) "Useful net thermal energy" means the energy output of thermal energy used for heating, cooling, industrial processes or other beneficial uses.

(82) "Voluntary clean energy purchase" means electricity from renewable energy generation or renewable energy attribute credits representing such renewable energy generation, purchased by a retail electricity customer on a voluntary basis, provided that purchases used to meet any regulatory mandate, such as a renewable portfolio standard, shall not be a voluntary renewable energy purchase.

(83) "Voluntary Clean Energy Purchase Set-aside Account" means a general account established by the commissioner to hold CO_2 allowances that are allocated pursuant to subsection (f)(3) of this section.

(b) Applicability and General Provisions

(1) Applicability. Any unit that, at any time on or after January 1, 2000, serves an electricity generator with a nameplate capacity equal to or greater than 25 MWe shall be a CO_2 budget source, and any owner or operator of such source that includes one or more such units shall be the owner or operator of a CO_2 budget source subject to the requirements of this section.

(2) Monitoring. In order to determine compliance with the CO_2 requirements of subdivision (3) of this subsection, the owner or operator of a CO_2 budget source subject to this section shall comply with the applicable monitoring requirements set forth in subsection (i) of this section.

(3) CO_2 requirements. The owner or operator of a CO_2 budget source subject to this section shall be subject to and comply with the following requirements:

(A) The owners and operators of each CO_2 budget source shall hold CO_2 allowances available for compliance deductions under subsection (g)(5) of this section, as of the CO_2 allowance transfer deadline, in the source's compliance account in an amount not less than the total CO_2 emissions for the control period from all CO_2 budget sources at the source, as determined in accordance with subsections (g) and (i) of this section;

(B) Each ton of CO_2 emitted in excess of the CO_2 budget emissions limitation shall constitute a separate violation of this section;

(C) A CO_2 budget source shall be subject to the requirements under subsection (c)(1) of this section starting on the later, of January 1, 2009 or the date on which the source commences operation;

(D) CO_2 allowances shall be held in, deducted from, or transferred among CO_2 Allowance Tracking System accounts in accordance with subsections (f), (g) and (h) of this section and section 22a-174-31a(j) of the Regulations of Connecticut State Agencies;

(E) A CO_2 allowance shall not be deducted, in order to comply with the requirements under subparagraph (A) of this subdivision, for a control period that ends prior to the year for which the CO_2 allowance was allocated. A CO_2 offset allowance shall not be deducted, in order to comply with the requirements under subparagraph (A) of this subdivision, to cover emissions beyond the applicable percent limitations set forth in subsection (g)(5)(B)(iii) of this section;

(F) A CO_2 allowance allocated by the commissioner or a participating state or otherwise acquired by the owner or operator of the CO_2 budget source under the provisions of the CO_2 Budget Trading Program is a limited authorization to emit

one ton of CO_2 in accordance with the CO_2 Budget Trading Program. No provision of the CO_2 Budget Trading Program, the CO_2 budget permit application, or the CO_2 budget permit or any provision of law shall be construed to limit the authority of the commissioner or a participating state to terminate or limit such authorization; and

(G) A CO_2 allowance allocated by the commissioner or otherwise acquired by the owner or operator of the CO_2 budget source under the CO_2 Budget Trading Program does not constitute a property right.

(4) Excess emissions. The owner and operator of a CO_2 budget source that has excess emissions in any control period shall:

(A) Forfeit the CO_2 allowances required for deduction under subsection (g)(5)(D)(i) of this section;

(B) Not be authorized to cover any part of such excess emissions with CO_2 offset allowances under section 22a-174-31a of the Regulations of Connecticut State Agencies; and

(C) Comply with any assessment imposed under subsection (g)(5)(D)(iii) of this section, provided that such assessment shall not limit additional enforcement action by the commissioner.

(5) Recordkeeping and reporting. The owner and operator of a CO_2 budget source shall comply with the following recordkeeping and reporting requirements:

(A) Unless otherwise provided, the owner or operator of a CO_2 budget source and each CO_2 budget unit at the source shall make and keep at the source each of the following documents for a period of ten years from the date the document is created. This period may be extended by the commissioner for cause at any time prior to the end of the ten year period;

(i) The account certificate of representation for the CO_2 authorized account representative for the source and each CO_2 budget unit at the source and all documents that demonstrate the truthfulness and accuracy of the statements made in the account certificate of representation, in accordance with subsection (c)(4) of this section, provided that the certificate and documents shall be retained on site at the source beyond such ten year period until such documents are superseded because of the submission of a new account certificate of representation changing the CO_2 authorized account representative;

(ii) All emissions monitoring information in accordance with subsection (i) of this section;

(iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the CO_2 Budget Trading Program; and

(iv) Copies of all documents used to complete any submission under the CO_2 Budget Trading Program or to demonstrate compliance with the requirements of the CO_2 Budget Trading Program.

(B) The CO_2 authorized account representative of a CO_2 budget source shall submit the reports and compliance certifications required under the CO_2 Budget Trading Program, including those under subsection (e) of this section.

(6) Liability. The owner and operator of a CO_2 budget source shall be subject to the following:

(A) Any provision of the CO_2 Budget Trading Program that applies to a CO_2 budget source, or the CO_2 authorized account representative of a CO_2 budget source, shall also apply to the owner or operator of such source; and

(B) Any provision of the CO_2 Budget Trading Program that applies to a CO_2 budget unit, or the CO_2 authorized account representative of a CO_2 budget unit, shall also apply to the owner or operator of such unit.

(7) Effect on other authorities. No provision of the CO_2 Budget Trading Program shall be construed as exempting or excluding the owner or operator and, to the extent applicable, the CO_2 authorized account representative of a CO_2 budget source from compliance with the provision of any other applicable state or federal law or regulation.

(8) Computation of time. Notwithstanding section 22a-3a-2(d) of the Regulations of Connecticut State Agencies, the owner or operator of a CO_2 budget source shall be subject to the following computation of time requirements:

(A) Unless otherwise stated, any time period scheduled, under the CO_2 Budget Trading Program, to begin on the occurrence of an act or event shall begin on the day the act or event occurs;

(B) Unless otherwise stated, any time period scheduled, under the CO_2 Budget Trading Program, to begin before the occurrence of an act or event shall be computed so that the period ends the day before the act or event occurs; and

(C) Unless otherwise stated, if the final day of any time period, under the CO_2 Budget Trading Program, falls on a weekend or a state or federal holiday, the time period shall be extended to the next business day.

(9) Copies of documents incorporated by reference into this section are available by contacting the Connecticut Department of Environmental Protection.

Table 31-1
Incorporated Reference Material

Citation	Title or Subject	Date on Document
40 CFR 75 including Appendices A, B, D & E	Part 75-Continuous Emission Monitoring, Appendix A Specification and Test Procedures, Appendix B Quality Assurance and Quality Control Procedures Fired and Oil-Fired Units Appendix E Optional NOx Emissions Estimation Protocol For Gas-Fired Peaking Units and Oil-Fired Peaking Units.	July 2007 Edition
	New York State Renewable Portfolio Standard Biomass Guidebook, Appendix B	May 2006

(10) Duty to comply. An owner or operator of a CO_2 budget source subject to the requirements of this section shall comply with the requirements of this section.

(c) CO_2 Authorized Account Representative for CO_2 Budget Sources

(1) With respect to the CO_2 authorized account representative, the owner or operator of each CO_2 budget source subject to this section shall comply with following:

(A) Except as provided under subdivision (3)(B) of this subsection, each CO_2 budget source, including all CO_2 budget units at the source, shall have only one CO_2 authorized account representative, with regard to all matters under the CO_2 Budget Trading Program concerning such source;

(B) The CO_2 authorized account representative of the CO_2 budget source shall be selected by an agreement binding on the owners or operators of the source;

(C) Upon receipt by the commissioner of a complete account certificate of representation under subsection (c)(4) of this section, the CO_2 authorized account representative of the source shall represent and, by such representations, actions, inactions, or submissions, legally bind each owner or operator of the CO_2 budget source represented and each CO_2 budget unit at the source in all matters pertaining to the CO_2 Budget Trading Program, notwithstanding any agreement between the CO_2 authorized account representative and such owners or operators. The owners or operators shall be bound by any decision or order issued to the

CO_2 authorized account representative by the commissioner or a court regarding the source;

(D) No CO_2 Allowance Tracking System account shall be established for a CO_2 budget unit at a source, until the commissioner has received a complete account certificate of representation under subsection (c)(4) of this section for a CO_2 authorized account representative; and

(E) Each submission under the CO_2 Budget Trading Program shall be submitted, signed, and certified by the CO_2 authorized account representative for each CO_2 budget source on behalf of which the submission is made, and shall:

(i) Include the following certification statement by the CO_2 authorized account representative: "I am authorized to make this submission on behalf of the owners and operators of the CO_2 budget sources or CO_2 budget sources for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."; and

(ii) Be made, signed and certified in accordance with subsection (e)(1) of this section. Otherwise the commissioner shall not accept or act on a submission made on behalf of owners or operators of a CO_2 budget source.

(2) With respect to the alternate CO_2 authorized account representative, the owner or operator of each CO_2 budget source subject to this section shall comply with the following:

(A) An account certificate of representation may designate one and only one alternate CO_2 authorized account representative who may act on behalf of the CO_2 authorized account representative. The agreement by which the alternate CO_2 authorized account representative is selected shall include a procedure for authorizing the alternate CO_2 authorized account representative to act in lieu of the CO_2 authorized account representative;

(B) Upon receipt by the commissioner of a complete account certificate of representation under subsection (c)(4) of this section, any representation, action,

inaction, or submission by the alternate CO_2 authorized account representative shall be deemed to be a representation, action, inaction, or submission by the CO_2 authorized account representative; and

(C) Except in this section and subsections (c)(1)(A), (c)(3), (c)(4), and (g)(2) of this section, wherever the term "CO_2 authorized account representative" is used such term shall be construed to include the alternate CO_2 authorized account representative.

(3) Transfers and name changes. With respect to changing the CO_2 authorized account representative and the alternate CO_2 authorized account representative or a change in ownership or operation of a CO_2 budget source, the owner or operator of each CO_2 budget source shall comply with following requirements:

(A) Changing the CO_2 authorized account representative. The CO_2 authorized account representative may be changed at any time upon receipt by the commissioner of a superseding complete account certificate of representation under subdivision (1)(C) of this subsection. Notwithstanding any such change, all representations, actions, inactions, and submissions by the previous CO_2 authorized account representative prior to the time and date when the commissioner receives the superseding account certificate of representation shall be binding on the new CO_2 authorized account representative and the owner or operator of the CO_2 budget source and the CO_2 budget units at the source.

(B) Changing the alternate CO_2 authorized account representative. The alternate CO_2 authorized account representative may be changed at any time upon receipt by the commissioner of a superseding complete account certificate of representation under subdivision (2)(B) of this subsection. Notwithstanding any such change, all representations, actions, inactions, and submissions by the previous alternate CO_2 authorized account representative prior to the time and date when the commissioner receives the superseding account certificate of representation shall be binding on the new alternate CO_2 authorized account representative and the owner or operator of the CO_2 budget source and the CO_2 budget units at the source.

(C) Changes in the owners and operators. With respect to a change in ownership or control of the CO_2 budget source, the owner or operator of each CO_2 budget source shall comply with the following requirements:

(i) In the event a new owner or operator of a CO_2 budget source is not included in the list of owners and operators submitted in the account certificate of representation, such new owner or operator shall be deemed to be subject to and bound by the account certificate of representation, the representations, actions, inactions, and submissions of the CO_2 authorized

account representative and any alternate CO_2 authorized account representative of the source, and the decisions, orders, actions, and inactions of the commissioner, as if the new owner or operator were included in such list; and

(ii) Within thirty (30) days following any change in the owner or operator of a CO_2 budget source or a CO_2 budget unit, including the addition of a new owner or operator, the CO_2 authorized account representative or alternate CO_2 authorized account representative shall submit a revision to the account certificate of representation amending the list of owners and operators to include such change.

(4) Account certificate of representation. With respect to an account certificate of representation, the owner or operator of each CO_2 budget source shall comply with the following:

(A) A complete account certificate of representation for a CO_2 authorized account representative or an alternate CO_2 authorized account representative shall include the following elements in a format prescribed by the commissioner:

(i) Identification of the CO_2 budget source for which the account certificate of representation is submitted;

(ii) The name, address, electronic mail address, telephone number, and facsimile transmission number of the CO_2 authorized account representative and any alternate CO_2 authorized account representative;

(iii) A list of the owners and operators of the CO_2 budget source;

(iv) The following certification statement by the CO_2 authorized account representative and any alternate CO_2 authorized account representative:

"I certify that I was selected as the CO_2 authorized account representative or alternate CO_2 authorized account representative, as applicable, by an agreement binding on the owners and operators of the CO_2 budget source and each CO_2 budget source at the source. I certify that I have all the necessary authority to carry out my duties and responsibilities under the CO_2 Budget Trading Program on behalf of the owners and operators of the CO_2 Budget source and that each such owner and operator shall be fully bound by my representations, actions, inactions or submissions and by any decision or order issued to me by the commissioner or a court regarding the source."; and

(v) The signature of the CO_2 authorized account representative and any alternate CO_2 authorized account representative and the dates signed.

(B) Unless otherwise required by the commissioner, documents of agreement referred to in the account certificate of representation shall not be submitted to the commissioner. The commissioner shall not be under any obligation to review or evaluate the sufficiency of such documents, if submitted.

(5) Objections to the CO_2 authorized account representative.

(A) Once a complete account certificate of representation under subsection (c)(4) of this section has been submitted and received, the commissioner shall rely on the account certificate of representation unless and until the commissioner receives a superseding complete account certificate of representation under subsection (c)(4) of this section;

(B) Except as provided in subdivision (3)(A) or (B) of this subsection, no objection or other communication submitted to the commissioner concerning the authorization, or any representation, action, inaction, or submission of the CO_2 authorized account representative shall affect any representation, action, inaction, or submission of the CO_2 authorized account representative or the finality of any decision or order by the commissioner under the CO_2 Budget Trading Program; and

(C) The commissioner shall not adjudicate any private legal dispute concerning the authorization or any representation, action, inaction, or submission of any CO_2 authorized account representative, including private legal disputes concerning the proceeds of CO_2 allowance transfers.

(6) Delegation by CO_2 authorized account representative and alternate CO_2 authorized account representative.

(A) A CO_2 authorized account representative may delegate, to one or more individuals, such representative's authority to make an electronic submission to the commissioner under this section.

(B) An alternate CO_2 authorized account representative may delegate, to one or more individuals, such representative's authority to make an electronic submission to the commissioner under this section.

(C) In order to delegate authority to make an electronic submission to the commissioner in accordance with subparagraphs (A) and (B) of this subdivision, the CO_2 authorized account representative or alternate CO_2 authorized account representative, as appropriate, must submit to the commissioner a notice of

delegation, in a format prescribed by the commissioner that includes the following elements:

(i) The name, address, electronic mail address, telephone number, and facsimile transmission number of such CO_2 authorized account representative or alternate CO_2 authorized account representative;

(ii) The name, address, electronic mail address, telephone number and facsimile transmission number of each such individual, herein referred to as the "electronic submission agent"; and

(iii) For each individual, a list of the type of electronic submissions under subparagraphs (A) or (B) of this subdivision for which authority is delegated to him or her.

(D) A notice of delegation submitted under subsection (c)(6)(C) of this section shall also include the following certification statements by such CO_2 authorized account representative or alternate CO_2 authorized account representative:

(i) "I agree that any electronic submission to the commissioner that is by the individual identified in this notice of delegation and of a type listed for such electronic submission agent in this notice of delegation and that is made when I am a CO_2 authorized account representative or alternate CO_2 authorized account representative, as appropriate, and before this notice of delegation is superseded by another notice of delegation under section 22a-174-31(c)(6)(E) of the Regulations of Connecticut State Agencies shall be deemed to be an electronic submission by me."

(ii) "Until this notice of delegation is superseded by another notice of delegation under section 22a-174-31(c)(6)(E) of the Regulations of Connecticut State Agencies, I agree to maintain an e-mail account and to notify the commissioner immediately of any change in my e-mail address unless all delegation authority by me under section 22a-174-31(c)(6) of the Regulations of Connecticut State Agencies is terminated."

(E) A notice of delegation submitted under subsection (c)(6)(C) of this section shall be effective, with regard to the CO_2 authorized account representative or alternate CO_2 authorized account representative identified in such notice, upon receipt of such notice by the commissioner and until receipt by the commissioner of a superseding notice of delegation by such CO_2 authorized account representative or alternate CO_2 authorized account representative as appropriate. The superseding notice of delegation may replace any previously identified electronic submission agent, add a new electronic submission agent, or eliminate entirely any delegation of authority.

(F) Any electronic submission covered by the certification in subsection (c)(6)(D)(i) of this section and made in accordance with a notice of delegation effective under subsection (c)(6)(E) of this section shall be deemed to be an electronic submission by the CO_2 authorized account representative or alternate CO_2 authorized account representative submitting such notice of delegation.

(d) Reserved

(e) Compliance Certification

(1) Compliance certification report. The owner or operator of each CO_2 budget source shall comply with the following compliance certification report requirements:

(A) Applicability and deadline. For each control period in which a CO_2 budget source is subject to the CO_2 requirements of subsection (b)(3) of this section, the CO_2 authorized account representative of the source shall submit to the commissioner by March 1st following the applicable control period, a compliance certification report;

(B) Contents of report. The CO_2 authorized account representative shall include in the compliance certification report required under subparagraph (A) of this subdivision the following elements, in a format prescribed by the commissioner:

(i) Identification of the source and each CO_2 budget source at the source;

(ii) At the CO_2 authorized account representative's option, the serial numbers of the CO_2 allowances that are to be deducted from the source's compliance account under subsection (g)(5) of this section for the control period; and

(iii) The compliance certification under subparagraph (C) of this subdivision; and

(C) Compliance certification. In the compliance certification report required under subparagraph (A) of this subdivision, the CO_2 authorized account representative shall certify, based on reasonable inquiry of those persons with primary responsibility for operating the source and the CO_2 budget sources in compliance with the CO_2 Budget Trading Program, whether the source and each CO_2 budget source for which the compliance certification is submitted was operated during the calendar year covered by the report in compliance with the requirements of the CO_2 Budget Trading Program, including:

(i) Whether the source was operated in compliance with the CO_2 requirements of subsection (b)(3) of this section;

(ii) Whether the monitoring plan applicable to each unit at the source has been maintained to reflect the actual operation and monitoring of the unit, and contains all information necessary to attribute CO_2 emissions to the unit, in accordance with subsection (i) of this section;

(iii) Whether all the CO_2 emissions from the units at the source were monitored or accounted for through the missing data procedures and reported in the quarterly monitoring reports, including whether conditional data were reported in the quarterly reports in accordance with subsection (i) of this section. If conditional data were reported, the owner or operator shall indicate whether the status of all conditional data has been resolved and all necessary quarterly report resubmissions have been made;

(iv) Whether the facts that form the basis for certification under subsection (i) of this section of each monitor at each unit at the source, or for using an excepted monitoring method or alternative monitoring method approved under subsection (i) of this section, if any, has changed; and

(v) If a change is required to be reported under subsection (c)(4) of this section, specify the nature of the change, the reason for the change, when the change occurred, and how the unit's compliance status was determined subsequent to the change, including what method was used to determine emissions when a change mandated the need for monitor recertification.

(2) Commissioner's action on compliance certifications.

(A) The commissioner may review and conduct independent audits concerning any compliance certification or any other submission under the CO_2 Budget Trading Program and make appropriate adjustments of the information in the compliance certifications or other submissions.

(B) The commissioner may deduct CO_2 allowances from or transfer CO_2 allowances to a source's compliance account based on the information in the compliance certifications or other submissions, as approved during the commissioner's review under subparagraph (A) of this subdivision.

(f) CO_2 Allowance Allocations

(1) The Connecticut CO_2 Trading Program Base Budget is as follows:

(A) For the 2009 through 2014 allocation years, the Connecticut CO_2 Trading Program Base Budget is 10,695,036 tons;

(B) For the 2015 allocation year, the Connecticut CO_2 Trading Program Base Budget is 10,427,660 tons;

(C) For the 2016 allocation year, the Connecticut CO_2 Trading Program Base Budget is 10,160,284 tons;

(D) For the 2017 allocation year, the Connecticut CO_2 Trading Program Base Budget is 9,892,908 tons; and

(E) For the 2018 allocation year and each succeeding allocation year, the Connecticut CO_2 trading program base budget is 9,625,532 tons.

(2) Timing requirements for CO_2 allowance allocations.

(A) By January 1, 2009, the commissioner will determine the initial CO_2 allowance allocations, in accordance with subdivision (3) of this subsection, for the 2009, 2010, 2011 and 2012 allocation years.

(B) By January 1, 2010 and January 1 of each year thereafter, the commissioner will determine the initial CO_2 allowance allocations, in accordance with subdivision (3) of this subsection, for the allocation year that commences three years after such applicable deadline for allocation.

(3) CO_2 allowance allocations.

(A) In accordance with the timing provisions of subdivision (2) of this subsection, the commissioner shall allocate ninety-one (91) percent of each annual CO_2 base budget to the Connecticut Auction Account, five (5) percent to the Combined Heat and Power (CHP) Set-aside Account, three (3) percent to the Consumer-side Distributed Resources (CDR) Set-aside Account and one (1) percent to the Voluntary Clean Energy Purchase Set-aside Account;

(B) By April 1, 2009 and April 1 of each year thereafter, the commissioner shall allocate to the compliance account of each CO_2 budget source generating useful net thermal energy from its CO_2 budget units the number of CO_2 allowances equal to the amount determined by the following equation (rounded to the nearest whole ton), subject to the limitation in subparagraph (C) of this subdivision:

$$\frac{\left((TEG \div 0.80) \times 136 \frac{lb}{mmBtu} \right)}{2000 \frac{lb}{ton}}$$

Where:

TEG = the average useful net thermal energy (in mmBtu) generated by CO_2 budget units at the CO_2 budget source during the second and third years preceding the allocation year of the allowances being allocated.

(C) IF $\Sigma A_{CHP} <= A_{CHP\text{-}AV}$, THEN

$A_{CHP\text{-}ALLOCATED} = A_{CHP}$.

IF $\Sigma A_{CHP} > A_{CHP\text{-}AV}$, THEN

$$A_{CHP\ -\ ALLOCATED} = A_{CHP} \times \left(\frac{A_{CHP\ -\ AV}}{\sum A_{CHP}} \right)$$

rounded to the nearest whole allowance.

Where:

A_{CHP} = the number of CO_2 allowances calculated for each CO_2 budget source pursuant to subparagraph (B) of this subdivision

ΣA_{CHP} = the total number of CO_2 allowances calculated for CO_2 budget sources pursuant to subparagraph (B) of this subdivision

$A_{CHP\text{-}AV}$ = the number of CO_2 allowances available for a allocation from the CHP Set-aside Account

$A_{CHP\text{-}ALLOCATED}$ = the number of CO_2 allowances the commissioner shall allocate to the compliance account of each CO_2 budget source

The commissioner may adjust an allowance allocation under this subparagraph as necessary to not exceed $A_{CHP\text{-}AV}$.

(D) If $\Sigma A_{CHP} < A_{CHP\text{-}AV}$, allowances from the CHP Set-aside Account not allocated for a vintage year shall be transferred to the Connecticut Auction Account, from

which such allowances will be auctioned in accordance with subdivision (4) of this subsection.

(E) By January 1, 2009 and January 1 of each year thereafter, CO_2 budget sources shall submit information required for the equation specified in subdivision (3)(B) of this subsection relating amount of useful net thermal energy generated by CO_2 budget units at the CO_2 budget source during the second and third years preceding the allocation year of the allowances being allocated.

(F) By February 28, 2010 and February 28 of each year thereafter, the commissioner shall allocate to the compliance account of each CO_2 budget source, which operates CO_2 budget units that are also customer-side distributed resources that received funds pursuant to the customer-side distributed resources program established by the Department of Public Utilities Control pursuant to Section 16-243 of the Connecticut General Statutes, the number of CO_2 allowances equal to the total number of tons of CO_2 emissions emitted by such CO_2 budget units in the previous calendar year (rounded to the nearest whole ton), subject to the limitation in subparagraph (G) of this subdivision.

(G) IF $\Sigma A_{CDR} <= A_{CDR\text{-}AV}$, THEN

$$A_{CDR\text{-}ALLOCATED} = A_{CDR}.$$

IF $\Sigma A_{CDR} > A_{CDR\text{-}AV}$, THEN

$$A_{CDR\ -\ ALLOCATED} = A_{CDR} \times \left(\frac{A_{CDR\ -\ AV}}{\sum A_{CDR}} \right)$$

rounded to the nearest whole allowance.

Where:

A_{CDR} = the number of CO_2 allowances calculated for each CO_2 budget source pursuant to subparagraph (F) of this subdivision

ΣA_{CDR} = the total number of CO_2 allowances calculated for CO_2 budget sources pursuant to subparagraph (F) of this subdivision

$A_{CDR\text{-}AV}$ = the number of CO_2 allowances available for a allocation from the CDR Set-aside Account

$A_{CDR\text{-}ALLOCATED}$ = the number of CO_2 allowances the commissioner shall allocate to the compliance account of each CO_2 budget source

The commissioner may adjust an allowance allocation under this subparagraph as necessary to not exceed $A_{CHP\text{-}AV}$.

(H) If $\Sigma A_{CDR} < A_{CDR\text{-}AV}$, allowances from the CDR Set-aside Account not allocated for a vintage year shall be transferred to the Connecticut Auction Account, from which such allowances will be auctioned in accordance with subdivision (4) of this subsection.

(4) CO_2 allowance auctions.

(A) For purposes of this subdivision, "auction" means the open and transparent process by which the commissioner or a trustee selected by the commissioner, in consultation with the Department of Public Utility Control, shall offer for sale and sell the CO_2 allowances in the Connecticut Auction Account at least once per year.

(B) Except as provided by subparagraph (C) of this subdivision, by December 31 of each allocation year, the commissioner or a trustee selected by the commissioner shall offer for sale the CO_2 allowances with the same allocation year that are held in the Connecticut Auction Account. Such auction shall be conducted under the oversight of the commissioner and the Department of Public Utility Control.

(C) CO_2 allowances which are transferred to the Connecticut Auction Account from the CHP Set-aside Account pursuant to subdivision (3)(D) of this subsection, from the CDR Set-aside Account pursuant to subdivision (3)(H) or from the Voluntary Clean Energy Purchase Set-aside Account pursuant to subdivision (5)(C) of this subsection shall be offered for sale at the next auction held following the transfer of such allowances.

(D) Proceeds derived from the sale of CO_2 allowances held in the Connecticut Auction Account shall be distributed as follows:

(i) Seven and one-half (7.5) percent of auction proceeds shall be retained by the commissioner;

(ii) By December 31, 2009 and December 31 of each year thereafter, twenty-three and one-eighth (23.125) percent of proceeds from auctions held in the previous 12 months shall be transferred to an account held by the Connecticut Clean Energy Fund. Proceeds are to be used to support the development of Class I renewable energy sources;

(iii) By December 31, 2009 and December 31 of each year thereafter, sixty-nine and three-eighths (69.375) percent of proceeds from auctions held in

the previous 12 months shall be transferred to accounts held by Connecticut Light & Power (CL&P) and United Illuminating (UI) and overseen by the Connecticut Energy Conservation Management Board (ECMB). Eighty (80) percent of this subtotal shall be distributed to the CL&P account and twenty (20) percent shall be distributed to the UI account. Proceeds are to be used to support the development of energy efficiency measures.

(5) Retirement of Allowances for Clean Energy Purchases. The commissioner shall permanently retire a number of CO_2 allowances from the Voluntary Clean Energy Purchase Set-aside Account based upon documented voluntary renewable energy purchases by customers in Connecticut that represent renewable energy generated from within any participating state. Any retirement of allowances shall be determined as follows:

(A) The commissioner shall retire the number of CO_2 allowances equal to the amount determined by the following equation (rounded to the nearest whole ton), subject to the limitations in subparagraph (B) and requirements of subparagraphs (E) and (F) of this subdivision:

$(MWH_{CCEO} + MWH_{RECS})$ x (0.554 tons CO_2 / MWh)

Where:

MWH_{CCEO} = the total number of RECs sold (in MWhs) to Connecticut customers through the Connecticut Clean Energy Options program in the year prior to the vintage year of the CO_2 allowances to be retired.

MWH_{RECS} = the total number of Class I RECs sold (in MWhs) to Connecticut customers through means other than the Connecticut Clean Energy Options program in the year prior to the vintage year of the CO_2 allowances to be retired.

(B) If the total number of allowances calculated to be retired pursuant to subparagraph (A) of this subdivision exceeds the number of CO_2 allowances held in the Voluntary Clean Energy Purchase Set-aside Account, then the number of CO_2 allowances to be retired shall be equal to the total number of CO_2 allowances allocated in the Voluntary Clean Energy Purchase Set-aside Account pursuant to subdivision (3)(A) of this subsection.

(C) If the total number of allowances calculated to be retired pursuant to subparagraph (A) of this subdivision is less than the number of CO_2 allowances held in the Voluntary Clean Energy Purchase Set-aside Account, then allowances

from the Voluntary Clean Energy Purchase Set-aside Account not allocated for a vintage year shall be transferred to the Connecticut Auction Account, from which such allowances will be auctioned in accordance with subdivision (4) of this subsection.

(D) By October 1, 2009 and October 1 of each year thereafter, the commissioner shall retire the number of allowances determined pursuant to subparagraphs (A) and (B) of this subdivision by transferring them to the Connecticut CO_2 Allowance Retirement Account.

(E) Data for the total number of RECs sold to Connecticut customers through the Connecticut Clean Energy Options program required for the equation specified in subdivision (5)(A) of this subsection shall be obtained from the Department of Public Utility Control.

(F) By June 30, 2009 and June 30 of each year thereafter, information required for the equation specified in subdivision (5)(A) of this subsection relating to the number of Class I RECs sold to Connecticut customers through means other than the Connecticut Clean Energy Options program in the previous year may be submitted by the retail provider that sold such RECs. Such information shall also include:

(i) Documentation that the retail provider procured the renewable energy or renewable energy attributes related to voluntary renewable energy or renewable energy attribute credit,

(ii) The time period when the retail purchase(s) was made,

(iii) The state where the REC was created, including documentation of facility name, unique generator identification number and fuel type, and

(iv) Any additional information required by the commissioner necessary to demonstrate that such REC purchase is not being credited in more than one participating state.

(6) Early reduction CO_2 allowances. The commissioner may award early reduction CO_2 allowances to a CO_2 budget source for reductions in the CO_2 budget source's CO_2 emissions, including all emissions from CO_2 budget units at the CO_2 budget source, that are achieved by the source during the early reduction period of 2006, 2007 and 2008, subject to the following requirements. For the purposes of this subdivision, the baseline period shall be defined as calendar years 2003, 2004 and 2005, and the early reduction period shall be defined as calendar years 2006, 2007 and 2008.

(A) The owner or operator of the CO_2 budget source shall submit its application for the award of CO_2 allowances by May 1, 2009.

(B) The owner or operator of the CO_2 budget source shall demonstrate that all CO_2 budget units that existed at the CO_2 budget source during the baseline period are included as CO_2 budget units for the early reduction period. New CO_2 budget units added at the CO_2 budget source must also be accounted for during the early reduction period.

(C) The owner or operator of the CO_2 budget source shall demonstrate that the data submitted in support of the early reduction application was recorded in compliance with the requirements of subsection (i) of this section for each of the baseline period years, and also for the early reduction period years, for which the CO_2 budget source was required to report CO_2 data pursuant to 40 CFR 75. An owner or operator of a CO_2 budget source that was not required to submit CO_2 data pursuant to 40 CFR 75 for any of the years contained in the baseline period or early reduction period may request, as part of its application to the commissioner under this subsection, to use an alternative data source or sources for the calculation of early reduction allowances.

(D) The commissioner shall calculate the number of early reduction CO_2 allowances to be awarded to a particular CO_2 budget source pursuant to the following formula:

(i) If total heat input to all CO_2 budget units at the CO_2 budget source during the early reduction period is less than or equal to the total heat input to all the CO_2 budget units at the CO_2 budget source during the baseline period, then:

$$ERAs = ((AEER_{BASELINE} - AEER_{ERP}) \times (EO_{ERP} + (TO_{ERP} / 3.413)))/2000$$

Where:

ERAs are early reduction CO_2 allowances;

$AEER_{BASELINE}$ is the average CO_2 emissions rate resulting from electric energy output and thermal energy output for all of the CO_2 budget units at the CO_2 budget source during the baseline period (in pounds of CO_2/MWh_{th+e});

$AEER_{ERP}$ is the average CO_2 emissions rate resulting from electric energy output and thermal energy output for all of the CO_2 budget units at the CO_2 budget source during the early reduction period (in pounds of CO_2/

MWh_{th+e});

EO_{ERP} is the total electric energy output from all CO_2 budget units at the CO_2 budget source during the early reduction period (in MWh_e);

TO_{ERP} is the total useful thermal energy output from all CO_2 budget units at the CO_2 budget source during the early reduction period (in MMBtu);

(ii) For the purposes of this subparagraph, thermal energy output will be converted to units of MWh by the conversion factor 1 MWh = 3.413 MMBtu.

(iii) For the purposes of this subparagraph, output shall be monitored in accordance with subsection (i) of this section.

(iv) If total heat input to all CO_2 budget units at the CO_2 budget source during the early reduction period is greater than or equal to the total heat input to all the CO_2 budget units at the CO_2 budget source during the baseline period, then:

$ERAs = E_{BASELINE} - E_{ERP}$

Where:

ERAs are early reduction CO_2 allowances;

$E_{BASELINE}$ are total CO_2 emissions from all of the CO_2 budget units at the CO_2 budget source during the baseline period (in tons); and

E_{ERP} are total CO_2 emissions from all of the CO_2 budget units at the CO_2 budget source during the early reduction period (in tons).

(E) Once the commissioner verifies a CO_2 budget source's early reductions of CO_2 emissions, the commissioner shall award the early reduction CO_2 allowances to the CO_2 budget source's compliance account by December 31, 2009.

(g) Allowance Tracking System

(1) CO_2 Allowance Tracking System accounts.

(A) Nature and function of compliance accounts. Consistent with subdivision (2)(A) of this subsection, the commissioner shall establish one compliance account for each CO_2 budget source. Allocations of CO_2 allowances pursuant to subsection (f) of this section and deductions or transfers of CO_2 allowances pursuant to

subsections (e)(2), (g)(5), (g)(7), or (h) of this section will be recorded in the compliance accounts in accordance with this subsection.

(B) Nature and function of general accounts. Consistent with subdivision (2)(B) of this subsection, the commissioner shall establish, upon request, a general account for any person. Transfers of CO_2 allowances pursuant to subsection (h) of this section will be recorded in the general account in accordance with this subsection.

(2) Establishment of accounts.

(A) Compliance accounts. Upon receipt of a complete account certificate of representation under subsection (c)(4) of this section, the commissioner shall establish a compliance account for each CO_2 budget source for which the account certificate of representation was submitted.

(B) General accounts. Any person may apply to open a general account for the purpose of holding and transferring CO_2 allowances. Such application shall:

(i) Designate only one CO_2 authorized account representative and only one alternate CO_2 authorized account representative who may act on behalf of the CO_2 authorized account representative; and

(ii) Include a procedure for authorizing the alternate CO_2 authorized account representative to act in lieu of the CO_2 authorized account representative.

(C) A complete application for a general account shall be submitted to the commissioner and shall include the following elements on forms prescribed by the commissioner:

(i) Name, address, electronic mail address, telephone number, and facsimile transmission number of the CO_2 authorized account representative and any alternate CO_2 authorized account representative;

(ii) At the option of the CO_2 authorized account representative, organization name and type of organization;

(iii) A list of all persons subject to a binding agreement for the CO_2 authorized account representative or any alternate CO_2 authorized account representative to represent their ownership interest with respect to the CO_2 allowances held in the general account;

(iv) The following certification statement by the CO_2 authorized account representative and any alternate CO_2 authorized account representative: "I certify that I was selected as the CO_2 authorized account representative or

the CO_2 alternate authorized account representative, as applicable, by an agreement that is binding on all persons who have an ownership interest with respect to CO_2 allowances held in the general account. I certify that I have all the necessary authority to carry out my duties and responsibilities under the CO_2 Budget Trading Program on behalf of such persons and that each such person shall be fully bound by my representations, actions, inactions, or submissions and by any order or decision issued to me by the commissioner or a court regarding the general account.";

(v) The signature of the CO_2 authorized account representative and any alternate CO_2 authorized account representative and the dates signed; and

(vi) Unless otherwise required by the commissioner, documents of agreement referred to in the application for a general account shall not be submitted to the commissioner. The commissioner shall not be under any obligation to review or evaluate the sufficiency of such documents, if submitted.

(D) Authorization of CO_2 authorized account representative. Upon receipt by the commissioner of a complete application for a general account under subparagraph (C) of this subdivision:

(i) The commissioner shall establish a general account for the person or persons for whom the application is submitted;

(ii) The CO_2 authorized account representative and any alternate CO_2 authorized account representative for the general account shall represent and, by such representations, actions, inactions or submissions, legally bind each person who has an ownership interest with respect to CO_2 allowances held in the general account in all matters pertaining to the CO_2 Budget Trading Program, notwithstanding any agreement between the CO_2 authorized account representative or any alternate CO_2 authorized account representative and such person. Any such person shall be bound by any order or decision issued to the CO_2 authorized account representative or any alternate CO_2 authorized account representative by the commissioner or a court regarding the general account; and

(iii) Any representation, action, inaction or submission by any alternate CO_2 authorized account representative shall be deemed to be a representation, action, inaction or submission by the CO_2 authorized account representative.

(E) Each submission concerning the general account shall be submitted, signed and certified by the CO_2 authorized account representative or any alternate CO_2 authorized account representative for the persons having an ownership interest

with respect to CO_2 allowances held in the general account. Each such submission shall include the following certification statement by the CO_2 authorized account representative or any alternate CO_2 authorized account representative:

> "I am authorized to make this submission on behalf of the persons having an ownership interest with respect to the CO_2 allowances held in the general account. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."

(F) The commissioner shall accept or act on a submission concerning the general account only if the submission has been made, signed and certified in accordance with subparagraph (E) of this subdivision.

(G) Changing CO_2 authorized account representative and alternate CO_2 authorized account representative; changes in persons with ownership interest.

(i) The CO_2 authorized account representative for a general account may be changed at any time upon receipt by the commissioner of a superseding complete application for a general account under subparagraph (B) of this subdivision of this subsection. Notwithstanding any such change, all representations, actions, inactions and submissions by the previous CO_2 authorized account representative prior to the time and date when the commissioner receives the superseding application for a general account shall be binding on the new CO_2 authorized account representative and the persons with an ownership interest with respect to the CO_2 allowances in the general account.

(ii) The alternate CO_2 authorized account representative for a general account may be changed at any time upon receipt by the commissioner of a superseding complete application for a general account under subparagraph (B) of this subdivision of this subsection. Notwithstanding any such change, all representations, actions, inactions and submissions by the previous alternate CO_2 authorized account representative prior to the time and date when the commissioner receives the superseding application for a general account shall be binding on the new alternate CO_2 authorized

account representative and the persons with an ownership interest with respect to the CO_2 allowances in the general account.

(H) In the event a new person having an ownership interest:

(i) With respect to CO_2 allowances in the general account is not included in the list of such persons in the application for a general account, such new person shall be deemed to be subject to and bound by the application for a general account, the representations, actions, inactions and submissions of the CO_2 authorized account representative and any alternate CO_2 authorized account representative of the source, and the decisions, orders, actions and inactions of the commissioner, as if the new individual were included in such list; and

(ii) Within 30 days following any change in the persons having an ownership interest with respect to CO_2 allowances in the general account, including the addition of persons, the CO_2 authorized account representative or any alternate CO_2 authorized account representative shall submit a revision to the application for a general account amending the list of persons having an ownership interest with respect to the CO_2 allowances in the general account to include the change.

(I) Objections concerning CO_2 authorized account representative.

(i) Once a complete application for a general account under subparagraph (B) of this subdivision has been submitted and received, the commissioner shall rely on such application unless and until the commissioner receives a superseding complete application for a general account under subparagraph (B) of this subdivision.

(ii) Except as provided in subparagraphs (G)(i) and (ii) of this subdivision, no objection or other communication submitted to the commissioner concerning the authorization, or any representation, action, inaction or submission of the CO_2 authorized account representative or any alternate CO_2 authorized account representative for a general account shall affect any representation, action, inaction or submission of the CO_2 authorized account representative or any alternate CO_2 authorized account representative or the finality of any decision or order by the commissioner under the CO_2 Budget Trading Program.

(J) The commissioner shall not adjudicate any private legal dispute concerning the authorization or any representation, action, inaction or submission of the CO_2 authorized account representative or any alternate CO_2 authorized account

representative for a general account, including private legal disputes concerning the proceeds of CO_2 allowance transfers.

(K) Account identification. The commissioner shall assign a unique identifying number to each account established under subparagraph (A) or (B) of this subdivision.

(3) CO_2 Allowance Tracking System responsibilities of CO_2 authorized account representative. Following the establishment of a CO_2 Allowance Tracking System account, all submissions to the commissioner pertaining to the account, including, but not limited to, submissions concerning the deduction or transfer of CO_2 allowances in the account, shall be made only by the CO_2 authorized account representative for the account.

(4) Recordation of CO_2 allowance allocations**.**

(A) By January 1, 2009, the commissioner shall record in the Connecticut Auction Account, the CHP Set-aside Account and the Voluntary Clean Energy Purchase Set-aside Account the CO_2 allowances for the allocation years of 2009, 2010, 2011, and 2012;

(B) By January 1, 2010 and January 1 of each year thereafter, the commissioner shall record in the Connecticut Auction Account, the CHP Set-aside Account and the Voluntary Clean Energy Purchase Set-aside Account the CO_2 allowances for the allocation year that commences three years after such applicable deadline for recordation;

(C) By April 1, 2009 and April 1 of each year thereafter, the commissioner shall record any CO_2 allowances allocated pursuant to subsections (f)(3)(B) and (f)(3)(C) of this section in the CO_2 budget source's compliance account;

(D) By February 28, 2009 and February 28 of each year thereafter, the commissioner shall record any CO_2 allowances allocated pursuant to subsections (f)(3)(F) and (f)(3)(G) of this section in the CO_2 budget source's compliance account;

(E) By October 1, 2009 and October 1 of each year thereafter, the commissioner shall record any CO_2 allowances retired pursuant to subsection (f)(5) of this section in the Connecticut CO_2 Allowance Retirement Account;

(F) Within seven business days of the results of an auction conducted pursuant to subsection (f)(4) of this section being deemed final by the commissioner, the commissioner or the commissioner's trustee shall record CO_2 allowances purchased from the Connecticut Auction Account;

(G) By December 31, 2009, the commissioner shall record any CO2 early reduction allowances awarded pursuant to subsection (f)(6) of this section in the CO2 budget source's compliance account; and

(H) Serial numbers for allocated CO_2 allowances. When allocating CO_2 allowances to and recording them in an account, the commissioner shall assign each CO_2 allowance a unique identification number that will include digits identifying the year for which the CO_2 allowance is allocated.

(5) Compliance.

(A) Allowances available for compliance deduction. CO_2 allowances that meet the following criteria are available to be deducted for compliance with a CO_2 budget source's CO_2 budget emissions limitation for a control period.

(i) The CO_2 allowances are of allocation years that fall within a prior control period or the same control period; and

(ii) The CO_2 allowances are held in the CO_2 budget source's compliance account as of the CO_2 allowance transfer deadline for that control period or are transferred into the compliance account by a CO_2 allowance transfer correctly submitted for recordation under subsection (h)(1) of this section by the CO_2 allowance transfer deadline for that control period.

(B) For CO_2 offset allowances, the number of CO_2 offset allowances that may be deducted can be no more than the number of tons representing the following percentages of the CO_2 budget source's CO_2 emissions for that control period as determined in accordance with subsection (i) of this section:

(i) Unless the provisions of subparagraphs (B)(ii) or (iii) of this subdivision apply, three and three-tenths (3.3) percent;

(ii) If the commissioner determines that there has been a Stage One Trigger Event, five (5) percent; or

(iii) If the commissioner determines that there have been at least two Stage Two Trigger Events in immediate succession; five (5) percent of the CO_2 budget source's CO_2 emissions for the first three years of the control period, and twenty (20) percent of the CO_2 budget source's CO_2 emissions for each year after the third year of the control period.

(C) The CO_2 allowances are not necessary for deductions for excess emissions for a prior control period under subsection (d) of this section.

(D) Deductions for compliance. Following the recordation, in accordance with subsection (h)(2) of this section, of CO_2 allowance transfers submitted for recordation in the CO_2 budget source's compliance account by the CO_2 allowance transfer deadline for a control period, the commissioner shall deduct CO_2 allowances available under subparagraph (A) of this subdivision to cover the source's CO_2 emissions, as determined in accordance with subsection (i) of this section, for the control period, as follows:

(i) Until the amount of CO_2 allowances deducted equals the number of tons of total CO_2 emissions, determined in accordance with subsection (i) of this section, from all CO_2 budget sources at the CO_2 budget source for the control period; or

(ii) If there are insufficient CO_2 allowances to complete the deductions in subparagraph (B)(i) of this subdivision, until no more CO_2 allowances available under subparagraph (A) of this subdivision remain in the compliance account.

(E) Identification of CO_2 allowances by serial number. The CO_2 authorized account representative for a source's compliance account may request that specific CO_2 allowances, identified by serial number, in the compliance account be deducted for emissions or excess emissions for a control period in accordance with subparagraph (B), or (D) of this subdivision. Such identification shall be made in the compliance certification report submitted in accordance with subsection (e)(1) of this section.

(F) The commissioner shall deduct CO_2 allowances for a control period from the CO_2 budget source's compliance account, in the absence of an identification or in the case of a partial identification of CO_2 allowances by serial number under subparagraph (E) of this subdivision, in the following descending order:

(i) Any CO_2 allowances, other than CO_2 offset allowances, that are available for deduction under subparagraph (A) of this subdivision and were allocated to the units at the source, in the order of recordation; and then

(ii) Any CO_2 allowances, other than CO_2 offset allowances, that are available for deduction under subparagraph (A) of this subdivision and were allocated other than to units at the source and transferred and recorded in the compliance account pursuant to subsection (h), in the order of recordation; and

(iii) Subject to the relevant compliance deduction limitations under subsection (g)(5) of this section, any CO_2 allowances that were awarded as CO_2 offset

allowances and transferred and recorded in the compliance account pursuant to subsection (h) of this section, in order of recordation.

(G) Deductions for excess emissions. After making the deductions for compliance under subparagraph (D) of this subdivision, the commissioner shall deduct from the CO_2 budget source's compliance account a number of CO_2 allowances, allocated for allocation years that occur after the control period in which the source has excess emissions, equal to three times the number of the source's excess emissions. No CO_2 offset allowances shall be deducted to account for the source's excess emissions. Any such CO_2 allowance deduction shall not affect the liability of the owners and operators of the CO_2 budget source or the CO_2 budget sources at the source for any fine, penalty or assessment, or their obligation to comply with any other remedy, for the same violation, as ordered under applicable state law. When assessing fines, penalties or other obligations, the commissioner shall:

(i) When determining the number of days of violation if a CO_2 budget source has excess emissions for a control period, consider each day in the control period a day in violation unless the owner or operator of the source demonstrate that a lesser number of days should be considered; and

(ii) Consider each ton of excess emissions is a separate violation.

(H) The commissioner's determination that a CO_2 budget source had excess emissions and the associated deduction of CO_2 allowances from such CO_2 budget source's account may be later challenged in an administrative enforcement or any civil or criminal judicial action arising from or encompassing such noncompliance. The commencement or pendency of any administrative enforcement or civil or criminal judicial action arising from or encompassing that excess emissions violation will not act to prevent the commissioner from initially deducting the CO_2 allowances resulting from the commissioner's original determination that the relevant CO_2 budget source has had excess emissions. Should the commissioner's determination of the existence or extent of the CO_2 budget source's excess emissions be revised, either by a settlement or issuance of any final administrative or judicial order, the commissioner shall:

(i) Take further action under subparagraph (G)(i) and (ii) of this subdivision to address the expanded violation where the commissioner's determination of the extent of excess emissions was too low; and

(ii) In any instance where the commissioner's determination of the extent of excess emissions was too high, distribute to the relevant CO_2 budget source a number of CO_2 allowances equaling the number of CO_2 allowances deducted that are attributable to the difference between the

original and final quantity of excess emissions. Should such CO_2 budget source's compliance account no longer exist, the CO_2 allowances will be provided to a general account selected by the owner or operator of the CO_2 budget source from which they were originally deducted.

(I) The commissioner shall record in the appropriate compliance account all deductions from such an account pursuant to subparagraphs (D) and (G) of this subdivision.

(J) Action by the commissioner on submissions. The commissioner may review and conduct independent audits concerning any submission under the CO_2 Budget Trading Program and make appropriate adjustments of the information in the submissions, including but not limited to, deductions of CO_2 allowances from or transfer of CO_2 allowances to a source's compliance account based on information in the submissions, as adjusted under subparagraph (H)(i) of this subdivision.

(6) Banking. Each CO_2 allowance that is held in a compliance account or a general account will remain in such account unless and until the CO_2 allowance is deducted or transferred under this subsection, subsection (e)(2), (g)(5), (g)(7), or (h) of this section.

(7) Account error. The commissioner may correct any error in any CO_2 Allowance Tracking System account. Within ten (10) business days of making such correction, the commissioner shall notify the CO_2 authorized account representative for the account.

(8) Closing of general accounts. The commissioner may close a general account for one of the following reasons:

(A) A CO_2 authorized account representative of a general account may instruct the commissioner to close the account by submitting a statement requesting deletion of the account from the CO_2 Allowance Tracking System and by correctly submitting for recordation under subsection (h)(1) of this section a CO_2 allowance transfer of all CO_2 allowances in the account to one or more other CO_2 Allowance Tracking System accounts.

(B) If a general account shows no activity for a period of six years or more and does not contain any CO_2 allowances, the commissioner may notify the CO_2 authorized account representative for the account that the account will be closed and deleted from the CO_2 Allowance Tracking System following twenty business days after the notice is sent. The account will be closed after the twenty day period unless before the end of such twenty day period the commissioner receives a correctly submitted transfer of CO_2 allowances into the account under section subsection (h)(1) of this section or a statement submitted by the CO_2 authorized account

representative demonstrating to the satisfaction of the commissioner good cause as to why the account should not be closed.

(h) CO_2 Allowance Transfers

(1) Submission of CO_2 allowance transfers. The CO_2 authorized account representatives seeking recordation of a CO_2 allowance transfer shall submit the transfer to the commissioner. The CO_2 allowance transfer shall include the following information:

(A) The numbers identifying both the transferor and transferee accounts;

(B) A specification by serial number of each CO_2 allowance to be transferred; and

(C) The printed name and signature of the CO_2 authorized account representative of the transferor account and the date signed.

(2) Recordation.

(A) Within five business days of receiving a CO_2 allowance transfer, except as provided in subparagraph (B) of this subdivision, the commissioner shall record a CO_2 allowance transfer by moving each CO_2 allowance from the transferor account to the transferee account as specified by the request, provided that:

(i) The transfer is correctly submitted under subdivision (1) of this subsection; and

(ii) The transferor account includes each CO_2 allowance identified by serial number in the transfer.

(B) A CO_2 allowance transfer that is submitted for recordation following the CO_2 allowance transfer deadline and that includes any CO_2 allowances that are of allocation years that fall within a control period prior to or the same as the control period to which the CO_2 allowance transfer deadline applies will not be recorded until after completion of the process of recordation of CO_2 allowance allocations in subsection (g)(4)(B) of this section.

(C) Where a CO_2 allowance transfer submitted for recordation fails to meet the requirements of subparagraph (A) of this subdivision, the commissioner shall not record such transfer.

(3) Notification.

(A) Notification of recordation. Within 5 business days of recordation of a CO_2 allowance transfer under subdivision (2) of this subsection, the commissioner shall notify each party to the transfer. Notice will be given to the CO_2 authorized account representatives of both the transferor and transferee accounts.

(B) Notification of non-recordation. Within ten business days of receipt of a CO_2 allowance transfer that fails to meet the requirements of subdivision (2)(A) of this subsection, the commissioner shall notify the CO_2 authorized account representatives of both accounts subject to the transfer of:

(i) A decision not to record the transfer; and

(ii) The reasons for such non-recordation.

(C) Nothing in this section shall preclude the submission of a CO_2 allowance transfer for recordation following notification of non-recordation.

(i) Monitoring and Reporting

(1) For the purposes of this subsection the definitions in subsection (a) of this section and in 40 CFR 72.2 shall apply. The terms "Administrator", "affected unit", and "designated representative" in 40 CFR 75 shall be replaced by the terms "commissioner", "CO_2 budget source", and "CO_2 authorized account representative", respectively, as defined in subsection (a) of this section. The definition of "continuous emission monitoring system" or "CEMs" in 40 CFR 75 shall be replaced with the definition in subsection (a) of this section.

(2) The owner or operator and, to the extent applicable, the CO_2 authorized account representative of a CO_2 budget source shall comply with the monitoring, recordkeeping and reporting requirements as provided in this subsection and all applicable sections of 40 CFR 75.

(A) Requirements for installation, certification, and data accounting. The owner or operator of each CO_2 budget source shall:

(i) Install all monitoring systems required under this subsection for monitoring CO_2 mass emissions, including all systems required to monitor CO_2 concentration, stack gas flow rate, O_2 concentration, heat input and fuel flow rate, as applicable, in accordance with 40 CFR 75.13 and 75.72 and Appendix G of 40 CFR 75;

(ii) Successfully complete all certification tests required under this subsection and meet all other requirements of this subsection and 40 CFR 75

applicable to the monitoring systems installed under subparagraph (A)(i) of this subdivision; and

(iii) Make and keep records, report and quality assure the data from the monitoring systems installed under subparagraph (A)(i) of this subdivision.

(B) Compliance dates. The owner or operator shall meet the monitoring system certification and other requirements of subparagraphs (A)(i) through (A)(iii) of this subdivision on or before the following dates:

(i) The owner or operator of a CO_2 budget source that intends to apply for early reduction allowances under subsection (f)(6) of this section must demonstrate that the data submitted in support of the early reduction application was recorded in compliance with the requirements of this subsection for all of the early reduction years for which the CO_2 budget source was required to report CO_2 data pursuant to 40 CFR 75. A CO_2 budget source that was not required to submit CO_2 data pursuant to 40 CFR 75 for any of the years contained in the early reduction application may petition the commissioner as part of its application under subsection (f)(6) of this section for the use of alternative data source or sources for the calculation of early reduction allowances;

(ii) The owner or operator of a CO_2 budget source, except for a CO_2 budget source under subclause (i) of this subparagraph, that commences commercial operation before July 1, 2008, must comply with the requirements of this subsection by January 1, 2009; and

(iii) The owner or operator of a CO_2 budget source that commences commercial operation on or after July 1, 2008, must comply with the requirements of this subsection by the later of January 1, 2009, or one hundred and eighty (180) calendar days after the date on which the source commences commercial operation.

(iv) For the owner or operator of a CO_2 budget source for which construction of a new stack or flue installation is completed after the applicable deadline under subclauses (i), (ii) or (iii) of this subparagraph by the earlier of ninety (90) source operating days after the date on which emissions first exit to the ambient air through the new stack or flue or one hundred and eighty (180) calendar days after the date on which emissions first exit to the ambient air through the new stack or flue.

(C) Reporting data.

(i) The owner or operator of a CO_2 budget source that misses the certification deadline under subparagraph (B)(i) of this subdivision is not eligible to apply for early reduction allowances. The owner or operator of the source becomes subject to the certification deadline under subparagraph (B)(ii) of this subdivision.

(ii) Except as provided in subclause (iii) of this subparagraph, the owner or operator of a CO_2 budget source that does not meet the applicable compliance date set forth in subparagraphs (B)(ii) and (B)(iii) of this subdivision for any monitoring system under subparagraph (A) of this subdivision shall, for each such monitoring system, determine, record and report maximum potential or, as appropriate, minimum potential, values for CO_2 concentration, CO_2 emission rate, stack gas moisture content, fuel flow rate and any other parameter required to determine CO_2 mass emissions and heat input in accordance with 40 CFR 75.31(b)(2) or (c)(3), 40 CFR 75, Appendix section 2.4 or 40 CFR 75 Appendix F section 2.5 as applicable.

(iii) The owner or operator of a CO_2 budget source that does not meet the applicable compliance date set forth in subparagraph (B)(iv) of this subdivision for any monitoring system under subparagraph (A)(i) of this subdivision shall, for each such monitoring system, determine, record and report substitute data using the applicable missing data procedures in 40 CFR 75, Subpart D, or 40 CFR 75, Appendix D or E, in lieu of the maximum potential or, as appropriate, minimum potential, values for a parameter if the owner or operator demonstrates that there is continuity between the data streams for that parameter before and after the construction or installation under subparagraph (B)(iv) of this subdivision.

(D) Prohibitions. No owner or operator of a CO_2 budget source or a non-CO_2 budget source monitored under 40 CFR 75.72(b)(2)(ii) shall use any alternative monitoring system, alternative reference method, or any other alternative for the required continuous emission monitoring system without having obtained prior written approval in accordance with subsection (i)(6) of this section.

(E) No owner or operator of a CO_2 budget source or a non-CO_2 budget source monitored under 40 CFR 75.72(b)(2)(ii) shall operate the source so as to discharge, or allow to be discharged, CO_2 emissions to the atmosphere without accounting for all such emissions in accordance with the applicable provisions of this subsection and 40 CFR 75.

(F) No owner or operator of a CO_2 Budget source or a non-CO_2 budget source monitored under 40 CFR 75.72(b)(2)(ii) shall disrupt the continuous emission monitoring system, any portion thereof, or any other approved emission

monitoring method, and thereby avoid monitoring and recording CO_2 mass emissions discharged into the atmosphere, except for periods of recertification or periods when calibration, quality assurance testing or maintenance is performed in accordance with the applicable provisions of this subsection and 40 CFR 75.

(G) No owner or operator of a CO_2 budget source or a non-CO_2 budget source monitored under 40 CFR 75.72(b)(2)(ii) shall retire or permanently discontinue use of the continuous emission monitoring system, any component thereof, or any other approved emission monitoring system under this subsection, except under any one of the following circumstances:

(i) The owner or operator is monitoring emissions from the source with another certified monitoring system approved, in accordance with the applicable provisions of this subsection and 40 CFR 75, by the permitting authority for use at that source that provides emission data for the same pollutant or parameter as the retired or discontinued monitoring system; or

(ii) The CO_2 authorized account representative submits notification of the date of certification testing of a replacement monitoring system in accordance with subparagraph (B)(ii) of this subdivision.

(3) Initial certification and recertification procedures.

(A) The owner or operator of a CO_2 Budget source shall be exempt from the initial certification requirements of this section for a monitoring system under subdivision (2)(A)(i) of this subsection if the following conditions are met:

(i) The monitoring system has been previously certified in accordance with 40 CFR 75; and

(ii) The applicable quality-assurance and quality-control requirements of 40 CFR 75.21 and 40 CFR 75 Appendices B, D, and E are fully met for the certified monitoring system described in subdivision (2)(A) of this subsection.

(B) The following systems are the principal types of continuous emission monitoring systems required under this subsection:

(i) A flow monitoring system, consisting of a stack flow rate monitor and an automated data acquisition and handling system and providing a permanent, continuous record of stack gas volumetric flow rate, in standard cubic feet per hour;

(ii) A nitrogen oxides emission rate or NOx-diluent monitoring system, consisting of a NOx pollutant concentration monitor, a diluent gas monitor, and an automated data acquisition and handling system and providing a permanent, continuous record of NOx concentration, in parts per million, diluent gas concentration, in percent CO_2 or O_2; and NOx emission rate, in lb/MMBtu;

(iii) A moisture monitoring system, as defined in 40 CFR 75.11(b)(2), which provides a permanent, continuous record of the stack gas moisture content, in percent H_2O;

(iv) A carbon dioxide monitoring system, consisting of a CO_2 pollutant concentration monitor, or an oxygen monitor plus suitable mathematical equations from which the CO_2 concentration is derived, and an automated data acquisition and handling system and providing a permanent, continuous record of CO_2 emissions, in percent CO_2; and

(v) An oxygen monitoring system, consisting of an O_2 concentration monitor and an automated data acquisition and handling system and providing a permanent, continuous record of O_2 in percent O_2.

(C) The recertification provisions of this section shall apply to a monitoring system under subdivision (2)(A) of this subsection exempt from initial certification requirements under subparagraph (A) of this subdivision.

(D) If the Administrator has previously approved a petition under 40 CFR 75.17(a) or (b) for apportioning the CO_2 emission rate measured in a common stack or a petition under 40 CFR 75.66 of this chapter for an alternative requirement in 40 CFR 75.12, 40 CFR 75.17 or 40 CFR 75, Subpart H, the CO_2 authorized account representative shall resubmit the petition to the Administrator under subdivision (7)(A) of this subsection to determine whether the approval applies under this program.

(E) Except as provided in subparagraph (A) of this subdivision, the owner or operator of a CO_2 budget source shall comply with the following initial certification and recertification procedures for a continuous emission monitoring system and an excepted monitoring system under 40 CFR 75, Appendices D and E, and under subdivision (2)(A)(i) of this subsection. The owner or operator of a source that qualifies to use the low mass emissions excepted monitoring methodology in 40 CFR 75.19 or that qualifies to use an alternative monitoring system under 40 CFR 75, Subpart E, shall comply with the procedures in subparagraph (A) or (B)(iv) of this subdivision.

(F) Requirements for initial certification. The owner or operator shall ensure that

each continuous emissions monitoring system required under subdivision (2)(A)(i) of this subsection completes all of the initial certification testing required under 40 CFR 75.20 by the applicable deadlines specified in subdivision (2)(B) of this subsection. In addition, whenever the owner or operator installs a monitoring system in order to meet the requirements of this subsection in a location where no such monitoring system was previously installed, initial certification in accordance with 40 CFR 75.20 is required.

(G) Requirements for recertification. Whenever the owner or operator makes a replacement, modification, or change in a certified continuous emission monitoring system under subdivision (2)(A)(i) of this subsection that the Administrator or the permitting authority determines significantly affects the ability of the system to accurately measure or record CO_2 mass emissions or heat input or to meet the quality-assurance and quality-control requirements of 40 CFR 75.21 or appendix B to 40 CFR 75, the owner or operator shall recertify the monitoring system according to 40 CFR 75.20(b). Furthermore, whenever the owner or operator makes a replacement, modification or change to the flue gas handling system or the source's operation that the Administrator or the permitting authority determines to significantly change the flow or concentration profile, the owner or operator shall recertify the continuous emissions monitoring system according to 40 CFR 75.20(b). Examples of changes that require recertification include, but are not limited to: replacement of the analyzer, change in location or orientation of the sampling probe or site, or changing of flow rate monitor polynomial coefficients.

(H) Approval process for initial certifications and recertification.

(i) Notification of certification. The CO_2 authorized account representative shall submit to the commissioner a written notice of the dates of certification in accordance with subdivision (5) of this subsection.

(ii) Certification application. The CO_2 authorized account representative shall submit to the commissioner a certification application for each monitoring system. A complete certification application shall include the information specified in 40 CFR 75.63.

(iii) Provisional certification data. The provisional certification date for a monitor shall be determined in accordance with 40 CFR 75.20(a)(3). A provisionally certified monitor may be used under the CO_2 Budget Trading Program for a period not to exceed 120 days after receipt by the commissioner of the complete certification application for the monitoring system or component thereof under subparagraph (H)(ii) of this subdivision. Data measured and recorded by the provisionally certified monitoring system or component thereof, in accordance with the

requirements of 40 CFR 75, will be considered valid quality-assured data, provided that the permitting authority does not invalidate the provisional certification by issuing a notice of disapproval within 120 days of receipt of the complete certification application by the commissioner.

(I) Certification application approval process. The commissioner shall issue a written notice of approval or disapproval of the certification application to the owner or operator within 120 days of receipt of the complete certification application subparagraph (H)(ii) of this subdivision. In the event the commissioner does not issue such a notice within such 120-day period, each monitoring system that meets the applicable performance requirements of 40 CFR 75 and is included in the certification application will be deemed certified for use under the CO_2 Budget Trading Program.

(i) Approval notice. If the certification application is complete and shows that each monitoring system meets the applicable performance requirements of 40 CFR 75, then the commissioner shall issue a written notice of approval of the certification application within 120 days of receipt of such complete application.

(ii) Incomplete application notice. If the certification application is not complete, then the commissioner will issue a written notice of incompleteness and set a reasonable date by which the CO_2 authorized account representative must submit the additional information required to complete the certification application. The commissioner may issue a notice of disapproval under subparagraph (I)(iii) of this subdivision if the CO_2 authorized account representative does not comply with the notice of incompleteness by the specified date. The 120 day review period shall not begin before receipt of a complete certification application

(iii) Disapproval notice. If the certification application shows that any monitoring system or component thereof does not meet the performance requirements of 40 CFR 75, or if the certification application is incomplete and the requirement for disapproval under subparagraph (I)(ii) of this subdivision is met, then the commissioner shall issue a written notice of disapproval of the certification application. Upon issuance of such notice of disapproval, the provisional certification is no longer valid and the data measured and recorded by each uncertified monitoring system or component thereof shall not be considered valid quality assured data beginning with the date and hour of provisional certification. The owner or operator shall follow the procedures for loss of certification in subparagraph (J) of this subdivision for each monitoring system or component thereof, which is disapproved for initial certification.

(iv) Audit decertification. The commissioner may issue a notice of disapproval of the certification status of a monitor in accordance with subdivision (4)(B) of this subsection.

(J) Procedures for loss of certification. If the commissioner issues a notice of disapproval of a certification application under subparagraph (I)(iii) of this subdivision or a notice of disapproval of certification status under subparagraph (I)(iv) of this subdivision, then the owner or operator shall substitute the following values for each disapproved monitoring system, for each hour of source operation during the period of invalid data beginning with the date and hour of provisional certification and continuing until the time, date, and hour specified under 40 CFR 75.20(a)(5)(i) or 40 CFR 75.20(g)(7):

(i) For sources using or intending to monitor for CO_2 mass emissions using heat input or for sources using the low mass emission excepted methodology under 40 CFR 75.19, the maximum potential hourly heat input of the source; and

(ii) For sources intending to monitor for CO_2 mass emissions using a CO_2 pollutant concentration monitor and a flow monitor, the maximum potential concentration of CO_2 and the maximum potential flow rate of the source under 40 CFR 75, Appendix A section 2.1.

(K) For each disapproved monitoring system, the CO_2 authorized account representative shall submit a notification of certification retest dates and a new certification application in accordance with subparagraphs (H)(i) and (ii) of this subdivision; and the owner or operator shall repeat all certification tests or other requirements, as indicated in the commissioner's notice of disapproval, no later than 30 source operating days after the date of issuance of the notice of disapproval.

(L) Initial certification and recertification procedures for low mass emission units using the excepted methodologies under 40 CFR 75.19. The owner or operator of a source qualified to use the low mass emissions excepted methodology under 40 CFR 75.19 shall meet the applicable certification and recertification requirements of 40 CFR 75.19, 40 CFR 75.20(h) and subdivision (3) of this subsection. If the owner or operator of such a source elects to certify a fuel flow meter system for heat input determinations, the owner or operator shall also meet the certification and recertification requirements in 40 CFR 75.20.

(M) Certification and recertification procedures for alternative monitoring systems. The CO_2 authorized account of each source for which the owner or operator intends to use an alternative monitoring system approved by the commissioner

under 40 CFR 75, Subpart E, shall apply for certification to the commissioner prior to use of the system under the CO_2 Budget Trading Program. The CO_2 authorized account representative shall apply for recertification following a replacement, modification or change according to the procedures in subparagraph (C) of this subdivision. The owner or operator of an alternative monitoring system shall comply with the notification and application requirements for certification according to the procedures specified in subparagraph (H) of this subdivision and 40 CFR 75.20(f).

(4) Out of control periods.

(A) Whenever any monitoring system fails to meet the quality assurance and quality control requirements or data validation requirements of 40 CFR 75, data shall be substituted using the applicable procedures in 40 CFR 75, Subpart D, Appendix D or E.

(B) Audit decertification. Whenever both an audit of a monitoring system and a review of the initial certification or recertification application reveal that any monitoring system should not have been certified or recertified because it did not meet a particular performance specification or other requirement under subdivision (3) of this subsection or the applicable provisions of 40 CFR 75, both at the time of the initial certification or recertification application submission and at the time of the audit, the commissioner will issue a notice of disapproval of the certification status of such monitoring system. For the purposes of this paragraph, an audit shall be either a field audit or an audit of any information submitted to the commissioner. By issuing the notice of disapproval, the commissioner revokes prospectively the certification status of the monitoring system. The data measured and recorded by the monitoring system shall not be considered valid quality-assured data from the date of issuance of the notification of the revoked certification status until the date and time that the owner or operator completes subsequently approved initial certification or recertification tests for the monitoring system. The owner or operator shall follow the initial certification or recertification procedures in subdivision (3) of this subsection for each disapproved monitoring system.

(5) Notifications. The CO_2 authorized account representative for a CO_2 budget source shall submit written notice to the commissioner in accordance with 40 CFR 75.61.

(6) Recordkeeping and reporting.

(A) General provisions. The CO_2 authorized account representative shall comply with all recordkeeping and reporting requirements in this section, the applicable record keeping and reporting requirements under 40 CFR 75.73 and with the certification requirements of subsection (c)(1)(E) of this section.

(B) Monitoring plans. The owner or operator of a CO_2 budget source shall comply with requirements of 40 CFR 75.62.

(C) Certification applications. The CO_2 authorized account representative shall submit an application to the commissioner within 45 days after completing all initial certification or recertification tests required under subdivision (3) of this subsection including the information required under CFR 75.63 and 40 CFR 75.73 (c) and (e).

(D) Quarterly reports. The CO_2 authorized account representative shall report the CO_2 mass emission data and heat input data for the CO_2 budget source, in an electronic format prescribed by the commissioner for each calendar quarter as follows:

(i) For a source that commences commercial operation before July 1, 2008, the calendar quarter covering January 1, 2009 through March 31, 2009; or

(ii) For a source commencing commercial operation on or after July 1, 2008, the calendar quarter corresponding to, the earlier of the date of provisional certification or the applicable deadline for initial certification under subdivision (2)(B) of this subsection or, unless that quarter is the third or fourth quarter of 2008, in which case reporting shall commence in the quarter covering January 1, 2009 through March 31, 2009.

(E) The CO_2 authorized account representative shall submit each quarterly report to the commissioner within 30 days following the end of the calendar quarter covered by the report. Quarterly reports shall be submitted in the manner specified in 40 CFR 75, Subpart H, and 40 CFR 75.64.

(F) Quarterly reports shall include all of the data and information required in 40 CFR 75, Subpart H, for each CO_2 budget source, or group of sources using a common stack, as well as information required in 40 CFR 75, Subpart G except for opacity and SO_2 provisions.

(G) Compliance certification. The CO_2 authorized account representative shall submit to the commissioner a compliance certification in support of each quarterly report based on reasonable inquiry of those persons with primary responsibility for ensuring that all of the source's emissions are correctly and fully monitored. T he certification shall state that:

(i) The monitoring data submitted were recorded in accordance with the applicable requirements of this subsection and 40 CFR 75, including the quality assurance procedures and specifications;

(ii) For a source with add-on CO_2 emission controls and for all hours where data are substituted in accordance with 40 CFR 75.34(a)(1), the add-on emission controls were operating within the range of parameters listed in the quality assurance quality control program under 40 CFR 75, Appendix B and the substitute values do not systematically underestimate CO_2 emissions; and

(iii) The CO_2 concentration values substituted for missing data under 40 CFR 75, Subpart D do not systematically underestimate CO_2 emissions.

(7) Petitions.

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(A) Except as provided in subparagraph (B) of this subdivision, the CO_2 authorized account representative of a CO_2 budget unit that is subject to an Acid Rain emissions limitation may submit a petition to the Administrator under 40 CFR 75.66 and to the commissioner requesting approval to apply an alternative to any requirement of 40 CFR Part 75. Application of an alternative to any requirement of 40 CFR Part 75 is in accordance with subsection (i) of this section only to the extent that the petition is approved in writing by the Administrator, in consultation with the commissioner, and subsequently approved in writing by the commissioner.

(B) The CO_2 authorized account representative of a CO_2 budget unit that is subject to an Acid Rain emissions limitation may submit a petition to the Administrator under 40 CFR 75.66 and to the commissioner requesting approval to apply an alternative to a requirement concerning any additional CEMS required under the common stack provisions of 40 CFR 75.72 or a CO_2 concentration CEMS used under 40 CFR 75.71(a)(2). Application of an alternative to any such requirement is in accordance with subsection (i) of this section only to the extent the petition is approved in writing by the Administrator, in consultation with the commissioner, and subsequently approved in writing by the commissioner.

(C) The CO_2 authorized account representative of a CO_2 budget unit that is not subject to an Acid Rain emissions limitation may submit a petition to the Administrator under 40 CFR 75.66 and to the commissioner requesting approval to apply an alternative to any requirement of 40 CFR Part 75. Application of an alternative to any requirement of 40 CFR Part 75 is in accordance with subsection (i) of this section only to the extent that the petition is approved in writing by the Administrator, in consultation with the commissioner, and subsequently approved in writing by the commissioner.

(D) In the event that the Administrator declines to review a petition under subparagraph (C) of this subdivision, the CO_2 authorized account representative of a CO_2 budget unit that is not subject to an Acid Rain emissions limitation may submit a petition to the commissioner requesting approval to apply an alternative to any requirement of subsection (i) of this section. That petition shall contain all of the relevant information specified in 40 CFR 75.66. Application of an alternative to any requirement of subsection (i) of this section is in accordance with subsection (i) of this section only to the extent that the petition is approved in writing by the commissioner.

(8) CO_2 budget units that co-fire eligible biomass.

(A) The CO_2 authorized account representative of a CO_2 budget unit that co-fires eligible biomass as a compliance mechanism under this subsection, shall report the following information to the commissioner for each calendar quarter:

(i) Chemical analysis of eligible biomass fired, including carbon content;

(ii) Moisture content of eligible biomass for each shipment received for firing at the CO_2 budget unit;

(iii) Total eligible biomass fuel input, in tons, to the CO_2 budget unit;

(iv) Total eligible biomass heat input on an as-fired basis to the CO_2 budget unit;

(v) Heat input rate of eligible biomass to the CO_2 Budget unit in MMBtu/hr;

(vi) Fuel feed rate of eligible biomass to the CO_2 budget unit in tons/hr;

(vii) Total operating hours for which eligible biomass was co-fired;

(viii) CO_2 tons emitted from the CO_2 budget unit due to firing of eligible biomass;

(ix) Description and documentation of fuel sampling frequency and methodology; and

(x) Description and documentation of monitoring technology employed.

(B) An owner or operator of a CO2 budget unit shall calculate and submit to the commissioner on a quarterly basis the as-fired biomass CO2 emissions factor for the CO2 budget unit for each distinct type of eligible biomass fired during the

reporting quarter, represented as CO2 lbs per MMBtu of biomass heat input. The as-fired CO2 emissions factor shall be the lower of the following:

(i) as measured and recorded by the continuous emissions monitor during all periods when firing eligible biomass alone; or

(ii) for solid fuels, as determined as follows:

CO_2 lbs/MMBtu = $((C \times FI_{TOTAL}) / HI) \times (44/12)$

Where:

C = Carbon content of biomass (percent by dry weight) for the distinct fuel type

FI_{TOTAL} = Total biomass fuel input, in pounds, for each distinct fuel type

HI = Heat input, as-fired, in MMBtu, derived as follows:

$HI = \sum (HHV_{DRY} \times (1\text{-}MCW_S)) \times FI_S$

Where:

HHV_{DRY} = MMBtu/lb (higher heating value) dry basis for each distinct fuel type fired

MCW_S = Moisture content wet basis (percent) for each shipment fired

FI_S = Biomass fuel input, in pounds, for each shipment fired

(iii) for gaseous fuels, as determined as follows:

CO_2 lbs/MMBtu = $((C \times D) / HHV) \times (44/12)$

Where:

C = Carbon content of biogas (percent by weight) for distinct fuel type

D = Density of biogas, in lb/scf for distinct fuel type

HHV = Higher heating value, in MMBtu/scf, for distinct fuel type

(C) CO_2 emissions due to firing of eligible biomass shall be determined as follows:

$$CO_{2\text{-BIOMASS}} = \sum (B_{HI} \times B_{EF} \times B_{OF})/2000$$

where:

$CO_{2\text{-BIOMASS}}$ = Total CO_2 emissions, in tons, due to firing of eligible biomass for the reporting quarter

B_{HI} = Eligible biomass heat input on an as-fired basis, in MMBtu, for the reporting quarter for each distinct type of eligible biomass fired

B_{EF} = Eligible biomass emissions factor for the reporting quarter, in lbs. CO_2/MMBtu, for each distinct type of eligible biomass fired

B_{OF} = Eligible biomass oxidation factor for each distinct type of eligible biomass fired, derived for solid fuels based on the ash content of the eligible biomass fired and the carbon content of this ash, as determined pursuant to subparagraph (A)(i) of this subdivision; for gaseous biomass fuels, a default oxidation factor of 0.995 may be used

(D) Fuel sampling methods and fuel sampling technology shall be consistent with the New York State Renewable Portfolio Standard Biomass Guidebook, May 2006.

(9) Additional requirements to provide net output data.

(A) A CO_2 budget source in a state that requires the use of information submitted to the Independent System Operator (ISO) to document megawatt-hours (MWh) the CO_2 budget source shall submit to the commissioner the same MWh value submitted to the ISO and a statement certifying that the MWh of electrical output reported reflects the total actual electrical output of the CO_2 budget sources at the facility used by the ISO to determine settlement resources of energy market participants.

(B) A CO_2 budget source in a state that requires gross output to be used that also reports gross hourly MW to the Administrator, shall use the same electronic data report (EDR) gross output (in MW), as submitted to the Administrator, for the hour times operating time in the hour, added for all hours in a year. A CO_2 budget source that does not report gross hourly MW to the Administrator shall submit to the commissioner information in accordance with subparagraph (F) of this subdivision.

(C) A CO_2 budget source in a state that requires net electrical output, shall submit to the commissioner information in accordance with subparagraph (F) of this subdivision. A CO_2 budget source whose electrical output is not used in ISO energy market settlement determinations shall propose to the commissioner a method for quantification of net electrical output.

(D) CO_2 budget sources selling steam should use billing meters to determine net steam output. A CO_2 budget source whose steam output is not measured by billing meters or whose steam output is combined with output from a non-CO_2 budget source prior to measurement by the billing meter shall propose to the commissioner an alternative method for quantification of net steam output. If data for steam output is not available, the CO_2 budget source may report heat input providing useful steam output as a surrogate for steam output.

(E) Monitoring. The owner or operator of each CO_2 budget source, in a state that has chosen to allocate allowances based on the CO_2 budget source's net output, shall meet the following requirements. Each CO_2 budget source must provide a description of its net output monitoring approach in an output monitoring plan application required by the CO_2 Budget Trading Program under this subdivision. The output monitoring plan application must include the elements described in subparagraphs (F) through (O) of this subdivision.

(F) The owner or operator of a CO_2 budget source shall submit, to the commissioner, a diagram of the electrical or steam system for which output is being monitored, specifically including:

(i) For net electric output, the diagram should contain all CO_2 budget sources and all generators served by each CO_2 budget source and the relationship between CO_2 Budget sources and generators. If a generator served by a CO_2 budget source is also served by a non-affected source, the non-affected source and its relationship to each generator should be indicated on the diagram as well. The diagram should indicate where the net electric output is measured and should include all electrical inputs and outputs to and from the plant. If net electric output is determined using a billing meter, the diagram should show each billing meter used to determine net sales of electricity and should show that all electricity measured at the point of sale is generated by the CO_2 budget sources; and

(ii) For net thermal output, the diagram should include all steam or hot water coming into the net steam system, including steam from CO_2 budget sources and non-affected sources, and all exit points of steam or hot water from the net steam system. In addition, each input and output stream will have an estimated temperature, pressure and phase indicator, and an enthalpy in Btu/lb. The diagram of the net steam system should identify

all useful loads, house loads, parasitic loads, any other steam loads and all boiler feed water returns. The diagram will represent all energy losses in the system as either usable or unusable losses. The diagram will also indicate all flow meters, temperature or pressure sensors or other equipment used to calculate gross thermal output. If a sales agreement is used to determine net thermal output, the diagram should show the monitoring equipment used to determine the sales of steam.

(G) The owner or operator of a subject facility shall submit, to the commissioner, a description of each output monitoring system. The description of the output monitoring system should include a written description of the output system and the equations used to calculate output. For net thermal output systems descriptions and justifications of each useful load should be included.

(H) The owner or operator of a subject facility shall submit, to the commissioner, a detailed description of all quality assurance and quality control activities that will be performed to maintain the output system in accordance with subparagraph (M) of this subdivision.

(I) The owner or operator of a subject facility shall submit, to the commissioner, documentation supporting any output values to be used as a missing data value should there be periods of invalid output data. The missing data output value must be either zero or an output value that is likely to be lower than a measured value and that is approved as part of the monitoring plan required under this section.

(J) Initial Certification. A certification statement must be submitted by the CO_2 authorized account representative stating that either the output monitoring system consists entirely of billing meters or that the output monitoring system meets one of the accuracy requirements for non-billing meters below. This statement may be submitted with the certification application required by the CO_2 Budget Trading Program.

(K) Billing Meters. The billing meter must record the electric or thermal output. Any electric or thermal output values that the facility reports must be the same as the values used in billing for the output. Any output measurement equipment used as a billing meter in commercial transactions requires no additional certification or testing requirements.

(L) Non-Billing Meters. For non-billing meters the output monitoring system must either meet, an accuracy of ten (10) percent of the reference value or each component monitor for the output system must meet an accuracy of three (3) percent of the full scale value, whichever is less stringent, as follows:

(i) The system approach to accuracy must include a determination of how the system accuracy of ten (10) percent is achieved using the individual components in the system and should include data loggers and any watt meters used to calculate the final net electric output data or any flow meters for steam or condensate, temperature measurement devices, absolute pressure measurement devices and differential pressure devices used for measuring thermal energy; or

(ii) A component approach to accuracy. If testing a piece of output measurement equipment shows that the output readings are not accurate to three (3) percent or less of the full scale, then retest or replace the measurement equipment and meet that requirement. Data should be considered invalid, prospectively, for purposes of determining allocations. Data remain invalid until the output measurement equipment passes an accuracy test or is replaced with another piece of equipment that passes the accuracy test.

(M) Ongoing quality assurance and quality control. Ongoing quality assurance and quality control activities must be performed in order to maintain the output system, which shall include the following.

(i) Billing Meters. In the case where billing meters are used to determine output, no quality assurance and quality control activities beyond those already performed are required; and

(ii) Non-Billing Meters. Certain types of equipment such as potential transformers, current transformers and the primary element of an orifice plate only require an initial certification of calibration and do not require periodic recalibration unless the equipment is physically changed. However, the pressure and temperature transmitters accompanying an orifice plate will require periodic retesting. For other types of equipment, either recalibrate or re-verify the meter accuracy at least once every two years, unless a consensus standard allows for less frequent calibrations or accuracy tests. The system approach to accuracy or a component approach to accuracy shall be in accordance with subparagraph (L)(i) or (ii) of this subdivision. If testing a piece of output measurement equipment shows that the output readings are not accurate to 3.0 percent or less of the full scale value, then retest or replace the measurement equipment and meet that requirement.

(N) Out of Control Periods. If testing a piece of output measurement equipment shows that the output readings are not accurate to the certification value, data remain valid until the output measurement equipment passes an accuracy test or is replaced with another piece of equipment that passes an accuracy test. All invalid

data shall be replaced by either zero output or an output value that is likely to be lower than a measured value and that is approved as part of the monitoring plan under subparagraph (E) of this subdivision.

(O) Recordkeeping and Reporting. The CO_2 authorized account representative shall comply with all recordkeeping and reporting requirements in this subparagraph and with the requirements of subsection (c)(1)(E) of this section:

(i) Recordkeeping. The owner or operator of a CO_2 budget source shall retain data used to monitor, determine or calculate net generation for ten years;

(ii) Annual reports. The CO_2 authorized account representative shall electronically submit to the commissioner an annual net output report by March 1 for the immediately preceding control period; and

(iii) The annual report shall be certified as follows:

> "I am authorized to make this submission on behalf of the persons having an ownership interest with respect to the Annual Report. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."

(j) Severability.

Each provision of this section is deemed severable, and in the event that any provision of this section is held to be invalid, the remainder of this section shall continue in full force and effect.

Statement of Purpose

The purpose of the proposed new Regulations of Connecticut State Agencies ("R.C.S.A.") section 22a-174-31 is to adopt a state rule to implement the Regional Greenhouse Gas Initiative (RGGI), a regional program under which the states of New York, Massachusetts, Rhode Island, Vermont, New Hampshire, Maine, New Jersey, Delaware and Maryland will:

- Impose a cap on carbon dioxide emissions from large fossil fuel-fired electricity

generating units in Connecticut,
- First stabilize (in 2009-2014), then reduce carbon dioxide emissions by 2.5% per year (in 2015-2018) from the region's utility sector,
- Allow allocation of emissions offsets to be used for compliance where real reduction of greenhouse gases are achieved outside the regulated sector,
- Require auctioning of CO_2 allowances and use auction proceeds for consumer benefit or strategic energy purposes as required by Public Act 07-242, Section 93,
- Require demonstration of compliance every three years.

B. Section 22a-174-31a, Greenhouse Gas Emission Offset Projects. This proposed new regulation authorizes the creation and use of emission reductions from outside the power sector to be counted towards compliance with the requirements of Section 31. Section 31a also establishes protocols and procedures under which such offsets may be created for five categories: landfill methane ("CH4") capture and destruction; sulfur hexafluoride ("SF6") reductions; sequestration of carbon due to afforestation; reduced or avoided carbon dioxide emissions due to end-use energy efficiency; and avoided methane emissions from agricultural manure management operations. The text of the regulation as proposed for pubic hearing is as follows:

Section 22a-174-31a. Greenhouse Gas Emission Offset Projects.

(a) Definitions and abbreviations. For the purposes of this section and section 22a-174-31 of the Regulations of Connecticut State Agencies:

(1) "Anaerobic digester" means a device that promotes the decomposition of organic material to simple organics and gaseous biogas products, usually accomplished by means of controlling temperature and volume, and including a methane recovery system;

(2) "Anaerobic digestion" means the degradation of organic material including manure brought about through the action of microorganisms in the absence of elemental oxygen;

(3) "Anaerobic storage" means the storage of organic material in an oxygen-free environment, or under oxygen-free conditions, including but not limited to, holding tanks, ponds, and lagoons;

(4) "ANSI" means the American National Standards Institute;

(5) "ASHRAE" means the American Society of Heating, Refrigerating and Air-Conditioner Engineers;

(6) "Award" means the determination by the commissioner of the number of CO_2 offset allowances to be recorded in the general account of a project sponsor. Award is a type of allocation;

(7) "Biogas" means the gas, primarily methane and CO_2, resulting from the decomposition of organic matter under anaerobic conditions;

(8) "Boiler" means a fossil or other fuel fired device that produces steam or heats water or any other heat transfer medium;

(9) "Building envelope" means the elements of a building, including walls, windows, foundation, basement slab, ceiling, roof and insulation, that separate conditioned space from unconditioned space, or that enclose semi-heated space, through which thermal energy may be transferred to or from the exterior, unconditioned space, or conditioned space;

(10) "Certification" means an independent third-party verification that a CO_2 emissions offset project application and all measurement, monitoring or verification associated therewith meets the requirements of this section;

(11) "CO_2 offset allowance" means "CO_2 offset allowance" as defined in section 22a-174-31 of the Regulations of Connecticut State Agencies;

(12) "CO_2 emissions offset project" means a project to reduce or avoid atmospheric loading of CO_2, CO_2e or sequestered carbon where such project yields reduced or avoided emissions that are real, additional, verifiable, enforceable and permanent;

(13) "CO_2e" means "carbon dioxide equivalent" as defined in section 22a-174-31 of the Regulations of Connecticut State Agencies;

(14) "Commercial building" means a non-residential building to which the provisions of ANSI/ASHRAE/IESNA Standard 90.1 apply;

(15) "Conflict of interest" means a situation under which an individual has a relationship with any specific project sponsor, CO_2 emissions offset project or category of offset projects, such that the individual's other activities or relationships with other persons or organizations render or may render the individual incapable of providing an impartial certification opinion, or otherwise compromise the individual's objectivity in performing certification functions;

(16) "Condensing mode" means the design and operation of furnaces or boilers in a mode that leads to the production of condensate in flue gases;

(17) "Cooperating regulatory agency" means a regulatory agency in a state or United States jurisdiction that is not a participating state that has entered into a memorandum of understanding with the commissioner and appropriate regulatory agencies of all participating states to carry out certain obligations relative to CO_2 emissions offset projects in that state or United States jurisdiction, including but not limited to the obligation to perform audits of offset project sites, and report noncompliance with this section;

(18) “Energy conservation measure” (“ECM”) or “energy efficiency measure” (“EEM”) means an activity or a set of activities designed to increase the energy efficiency of a building or improve the management of energy demand and may include, but not be limited to, physical changes to facility equipment, modifications to a building, revisions to operating and maintenance procedures, software changes, or new means of training or managing users of the building or operations and maintenance staff;

(19) “Energy performance” means a measure of the relative energy efficiency of a building, building equipment, or building components, as measured by the amount of energy required to provide building services. For building equipment and components, a relative measure of the impact of equipment or components on building energy usage;

(20) “Energy services” means the provision of useful services to building occupants, such as heating and hot water, cooling, and lighting;

(21) “Forested condition” means land that is at least 1.0 acre in size and 120.0 feet wide measured stem-to-stem from the outer-most edge with forested strips that must be 120.0 feet wide for a continuous length of at least 363.0 feet, and meets one of the following stocking criteria:

(A) The condition is at least 10-percent stocked by trees of any size or has been at least 10-percent stocked in the past, and the condition is not subject to non-forest use that prevent normal tree regeneration and succession such as regular mowing, intensive grazing, or recreation activities, or

(B) In several western woodland species where stocking cannot be determined, the condition has at least 5-percent crown cover by trees of any size, or has had at least 5-percent cover in the past, and the condition is not subject to non-forest use that prevents normal regeneration and succession such as regular mowing, chaining, or recreation activities;

(22) “Furnace (residential)” means a self-contained, indirect-fired appliance with a heat input rate of less than 225,000 Btu/hr that supplies heated air to a residential or commercial building through ducts to conditioned spaces;

(23) “HVAC system” means a system or systems that provide, either collectively or individually, heating, ventilation, or air conditioning to a building, including the equipment, distribution network, and terminals;

(24) “IESNA” means the Illuminating Engineering Society of North America;

(25) “Independent verifier” means an individual who has been approved by the commissioner or the commissioner’s designee to conduct verification activities;

(26) "Market penetration rate" means a measure of the diffusion of a technology, product, or practice in a defined market, as represented by the percentage of annual sales for a product or practice, or as a percentage of the existing installed stock for a product or category of products, or as the percentage of existing installed stock that utilizes a practice. The commissioner may determine an appropriate market definition and market penetration metric for a category of technology, product or practice, and may issue guidance specifying the technologies, products or practices that meet a specified market penetration rate;

(27) "Non-census water" means streams, sloughs, estuaries, and canals more than 120 feet and less than 1/8 of a mile wide. Lakes, reservoirs, and ponds one (1) to 40 acres in size.

(28) "Non-forested condition" means land that does not meet the definition of "forested condition" and any land that includes areas used for crops, improved pasture, residential areas, city parks, improved roads of any width and adjoining rights-of-way, power line clearings of any width, and non-census water. If intermingled in forested areas, unimproved roads and non-forest strips must be more than 120.0 feet wide, and clearings more than one acre in size, to qualify as non-forest land;

(29) "Offset project" means all equipment, materials, items, or actions directly related to the reduction of CO_2 equivalent emissions or the sequestration of carbon specified in a consistency application submitted pursuant to this section;

(30) "On-site combustion" means the combustion of fossil fuel at a building to provide building services, such as heating, hot water, or electricity;

(31) "Passive solar" means a combination of building design features and building components that utilize solar energy to reduce or eliminate the need for mechanical heating and cooling and daytime artificial lighting;

(32) "Permanently retired" means a greenhouse gas allowance or credit has been placed in a retirement account controlled by the jurisdiction that generated the allowance or credit, or has been placed in an allowance retirement account controlled by the commissioner or is otherwise determined by the commissioner to be rendered unusable;

(33) "Project commencement" means the date on which physical construction, installation of equipment or materials or other work at an offset project site began; or the date on which a management activity or protocol is first utilized for an offset project;

(34) "Project sponsor" means any person who owns or operates an eligible CO_2 emission offset project or CO_2 emissions credit retirement;

(35) "Regional-type anaerobic digester" means an anaerobic digester using feedstock from more than one agricultural operation, or importing feedstock from more than one agricultural operation. Also referred to as a community digester or centralized digester;

(36) “Renewable portfolio standard” means the statutory requirement that a load-serving entity provide a certain portion of the electricity it supplies to its customers from renewable energy sources pursuant to section 16-245*a* of the Connecticut General Statute or any other statute or regulation requiring a certain portion of electricity supplied to the electricity grid be generated from renewable energy sources;

(37) “Residential building” means a low-rise structure used as a single family home, a multifamily home of three or fewer stories above grade, or a modular or mobile manufactured home for which the provisions of ANSI/ASHRAE/IESNA Standard 90.1 do not apply;

(38) “RESNET” means the Residential Energy Services Network;

(39) “SF_6-containing operating equipment” means any equipment used for the transmission or distribution of electricity that contains SF_6;

(40) “System benefit fund” means the monies collected directly from retail electricity or natural gas ratepayers pursuant section 16-245*l* of the Connecticut General Statutes or the statutes and regulations of other states;

(41) “Total solids” means the total of all solids in a sample, including total suspended solids, total dissolved solids, and volatile suspended solids;

(42) “Transmission or distribution entity” means the assets and equipment used to transmit and distribute electricity from an electric generator to the electrical load of a customer, including all related assets and equipment located within the service territory of the entity, defined as the service territory of a load-serving entity specified by the Connecticut Department of Public Utility Control;

(43) “Verification” means the determination by an independent verifier that certain parts of a CO_2 emissions offset project consistency application or measurement, monitoring and verification report conforms to the requirements of this section;

(44) “Volatile solids” means the fraction of total solids that is comprised primarily of organic matter;

(45) “Whole-building energy performance” means the overall energy performance of a building, taking into account the integrated impact on energy usage of all building components and systems;

(46) “Whole-building retrofit” means any building project that involves the replacement of more than one building system, or set of building components, and also requires a building permit; and

(47) "Zero net energy building" means a building designed to produce as much energy, using renewable energy sources, as the building is projected to use, as measured on an annual basis.

(b) Applicability and General Requirements.

(1) This section applies to the sponsor of any CO_2 emissions offset project undertaken to create CO_2 offset allowances for sale or use in the State of Connecticut in accordance with the requirements of section 22a-174-31 of the Regulations of Connecticut State Agencies or in any other participating state.

(2) Copies of documents incorporated by reference into this section are available by contacting:

Connecticut Department of Environmental Protection
Bureau of Air Management
79 Elm Street
Hartford, Connecticut 06106
(860) 424-3027

(c) General Requirements for CO_2 Emissions Offset Projects.

(1) The commissioner or commissioner's designee may award CO_2 offset allowances to sponsors of CO_2 emissions offset projects or CO_2 emissions credit retirements that have reduced or avoided atmospheric loading of CO_2 or CO_2 equivalent or sequestered carbon as demonstrated in accordance with the applicable provisions of this section provided that such projects represent CO_2 or CO_2 equivalent reductions or carbon sequestration that are real, additional, verifiable, enforceable, and permanent. The use of such offset allowances for compliance purposes are subject to the provisions of section 22a-174-31 of the Regulations of Connecticut State Agencies.

(2) Eligible CO_2 emissions offset projects. Offset projects shall satisfy all the applicable requirements of this section to qualify for the award of CO_2 offset allowances. As identified in subsections (d) through (h) of this section, projects that either capture and destroy landfill methane, avoid sulfur hexafluoride emissions, sequester carbon through afforestation, provide end-use energy efficiency, or avoid methane emissions from agricultural management operations are eligible for the award of CO_2 offset allowances.

(3) Eligible offset project locations. Eligible offset projects may be located in any participating state or in any state or other U.S. jurisdiction that has entered into a memorandum of understanding with the commissioner and the appropriate regulatory agencies of all participating states to carry out certain obligations relative to CO_2 emissions offset projects in such state or U.S. jurisdiction, including but not limited to the obligation to perform audits of

offset project sites, and report violations of this section to the commissioner or the commissioner's designee.

(4) Eligible CO_2 emissions credit retirements. A CO_2 emissions credit retirement shall satisfy all the applicable requirements of this section, to qualify for the award of CO_2 offset allowances. CO_2 emissions credit retirements include the permanent retirement of greenhouse gas allowances or credits issued pursuant to any governmental mandatory carbon constraining program outside the United States that places a specific tonnage limit on greenhouse gas emissions, provided the allowances or credits are acceptable and valid for use in that program at the time the consistency application is filed pursuant to this subsection, or certified greenhouse gas emissions reductions credits issued pursuant to the United Nations Framework Convention on Climate Change (UNFCCC) or protocols adopted through the UNFCCC process. The commissioner or the commissioner's designee may award CO_2 offset allowances for CO_2 emissions credit retirements only after the occurrence of a stage two trigger event.

(5) General Requirements. In addition to the requirements set forth in subsections (d) through (h) of this section, the following general requirements shall apply to each offset project:

(A) CO_2 offset allowances shall not be awarded for an offset project or CO_2 emissions credit retirement that is required pursuant to any local, state or federal law, regulation, or administrative or judicial order. If an offset project receives a consistency determination under this subsection and is later required by local, state or federal law, regulation, or administrative or judicial order, then the offset project shall only remain eligible for the award of CO_2 offset allowances until the end of its current allocation period.

(B) If an offset project includes an electric generation component, the project sponsor shall transfer to the commissioner or the commissioner's designee the legal rights to all attribute credits generated from the operation of the offset project, other than CO_2 offset allowances issued under this subsection, that may be used for compliance with a renewable portfolio standard or other regulatory requirement.

(C) Offset projects may not receive funding or other incentives from any systems benefit fund, or funds or other incentives provided through the auction reserves described in section 22a-174-31(f)(4)(D)(ii) and 22a-174-31(f)(4)(D)(iii) of the Regulations of Connecticut State Agencies.

(D) CO_2 offset allowances shall not be awarded to an offset project or CO_2 emissions credit retirement that is awarded credits or allowances under any other mandatory or voluntary greenhouse gas program, by another participating state, or by any other carbon market.

(6) Maximum allocation periods for CO_2 emissions offset projects. The commissioner or the commissioner's designee may award CO_2 offset allowances under this section as follows:

(A) Maximum allocation periods. Except as provided in subparagraph (B) of this subdivision, the commissioner or the commissioner's designee shall award CO_2 offset allowances under this section for any offset project for an allocation period not to exceed ten years. At the end of the initial 10-year allocation period and upon a demonstration by the project sponsor that the offset project continues to meet all applicable requirements of this section, the commissioner or the commissioner's designee may award CO_2 offset allowances for a second 10-year allocation period. Prior to the expiration of the initial allocation period, the offset project sponsor must submit a consistency application pursuant to this section and receive a consistency determination from the commissioner or the commissioner's designee.

(B) Maximum afforestation allocation period. The commissioner or the commissioner's designee may award CO_2 offset allowances under this subsection for any afforestation offset project for an initial 20-year allocation period. At the end of the initial 20-year allocation period the commissioner or the commissioner's designee may award CO_2 offset allowances for a second 20-year allocation period, provided the offset sponsor submitted a consistency application for the afforestation offset project prior to the expiration of the initial allocation period, and the commissioner or the commissioner's designee has issued a consistency determination pursuant to this subsection. At the end of the second 20-year allocation period, the commissioner or the commissioner's designee may award CO_2 offset allowances for a third 20-year allocation period, provided the offset sponsor has submitted a consistency application for the afforestation offset project prior to the expiration of the second allocation period, and the commissioner or the commissioner's designee has issued a consistency determination pursuant to this subsection. In no event shall an afforestation offset project be awarded CO_2 offset allowances for more than a total of 60 allocation years.

(7) Timing of offset projects. The commissioner or the commissioner's designee may award CO_2 offset allowances under this section only for offset projects that commenced on or after December 20, 2005.

(8) Offset project audit. Project sponsors shall provide the commissioner or the commissioner's designee access to the physical location of the offset project in order to determine compliance with this section.

(9) Ineligibility due to noncompliance. If at any time the commissioner or the commissioner's designee determines that a project sponsor has not complied with the requirements of this section, the commissioner or the commissioner's designee may revoke and

retire any and all offset allowances in the project sponsor's general account. If at any time the commissioner or the commissioner's designee determines that an offset project does not comply with the requirements of this section, the commissioner or the commissioner's designee may revoke any prior approvals issued in relation to an offset project.

(10) Application Process. Any person may act as the sponsor of an eligible CO_2 emissions offset project or CO_2 emissions credit retirement, provided that person meets the requirements of this subdivision as follows:

(A) Establishment of general account. The sponsor of an offset project or CO_2 emissions credit retirement shall establish a general account under section 22a-174-31(g)(2)(B) of the Regulations of Connecticut State Agencies. All submissions to the commissioner required for the award of CO_2 offset allowances under this subsection must be from the CO_2 authorized account representative for the general account of the sponsor of the relevant offset project or CO_2 emissions credit retirement;

(B) Consistency application time frames.

(i) For offset projects commenced prior to January 1, 2009, the project sponsor shall submit the consistency application no later than June 30, 2009,

(ii) For offset projects commenced on or after January 1, 2009, the project sponsor shall submit the consistency application no later than the date that is six months after the offset project is commenced, and

(iii) The commissioner or the commissioner's designee shall deny any application that fails to meet the time frames specified in this subparagraph.

(C) Consistency application contents. The sponsor of an offset project shall provide the following information to the commissioner or the commissioner's designee:

(i) The project's sponsor's name, address, e-mail address, telephone number, facsimile transmission number, and account number;

(ii) The offset project description as required by the relevant provisions of subsection (d) through (h) of this section;

(iii) The emissions baseline determination as required by relevant provisions of subsection (d) through (h) of this section;

(iv) An explanation of how the projected reduction or avoidance of atmospheric loading of CO_2 or CO_2 equivalent or the sequestration of

carbon is to be quantified, monitored and verified as required by the relevant provisions of subsection (d) through (h) of this section;

(v) A completed application agreement that reads as follows: "The undersigned project sponsor recognizes and accepts that the application for, and the receipt of, CO_2 offset allowances under the CO_2 Budget Trading Program is predicated on the project sponsor following all the requirements of section 22a-174-31a of the Regulations of Connecticut State Agencies. The project sponsor holds the legal rights to the offset project, or has been granted the right to act on behalf of a party that holds the legal rights to the offset project. I understand that eligibility for the award of offset allowances under section 22a-174-31a of the Regulations of Connecticut State Agencies is contingent on meeting the requirements of this section. I authorize the commissioner or the commissioner's designee to audit this offset project for purposes of verifying that the project, including the monitoring and verification plan, has been implemented as described in this application. I understand that this right to audit shall include the right to enter the physical location of the offset project. I submit to the legal jurisdiction of the State of Connecticut.";

(vi) A statement and certification report signed by the offset project sponsor certifying that all offset projects for which the sponsor has received offset allowances under this section (or similar provisions in the rules of other participating states), under the sponsor's ownership or control (or under the ownership or control of any entity which controls, is controlled by, or has common control with the sponsor) are in compliance with all applicable requirements of the CO_2 Budget Trading Program in all participating states;

(vii) A statement and certification report drafted and signed by an independent verifier, accredited pursuant to this section, indicating that the independent verifier has reviewed the entire application and evaluated the adequacy and validity of the following information in relation to the applicable requirements in this section: the demonstration that the offset project meets the applicable eligibility requirements of this section; baseline emissions in accordance with this section; the monitoring and verification plan submitted in accordance with this section; and such other statements as may be required by commissioner or the commissioner's designee;

(viii) Disclosure of any voluntary or mandatory programs, other than the CO_2 Budget Trading Program, to which greenhouse gas emissions data related to the offset project has been, or will be, reported;

(ix) For offset projects located in a state or United States jurisdiction that is not a participating state, a demonstration that the project sponsor has complied with all requirements of the cooperating regulatory agency in the state where the offset project is located; and

(x) Any other information the commissioner or the commissioner's designee may require in order to evaluate the proposed offset project.

(D) CO_2 emissions offset credit retirements. For a CO_2 emissions credit retirement, the consistency application must include sufficient information to demonstrate that the CO_2 emissions credit is eligible pursuant to this section, was lawfully held by the project sponsor, and has been permanently and irrevocably retired.

(11) Place for filing**.**

(A) For an offset project located in one participating state in whole or in part, the consistency application must be filed with the appropriate commissioner in that State.

(B) For an offset project located wholly outside all participating states, the consistency application may be filed with the appropriate commissioner in any one participating state. In addition, a copy of the consistency application shall be filed with the cooperating regulatory agency in the state or United States jurisdiction where the offset project is located.

(C) For an offset project located in more than one participating state, the consistency application must be filed in the participating state where the larger part of the emissions reduction or carbon sequestration due to the offset project activity is projected to occur.

(D) For CO_2 emissions credit retirements, the consistency application may be filed with the appropriate commissioner in any one participating state.

(12) Commissioner action on consistency applications.

(A) Completeness determination. Within 30 days following receipt of the application filed pursuant to subdivision (9)(B) of this subsection, the commissioner or the commissioner's designee will notify the project sponsor whether the consistency application is complete. A complete consistency application is one that is in an approved form and is determined by the commissioner or the commissioner's designee to be complete for the purpose of commencing review of the application. In no event shall a completeness determination prevent the commissioner or the commissioner's designee from requesting additional information in order to fully

evaluate the proposed project in accordance with subparagraph (B) of this subdivision.

(B) Consistency determination. Within 150 days of making the completeness determination under subparagraph (A) of this subdivision, the commissioner or the commissioner's designee will issue a determination as to whether the offset project has met the requirements of this section and the requirements of the applicable offset project standard of subsection (d), (e), (f), (g) or (h) of this section. For any application found to lack consistency with these requirements, the commissioner or the commissioner's designee will inform the project sponsor of the offset project's deficiencies.

(d) Landfill Methane (CH_4) Capture and Destruction

(1) Eligibility. An offset project that captures and destroys methane from landfills shall meet the requirements of subsection (d) and all applicable requirements of this section, to qualify for the award of CO_2 offset allowances. In addition, eligible offset projects shall meet the following requirements:

(A) The offset project may only occur at a landfill that is not subject to the New Source Performance Standards for municipal solid waste landfills under subpart Cc and subpart WWW of 40 CFR 60, a non-NSPS landfill; and

(B) Offset project description. The project sponsor shall provide a detailed narrative of the offset project action(s) to be taken, including supporting materials as appropriate. The project narrative shall include the following:

(i) Owner and operator of the offset project;

(ii) Location and specifications of the landfill where the offset project will occur, including waste in place;

(iii) Owner and operator of the landfill where the offset project will occur; and

(iv) Specifications of the equipment to be installed and a technical schematic of the offset project.

(2) Emissions baseline determination. The emissions baseline shall represent the potential fugitive landfill emissions, in tons of CO_2e, of the methane (CH_4) collected and metered for thermal destruction as part of the offset project. Baseline CH_4 fugitive emissions shall be calculated as follows:

Emissions (tons CO_2e) = (V x M x (1-OX) x GWP)/2000

Where:

V	=	Volume of CH_4 collected (ft^3)
M	=	Mass of CH_4 per cubic foot (0.04246 lbs/ft^3 default value at 1 atmosphere and 20° C)
OX	=	Oxidation factor (0.10), representing estimated portion of collected CH_4 that would have eventually oxidized to CO_2 if not collected
GWP	=	CO_2e global warming potential of CH_4 (23)

(3) Calculating emissions reductions. Emissions reductions shall be determined based on the difference between potential fugitive CH_4 emissions that would have occurred if metered CH_4 collected from the landfill for thermal destruction as part of the offset project was not collected and destroyed. CO_2e emissions reductions shall be calculated as follows:

$$\text{Emissions Reductions (tons } CO_2e) = (V \times M \times (1 - OX) \times C_{ef} \times GWP)/2000$$

Where:

V	=	Volume of CH_4 collected (ft_3)
M	=	Mass of CH_4 per cubic foot (0.04246 lbs/ft^3 default value at 1 atmosphere and 20° C)
OX	=	Oxidation factor (0.10), representing estimated portion of collected CH_4 that would have eventually oxidized to CO_2 if not collected
C_{ef}	=	Combustion efficiency of methane control technology (0.98)
GWP	=	CO_2e global warming potential of CH_4 (23)

(4) Monitoring and verification requirements. Offset projects shall employ a landfill gas collection system that provides continuous metering and data computation of landfill gas volumetric flow rate and CH_4 concentration. Annual monitoring and verification reports required pursuant to subsection (j) of this section shall include monthly volumetric flow rate and CH_4 concentration data, including documentation that the CH_4 was actually supplied to the combustion source. Monitoring and verification is also subject to the following requirements:

(A) The project sponsor shall submit a monitoring and verification plan as part of the consistency application that includes a quality assurance and quality control program associated with equipment used to determine landfill gas volumetric flow rate and CH_4 composition. The monitoring and verification plan shall also include provisions for ensuring that measuring and monitoring equipment is maintained, operated and calibrated based on manufacturer recommendations, as well as provisions for the retention of maintenance records for audit purposes. The monitoring and verification plan shall be certified by an independent verifier accredited pursuant to subsection (i) of this section.

(B) The project sponsor shall annually verify landfill gas CH_4 composition through landfill gas sampling and third party laboratory analysis using applicable U.S. Environmental Protection Agency laboratory test methods.

(e) Reduction in emissions of sulfur hexafluoride (SF_6).

(1) Eligibility. Offset projects that prevent emissions of sulfur hexafluoride to the atmosphere from equipment in the electricity transmission and distribution sector, through capture and storage, recycling, or destruction, shall meet the requirements of subsection (e) and all applicable requirements of this section, to qualify for the award of CO2 offset allowances. In addition, eligible offset projects shall meet the following requirements:

(A) Eligible offset projects shall consist of the incremental actions to be taken, beyond current actions, to achieve a reduction in emissions of SF_6 beyond the transmission and distribution entity's emissions in the baseline reporting year. The identified actions to be taken shall be consistent with the guidance provided in International Electrotechnical Commission (IEC) 1634, and "High-voltage switchgear and control gear – Use and handling of sulfur hexafluoride (SF_6) in high-voltage switchgear and control gear," (CEI/IEC 1634, 1995-04).

(B) Except as provided in subparagraph (C) of this subdivision, eligible offset projects shall take place where the SF_6 entity-wide emissions rate for the baseline year is less than the applicable emissions rate in Table 31a-1B. The entity-wide SF_6 emissions rate shall be calculated as follows:

SF_6 Emissions Rate (%) = (Total SF_6 Emissions for Reporting Year)/ (Total SF_6 Nameplate Capacity at End of Reporting Year)

Where:
SF_6 Nameplate Capacity refers to all SF_6-containing equipment owned or operated by the entity, at full and proper SF_6 charge of the equipment rather than the actual charge of the equipment, which may reflect leakage.

Table 31a-1A and B
SF_6 Emissions Rate Performance Standards

Table 31a-1A. Emission Regions

Region A	Region B	Region C	Region D	Region E
Connecticut	Alabama	Colorado	Arkansas	Alaska
Delaware	District of Columbia	Illinois	Iowa	Arizona

Maine	Florida	Indiana	Kansas	California
Massachusetts	Georgia	Michigan	Louisiana	Hawaii
New Jersey	Kentucky	Minnesota	Missouri	Idaho
New York	Maryland	Montana	Nebraska	Nevada
New Hampshire	Mississippi	North Dakota	New Mexico	Oregon
Pennsylvania	North Carolina	Ohio	Oklahoma	Washington
Rhode Island	South Carolina	South Dakota	Texas	
Vermont	Tennessee	Utah		
	Virginia	Wisconsin		
	West Virginia	Wyoming		

Table 31a-1B. Emissions Rate Performance Standards

Region	Emission Rate[a]
Region A	9.68%
Region B	5.22%
Region C	9.68%
Region D	5.77%
Region E	3.65%
U.S. (National)	9.68%

[a] Based on weighted average 2004 emissions rates for U.S. EPA SF_6 Partnership utilities in each region. If the weighted average emissions rate in a region is higher than the national weighted average, the default performance standard is the national weighted average emissions rate.

(C) An SF_6 offset project located at a transmission or distribution entity serving a predominantly urban service territory shall be eligible even if the entity does not meet the emissions rate requirement at subparagraph (B) Table 31a- 1B of this subdivision, provided the project sponsor demonstrates and the commissioner or the commissioner's designee determines that two or more of the following factors functionally impede management of SF_6 and prevent such entities from meeting the entity-wide emissions rate requirement:

(i) The entity is comprised of older than average installed transmission and distribution equipment in relation to the national average age of equipment,

(ii) A majority of the entity's electricity load is served by equipment that is located underground, and poor accessibility of such underground equipment precludes management of SF_6 emissions through regular ongoing maintenance,

(iii) The inability to take a substantial portion of equipment out of service, as such activity would jeopardize system reliability as set forth in applicable regulatory criteria documents, and

(iv) Required equipment purpose or design for a substantial portion of entity transmission and distribution equipment results in inherently leak-prone equipment.

(2) Offset project description. The offset project sponsor shall provide a detailed narrative of the offset project actions to be taken, including supporting materials as appropriate. The offset project narrative shall include the following:

(A) A description of the transmission or distribution entity specifying the service territory served by the entity.

(B) The owner and operator of the transmission or distribution entity.

(3) Emissions baseline determination. Baseline SF_6 emissions shall be determined based on annual entity-wide reporting of SF_6 emissions for the calendar year immediately preceding the calendar year in which the consistency application is filed and such calendar year shall be designated as the baseline year. If the consistency application is filed prior to 2009, the baseline year may be 2005, but no earlier. The reporting entity shall systematically track and account for all entity-wide uses of SF_6 in order to determine entity-wide emissions of SF_6. The scope of such tracking and accounting shall include all electric transmission and distribution assets and all SF_6-containing and SF_6-handling equipment owned or operated by the reporting entity.

(A) Emissions shall be determined based on the following mass balance method:

SF_6 Emissions(lbs.) = (SF_6 Change in Inventory) + (SF_6 Purchases and Acquisitions) – (SF_6 Sales and Disbursements) – (Change in Total SF_6 Nameplate Capacity of Equipment)

Where:

Change in Inventory means the difference between the quantity of SF_6 gas in storage at the beginning of the reporting year and the quantity in storage at the end of the reporting year. The change in inventory will be negative if the quantity of SF_6 gas in storage increases over the course of the year.

Quantity in Storage means all SF_6 gas contained in cylinders, including 115-pound storage cylinders, gas carts, and other storage containers. This term does not refer to SF_6 gas held in SF_6-using operating equipment.

Purchases and Acquisitions of SF_6 means the sum of all the SF_6 gas acquired from other parties during the reporting year, as contained in storage containers or SF_6-using operating equipment.

Sales and Disbursements of SF_6 means the sum of all the SF_6 gas sold or otherwise disbursed to other parties during the reporting year, as contained in storage containers and SF_6-using operating equipment.

Change in Total SF_6 Nameplate Capacity of Equipment means the net change in the total volume of SF_6-containing operating equipment during the reporting year. The net change in nameplate capacity is equal to new equipment nameplate capacity, minus retired nameplate capacity. This quantity will be negative if the retired equipment has a total nameplate capacity larger than the total nameplate capacity of the new equipment. "Total nameplate capacity" refers to the full and proper SF_6 charge of the equipment rather than to the actual charge, which may reflect leakage.

(B) Emissions shall be calculated as follows:

Emissions (tons CO_2e) = $[(V_{iby} - V_{iey}) + (PA_{psd} + PA_e + PA_{rre}) - (SD_{op} + SD_{rs} + SD_{df} + SD_{sor}) - (CNP_{ne} - CNP_{rse})]$ x GWP/2000

Where (all SF6 values in lbs):

V_{iby}	=	SF_6 inventory in cylinders, gas carts, and other storage containers (not SF_6–containing operating equipment) at the beginning of the reporting year
V_{iey}	=	SF_6 inventory in cylinders, gas carts, and other storage containers (not SF_6–containing operating equipment) at the end of the reporting year
PA_{psd}	=	SF_6 purchased from suppliers or distributors in cylinders
PA_e	=	SF_6 provided by equipment manufacturers with or inside equipment
PA_{rre}	=	SF_6 returned to the reporting entity after off-site recycling
SD_{op}	=	Sales of SF_6 to other parties, including gas left in equipment that is sold
SD_{rs}	=	Returns of SF_6 to supplier (producer or distributor)
SD_{df}	=	SF_6 sent to destruction facilities
SD_{sor}	=	SF_6 sent off-site for recycling
CNP_{ne}	=	Total SF_6 nameplate capacity of new equipment at proper full charge
CNP_{rse}	=	Total SF_6 nameplate capacity of retired or

sold equipment at proper full charge
GWP = CO_2e global warming potential of SF_6 (22,200)

(C) As part of the project consistency application required pursuant to subsection (c) of this section and in annual monitoring and verification reports required pursuant to subsection (j) of this section, the project sponsor shall provide the documentation required at subdivision (5)(A) through (C) of this subsection to support emissions calculations.

(4) Calculating emissions reductions. Emissions reductions shall represent the annual entity-wide avoided fugitive emissions of SF_6 for the reporting entity. Emissions reductions shall be determined as follows using the quantification method outlined in subdivision (3)(B) of this subsection to determine emissions in both the baseline year and reporting years:

Emissions Reduction (short tons CO_2e) = (Total Pounds of SF_6 Emissions in Baseline Reporting Year) – (Total Pounds of SF_6 Emissions in Reporting Year) x GWP/2000

Where:
GWP = CO_2e global warming potential of SF_6 (22,200)

(5) Annual monitoring and verification requirements. The annual monitoring and verification report shall include supporting material detailing the calculations and data used to determine SF_6 emissions reductions and shall also provide the following documentation:

(A) The project sponsor shall identify all facilities managed by the entity from which all SF_6 gas is procured and disbursed and maintain an entity-wide log of all SF_6 gas procurements and disbursals. The entity-wide log shall include the weight of each cylinder transported before shipment from the facilities and the weight of each cylinder after return to the facilities. A specific cylinder log shall also be maintained for each cylinder that is used to fill equipment with SF_6 or reclaim SF_6 from equipment. The cylinder log shall be retained with the cylinder and indicate the location and specific identifying information of the equipment being filled, or from which SF_6 is reclaimed, and the weight of the cylinder before and after this activity. The cylinder log shall be returned with the cylinder to the facility when the activity is complete or the cylinder is empty.

(B) A current entity-wide inventory of all SF_6-containing operating equipment and all other SF_6-related items, including cylinders, gas carts, and other storage containers used by the entity. The inventory shall be certified by an independent verifier accredited pursuant to subsection (i) of this section.

(C) The project sponsor shall provide a monitoring and verification plan as part of the consistency application, which shall include an SF_6 inventory management and

auditing protocol and a process for quality assurance and quality control of inventory data. The monitoring and verification plan shall be certified by an independent verifier accredited pursuant to subsection (i) of this section.

(f) Sequestration of Carbon Due To Afforestation.

(1) Eligibility. Offset projects that result in the conversion of land from a non-forested to forested state shall meet the requirements in subsection (f) and all applicable requirements in this section, to qualify for the award of CO_2 offset allowances. In addition, eligible offset projects shall meet the following requirements:

(A) Eligible offset projects have been in a non-forested state for at least the ten (10) years preceding the commencement of the offset project.

(B) Eligible offset projects shall be managed in accordance with widely accepted environmentally sustainable forestry practices and designed to promote the restoration of native forests by using mainly native species and avoiding the introduction of invasive non-native species. If commercial timber harvest activities are to occur, certification must be obtained, prior to any harvest activities at the site, through the Forest Stewardship Council (FSC), Sustainable Forestry Institute (SFI), American Tree Farm System (ATFS), or such other similar organizations as may be approved by the commissioner or the commissioner's designee.

(2) Offset project description. The project sponsor shall provide a detailed narrative of the offset project actions to be taken, including supporting materials as appropriate. The offset project narrative shall include the following:

(A) Owner of the land within the offset project boundary;

(B) Detailed map of the land within the offset project boundary and areas adjacent to the offset project boundary;

(C) A copy of the permanent conservation easement required pursuant to subdivision (6) of this subsection;

(D) A written legal opinion from an attorney licensed to practice in the state where the offset project is located, or from the cooperating regulatory agency, confirming the enforceability of the permanent conservation easement for those offset projects located in a state or United States jurisdiction that is not a participating state; and

(E) Plant species to be planted or established via natural regeneration, and a forest

management plan consistent with the requirements of subdivision (3) of this subsection.

(3) Carbon sequestration baseline determination. The existing sequestered carbon within the project boundary shall be calculated prior to commencement of the offset project. The carbon sequestration baseline shall be determined based on a sum of measurements, made no more than 12 months prior to offset project commencement, of the carbon content of the following carbon pools:

(A) Carbon content shall be calculated for the following required carbon pools:

(i) Live above-ground tree biomass,

(ii) Live below-ground tree biomass,

(iii) Soil carbon; and

(iv) Dead organic matter, coarse woody debris, unless the baseline measurement for this carbon pool is at or near zero, in which case measurement of this carbon pool during the allocation period is optional.

(B) Carbon content may be calculated for the following optional carbon pools:

(i) Live above-ground non-tree biomass, and

(ii) Dead organic matter, forest floor.

(C) Carbon content shall be calculated individually for each carbon pool within the offset project boundary;

(D) To increase the accuracy of measurement and verification, the area within both the offset project boundary shall be divided into strata and sub-populations that form relatively homogenous units. When defining strata, the project sponsor shall consider vegetation and tree species, including existing vegetation and trees and those to be utilized as part of the offset project activity, and site factors such as soil type, elevation, slope and other factors as warranted;

(E) Calculation of sequestered carbon for each carbon pool in each reporting stratum shall be based on the following:

CO_2 tons $= [(A \times C/ha)(44/12)] / 0.9072$

Where:
A = Area in hectares within each reporting

stratum

C = Carbon content (metric tons of carbon for each carbon pool)

C/ha = Mean carbon content per hectare for each carbon pool

(F) Total carbon contained within the offset project boundary represented in tons of carbon shall be calculated as follows:

$$TC_{pb} = TC_{latb} + TC_{lbtb} + TC_{s} [+ TC_{lantb} + TC_{doff} + TC_{docwd}]$$

Where:

TC_{pb} = Total carbon content within the offset project boundary (TC_{pb}) (sum of carbon content of all carbon pools in all reporting sub-populations)

TC_{latb} = Sum of carbon content of live above-ground tree biomass in all reporting sub-populations

TC_{lbtb} = Sum of carbon content of live below-ground tree biomass in all reporting sub-populations

TC_{s} = Sum of carbon content of soil carbon in all reporting sub-populations

TC_{lantb} [option]= Sum of carbon content of live above-ground non-tree biomass in each reporting sub-populations

TC_{doff} [option]= Sum of carbon content of dead organic matter, forest floor in all reporting sub-populations

TC_{docwd}[mandatory/option1] = Sum of carbon content of dead organic matter, coarse woody debris in all reporting sub-populations

(G) Each individual carbon pool to be measured must be directly measured using a measurement protocol and sample size that achieves a demonstrated quantified accuracy such that there is 95% confidence that the resulting reported value is within 10% of the true mean. Measurement and sampling practices shall meet the following requirements:

(i) An adequate sample size that meets the requirements of subparagraph (ii) of this subparagraph shall be determined for each stratum.

(ii) The minimum number of required sampling plots for each reporting stratum shall be determined based on the following:

1 Pursuant to the requirements of sub clause (3)(A)(iv) of this subsection.

$$n = (s \times 1.960)/(mean \times re)^2$$

Where:

n	=	required number of sample plots for each reporting sub-populations
s	=	standard deviation
mean	=	mean reported carbon content for the sample population
re	=	level of sampling error (0.08) to assure a total maximum error of 10% for the 95% confidence interval, that assumes total error due to measurement error of 0.02

(H) Direct measurement procedures shall be consistent with current forestry good practice and the guidance contained in U.S. Department of Energy, *Technical Guidelines for Voluntary Reporting of Greenhouse Gases (1605(b)) Program; Chapter 1, Emissions Inventories; Part I Appendix: Forestry; Section 3: Measurement Protocols for Forest Carbon Sequestration* (March 2006).

(4) Calculating carbon sequestered. Carbon sequestration shall be determined using a base year approach, where the amount of carbon sequestered is measured as a net increase in carbon relative to the base year measurement. Carbon sequestration, represented in tons of carbon, shall be the amount of net additional carbon sequestered during each calculation period, based upon aggregate carbon uptake and carbon emissions for the sum of carbon pools, relative to the baseline carbon content or the carbon content as of the previous calculation period, if above the baseline carbon content, as applicable. CO_2 offset allowances shall be issued based on the amount of net additional carbon sequestered within the offset project boundary during each reporting period, and represented in tons of CO_2 equivalent. Sequestered carbon shall be calculated using a stock-change approach as follows:

$$NCS_t = I_t - I_{t-1}$$

Where:

NCS_t	=	Net carbon sequestered in reporting period t
I_t	=	Inventory of carbon stock for all carbon pools in all reporting sub-populations within the offset project boundary in reporting period t
I_{t-1}	=	Inventory of carbon stock for all carbon pools in all reporting sub-populations within the offset project boundary in the reporting period immediately preceding reporting period t

(A) Except as provided in subdivision (3)(A)(iv) of this subsection, each of the carbon pools that were measured as part of the baseline determination must be re-

measured using the same methodology, and to the same or better quantified accuracy consistent with the requirements of subdivisions (3)(G) and (H) of this subsection, as that used for the baseline determination.

(B) The net change in each pool's carbon stock in each reporting stratum is calculated by subtracting the baseline carbon stock (or stock at the previous monitoring) from the carbon stock at the time of the current monitoring. Determination of carbon stock shall be in accordance with the formulas and procedures in subdivision (3) of this subsection.

(C) Net carbon stock change for the offset project is the sum of the net changes in the carbon stock of all applicable pools in all reporting sub-populations within the offset project boundary, less ten percent (10%) to account for potential losses of sequestered carbon. This 10% discount shall not be required, provided the project sponsor retains long-term insurance, approved by the commissioner or their designee, that guarantees replacement of any lost sequestered carbon for which CO_2 allowances were issued pursuant to subsection (j) of this section.

(5) Monitoring and verification requirements. Total carbon stock shall be calculated not less than every five years. Monitoring and verification is subject to the following requirements:

(A) Monitoring and verification reports shall include data from direct measurement of carbon content for all plots used to determine baseline and reporting period carbon content.

(B) The consistency application shall include a monitoring and verification plan certified by the commissioner or their designee or an independent verifier accredited pursuant to subsection (i) of this section. The monitoring and verification plan shall include the following:

(i) Direct carbon measurement procedures consistent with the requirements at subdivision (3)(H) of this subsection,

(ii) The designation of sub-populations pursuant to subdivision (3)(D) of this subsection. The determination of the minimum number of sampling plots pursuant to subdivision (3)(G) of this subsection, and

(iii) If commercial timber harvest activities have occurred or will occur, an assessment of management practices to ensure that the offset project has been managed in accordance with environmentally sustainable forestry practices consistent with the Forest Stewardship Council (FSC), Sustainable Forestry Institute (SFI), American Tree Farm System (ATFS), or such other similar organizations as may be approved by the commissioner or their designee.

(C) The applicant shall allow access to the project site and the reserve set-aside site to the accredited independent verifier, or as requested by the commissioner or the commissioner's designee.

(6) Carbon sequestration permanence. The offset project shall meet the following requirements to address permanence of sequestered carbon:

(A) The project sponsor shall place the land within the offset project boundary under a legally binding permanent conservation easement, approved by the commissioner or the commissioner's designee, which requires the land to be maintained in a forested state in perpetuity;

(B) The conservation easement shall include a requirement that the carbon density within the offset project boundary be maintained at long-term levels at or above that achieved as of the end of the CO_2 offset crediting period pursuant to subsection (c)(5) of this section; and

(C) The conservation easement shall require that the land be managed in accordance with environmentally sustainable forestry practices.

(g) Reduced or Avoided CO_2 Emissions Due to End-Use Energy Efficiency

(1) Eligibility. An offset project that reduces CO_2 emissions by reducing on-site combustion of natural gas, oil, or propane for end-use in an existing or new commercial or residential building by improving the energy efficiency of fuel usage and the energy-efficient delivery of energy services shall meet the requirements of subsection (g) and all other applicable requirements of this section, to qualify for the award of CO_2 offset allowances. Eligible new buildings are limited to new buildings that are designed to replace an existing building on the offset project site, or new buildings designed to be zero net energy buildings. Eligible offset projects may include the following energy conservation measures (ECMs):

(A) Improvements in the energy efficiency of combustion equipment that provide space heating and hot water, including a reduction in fossil fuel consumption through the use of renewable energy;

(B) Improvements in the efficiency of heating distribution systems, including proper sizing and commissioning of heating systems;

(C) Installation or improvement of energy management systems;

(D) Improvement in the efficiency of hot water distribution systems and reduction in demand for hot water;

(E) Measures that improve the thermal performance of the building envelope or reduce building envelope air leakage;

(F) Measures that improve the passive solar performance of buildings and utilization of active heating systems using renewable energy; and

(G) Fuel switching to a less carbon-intensive fuel for use in combustion systems, including the use of liquid or gaseous renewable fuels, provided that conversions to electricity are not eligible.

(2) Offset project description. The project sponsor shall provide a detailed narrative of the offset project actions to be taken, including supporting materials as appropriate. The offset project narrative shall include the following:

(A) Location and specifications of the building(s) where the offset project actions will occur;

(B) Owner and operator of the building(s);

(C) The parties implementing the offset project, including lead contractor(s), subcontractors, and consulting firms;

(D) Specifications of equipment and materials to be installed as part of the offset project; and

(E) Building plans and offset project technical schematics, as applicable.

(3) Performance standards. For offset projects initiated on or after January 1, 2009, the project sponsor shall demonstrate, to the satisfaction of the commissioner or the commissioner's designee, that energy conservation measures implemented as part of eligible offset projects listed in subdivision (1) of this subsection have a market penetration rate of less than 5%. Offset projects initiated on or after January 1, 2009 shall also meet the applicable requirements set forth in subdivisions (3)(A)(iii) and (3)(C) of this subsection. For offset projects initiated prior to 2009, energy conservation measures implemented as part of eligible offset projects listed in subdivision (1) of this subsection shall meet the following performance or prescriptive criteria, as applicable:

(A) Combustion equipment. Combustion equipment shall meet the following energy efficiency performance and other requirements, as applicable:

(i) Commercial boilers. Commercial boilers shall meet the following energy efficiency criteria set forth in Table 31a-2:

Table 31a-2
Minimum Commercial Boiler Energy Efficiency

Technology	Size (Btu/hr)	Rating Method	Minimum Efficiency
Gas-fired[b]	125,000-300,000	AFUE	≥ 88.0%
	300,000-12,500,000	Thermal Efficiency[a]	≥ 90.0%
Oil-fired	> 300,000	Thermal Efficiency	≥ 84.0%

[a] Thermal Efficiency is defined as useful energy output (Btu) divided by energy input (Btu) and presented as a percentage. This shall be measured under steady state conditions, at full rated useful thermal output, 140°F supply from and 120°F return water temperature to the boiler.

[b] Gas-fired boilers shall be installed with controls that allow the boiler to operate in condensing mode and installed with vents designed for positive vent static pressure and vent gas temperature that leads to condensate production in the vent.

(ii) Residential combustion equipment. Residential combustion equipment, furnaces, boilers and water heaters, shall meet or exceed the following energy efficiency criteria set forth in Table 31a-3:

Table 31a-3
Minimum Residential Combustion Equipment[a] Energy Efficiency

Technology	Rating Method	Min. Efficiency
Gas-fired furnace	AFUE	≥ 94%
Oil-fired furnace	AFUE	≥ 92%
Gas/oil-fired boiler	AFUE	≥ 90%
Gas/oil-fired water heater	Energy Factor	≥ 0.62

[a] For furnaces, defined as equipment with a heat input rate of less than 225,000 Btu/hr; for boilers, defined as equipment with a heat input rat of less than 300,000 Btu/hr; for water heaters, defined as equipment subject to 10 CFR 430.

(iii) Installation best practice for commercial HVAC systems. Combustion equipment and related air handling equipment (HVAC systems) shall be sized and installed in accordance with ANSI/ASHRAE/IESNA Standard 90.1-2004: Energy Standard for Buildings Except Low-Rise Residential

Buildings and ANSI/ASHRAE Standard 62.1-2004: Ventilation for Acceptable Indoor Air Quality; and

(iv) Installation best practice for residential HVAC systems. Residential HVAC systems shall meet the applicable sizing and installation specifications of "Specification of Energy-Efficient Installation and Maintenance Practices for Residential HVAC Systems," Consortium for Energy Efficiency, 2000.

(B) Non-combustion energy conservation measures. Energy conservation measures implemented as part of an offset project or actions pursuant to subdivision (1)(B) through (G) of this subsection shall meet the applicable requirements, as specified, in *Energy Benchmark for High Performance Buildings, Version 1.1*, New Buildings Institute, 2005 (herein referred to as EBHPB), or state building energy codes, whichever are more stringent as demonstrated by the offset project sponsor. Energy conservation measures without specified performance criteria in the referenced EBHPB shall meet the requirements of Federal Energy Management Program (FEMP) Product Energy Efficiency Recommendations, issued pursuant to Executive Orders 13123 and 13221, or Energy Star criteria issued jointly by the U.S. Environmental Protection Agency and U.S. Department of Energy, whichever result in better energy performance as demonstrated by the offset project sponsor.

(C) Whole-building energy performance. New buildings or whole building retrofits that incorporate offsets projects or actions shall also meet the following requirements:

(i) Commercial buildings. Commercial buildings shall exceed the energy performance requirements of ANSI/ASHRAE/IESNA Standard 90.1-2004: Energy Standard for Buildings Except Low-Rise Residential Buildings by 30%, with the exception of multi-family residential buildings classified as commercial by ANSI/ASHRAE/IESNA Standard 90.1-2004, which shall exceed these energy performance requirements by 20%, and

(ii) Residential buildings. Residential buildings shall exceed the energy performance requirements of the 2004 International Energy Conservation Code Supplement by 30%.

(4) Emissions baseline determination. Emissions baseline shall be determined based on energy usage (MMBtu) by fuel type for each energy conservation measure, derived using historic fuel use data from the most recent calendar year for which data is available, multiplied by an emission factor and oxidation factor for each respective fuel set forth in Table 31a-4:

Table 31a-4

Fuel	Emission Factor (lbs. CO_2/MMBtu)	Oxidation Factor
Natural Gas	116.98	0.995
Propane	139.04	0.995
Distillate Fuel Oil	161.27	0.99
Kerosene	159.41	0.99

(A) Isolation of applicable energy conservation measure baseline. The project sponsor shall isolate the baseline energy usage of the application to be targeted by the energy conservation measure, in a manner consistent with the requirements set forth in subdivision (6) of this subsection.

(B) Annual baseline energy usage shall be determined as follows:

Energy Usage (MMBtu) = BEU_{AECM} x A

Where:

BEU_{AECM} = Annual pre-installation baseline energy use by fuel type (MMBtu) attributable to the application(s) to be targeted by the energy conservation measure(s). If applicable building codes or equipment standards require that equipment or materials installed as part of the offset project meet certain minimum energy performance requirements, baseline energy usage for the application shall assume that equipment or materials are installed that meet such minimum requirements. For offset projects that replace existing combustion equipment, the assumed minimum energy performance required by applicable building codes or equipment standards shall be that which applies to new equipment that uses the same fuel type as the equipment being replaced. Baseline energy usage shall be determined in accordance with the applicable requirements set forth in subdivision (6) of this subsection.

A = Adjustments to account for differing conditions during the two time periods, pre-installation and post-installation, such as weather and building occupancy. Adjustments shall be determined in accordance with the applicable requirements in subdivision (6) of this subsection.

(C) Annual baseline emissions shall be determined as follows:

n

$$\text{Emissions (lbs. } CO_2) = \sum_{i=1} BEU_i \times EF_i \times OF_i$$

Where:

BEU_i = Annual baseline energy usage for fuel type i (MMBtu) demonstrated pursuant to the requirements at subdivision (6)(A) through (D) of this subsection.

EF_i = Emissions factor (lbs. CO_2/MMBtu) for fuel type i listed at subdivision (4), Table 31a-4 of this subsection.

OF_i = Oxidation factor for fuel type i listed at subdivision (4), Table 31a-4 of this subsection.

(5) Calculating emissions reductions. Emissions reductions shall be determined based upon annual energy savings by fuel type (MMBtu) for each energy conservation measure, multiplied by the emission factor and oxidation factor for the respective fuel type in subdivision (4), Table 31a-4 of this subsection.

(A) Annual energy savings shall be determined as follows:

$$\text{Energy Savings (MMBtu)} = (BEU_{AECM} \times A) - (PIEU_{ECM} \times A)$$

Where:

BEU_{AECM} = Annual pre-installation baseline energy use by fuel type (MMBtu) calculated pursuant to subdivision (6)(A) through (D) of this subsection.

$PIEU_{ECM}$ = Annual post-installation energy use by fuel type (MMBtu) attributable to the energy conservation measure. Post-installation energy usage shall be determined in accordance with the applicable requirements in subdivision (6) of this subsection.

A = Adjustments to account for any differing conditions during the two time periods, pre-installation and post-installation, including but not limited to weather, building occupancy, and changes in building use or function. Adjustments shall be determined in accordance with the applicable requirements at subdivision (6) of this subdivision.

(B) Annual emissions reductions shall be determined as follows:

$$\text{Emissions Reduction (lbs. } CO_2) = \sum_{i=1}^{n} ES_i \times EF_i \times OF_i$$

Where:

ES_i = Energy savings for fuel type i (MMBtu) demonstrated pursuant to the requirements at subdivision (6) of this subsection.
EF_i = Emissions factor (lbs. CO_2/MMBtu) for fuel type i listed at subdivision (4), Table 31a-4 of this subsection.
OF_i = Oxidation factor for fuel type i listed in subdivision (4), Table 31a-4 of this subsection.

(6) Monitoring and verification requirements. As part of the consistency application, the project sponsor shall provide a monitoring and verification plan certified by an independent verifier accredited pursuant to subsection (i) of this section. Annual monitoring and verification reports shall be certified by an independent verifier accredited pursuant to subsection (i) of this section. Independent verifiers must conduct a site audit when reviewing the first monitoring and verification report submitted by the project sponsor, except for offset projects that save less than 1,500 MMBtu per year. For offset projects that save less than 1,500 MMBtu per year, the project sponsor must provide the independent verifier with equipment specifications and copies of equipment invoices and other relevant offset project-related invoices. All offset project documentation, including the consistency application and monitoring and verification reports, shall be signed by a Professional Engineer, identified by license number. Monitoring and verification shall also meet the following requirements:

(A) General energy measurement and verification requirements. Monitoring and verification of energy usage shall be demonstrated through a documented process consistent with the following protocols and procedures, as applicable:

(i) For existing commercial buildings, determination of baseline energy usage shall be consistent with the International Performance Measurement & Verification Protocol, Volume I: Concepts and Options for Determining Energy and Water Savings (IPMVP), "Option B. Retrofit Isolation" and "Option D. Calibrated Simulation." If a building project involves only energy conservation measures implemented as part of a CO_2 emissions offset project, a process consistent with IPMVP "Option C. Whole Facility" may be used, as applicable. Application of the IPMVP general guidance shall be consistent with the applicable detailed specifications in ASHRAE Guideline 14-2002, Measurement of Energy and Demand Savings.

(ii) For new commercial buildings, determination of baseline energy usage shall be consistent with the International Performance Measurement & Verification Protocol, Volume III: Concepts and Options for Determining Energy Savings in New Construction (IPMVP), "Option D. Calibrated Simulation." Application of the IPMVP general guidance shall be consistent with the applicable detailed specifications in ASHRAE Guideline 14-2002, Measurement of Energy and Demand Savings.

(iii) For existing and new residential buildings, determination of baseline energy usage shall be consistent with the requirements of the RESNET National Home Energy Rating Technical Guidelines, 2006 (Chapter 3 and Appendix A of 2006 Mortgage Industry National Home Energy Rating System Standards).

(B) Isolation of applicable energy conservation measure. In calculating both baseline energy usage and energy savings, the applicant shall isolate the impact of each eligible energy conservation measure (ECM), either through direct metering or energy simulation modeling. For offset projects with multiple ECMs, and where individual ECMs can affect the performance of others, the sum of energy savings due to individual ECMs shall be adjusted to account for the interaction of ECMs. For commercial buildings, this process shall be consistent with the requirements of ASHRAE Guideline 14-2002, Measurement of Energy and Demand Savings, and ANSI/ASHRAE/IESNA Standard 90.1-2004: Energy Standard for Buildings Except Low-Rise Residential Buildings. For residential buildings, this process shall be consistent with the requirements of RESNET National Home Energy Rating Technical Guidelines, 2006 (Chapter 3 and Appendix A of 2006 Mortgage Industry National Home Energy Rating System Standards). Reductions in energy usage due to the energy conservation measure shall be based upon actual energy usage data. Energy simulation modeling shall only be used to determine the relative percentage contribution to total fuel usage (for each respective fuel type) of the application targeted by the energy conservation measure.

(C) Calculation of energy savings. Annual energy savings are to be determined based on the following:

Energy Savings (MMBtu) = $(BEU_{AECM} \times A) - (PIEU_{ECM} \times A)$

Where:

BEU_{AECM} = Annual pre-installation baseline energy use by fuel type (MMBtu) attributable to the application(s) to be targeted by the energy conservation measure(s), based upon annual fuel usage data for the most recent calendar year for which data is available. For new buildings, baseline energy use for a reference building equivalent in basic configuration, orientation, and location to the building in which the eligible energy conservation measure(s) is implemented shall be determined according to ASHRAE Guideline 14-2002, Measurement of Energy and Demand Savings and ANSI/ASHRAE/IESNA Standard 90.1-2004, Section 11 and Appendix G. Where energy simulation modeling is used to evaluate an existing building, modeling shall be conducted in accordance with ASHRAE Guideline 14-2002, Measurement of

Energy and Demand Savings, and ANSI/ASHRAE/IESNA Standard 90.1-2004, Section 11 and Appendix G. For existing and new residential buildings, energy simulation modeling shall be conducted in accordance with the requirements of RESNET National Home Energy Rating Technical Guidelines, 2006 (Chapter 3 and Appendix A of 2006 Mortgage Industry National Home Energy Rating System Standards).

$PIEU_{ECM}$ = Annual post-installation energy use by fuel type (MMBtu) attributable to the energy conservation measure, to be verified based on annual energy use after installation of the energy conservation measure(s), consistent with the requirements of ASHRAE Guideline 14-2002, Measurement of Energy and Demand Savings. Where energy simulation modeling is used to evaluate a new or existing building, modeling shall be conducted in accordance with ASHRAE Guideline 14-2002, Measurement of Energy and Demand Savings, and ANSI/ASHRAE/IESNA Standard 90.1-2004, Section 11 and Appendix G. For existing and new residential buildings, energy simulation modeling shall be consistent with the requirements of RESNET National Home Energy Rating Technical Guidelines, 2006 (Chapter 3 and Appendix A of 2006 Mortgage Industry National Home Energy Rating System Standards).

A = Adjustments to account for any differing conditions during the two time periods (pre-installation and post-installation), such as weather (weather normalized energy usage based on heating and cooling degree days), building occupancy, and changes in building use or function. For commercial buildings, adjustments shall be consistent with the specifications of ASHRAE Guideline 14-2002, Measurement of Energy and Demand Savings, and ANSI/ASHRAE/IESNA Standard 90.1-2004, Section 11 and Appendix G. For residential buildings, adjustments shall be consistent with the specifications of RESNET National Home Energy Rating Technical Guidelines, 2006 (Chapter 3 and Appendix A of 2006 Mortgage Industry National Home Energy Rating System Standards).

(D) Provision for sampling of multiple like offset projects in residential buildings. Offset projects that implement similar measures in multiple residential buildings may employ representative sampling of buildings to determine aggregate baseline energy usage and energy savings. The commissioner or their designee shall approve sampling protocols. All sampling plans shall be certified by an independent verifier, accredited pursuant to subsection (i) of this section.

(h) Avoided Methane (CH_4) Emissions from Agricultural Manure Management Operations

(1) Eligibility. Offset projects that capture and destroy methane from animal manure and organic food waste using anaerobic digesters shall meet the requirements of subsection (h) and all other applicable requirements of this section, to qualify for the award of CO_2 offset allowances. In addition, eligible offset projects shall meet the following requirements:

(A) CO_2 offset allowances may be awarded for the destruction of that portion of methane generated by the anaerobic digester that would have been generated in the absence of the offset project through the uncontrolled anaerobic storage of manure or organic food wastes.

(B) Eligible offset projects shall employ only manure-based anaerobic digester systems using livestock manure as the majority of digester feedstock, defined as 50% or more of the mass input into the digester on an annual basis. Organic food waste used by an anaerobic digester shall only be that which would have been stored in anaerobic conditions in the absence of the offset project.

(C) The provisions of subsection (c)(5)(B) and (C) of this section shall not apply to agricultural manure methane offset projects provided either:

(i) The offset project is located in a state that has a market penetration rate for anaerobic digester projects of 5% or less. The market penetration determination shall utilize the most recent market data available at the time of submission of the consistency application and shall be determined as follows:

$MP\ (\%) = MG_{AD} / MG_{STATE}$

Where:

MG_{AD} = Average annual manure generation for the number of dairy cows and swine serving all anaerobic digester projects in the applicable U.S. state at the time of submission of a consistency application pursuant to subsection (c)(10) of this section.

MG_{STATE} = Average annual manure production of all dairy cows and swine in that U.S. state at the time of submission of a consistency application pursuant to subsection (c)(10) of this section.

or

(ii) The offset project is located at a farm with 4,000 or less head of dairy

cows, or a farm with equivalent animal units, assuming an average live weight for dairy cows (lbs./cow) of 1,400 lbs., or, if the project is a regional-type digester, total annual manure input to the digester is designed to be less than the average annual manure produced by a farm with 4,000 or less head of dairy cows, or a farm with equivalent animal units, assuming an average live weight for dairy cows (lbs./cow) of 1,400 lbs.

(2) Offset project description. The project sponsor shall provide a detailed narrative of the offset project, including supporting materials as appropriate. The offset project narrative shall include the following:

(A) Owner and operator of the offset project;

(B) Location and specifications of the facility where the offset project will occur;

(C) Owner and operator of the facility where the offset project will occur;

(D) Specifications of the equipment to be installed and a technical schematic of the offset project; and

(E) Location and specifications of the facilities from which anaerobic digester influent will be received, if different from the facility where the offset project will occur.

(3) Emissions baseline determination. The emissions baseline shall represent the potential emissions of the CH_4 that would have been produced in a baseline scenario under uncontrolled anaerobic storage conditions and released directly to the atmosphere in the absence of the offset project.

(A) Baseline CH_4 emissions shall be calculated as follows**:**

CO_2e (tons) = (V_m x M)/2000 x GWP
Where:

CO_2e = Potential CO_2e emissions due to calculated CH_4 production under site-specific anaerobic storage and weather conditions

V_m = Volume of CH_4 produced each month from degradation of volatile solids in a baseline uncontrolled anaerobic storage scenario under site-specific storage and weather conditions for the facility at which the manure is generated (ft^3)

M = Mass of CH_4 per cubic foot (0.04246 lb/ft^3 default value at one

atmosphere and 20°C)

GWP = Global warming potential of CH_4 (23)

(B) The estimated amount of volatile solids degraded each month under the uncontrolled anaerobic storage baseline scenario (kg) shall be calculated as follows:

$VS_{deg} = VS_{avail} \times f$

Where:

VS = volatile solids as determined from the equation:

$VS = M_m \times TS_{\%} \times VS_{\%}$

where:

M_m = mass of manure or organic good waste produced per month (kg)

$TS_{\%}$ = Concentration (percent) of total solids in manure or organic food waste as determined through EPA 160.3 testing method (U.S.EPA Method Number 160.3, Methods for the Chemical Analysis of Water and Wastes (MCAWW) (EPA/600/4-79/020))

$VS_{\%}$ = Concentration (percent) of volatile solids in total solids as determined through EPA 160.4 testing method (USEPA Method Number 160.4, Methods for the Chemical Analysis of Water and Wastes (MCAWW) (EPA/600/4-79/020))

VS_{avail} = Volatile solids available for degradation in manure or organic food waste storage each month as determined from the equation:

$VS_{avail} = VS_p + ½\ VS_{in} - VS_{out}$

where:

VS_p = Volatile solids present in manure or organic food waste storage at beginning of month (left over from previous month) (kg)

VS_{in} = Volatile solids added to manure or organic food waste storage during the course of the month (kg). The factor of ½ is multiplied by this number to represent the average mass of volatile solids available for degradation for the entire duration of the month.

VS_{out} = Volatile solids removed from the manure or organic food waste storage for land application or export (assumed value based on standard farm practice)

f = Van't Hoff-Arrhenius factor for the specific month as determined using the equation below. Using a base temperature of 30^{o} C, the equation is as follows:

$f = \exp[E \times (T_2 - T_1)]/[(GC \times T_1 \times T_2)]$
Where:
f = conversion efficiency of VS to CH_4 per month

E = Activation energy constant (15,175 cal/mol)

T_2 = Average monthly ambient temperature for farm (converted from ^{o} Celsius to ^{o} Kelvin) as determined from the nearest National Weather Service certified weather station (if reported temperature $^{o}C > 5^{o}$ C; if reported temperature $^{o}C < 5^{o}$ C, then F = 0.104)

T_1 = 303.16 (30^{o} C converted to ^{o}K)

GC = Ideal gas constant (1.987 cal/K mol)

(C) The volume of CH_4 produced (ft^3) from degradation of volatile solids shall be calculated as follows:

$V_m = (VS_{deg} \times B_o) \times 35.3147$

Where:

V_m = Volume of CH_4 (ft^3)

VS_{deg} = Volatile solids degraded (kg)

B_o = Manure or organic food waste type-specific maximum methane generation constant (m^3 CH_4/kg VS degraded). For dairy cow manure, B_o = 0.24 m^3 CH_4/kg VS degraded. The methane generation constant for other types of manure shall be those cited at U.S. EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2001*, Annex 3, Table A-162 (U.S. EPA, April 2007), unless the project sponsor proposes an alternate methane generation constant. If the project sponsor proposes to use a methane generation constant other than the one found in the above-cited reference, the project sponsor must

provide justification and documentation to the commissioner or their designee.

(4) Calculating emissions reductions. Emissions reductions shall be determined based on the potential emissions (in tons of CO_2e) of the CH_4 that would have been produced in the absence of the offset project under a baseline scenario that represents uncontrolled anaerobic storage conditions, as calculated pursuant to subdivision (3) of this subsection, and released directly to the atmosphere. Emissions reductions may not exceed the potential emissions of the digester, as represented by the annual volume of CH_4 produced by the anaerobic digester, as monitored pursuant to subdivision (5) of this subsection. If the project is a regional-type digester, CO_2 emissions due to transportation from the site where the manure or organic food waste was generated to the anaerobic digester shall be subtracted from the emissions reduction calculated pursuant to subdivision (3) of this subsection. Transportation related CO_2 emissions shall be determined through one of the following methods:

(A) Documentation of transportation fuel use for all shipments of manure or organic food waste to the anaerobic digester during each reporting year and a log of transport miles for each shipment. CO_2 emissions shall be determined through the application of an emissions factor for the fuel type used. If this option is chosen, the following emission factors shall be applied as appropriate:

(i) Diesel fuel: 22.912 lbs. CO_2/gallon,

(ii) Gasoline: 19.878 lbs. CO_2/gallon, or

(iii) Other fuel: submitted emission factor approved by the commissioner or the commissioner's designee.

(B) Documentation of total tons of manure or organic food waste transported from off-site for input into the anaerobic digester during each reporting year, as monitored pursuant to subdivision (5)(A) of this subsection, and a log of transport miles and fuel type used for each shipment. CO_2 emissions shall be determined through the application of a ton-mile transport emission factor for the fuel type used. If this option is chosen, the following emission factors shall be applied as appropriate for each ton of manure delivered, and multiplied by the number of miles transported:

(i) Diesel fuel: 0.131 lbs. CO_2 per ton-mile,

(ii) Gasoline: 0.133 lbs. CO_2 per ton-mile, or

(iii) Other fuel: submitted emission factor approved by the commissioner or the commissioner's designee.

(5) Monitoring and verification requirements. Offset projects shall employ a system that provides metering of biogas volumetric flow rate and determination of CH_4 concentration. Annual monitoring and verification reports shall include monthly biogas volumetric flow rate and CH_4 concentration determination. Monitoring and verification shall also meet the following requirements:

(A) If the offset project is a regional-type digester, manure and organic food waste from each distinct supply source supplying to the anaerobic digester shall be sampled monthly to determine the amount of volatile solids present. Any emissions reduction will be calculated according to mass of manure and organic food waste (kg) being digested and percentage of volatile solids present before digestion, consistent with the requirements at subdivisions (3) and (5)(C) of this subsection, and apportioned accordingly. The project sponsor shall provide supporting material and receipts tracking the monthly receipt of manure and organic food waste (kg) used to supply the anaerobic digester from each manure supplier.

(B) If the offset project includes the digestion of organic food wastes eligible pursuant to subdivision (1)(A) of this subsection, organic food wastes shall be sampled monthly to determine the amount of volatile solids present before digestion, consistent with the requirements at subdivision (3) of this subsection, and apportioned accordingly.

(C) The project sponsor shall submit a monitoring and verification plan as part of the consistency application that includes a quality assurance and quality control program associated with equipment used to determine biogas volumetric flow rate and CH_4 composition. The monitoring and verification plan shall be specified in accordance with the monitoring requirements listed in Table 31a-5, Input Monitoring Requirements, as applicable. The monitoring and verification plan shall also include provisions for ensuring that measuring and monitoring equipment is maintained, operated, and calibrated based on manufacturer's recommendations, as well as provisions for the retention of maintenance records for audit purposes. The monitoring and verification plan shall be certified by an independent verifier accredited pursuant to subsection (i) of this section.

(D) The project sponsor shall quarterly verify biogas CH_4 composition through gas sampling and third party laboratory analysis using applicable U.S. EPA test methods.

Table 31a-5
Input Monitoring Requirements

Input Parameter	**Measurement Unit**	**Frequency of Sampling**	**Sampling Method(s)**
Influent flow (mass) into the digester	Kilograms (kg) per month (wet weight)	Monthly total into the digester	a) Average herd population and American Society of Agricultural and Biological Engineers (ASABE) standard (ASAE D384.2, March 2005) b) Digester influent pump flow c) Recorded weight
Influent total solids concentration (TS)	Percent (of sample)	Monthly, depending upon recorded variations	U.S. EPA Method Number 160.3, Methods for the Chemical Analysis of Water and Wastes (MCAWW) (EPA/600/4-79/020)
Influent volatile solids (VS) concentration	Percent (of TS)	Monthly, depending upon recorded variations	USEPA Method Number 160.4, Methods for the Chemical Analysis of Water and Wastes (MCAWW) (EPA/600/4-79/020)
Average monthly ambient temperature	Temperature ^{o}C	Monthly (based on farm averages)	Closest National Weather Service-certified weather station

(i) Accreditation of Independent Verifiers

(1) Standards for accreditation. Independent verifiers may be accredited by the commissioner or the commissioner's designee in accordance with the requirements of this subsection. To be considered for accreditation, a person must submit an application to the commissioner. The application shall include sufficient information to demonstrate that the applicant meets all accreditation standards:

(A) Persons selected to perform certification activities shall:

(i) Possess experience in quantifying greenhouse gas emissions;

(ii) Demonstrate knowledge of engineering and accounting principles sufficient to quantify greenhouse gas emissions, develop and evaluate air emissions inventories and audit the work product of others engaged in similar activities;

(iii) Demonstrate knowledge of auditing and accounting principles and information systems sufficient to carry out this section;

(iv) Demonstrate knowledge of information management systems;

(v) Demonstrate knowledge of the requirements of this section and section 22a-174-31 of the Regulations of Connecticut State Agencies;

(vi) Demonstrate that no direct or indirect financial relationship, beyond a contract for provision of verification services, exists with any offset project developer or sponsor;

(vii) Certify that such person holds a minimum of one million U.S. dollars of professional liability insurance;

(viii) Certify the truthfulness and accuracy of all documents, reports and conclusions submitted to the commissioner or the commissioner's designee;

(ix) Demonstrate that adequate protocols are established to avoid conflicts of interest with regard to an offset project, offset project developer, or project sponsor, or any other party with a direct or indirect financial interest in an offset project that is seeking or has been granted an approval under subsection (c) of this section; and

(x) Maintain records for a period of 10 years from the certification report which will be made available for audit by either the commissioner or its agent.

(B) Applicants shall possess such other qualifications necessary to provide competent certification services as required for specific CO_2 emissions offset project types set forth in this section.

(2) Training workshop. The commissioner or the commissioner's designee may require prospective independent verifiers to successfully complete a training workshop or workshops developed by the commissioner or the commissioner's designee.

(3) Conflict of interest requirements.

(A) Prospective independent verifiers. Prior to accreditation, an applicant shall disclose all relevant information to the commissioner or the commissioner's designee to allow for a comprehensive conflict of interest assessment. The applicant shall disclose information concerning its ownership, past and current clients, related entities, as well as any other facts or circumstances that have the potential to create a conflict of interest.

(B) Accredited independent verifiers.

(i) Prior to the commencement of any work related to certification of a specific offset project or projects, an independent verifier shall submit additional information to the commissioner to permit a conflict of interest assessment relative to the specific offset project or projects.

(ii) Independent verifiers shall have an ongoing obligation to disclose any facts or circumstances that may give rise to a conflict of interest with respect to an ongoing offset project or current project sponsor.

(4) Application for accreditation. The independent verifier's application for accreditation shall not contain any proprietary information, but shall include the following:

(A) Provide the applicant's name, address, e-mail address, telephone number, and facsimile transmission number;

(B) Demonstrate that the applicant has at least two years of experience in each of the knowledge areas specified in subdivision (1)(A)(i) through (x) of this subsection;

(C) Verify that the applicant has successfully completed the requirements at subdivision (2) of this subsection, as applicable;

(D) Include a sample of at least one work product that provides supporting evidence that the applicant meets the requirements in subdivision (1)(A) of this subsection. The work product shall have been produced, in whole or part, by the applicant and shall consist of a final report or other material provided to a client under contract in previous work. For a work product that was jointly produced by the applicant and another entity, the role of the applicant in the work product shall be clearly explained;

(E) Provide documentation that the applicant holds professional liability insurance as required pursuant to subdivision (1)(A)(vii) of this subsection; and

(F) Demonstrate that the applicant has implemented an adequate management protocol to address and remedy any conflict of interest issues that may arise.

(5) Appeals, complaints and audits. The commissioner or the commissioner's designee may develop processes for handling appeals and complaints, and shall maintain the authority to audit the independent verifiers, including on-site audits during certifications. Independent verifiers or project sponsors may be audited on either's premises.

(6) Independent verifiers accredited in participating states. Independent verifiers that have been accredited in other participating states shall be deemed accredited in Connecticut.

(7) Rejection of verification reports. The commissioner or the commissioner's designee may reject a verification report and certification statement from an accredited verifier, submitted as part of a consistency application required pursuant to subsection (c) of this section or submitted as part of a monitoring and verification report submitted pursuant to subsection (j) of this section, if the commissioner or the commissioner's designee determines that the accredited verifier has a conflict of interest related to the offset project, offset project developer, or project sponsor.

(8) Revocation of accreditation. The commissioner or the commissioner's designee may revoke the accreditation of a verifier at any time given cause, for any of the following:

(A) Failure to fully disclose any issues that may lead to a conflict of interest situation with respect to an offset project, offset project developer, or project sponsor;

(B) The verifier is no longer qualified due to changes in staffing or other criteria;

(C) Negligence or neglect of responsibilities pursuant to the requirements of this Subpart; and

(D) Intentional misrepresentation of data or other intentional fraud.

(j) Award and Recordation of CO_2 Offset Allowances

(1) Quantities of CO_2 offset allowances awarded. Following the issuance of a consistency determination under subsection (c)(12) of this section and the approval of a monitoring and verification report under the provisions of subdivision (5) of this subsection, the commissioner or their designee will award one CO_2 offset allowance for each ton of demonstrated reduction in CO_2 or CO_2 equivalent emissions or sequestration of CO_2.

(2) CO_2 emissions credit retirement. If a project sponsor received a consistency determination pursuant to subsection (c)(12) of this section, one CO_2 offset allowance will be awarded for each ton of reduction of CO_2 or CO_2 equivalent or sequestration of CO_2, represented

by the relevant credits or allowances retired. If a credit or allowance is represented in metric tons, 1.1023 tons will be awarded for every metric ton, provided that total CO_2 offset allowances awarded shall be rounded down to the nearest whole ton.

(3) Recordation of CO_2 offset allowances. After CO_2 offset allowances are awarded under this subsection the commissioner or the commissioner's designee shall record such CO_2 offset allowances in the project sponsor's general account.

(4) Place for filing monitoring and verification reports. The monitoring and verification report must be filed with the same participating state that issued the consistency determination for the offset project pursuant to subsection (c)(12) of this section.

(5) Deadlines for submittal of monitoring and verification reports.

(A) For CO_2 emissions offset projects undertaken prior to January 1, 2009, the project sponsor must submit the monitoring and verification report covering the pre-2009 period by June 30, 2009.

(B) For CO_2 emissions offset projects undertaken on or after January 1, 2009, the monitoring and verification report must be submitted within 6 months following the completion of the last calendar year during which the offset project achieved CO_2 equivalent reductions or sequestration of CO2 for which the project sponsor seeks the award of CO_2 offset allowances.

(6) Contents of monitoring and verification reports. For an offset project, the monitoring and verification report shall include the following information:

(A) The project's sponsor's name, address, e-mail address, telephone number, facsimile transmission number, and account number;

(B) The CO_2 emissions reduction or CO_2 sequestration determination as required by the relevant provisions of this section, including a demonstration that the project sponsor complied with the required quantification, monitoring, and verification procedures under this section, as well as those outlined in the consistency application approved pursuant to subsection (c)(12) of this section;

(C) The following statement signed by the offset project sponsor:

> "The undersigned project sponsor hereby confirms and attests that the offset project upon which this monitoring and verification report is based is in full compliance with all of the requirements of Section 22a-174-31a of the Regulations of Connecticut State Agencies. The project sponsor holds the legal rights to the offset project, or has been granted the right to act on behalf of a party that holds the legal

rights to the offset project. I understand that eligibility for the award of CO_2 offset allowances under Section 22a-174-31a of the Regulations of Connecticut State Agencies is contingent on meeting the requirements of this section. I authorize the Connecticut Department of Environmental Protection or its agent to audit this offset project for purposes of verifying that the offset project, including the monitoring and verification plan, has been implemented as described in the consistency application that was the subject of a consistency determination by the Connecticut Department of Environmental Protection. I understand that this right to audit shall include the right to enter the physical location of the offset project. I submit to the legal jurisdiction of the State of Connecticut.";

(D) A certification signed by the offset project sponsor certifying that all offset projects for which the sponsor has received offset allowances under either this section or any similar provisions in the rules of other participating states that are under the sponsor's ownership or control, or under the ownership or control of any entity which controls, is controlled by, or has common control with the sponsor, are in compliance with all applicable requirements of the CO_2 Budget Trading Program in all participating states;

(E) A verification report and certification statement signed by an independent verifier accredited pursuant to subsection (i) of this section documenting that the independent verifier has reviewed the monitoring and verification report and evaluated the following in relation to the applicable requirements of this section, and any applicable guidance issued by the commissioner or the commissioner's designee. Such verification report and certification statement shall also state:

(i) The adequacy and validity of information supplied by the project sponsor to determine CO_2 emissions reductions or CO_2 sequestration pursuant to the applicable requirements in this section,

(ii) The adequacy and consistency of methods used to quantify, monitor, and verify CO_2 emissions reductions and CO_2 sequestration in accordance with the applicable requirements of this section and as outlined in the consistency application approved pursuant to subsection (c)(12) of this section, and

(iii) Such other evaluations and verification reviews as may be required by the commissioner or the commissioner's designee to determine the adequacy and validity of information supplied by the project sponsor to demonstrate that the offset project meets the applicable eligibility requirements of this section;

(F) Disclosure of any voluntary or mandatory programs, other than the CO_2 Budget Trading Program, to which greenhouse gas emissions data related to the offset project has been, or will be reported; and

(H) For offset projects located in a state or United States jurisdiction that is not a participating state, a demonstration that the project sponsor has complied with all requirements of the cooperating regulatory agency in the state or United States jurisdiction where the offset project is located.

(7) Commissioner action on monitoring and verification reports. The commissioner or the commissioner's designee will approve or deny, with or without conditions, a complete monitoring and verification report within 90 days following receipt of a complete report.

Statement of Purpose:

To adopt a new regulation to implement the provisions of the Regional Greenhouse Gas Initiative (RGGI) necessary to provide for the creation and use of carbon dioxide offset credits through five specific activities: landfill methane capture and destruction; avoided sulfur hexafluoride emissions; sequestration due to afforestation; end-use energy efficiency; and avoided methane.

V. Principal Reasons in Support of the Adoption of Proposed Regulations

The proposed adoption of sections 31 and 31a is required pursuant to C.G.S. section 22a-200c and will provide emission reductions of CO_2, a greenhouse gas that contributes to climate change and is impacting the environment and public health of Connecticut, the United States and the world. Overwhelming scientific evidence suggests that a changing climate poses a serious threat to environmental resources as well as the public health. Specifically, the region's air quality, water quality, marine and freshwater fisheries, salt and freshwater wetlands, surface and subsurface drinking water supplies, river and stream impoundment infrastructure, forest species and wildlife habitats are threatened.[2] The proposed regulations, in addition to being mandated by C.G.S. section 22a-200c, are also a critical element of Connecticut's overall efforts to mitigate the effects of climate change in Connecticut. The proposed regulations do not mandate a specific technology to capture and control CO_2, instead the proposed regulations will leverage market forces and a significant regional investment in energy efficiency and renewable energy to attain the required reductions. As a result, Connecticut ratepayers will benefit from increased investment in energy efficiency and renewable energy. According to the Connecticut Energy Conservation Management Board ("ECMB"), ratepayers receive a $4 benefit for every $1 spent on energy efficiency.

2 http://www.ipcc.ch/

In July 2007, the Northeast Climate Impacts Assessment[3] (a collaboration between the Union of Concerned Scientists and a team of independent experts) published "Confronting Climate Change in the U.S. Northeast: Science, Impacts, and Solutions," a report that projects climate impacts on New England over the next century. The findings of the Northeast Climate Impacts Assessment show that the Northeast has been warming at a rate of nearly 0.5 degrees Fahrenheit per decade since 1970, with winter temperatures rising faster, at a rate of 1.3 degrees Fahrenheit per decade since 1970. This warming correlates with the following predicted climate changes across the region:

- More frequent days with temperatures above 90 degrees Fahrenheit, which will lead to greater smog forming emissions and unhealthful air quality days,
- A longer growing season,
- Less winter precipitation falling as snow and more as rain,
- Reduced snowpack and increased snow density,
- Earlier breakup of winter ice on lakes and rivers,
- Earlier spring snow melt resulting in earlier peak river flows, and
- Rising sea-surface temperatures and sea levels.

The DEP believes implementing RGGI will provide the following benefits to Connecticut:

- Reduce the long-term costs of addressing climate change. By acting now, Connecticut may be able to avoid more disruptive measures later.[4]

- Capture environmental co-benefits. Reducing carbon emissions from the electric generators is an effective multi-pollutant strategy and should lead to reductions in the emissions of other pollutants associated with fossil fuel-based electricity generation (e.g., NOx, SO_2, and mercury). Additional co-benefits should be realized through the offsets component of the program, which would provide incentives for: afforestation, improved agricultural manure management, and reduced consumption of natural gas, propane, and home heating oil. The auction of allowances will generate revenue that can be used to benefit the environment and energy planning (e.g., through investments in energy efficiency and clean energy technologies).

- Drive new technology. By requiring polluters to internalize the cost of emitting CO_2, the CO_2 Budget Trading Program will provide a market incentive for developing and deploying technologies that improve the fuel efficiency of electric generation, generate

3 http://www.northeastclimateimpacts.org/

4 When ranked against other nations, RGGI states represent one of the ten largest sources of carbon dioxide emissions from energy use in the world.

electricity from non-carbon emitting resources (e.g., wind and solar power), and reduce CO_2 emissions from combustion sources.

- Promote expanded energy efficiency. The offsets provisions provide incentives for end-use efficiency improvements. In addition, section 93 of P.A. 07-242 directs DEP to utilize a significant portion of auction proceeds in Connecticut for energy efficiency programs.

- Stimulate economic development. Many Connecticut businesses have shown leadership in the development of cleaner and renewable energy technologies, such as fuel cells, gas turbines, and wind turbines. The CO_2 Budget Trading Program will support this leadership by providing financial assistance to help further the growth of clean energy technologies in the region.

VI. Statement of Principal Considerations in Opposition to the Department's Intended Action as Urged in Written and Oral Comments and the Department's Reason for Rejecting Such Considerations

A. Principal Considerations Raised in Opposition to the Proposed Regulations

The principal considerations raised in opposition to the proposed regulations are:

1. The proposed regulations will negatively impact energy prices by increasing the cost of power generation; this will impact reliability and lead to "leakage" – the shifting of generation to areas outside that covered by the RGGI program. In addition, the proposed regulations could result in unacceptable and unreasonable degradation due to the magnitude of leakage and violate the Public Trust provisions of C.G.S., Title 22a.

2. The Department should not use an "open" auction, it should be "closed" (i.e., only available to the regulated sources). The first auction should start at a percentage well below the 91% set out in the proposed regulations and the remaining allowances should be allocated (for free) to the regulated sources.

3. Allowance cost – Initial modeling done in 2003-04 to support the 2005 Connecticut Climate Change Action Plan indicated allowance prices of $7 in 2010 and near $10 by 2015. This cost will be passed directly to Connecticut ratepayers. The proposed regulations should contain a price mitigation mechanism.

4. The proposed regulations do not ensure an adequate supply of allowances will be available for use by the regulated community.

B. Reasons for Rejecting Considerations Raised in Opposition to the Proposed Regulations

It should be noted that only one commenter directly opposed the adoption of the proposed regulations. All other commenters, while suggesting a variety of changes to the proposed regulations, nonetheless supported the goal of the proposed regulations and recognized the Department's efforts to begin to address the threat of climate change to the State of Connecticut.

The Department has been working on the proposed regulations for many months and underwent an intense stakeholder process, including three stakeholder meetings since December 2006. During this time, the Department shared pre-proposal drafts of the proposed regulations with the regulated community and received thoughtful comments in return. The proposed regulations are also based on a model rule, which itself was subject to development in an open and transparent process with multiple stakeholder meetings, which included many stakeholders from the regulated community in Connecticut.

The reasons for rejecting the considerations raised in opposition noted above are:

1. As noted in Part III of this report, the regional model rule and the proposed regulations were developed to implement a cost-effective, market-based approach with minimal impact on both energy prices and overall system reliability. The proposed cap and trade system, including the auction and re-investment component, provide incentives to increase efficiencies at the generating level, while at the same time increasing investment in energy efficiency to reduce consumer demand thereby allowing the regulated sources to reduce emissions in the most cost effective manner possible. Substantially increasing spending on energy efficiency through the entire ISO-NE, ISO-NY and significant portions of the PJM regions will mitigate potential energy price impacts. While "leakage" is less of a specific concern to Connecticut due to the fact that our transmission system constrains our ability to import power and the three states that border Connecticut are also adopting the same regulatory requirements, the Department understands that leakage continues to be a concern for the southern portions of the 10 state RGGI region. As such, the Department should continue to work with other states in the region to monitor this issue and work towards establishing regionally consistent protocols if identifiable leakage occurs and negatively impacts the program. The Department should not address in this report the issue of whether the proposed regulations conflict with the Public Trust provisions of Title 22a. This issue falls within the scope of review to be conducted by the Office of the Attorney General on the Department's final proposed regulations as required by C.G.S. section 4-169. However, it should be

noted that while the Department lacks specific jurisdiction over sources located in upwind states, the Department has been and is expected to continue to work to ensure that upwind sources meet their clean air responsibilities under the federal Clean Air Act.

2. Auctions. The goal of a market-based cap and trade program is to ensure the value of an allowance reflects its true market value. Thus, an open auction will provide the best indicator of true market value. This market signal will stimulate action both within the electric generating sector and within the five offset sectors dedicated to the creation of carbon offsets outside of the electric generating sector. As such, the Department should participate in an open, regional auction so as to assist the proper functioning of this new market. Each state within the RGGI region has committed to auction a significant portion of their respective CO_2 allowance budgets. The Department should work to ensure that any auction contain adequate safeguards to identify and prevent undue use of market power and provide adequate notice to the participants of the applicable auction protocols. With respect to the number of allowances offered for auction, the Department must comply with the provisions of section 22a-200c of the C.G.S. that directs the Department to auction all allowances with the exception of those set aside to support voluntary renewable energy and combined heat and power.

3. Allowance cost. The estimated costs for carbon allowances listed in the 2005 Connecticut Climate Change Action Plan ("CCAP") are $7 in 2010 and almost $10 in 2015. (see CCAP at page 194) However, the commenter neglected to note two important facts. First, the CCAP states, "It should be noted that updated IPM [Integrated Planning Modeling] runs currently being conducted by RGGI will provide revised cost figures." (Id.) Second, the revised modeling takes into account the many program design elements intended to reduce the cost of allowances by reducing overall demand for electricity in the RGGI region through significantly increasing spending on energy efficiency, renewable energy and other programs that will mitigate potential price impacts. The Department's fiscal impact statement is based on such revised modeling.

   While CO_2 allowance costs will exert some direct upward pressure on electricity prices, any price impacts are expected to be minor especially due to the significant investment in energy efficiency throughout the RGGI region that will occur as a result of this program. Furthermore, the RGGI planning process employed sophisticated economic models to characterize potential economic impacts on the electricity sector and the broader economy. Stakeholders, academics, and regulators discussed the resulting data extensively. The Department strongly believes that this

CO_2 cap and trade program is unlikely to have substantial impacts on electricity prices. The proposed regulations also include a number of provisions designed to limit price impacts. These provisions include three-year compliance periods that mitigate impacts of year-to-year variation in weather and economic activity, and offset provisions that allow for limited compliance through off-sector reductions. In the event that prices exceed specified triggers, compliance periods will be expanded to four years and the expanded use of offsets will be allowed up to a level equivalent to 50% of the required emission reductions.

4. Adequacy of budget. The Department received comments that the budget is too small to ensure an adequate supply for the regulated community. The Department also received comments that the budget is too large, that current emissions are 11-17% below the initial cap levels. See the Department's response in Part VII.C., below.

VII. General Comments on Proposed R.C.S.A. Sections 22a-174-31 and 22a-174-31a and Responses Thereto

The Department received numerous comments on the proposed regulations. While not addressing specific provisions of the proposed regulations, many comments were directed at larger policy issues and implications raised by the proposed regulations. As such, this report will address general comments separate from comments that were directed at specific regulatory provisions.

General comments have been grouped into five topical areas: auction issues, cost issues, budget allocation, scope of offset program, and transition to a federal climate program.

On January 31, 2008, the Department received a request to extend the comment period until February 22. In correspondence responding to this request, the Department noted that it has been working for many months to develop a regulatory framework to implement RGGI in Connecticut. The Department's proposed regulations underwent an intense stakeholder process, which included three stakeholder meetings since December 2006. During this time, the Department shared pre-proposal draft regulations with the regulated community and received thoughtful comments in return. The proposed regulations are also based on a model rule, which itself was subject to development in an open and transparent process with multiple stakeholder meetings that were also open to the regulated community and other interested parties in Connecticut. As such, the Department did not extend the comment period as requested.

A. Auction Issues

The Department received many comments on the auctioning of CO_2 allowances. These comments are summarized as follows:

1. The Department should adopt auction procedures by regulation;
2. The Department should adopt and communicate auction procedures or policies to the regulated community to ensure an open and transparent process;
3. The auction of carbon dioxide allowances should not interfere with regional energy markets;
4. The Department should hold a pilot auction of a small number of allowances prior to the initial formal auction;
5. The Department should auction substantially less than 100% of its allocated budget with the remainder being allocated (for free) to regulated sources;
6. The Department should participate in a multi-state auction and coordinate closely with the RGGI regional organization;
7. The Department should monitor the auction process to ensure there is no undue use of market force;
8. The Department should close the auction to only regulated sources;
9. The Department should open the auction to anyone who wishes to obtain carbon allowances;
10. The auction should employ a "reserve price"; and
11. The auction should employ a "price cap".

Response: Offering allowances for sale at auction is an administrative requirement set forth in C.G.S. section 22a-200c, whereby the General Assembly has directed the Department to administer the auction in consultation with the DPUC.

With respect to the auction planning process and in response to the above comments, the Department should:

1. Not incorporate auction procedures into regulations. There are only two parties involved in the administration of the auction – the State who controls the allocation of allowances and the auction vendor who will match buyers with the state and perform such other actions as may be necessary to hold the auction. As such, the Department should utilize the contracting process to engage a vendor for auction services to auction the Connecticut budget of CO_2 allowances.
2. Commit to communicate all information necessary for buyers to understand the parameters under which the Department will auction CO_2 allowances. The Department should commit to release public notice, including detailed guidance, no less than forty-five days before each auction to ensure an open and transparent process.
3. Commit to communicate with ISO on an ongoing basis to ensure the safeguards build into the regional program, are operating as intended, and preventing interference in the regional energy market. The safeguards built into the regional program include, but are not limited to, the

investment of significant resources into energy efficiency, clean energy, stage one and stage two trigger mechanisms allowing greater use of offsets for compliance purposes.

4. Not commit to participate in a pilot auction. The Department should commit to participate in frequent (quarterly) regional auctions to minimize the impacts of potential market fluctuations.
5. Must comply with section 22a-200c of the C.G.S. that directs the Department to auction all allowances except those set aside to support voluntary renewable energy and combined heat and power.
6. Commit to participate in all regional auctions and coordinate with the RGGI regional organization.
7. Commit to work with the RGGI regional organization to ensure that there is a market monitor in place.
8. Avoid actions that would significantly impact the market price, such as closing the auction.
9. Commit to participating in an open auction.
10-11. Commit to adopt regionally consistent auction protocols. If the RGGI regional organization recommends that states implement a reserve price or price cap, then the Department should consider such recommendations to maintain consistency with the regional auction platform.

B. Cost Issues

The Department received several comments on the cost implications associated with the use of a truly market-based regulatory framework to control CO_2 emissions from the power generation sector. These comments are summarized as follows:

1. The Department should incorporate price mitigation measures to protect ratepayers from unexpectedly high allowance prices. Several commenters provided examples of how other states, such as Maine, New Jersey and Maryland, plan to address this issue. These measures include the ability to withdraw allowances from the auction and make them available to in-state generators at a fixed price and/or limit participation in the auction to the owners and operators of regulated sources.
2. The Department should clarify the use of auction proceeds it retains under the statutory limit of 7.5%. Many comments indicated that this amount is well above the level necessary to administer the program.
3. To moderate cost and keep the price of carbon allowances within the forecasted range, the Department should expand the categories of projects that are eligible to generate offsets and expand the use of offsets by regulated sources.
4. Auction proceeds should be monitored to ensure they are distributed to projects that benefit ratepayers and not the shareholders of electric distribution companies. Other comments suggested the Department interpret the term “cost effective” within C.G.S. section 22a-200c(b) to

mean "zero" or "no" cost with respect to the delivery of energy conservation, load management and Class I renewable energy programs. In addition, the process by which auction proceeds are designated for use should be a transparent and public process.

Response: The proposed regulations and final proposed regulations contain price mitigation measures to protect ratepayers. Examples of such measures include the use of CO_2 offsets at higher rates in the event of sustained high prices of CO_2 allowances; expanding compliance periods from three to four years; and most importantly – expanding the use of energy efficiency to reduce overall demand for electricity. The Department's use of the funds authorized by section 22a-200c of the C.G.S. are discussed further in Part VIII.12.a. of this report. The Department should not expand CO_2 offset categories beyond those established in the proposed regulations as requested in comment B.3. above, for the reasons set forth in Paragraph E of this Part. With respect to comment B.4. above, the Department proposed to use the pathway created by the combined public benefits charge because this existing delivery system is an open and transparent process that is also subject to numerous regulatory safeguards. Energy conservation, load management and renewable energy programs are independently audited and the results of such audits are reported to the DPUC. The Department should also work closely with the DPUC so as to maximize cost effective reductions in greenhouse gases in accordance with the provisions of C.G.S. section 22a-200c(c). The Department should not interpret the term "cost effective" within C.G.S. section 22a-200c(b) to mean "zero" or "no" cost as suggested in some comments. The Department understands that there will be administrative costs associated with the delivery of energy efficiency, load management and class I renewable energy projects and services. The Department, in coordination with DPUC, should strive to ensure such costs are reasonable and necessary.

C. Budget Allocation Issues

The Department received a number of comments relating to budget allocation issues and broader issues associated with the Connecticut carbon dioxide budget, including leakage, and electric system reliability. These comments are summarized as follows:

1. The Department should not reduce the allocation of carbon dioxide allowances to levels below that established in the RGGI MOU.
2. The Department should adopt mechanisms to address major unanticipated contingencies, such as the prolonged outage of nuclear generating units within Connecticut or the region.
3. The Department should retire or hold in a contingency account any unsold allowances in lieu of rolling the allowances forward to the next auction.
4. The Department should address the leakage issue by assessing a RGGI allowance cost on imported energy.

Response: The proposed allocation of the Connecticut carbon dioxide budget set forth in the proposed regulations and amended in accordance with Part VIII.A.7 is consistent with the General Assembly's direction to the Department as expressed in C.G.S. section 22a-200c. The Department should not reduce its allocation of CO_2 allowances to levels below that set out in the proposed regulations because the proposed budget accurately reflects average emission levels in Connecticut. Connecticut's carbon dioxide budget was based on a 3-year average of CO_2 emissions from RGGI units in Connecticut in years 2000-2002. This methodology is consistent with the base methodology used by the other RGGI states. However, the Department should review budget allocation issues when it undertakes a program review for sections 31 and 31a in 2012. The multi-year compliance period, expanded use of CO_2 offsets and expanded use of energy efficiency programs should be sufficient to address major unanticipated contingencies expressed in comment 2 above. The Department should not retire or hold in a contingency account any unsold allowances as suggested in comment 3 above because the Connecticut budget accurately reflects historic actual emissions. However, this approach should be re-examined at such time the Department reviews budget allocation issues in a regional context. The Department should continue to work with states in the RGGI region to ascertain whether leakage develops into a material issue. The Department should work with the states in the RGGI region to address leakage in a regionally consistent manner in the event that leakage develops into a material issue. For further information on specific changes recommended for the final proposed regulations, see the Department's responses to comments in Part VIII.A.6-12, below.

D. Transition to a Federal Climate or CO_2 Budget Trading Program

The Department received several comments recommending the proposed regulations automatically sunset upon the passage of federal climate legislation, or otherwise articulate a path by which the Department would harmonize and integrate the proposed regulations with the adoption of a subsequent national program.

Response: The Department should agree that a federal program, if properly designed and implemented, would be superior to a regional program. However, the Department should not commit in regulations to adopt a program that does not yet exist and it has not had the opportunity to review. Therefore, the Department should not adopt regulatory triggers to automatically sunset the proposed regulations on the adoption of federal climate legislation as suggested in some comments. The Department should review any adopted federal climate legislation and subsequent implementing regulations. If the subsequent federal program is substantially equivalent or more stringent than the final proposed regulations, the Department should move to adopt the federal program when it becomes effective.

E. Expansion of Offset Categories and Guidance

The Department received comments from both the nuclear power generating industry and the municipal solid waste combustor industry recommending that offset categories be expanded or that these industries receive direct allocations of allowances based upon their beneficial greenhouse gas profiles. A number of sources that will be subject to the proposed regulations also recommended the Department expand offset categories and the sources' ability to utilize offsets for compliance purposes. Other comments requested the Department develop streamlined mechanisms for approving new offset technology and issue appropriate guidance for the offset program.

Response: The Department should not include any offset categories beyond the five that were included in the proposed regulations at this time. After extensive study during the RGGI planning process, the five offset project categories were selected with consideration of expected offset supply within the borders of the participating states, the relative ease of developing standards, and the likelihood of mandatory greenhouse gas regulations for that sector. Nonetheless, the Department should ensure that consistent offset criteria are adopted throughout the region and continue to work toward the development of additional offset categories with the other participating states. Proposed categories will be evaluated based on the requirements included in the final proposed regulations. The Department must ensure that any CO_2 offsets awarded to any new offset category meets the requirements set forth in proposed section 31a and that such offsets represent CO_2 equivalent emission reductions or carbon sequestration that are real, additional, verifiable, enforceable, and permanent within the framework of a standards-based approach. Within this context, the Department should continue to explore non-regulation based methods for establishing additional offset categories in the event that additional offset categories are established in a regionally consistent manner.

The Department should not make the requested change to allow offsets to satisfy a larger fraction of a regulated source's compliance obligation. The option to use offsets for a portion of a regulated source's compliance obligation is intended to provide flexibility by allowing for the use of documented off-grid reductions to compensate for excess on-grid emissions. This approach recognizes the current technological challenges relative to CO_2 capture and control. However, allowing offsets to be used to satisfy a larger fraction of a regulated source's compliance obligation would undermine the program's intent to ensure that some emissions reductions occur within the electric sector. The Department should note that the proposed regulations also include provisions that allow for the use of offsets to meet increased percentages of compliance obligations after a period of sustained high allowance prices.

VIII. Summary of Specific Comments

A. Specific Comments on Proposed RCSA Section 22a-174-31

1. Comments on section 22a-174-31(a), Definitions and abbreviations:

a. Comment: One commenter believes the definitions section needs to be expanded to define "non carbon-emitting technologies." Specifically, this new definition should clearly exclude nuclear power from its meaning. (Commenter: 12)

Response: The Department should delete definition (a)(36) "Consumer benefit or strategic energy purpose account" which contains the phrase "non carbon-emitting technologies" noted in the comment above because this term is not used in the proposed regulations or in the final proposed regulations.

b. Comment: One commenter would like the Department to add "innovative carbon emissions abatement technologies" to the definitions section. Specifically, the language should limit the definition to those technologies with proven, verifiable results. (Commenter: 12)

Response: The Department should delete definition (a)(36) "Consumer benefit or strategic energy purpose account" which contains the phrase "innovative carbon emissions abatement technologies" noted in the comment above because this term is not used in the proposed regulations.

c. Comment: One commenter would like the Department to adopt a definition for "combined heat and power" ("CHP") that references the statutory definition of CHP. The commenter believes that defining CHP will provide meaningful criteria as to which facilities qualify for the CHP set aside. (Commenter: 14)

Response: Rather than incorporate the statutory definition of "combined heat and power system" into the proposed regulation, the Department should incorporate the definition used in other regulations for the abatement of air pollution because the regulatory provision includes thermal efficiency and does not limit CHP to electrical efficiency only. The Department should define CHP as follows:

(28) "combined heat and power system" means "combined heat and power system" as defined Section 22a-174-22c of the Regulations of Connecticut State Agencies.

2. Comments on section 22a-174-31(a)(42): Two commenters suggested adding further specificity to the terms "sustainably harvested" in the definition of "eligible biomass" and to the reporting requirements for units co-firing eligible biomass. One commenter recommends incorporating the following, new definition of "sustainably harvested," that does not comment on the standards that should apply to non-woody biomass:

"Sustainably Harvested Woody Biomass" means woody biomass that the CO2 budget source demonstrates has come from forested land that is not being converted to a non-forest land use and is not otherwise harvested in a manner incompatible with the capacity of that forest to regrow at a rate that is not less than the rate of carbon accumulation prior to the harvest, as determined in accordance with Subsection (i)(8) of this Rule."

If the above definition is used, the commenter recommends creating a new Subsection 31(i)(8)(E), to track sustainably harvested wood. This subsection should use the Forest Stewardship council and Sustainable Forestry Initiative certification programs, and in the case of smaller landowners, enrollment in the Public Act 490 [sic] current use tax program, as proxies for sustainability.

One commenter notes that if the Department believes a definition of "sustainably harvested" is not practicable at this time, the current definition in which "eligible biomass means sustainably harvested, as determined by the commissioner . . ." would allow for the development of a guidance document by the Department at a later date. (Commenters: 14 and 28)

Response: The Department should not adopt the definition of "Sustainably Harvested Woody Biomass" as suggested because there is no widely accepted and regionally consistent definition for this term. Based on technical uncertainties associated with determining GHG emissions benefits associated with the combustion of liquid biofuels, the Department should revise the definition of "eligible biomass." The Department should revise the definition consistent with other RGGI states, to indicate that liquid biofuels do not qualify as eligible biomass as follows:

~~(42)~~ (45) "Eligible biomass" means sustainably harvested, as determined by the commissioner, woody and herbaceous fuel sources that are available on a renewable or recurring basis, excluding old-growth timber, but including dedicated energy crops and trees, agricultural food and feed crop residues, aquatic plants, unadulterated wood and wood residues, animal wastes, other clean organic wastes not mixed with other solid wastes~~,~~ and biogas~~, and other neat liquid biofuels derived from such fuel sources~~. Liquid biofuels shall not qualify as eligible biomass.

3. Comment on section 22a-174-31(a)(69): In the proposed regulations, "renewable energy" means electricity generated from eligible biomass, wind, solar, thermal, photovoltaic, geothermal, . . . and fuel cells powered by renewable fuels." One commenter states the incorporation of the requirement for renewable fuels in this definition of "renewable energy" makes it inconsistent with the definition of Connecticut's Class I renewable energy set forth in C.G.S. section 16-1(a)(26). This definition should be revised to reflect the statutory definition of Class I renewable energy resources, which defines fuel cells as a Class I renewable energy resource irrespective of the underlying fuel source. Another commenter requested the

Department extend the definition of "renewable energy" to Connecticut Class II renewable energy. (Commenter: 27)

Response: The Department should make three changes in response to this comment. First, the Department should adopt a definition of "Class I renewable energy source." Second, the Department should clarify that the Connecticut Clean Energy Fund is authorized to use auction proceeds on further development and deployment of Connecticut Class I renewable energy sources. Third, the Department should clarify that energy derived from fuel cells would be recognized for voluntary clean energy purchase set asides only if such energy is derived from renewable fuels, as follows:

(11) "Class I renewable energy source" means "Class I renewable energy source" as defined in section 16-1(a)(26) of the Connecticut General Statutes.

See the regulatory language in response to comment 13.a below. This provision contains section 31(f)(5)(B)(ii) specifying CCEF can use any auction proceeds on Connecticut Class I renewable energy sources, which includes all fuel cells.

~~(5)~~(6) Retirement of Allowances for Clean Energy Purchases. The commissioner shall permanently retire a number of CO_2 allowances from the Voluntary Clean Energy Purchase Set-aside Account based upon documented voluntary renewable energy purchases by customers in Connecticut that represent RECs sold through the Connecticut Clean Energy Options program or renewable energy generated from within any participating state. Any retirement of allowances shall be determined as follows:

(A) The commissioner shall retire the number of CO_2 allowances equal to the amount determined by the following equation (rounded to the nearest whole ton), subject to the limitations in subparagraph (B) and requirements of subparagraphs (E) and (F) of this subdivision:

$(MWH_{CCEO} + MWH_{RECS}) \times (0.554 \text{ tons } CO_2 / MWh)$

Where:

MWH_{CCEO} = the total number of RECs sold (in MWhs) to Connecticut customers through the Connecticut Clean Energy Options program in the year prior to the vintage year of the CO_2 allowances to be retired.

MWH_{RECS} = the total number of ~~Class I~~ RECs from renewable energy sources located within any participating state sold (in MWhs) to Connecticut customers through means other than the Connecticut Clean Energy Options program in the year prior to the vintage year of the CO_2 allowances to be retired.

(B) If the total number of allowances calculated to be retired pursuant to subparagraph (A) of this subdivision exceeds the number of CO_2 allowances held in the Voluntary Clean Energy Purchase Set-aside Account, then the number of CO_2 allowances to be retired shall be equal to the total number of CO_2 allowances allocated in the Voluntary Clean Energy Purchase Set-aside Account pursuant to subdivision (3)(A) of this subsection.

(C) If the total number of allowances calculated to be retired pursuant to subparagraph (A) of this subdivision is less than the number of CO_2 allowances held in the Voluntary Clean Energy Purchase Set-aside Account, then allowances from the Voluntary Clean Energy Purchase Set-aside Account not allocated for a vintage year shall be transferred to the Connecticut Auction Account, from which such allowances will be auctioned in accordance with subdivision (4) of this subsection.

(D) By October 1, 2009 and October 1 of each year thereafter, the commissioner shall retire the number of allowances determined pursuant to subparagraphs (A) and (B) of this subdivision by transferring them to the Connecticut CO_2 Allowance Retirement Account.

(E) Data for the total number of RECs sold to Connecticut customers through the Connecticut Clean Energy Options program required for the equation specified in subparagraph (A) of this subdivision ~~(5)(A) of this subsection~~ shall be obtained from the Department of Public Utility Control.

(F) By June 30, 2009 and June 30 of each year thereafter, information required for the equation specified in subparagraph (A) of this subdivision ~~(5)(A) of this subsection~~ relating to the number of ~~Class I~~ RECs from renewable energy sources located within any participating state sold to Connecticut customers through means other than the Connecticut Clean Energy Options program in the previous year may be submitted by the retail provider that sold such RECs. Such information shall also include:

4. Comment on section 22a-174-31(b)(3)(B): This subparagraph states, "Each ton of CO_2 emitted in excess of the CO_2 budget emissions limitation shall constitute a separate violation of this section." One commenter doesn't think emissions limitations should constitute a separate violation as provided in this subparagraph, as it is administratively burdensome and overly punitive. Instead, the commenter believes generators in non-compliance should be allowed to comply by making alternative market payments. (Commenter: 20)

Response: The Department should not make the requested change because the enforcement provisions in the proposed regulations are consistent with those set forth in other cap and trade programs administered by the Department, such as R.C.S.A.

section 22a-174-22c. The Department should not allow alternative market payments as a compliance option. Doing so would effectively eliminate the "cap" on carbon emissions and would, instead, establish a "pay to pollute" program, which is contrary to RGGI's goal of reducing carbon emissions from the region's power generation sector.

5. Comment on section 22a-174-31(b)(5)(C): One commenter stated generators should not incur multiple fines and penalties for noncompliance as anticipated by this subparagraph. (Commenter: 20)

Response: See response to comment 4 above indicating the compliance requirements in the proposed regulations are consistent with the compliance requirements contained in R.C.S.A. section 22a-174-22c concerning the nitrogen oxides cap and trade program.

6. Comments on section 22a-174-31(f)(1), The Connecticut CO_2 Trading Program Base Budget: Several commenters requested the Department reduce the CO_2 Trading Program Base Budget. Two commenters requested the Department not reduce the allocation of CO_2 allowances below the level set in the RGGI MOU, as the total number of allowances available for Connecticut generators should remain whole. In contrast one commenter requested the Department make a determination now as to whether Connecticut's cap is higher than likely actual emissions in 2009, and adjust the budget based on the more accurate emissions data. The majority of commenters urged the Department to include a clause in the regulation to assess the cap level at the start of 2010, at which time the Department would make necessary cap adjustments to ensure intended emissions reductions are met. (Commenters: 12, 14, 20, 25, 28, 33, and 34)

Response: The Department should not reduce its allocation of CO_2 allowances to levels below that set out in the proposed regulations because the proposed budget accurately reflects average emission levels in Connecticut. Connecticut's carbon dioxide budget was based on a 3-year average of CO_2 emissions from RGGI units in Connecticut in years 2000-2002. This methodology is consistent with the base methodology used by the other RGGI states. The Department should commit to participate in the regional program review as set forth in the RGGI MOU.

7. Comments on section 22a-174-31(f)(3)(A), CO_2 allowance allocations:

a. Comment: One commenter requested the regulations include a provision providing a set-aside for Long Term Contracted Plants, as their current long-term contract does not provide for a pass-through of any CO_2 allowance costs or allow for the capture of any market-based price increases. (Commenter: 8)

Response: The Department should adjust its allocation methodology to provide a

transition period through the first compliance period during which time a fixed cost option would be available for sources subject to long-term contracts, as follows:

(F) Subject to the requirements set forth in subparagraphs (G) through (M) of this subdivision, by June 1, 2009 and by June 1, 2010 and June 1, 2011, the commissioner shall offer for sale allowances from the CHP Long-term PPA Set-aside Account to eligible CO_2 budget sources which operate CO_2 budget units that are also CHP units with existing long-term power purchase agreements. CO_2 budget units that are eligible for allowances from the CDR Set-aside Account pursuant to subparagraph (O) of this subdivision shall not be eligible for allowances from the CHP Long-term PPA Set-aside Account.

(G) In order to purchase allowances from the CHP Long-term PPA Set aside Account, a CO_2 budget source shall, on or before October 31, 2008, or within 30 days of revising a long-term PPA, submit an application to the commissioner. Such application shall include:

(i) A copy of the long-term PPA for the electricity generated from the CO_2 budget units at the CO_2 budget source,

(ii) A demonstration that the long-term PPA was executed prior to January 1, 2001,

(iii) Certification that the CO_2 budget source cannot pass along to the purchasing party in a long-term PPA any additional operating costs resulting from the implementation of this section,

(iv) Certification that the CO_2 budget source cannot recover the costs of CO_2 allowances as a result of participation in electricity markets,

(v) A disclosure of any renegotiations or revisions to the long-term PPA that have been executed on or after January 1, 2001, and

(vi) Any other information the commissioner may require.

(H) A CO_2 budget source shall remain eligible to purchase allowances from the CHP Long-term PPA Set-aside Account established pursuant to subparagraph (G) of this subdivision until the expiration date of the long-term PPA, the date on which the long-term PPA is revised, or December 31, 2011, whichever occurs first. Provided that:

(i) If the long-term PPA is revised after the submission of the application pursuant to subparagraph (G) of this subdivision, the CO_2 budget source shall notify the commissioner of such revision within thirty days of execution; and

(ii) The CO_2 budget source shall no longer be eligible to purchase CO_2 allowances from the CHP Long-term PPA Set-aside Account until eligibility is re-established by submitting an application under subparagraph (G) of this subdivision. The CO_2 budget source shall document the reasons that the revised long-term PPA does not include provisions related to the cost of CO_2 allowances.

(I) The commissioner shall offer for sale allowances from the CHP Long-term PPA Set-aside Account to eligible CO_2 budget source at the following prices:

(i) Two dollars in 2009, and

(ii) Two dollars as indexed for inflation in years 2010 and 2011 as follows: Two dollars multiplied by the ratio of the Consumer Price Index for all-Urban consumers published by the United States Department of Labor, as of August 31 of the previous calendar year to the Consumer Price Index for all-Urban consumers for August 2008.

(J) The maximum number of allowances that an eligible CO_2 budget source may purchase from the CHP Long-term PPA Set-aside Account shall be equal to the total number of tons of CO_2 emissions emitted by CO_2 budget units at the CO_2 budget source in the previous calendar year (rounded to the nearest whole ton), less any allowances allocated to the compliance account of the CO_2 budget source pursuant to subparagraphs (B) and (C) of this subdivision, subject to the limitations in subparagraphs (K) and (L) of this subdivision.

(K) If an existing long-term PPA is set to expire mid-year in any given year, the commissioner shall adjust the maximum number of allowances that may be purchased from the CHP Long-term PPA Set-aside Account to reflect the number of days in the current year for which the long-term PPA will be valid.

(L) IF $\Sigma A_{CHP2} <= A_{CHP2\text{-}AV}$, THEN

$A_{CHP2\text{-}OFFERED} = A_{CHP2}$.

IF $\Sigma A_{CHP2} > A_{CHP2\text{-}AV}$, THEN

$$A_{CHP\ 2-OFFERED} = A_{CHP\ 2} \times \left(\frac{A_{CHP\ 2-AV}}{\sum A_{CHP\ 2}} \right)$$

rounded to the nearest whole allowance.

Where:

A_{CHP2} = the maximum number of CO_2 allowances determined for each CO_2 budget source pursuant to subparagraphs (J) and (K) of this subdivision

ΣA_{CHP2} = the total number of CO_2 allowances determined for CO_2 budget sources pursuant to subparagraphs (J) and (K) of this subdivision

$A_{CHP2\text{-}AV}$ = the number of CO_2 allowances available for allocation from the CHP Useful Thermal Output Set-aside Account

$A_{CHP2\text{-}OFFERED}$ = the number of CO_2 allowances the commissioner shall offer for sale of each eligible CO_2 budget source

The commissioner may adjust an allowance allocation under this subparagraph as necessary to not exceed $A_{CHP2\text{-}AV}$.

(M) Allowances sold to a CO_2 budget source from the CHP Long-term PPA Set-aside Account may be used for compliance only and shall not be resold by or transferred from the compliance account of a CO_2 budget source.

(N) If $\Sigma A_{CHP2} < A_{CHP2\text{-}AV}$, allowances from the CHP Long-term PPA Set-aside Account not sold for a vintage year shall be transferred to the Connecticut Auction Account, from which such allowances will be auctioned in accordance with subdivision (4) of this subsection.

b. Comment: One commenter stated the proposed regulations should be modified to exempt all Customer-Side Distributed Resources (CDRs), as well as all other on-site distributed generation resources, including such resources that are CHP units between 25 and 65MWs. Two commenters stated Connecticut should follow New Jersey and New York's lead by exempting from the proposed regulation those CDR units that supply 10 percent or less of their net annual output into the grid. The commenters believe the aforementioned units should be exempt rather than receive set-asides. However, if CDR and CHP units are not exempt for the final regulation, the commenter would like the set-asides to provide a fixed allocation rather than allocations determined as a percentage of Connecticut's annual emissions budget. In addition, the allocation methodology for the CHP set-aside account should be revised to ensure that newly installed customer-side distributed cogeneration facilities receive allocations promptly after commencing

operation. (Commenters: 5, 8, and 19)

Response: The Department should not adopt the "10% behind the meter" exemption because there are no sources in Connecticut that qualify for such exemption. Concerns were expressed to the Department during the stakeholder process that such a provision could lead to "in-state" leakage whereby large power generators with significant CO_2 emissions would not be required to contribute to emission reductions necessary to meet state wide GHG reduction targets. In addition, if Connecticut had sources that qualified for such exemption, it would be required to adjust its overall state CO_2 budget downward. This exemption is inconsistent with the regulatory goal of requiring electric generators, with a nameplate capacity of 25 MW or greater, to reduce CO_2 emissions.

The Department intends to maintain applicability for CDR and CHP units for the same reasons noted above. The Department recognizes that establishing set asides as a percentage of the budget will reduce such set asides as the overall budget is reduced in 2015 and annually thereafter. To ensure there are sufficient allowances to meet the legislative goals in support of CDR and CHP, the Department should increase the total CDR and CHP set asides. Doing so will enable the Department to establish a transition path in the final proposed regulations for CHP units that entered into long-term contracts to sell their power output. As such, this provision should be amended as follows:

(A) In accordance with the timing provisions of subdivision (2) of this subsection, the commissioner shall allocate each annual CO_2 base budget as follows: ~~ninety-one (91) percent of each annual CO_2 base budget to the Connecticut Auction Account, five (5) percent to the Combined Heat and Power (CHP) Set-aside Account, three (3) percent to the Consumer-side Distributed Resources (CDR) Set-aside Account and one (1) percent to the Voluntary Clean Energy Purchase Set-aside Account;~~

(i) One and one-half (1.5) percent to the Voluntary Clean Energy Purchase Set-aside Account,
(ii) Three and one-half (3.5) percent to the Customer-side Distributed Resources (CDR) Set-aside Account,
(iii) Five (5) percent to the Combined Heat and Power (CHP) Useful Thermal Energy Set-aside Account,
(iv) Up to thirteen (13) percent to the Combined Heat and Power (CHP) Long-term PPA Set-aside Account, and
(v) A minimum seventy-seven (77) percent shall be allocated to the Connecticut Auction Account

c. Comment: One commenter is concerned that the allocation of allowances proposed by section 31(f)(3)(A) and the retirement of allowances proposed in section 31(f)(5) is contrary to RGGI's initial phase in approach and may reallocate the emission baseline to a level that is insufficient to ensure reliable dispatch of all supply side resources. (Commenter: 20)

Response: The Department does not believe the retirement of allowances set forth in section 31(f)(6) of the final proposed regulations will impact dispatch of supply side resources. Recent forward capacity auction activity by ISO-NE indicates the market is effective in addressing future reliability needs in a carbon-constrained system. In addition, the Department's proposed changes to create a CHP long-term contract set aside for a transition period through December 31, 2011 should also address any concerns related to reliability. See the Department's response to comment 7.a., above.

d. Comment: One commenter requests the Department amend the language of this section to recognize and provide allowances to non-CO_2 energy sources, like nuclear uprates. Specifically, the commenter would like to change the annual CO_2 base allowance budget to eighty seven and four tenths (87.4) percent, from which three and 6 tenths (3.6) percent of the allowances should go to "uprated capacity from non-CO_2emitting conventional nuclear generating facilities." (Commenter: 23)

Response: The Department should not provide allowances to "uprated" nuclear generation units because these units are not subject to the RGGI program (i.e., they do not emit regulated air pollutants and have no compliance obligations under the proposed regulations).

e. Comment: Three commenters noted that under the current regulatory language CHP facilities qualify for both the 5% allocation to CHP facilities and the 3% allocation to CDR resources. "CSD" [sic] means an entity that "operates CO_2 budget units that are also CDR resources that received funds pursuant to the CDR program established by the Department of Public Utilities Control (DPUC) pursuant to Section 16-243 of the Connecticut General Statutes." Many of the CDR projects that are being funded and built in Connecticut are CHP facilities. The commenters would like the regulation amended to ensure a facility is able to participate in only one set-aside program, not both. (Commenters: 14, 28, and 34)

Response: The Department should clarify that a regulated source may only participate in one set aside program as follows:

(B) By April 1, 2009 and April 1 of each year thereafter, the commissioner shall allocate <u>from the CHP Useful Thermal Energy Set-aside Account</u> to the compliance account of each CO_2 budget source

generating useful net thermal energy from its CO_2 budget units the number of CO_2 allowances equal to the amount determined by the following equation (rounded to the nearest whole ton), subject to the limitation in subparagraph (C) of this subdivision.~~.~~ CO_2 budget units that are eligible for allowances from the CDR Set-aside Account pursuant to subparagraph (O) of this subdivision shall not be eligible for allowances from the CHP Useful Thermal Output Set-aside Account.

$$\frac{\left((TEG \div 0.80) \times 136 \frac{lb}{mmBtu} \right)}{2000 \frac{lb}{ton}}$$

Where:

TEG = the average useful net thermal energy (in mmBtu) generated by CO_2 budget units at the CO_2 budget source during the ~~second and third~~ two years preceding the allocation year of the allowances being allocated.

See also section 31(f)(3)(F) in the Department's revised language offered in response to comment 7.a. above.

8. Comment on section 22a-174-31(f)(3)(D): One commenter requested making allowances available from the CHP set aside account to CHP installations and other low emission technologies that are not subject to RGGI. (Commenter: 27)

Response: The Department should not provide allowances to generation units that are not subject to the proposed regulations because these units have no compliance obligations under the proposed regulations.

9. Comments on section 22a-174-31(f)(3)(F): One commenter stated resources equivalent to CDRs exist or may be developed within municipal electric utility service areas, which because municipal electric utilities are not regulated by the DPUC don't meet the regulatory requirements for allowances from this set-aside account. However, these resources should not be excluded from qualification to receive the set-aside benefits. (Commenter: 30)

Response: The Department should not extend the CDR provisions beyond those explicitly described in the legislative history to section 93 of Public Act 07-242, which is codified in section 22a-200c of January 2008 supplement to the Connecticut General Statutes.

10. Comment on section 22a-174-31(f)(4): One commenter stated the regulation should be

modified to clarify that the allowance auction is conducted by the Department, in consultation with the DPUC. Specifically, this section should clarify the Department shall conduct the auctions and maintain a leadership role which is consistent with the language C.G.S. section 22a-200c(b), which states:

> "The Department of Environmental Protection, in consultation with the Department of Public Utility Control, shall auction all emissions allowances and invest the proceeds on behalf of the electric ratepayers in energy conservation, load management and Class I renewable energy programs."

(Commenter: 32)

Response: The Department believes section 31(f)(4)(A) and (B) of the proposed regulations clearly indicates that the Department, in consultation with the DPUC, shall auction all emissions allowances. The language in the final proposed regulations is also consistent with C.G.S. section 22a-200c. Furthermore, the Department intends to maintain a leadership role in the implementation of the final proposed regulations upon their promulgation.

11. Comments on section 22a-174-31(f)(4)(D):

a. Comment: Four commenters believe a portion of the auction proceeds should flow back to consumers to provide rate relief in order to help mitigate the impact of implementing the proposed RGGI program. In particular, one commenter recommended that the proceeds go to end-users in the form of a per kilowatt-hour credit. Another commenter believes ratepayer relief should be directed to the State's electric distribution system, including the State's municipal electric utilities, in proportion to their share of the State's electric load. (Commenters: 5, 16, 19, and 30)

Response: Regional modeling demonstrates that significant regional investment in energy efficiency is the most effective means to help mitigate potential cost impacts associated with RGGI. Energy efficiency measures reduce overall demand, which will reduce overall cost. Direct ratepayer relief would not capture the many benefits of energy efficiency. Furthermore, the Department is not authorized to use allowance auction proceeds for direct ratepayer relief. The Department should continue to support all effective and efficient means to minimize potential ratepayer impacts associated with the regulation of carbon emissions from the power sector. Such efforts will also provide a public health benefit to the extent that other air pollutants are reduced by increased efficiencies and lower demand in the power sector. It is also important to note that the ECMB determined in its 2008 report to the legislature, "Energy Efficiency – Investing in Connecticut's Future," that there is a significant benefit to the system of four dollars for every dollar invested in energy efficiency. See

also the Department's response to comment 1, above.

b. Comment: Two commenters recommend retaining the MOU language in the regulation permitting the use of auction proceeds to promote low and non-carbon-emitting technologies. In addition, one commenter believes a material portion of the proceeds should be directed to discovering methods of capturing and sequestering CO_2 from fossil-fuel-fired generation. (Commenters: 16 and 25)

Response: The Department's proposed allocation methodology provides for the use of auction proceeds to promote low and non-carbon-emitting technologies through auction proceeds awarded to the Connecticut Clean Energy Fund ("CCEF").

c. Comment: One commenter stated the Department should change the regulations to allocate to the Connecticut Municipal Electric Energy Cooperative ("CMEEC") a portion of the auction proceeds that is equal to its portion of the State's electric load. Specifically, the commenter believes the allocation should be 75.192% to CL&P, 18.798% to UI and 6.01% to CMEEC. (Commenter: 30)

Response: There is currently a single 85MW CO_2 budget unit operating within the CMEEC service territory. Therefore it is more appropriate to allocate auction proceeds based on electricity generation relative to electricity generation by CO_2 budget units operating in the CMEEC service territory. It is also important for the Department to ensure that any auction proceeds made available to CMEEC be used to minimize ratepayer impact in accordance with section 31(f)(5)(C) of the final proposed regulations as follows:

(C) By December 31, 2009 and December 31 of each year thereafter, up to one (1) percent of proceeds from auctions held in the previous 12 months may be transferred to an account held by the Connecticut Municipal Electric Energy Cooperative (CMEEC). The commissioner shall determine the amount of proceeds to be transferred to CMEEC as follows:

(i) By October 31, 2009 and October 31 of each year thereafter, CMEEC shall apply for such funds on forms prescribed by the commissioner,

(ii) The actual percent of the proceeds that CMEEC may receive in a calendar year shall be the lower of one percent or the percentage representing the amount of electricity generated in MWhs by CO_2 budget units operating in the CMEEC service territory relative to the amount of

electricity generated in MWhs by all CO_2 budget units in Connecticut in the previous calendar year.

(iii) If the commissioner transfers proceeds to CMEEC in accordance with the provisions of subparagraph (C)(i) of this subdivision, CMEEC shall provide a full accounting of the use of such funds to the commissioner, the Department of Public Utility Control, the Energy Conservation and Management Board and all CMEEC municipal utilities no later than March 31, 2010 and annually thereafter following the year in which CMEEC received such funding.

12. Comments on section 22a-174-31(f)(4)(D)(i):

a. Comment: One commenter stated the seven and one-half (7.5) percent of the auction proceeds to be retained by the Commissioner is more money than the Department needs to run the RGGI program. (Commenter: 5)

Response: The Department is authorized to retain 7.5 percent of the auction proceeds to cover the reasonable administrative costs associated with the implementation of RGGI in Connecticut *and to fund assessment and planning of measures to reduce emissions and mitigate the impacts of climate change.* See, C.G.S. section 22a-200c(c). The Department should not require 7.5 percent of the auction proceeds to implement RGGI. Due to the magnitude of efforts necessary to adapt to climate change and mitigate further GHG emissions, it is likely that at least 75% of this funding will be utilized for climate programs in accordance with C.G.S. section 22a-200c(c). While the costs to be borne by the Department are unknown at present (as are the revenues associated with the auction of CO_2 allowances), the tasks before the Department are clear. The Department will need to commit resources to implement the final proposed regulations. These resources must also support the regional organization, the development and implementation of auction services, and ensure compliance with the program in Connecticut. In addition, the Department will need to commit significant resources to assess and plan measures to reduce emissions and mitigate the impacts of climate change in Connecticut. The Department should acknowledge that the auction proceeds could be significant. In addition, the Department should also acknowledge the auction proceeds, like all public funds, are subject to stringent control and oversight by both the Department and State Auditors. As such, the Department should revise the proposed regulations to clearly commit to use such funds in accordance with the provisions of C.G.S. section 22a-200c, as follows:

~~(i)~~(A) Seven and one-half (7.5) percent of auction proceeds shall be retained by the commissioner for use in accordance with section 22a-200c(c) of the Connecticut General Statutes.

b. Comment: Several commenters would like the Department to clarify how the 7.5% of the auction proceeds will be used. In particular, the majority of these commenters believe the language of this sections should be revised to clearly reflect the language in Public Act 07-242, Section 93(c) which states:

> "The regulations adopted pursuant to subsection (a) of this section may include provisions to cover the reasonable administrative costs associated with the implementation on the Regional Greenhouse Gas Initiative in Connecticut and to fund assessment and planning of measures to reduce emission and mitigate the impacts of climate change. Such costs shall not exceed seven and one-half percent of the total projected allowance value."

(Commenters: 14, 16, 24, 28, 33, and 34)

Response: The Department should clarify in the final proposed regulations that it should use the auction proceeds in accordance with the provisions of C.G.S. section 22a-200c(c). Furthermore, the Department should convene a stakeholder group to assist its efforts in planning measures to reduce emissions and mitigate the impacts of climate change in Connecticut. See also the Department's revised language offered in response to comment 12.a., above.

13. Comments on section 22a-174-31(f)(4)(D)(ii):

a. Comment: One commenter strongly urges the Department to modify the allocation percentages to provide that a full fifty (50) percent of the available auction proceeds be allocated to Class I renewable energy sources such as solar power, methane gas recovery from landfills and fuel cells. (Commenter: 11)

Response: The Department intends to distribute a portion of auction proceeds to the Connecticut Clean Energy Fund so that they may invest in Class I renewable energy sources in Connecticut. However, other commenters have pointed out that CCEF maintains a significant budget surplus and that the Department should not contribute to creating further surplus at CCEF. CCEF's annual report confirms such surplus. As such, the Department should amend the proposed regulations to distribute auction proceeds to CCEF upon a demonstration that the funds will be committed for development of Class I renewable sources in Connecticut within the next succeeding calendar year and further provided that CCEF does not have more than ten million dollars in unallocated funds, as follows:

~~(ii)~~(B) By December 31, 2009 and December 31 of each year thereafter, up to twenty-three ~~and one-eighth~~ (23~~.125~~) percent of proceeds from auctions held in the previous 12 months ~~shall~~ may be transferred to an account held by the Connecticut Clean Energy Fund. Proceeds are to be used to support the development of Class I renewable energy sources. The amount of proceeds to be transferred to CCEF shall be determined based on the following criteria;

(i) By October 31, 2009 and October 31 of each year thereafter, CCEF shall apply for such funds on forms prescribed by the commissioner, and

(ii) The commissioner shall transfer funds to CCEF provided that CCEF demonstrates such funds will be committed within twelve months from the date of receipt to support the development of Class I renewable energy sources and further provided that for the prior year ending June 30 there is no more than ten million dollars unallocated.

b. Comment: One commenter recommends the regulations require that the proceeds invested in Class I renewable energy be restricted specifically for uses that directly support the development of new Class I generation. (Commenter: 34)

Response: The Department understands that CCEF utilizes its funding to directly support the development of new Class I generation.

c. Comment: One commenter recommended the regulation incorporate a "weighting" mechanism favoring investments in those Class I resources that produce the largest global warming emissions reduction benefits. (Commenter: 34)

Response: The Department should not make the suggested change because the Department will not be directing investments made by CCEF with auction proceeds. The CCEF's use of these funds will be subject to DPUC review and oversight.

14. Comments on section 22a-174-31(f)(4)(D)(ii) and (iii):

a. Several commenters suggest the Department provide some discretion in the regulations to alter the percentages between energy efficiency and Class I renewable energy investments. The commenters reason that the benefits of investing in energy efficiency or Class I renewable energy may change from year to year. Specifically, one commenter maintained monies directed to the Connecticut Clean Energy Fund (CCEF) should not be an automatic percentage, but instead should be directed to CCEF if the Fund

demonstrates a need and ensures that the money is being used to support Class I renewable energy projects. (Commenters: 14, 26, 28, and 34)

Response: With respect to CCEF, as stated in response to comment 13.a., above, the Department should amend the proposed regulations to distribute auction proceeds to CCEF upon a demonstration that the funds will be used for Class I renewable sources in Connecticut within the next succeeding calendar year. To the extent the amount of auction proceeds distributed to CCEF is limited, the remaining auction proceeds should be directed to energy efficiency programs in accordance with section 31(f)(5)(D) of the proposed final regulations as follows:

~~(iii)~~(D) By December 31, 2009 and December 31 of each year thereafter, a minimum sixty-eight and one-half (68.5) ~~sixty-nine and three-eighths (69.375)~~ percent of proceeds from auctions held in the previous 12 months shall be transferred to accounts held by Connecticut Light & Power (CL&P) and United Illuminating (UI) and overseen by the Connecticut Energy Conservation Management Board ~~(ECMB)~~. Eighty (80) percent of this subtotal shall be distributed to the CL&P account and twenty (20) percent shall be distributed to the UI account. Proceeds are to be used to support the development of energy efficiency measures.

b. One commenter recommends the regulations be revised to permit the Department and DPUC to jointly review proposed projects, determine annual funding levels for the CCEF and energy efficiency measures, consider the current revenues collected through the Combined Public Benefits Charge and then determine the best uses of the auction revenues. (Commenter: 26)

Response: The Department should not revise the proposed regulations as suggested because there is already a public process in place in which the Department, DPUC and others jointly review projects in an open and public process. The Department does not determine funding levels for CCEF outside of distributing auction proceeds in accordance with section 31(f)(B) of the final proposed regulations. See the Department's response to comment 13.a., above.

c. One commenter supports the current allocation of auction proceeds in energy efficiency and Class I renewable energy investments. (Commenter: 33)

Response: See the Department's response to comments 13a. and 14.a., above.

15. Comment on section 22a-174-31(f)(4)(D)(iii): One commenter recommends the Department allocate a larger percentage of the auction proceeds to energy efficiency programs. Specifically, the commenter believes the Department should seek to designate 100 percent of the

auction proceeds to energy efficiency, or at least the amount necessary to mitigate all customer cost increases. (Commenter: 29)

Response: See the Department's response to comment 14.a. above.

16. Comments on section 22a-174-31(f)(5), Retirement of Allowances for Clean Energy Purchases:

a. Comment: Nine commenters believe the Voluntary Clean Energy Purchase Set-aside should not be capped at 1%. The commenters reason that the number of clean energy purchasers is increasing and the retirement of these allowances increases participation and allows the purchasers to feel as though their extra expenditure toward clean energy is meaningful and real. One commenter recommended the allowances retired through the Voluntary Clean Energy Purchase Set-aside account grow in proportion to the size of Connecticut's voluntary market, rather than be capped at the maximum of one percent. (Commenters: 4, 7, 10, 14, 28, 32, 33, 34, and 36)

Response: The Department believes it is important to support clean energy purchases and that the set aside should be increased. It is worthwhile public policy to acknowledge individuals who pay price premiums to support renewable power and advise them that their purchase impacts carbon emissions in Connecticut. Rather than automatically increase this set aside over the course of the program, the Department should periodically evaluate the set aside established in the final proposed regulation. The Department should commit to this review in accordance with a mid-course review of the RGGI program scheduled to occur in 2012. Until the first such review, the Department should increase the Voluntary Clean Energy Purchase Set-aside to 1.5%. See the proposed regulatory language provided in the Department's response to comment 7.b., above.

b. Comment: Two commenters recommend the Voluntary Clean Energy Purchase Set-aside be eliminated, as it unnecessarily restricts the supply of allowances that are available to budget units. (Commenters: 19 and 20)

Response: See the Department's response to comment 16.a. above

17. Comments on section 22a-174-31(f)(6), Early reduction CO2 allowances: One commenter supported the Departments decision to allow for the creation of early reduction allowances (ERAs). There was also one commenter that recommended the Department refrain from adopting this provision, as it is a free allocation to generators. (Commenters: 26 and 28)

Response: To the extent that CO_2 budget units are eligible for early reductions, the Department supports such allowances as they represent real CO_2 emission reductions that occurred prior to the program start date of January 1, 2009.

This approach is consistent with the Department's approach in other cap and trade programs.

18. Comment on section 22a-174-31(g)(5)(B): One commenter recommended the Department revise the regulations to increase the percentage of offset allowances that may be used by a CO_2 budget source for compliance. (Commenter: 30)

Response: The Department should not increase allowable offset percentages set forth in section 31(g)(5)(B). The Department believes these offset percentages, which were set as part of the regional process are sufficient as modified in response to comment 19, below. These percentages are set at an appropriate level so as to ensure a portion of the required emission reductions occur within the power-generating sector.

19. Comments on section 22a-174-31(g)(5)(B)(iii): Three commenters recommended the Department revise the language of this section to make it consistent with the RGGI Model Rule. The Model Rule states a Stage 2 trigger event would increase the percentage of offsets allowed for compliance to 10%, not 20%. In addition, a Stage 2 trigger event only needs to occur once, in order to increase the offsets allowed for compliance to 10%. (Commenters: 19, 24, and 28)

Response: In response to this comment and to make an additional technical change based on the recommendation of the hearing office for regional consistency, the Department should amend section 31(g)(5)(B) as follows:

(B) For CO_2 offset allowances, the number of CO_2 offset allowances that are available to ~~may~~ be deducted in order for a CO_2 budget source to comply with the CO_2 requirements of subsection (b)(3) of this section for a control period may not exceed ~~can be no more than~~ the number of tons representing the following percentages of the CO_2 budget source's CO_2 emissions for that control period as determined in accordance with subsection (i) of this section:

(i) Unless the provisions of subparagraphs (B)(ii) or (iii) of this subdivision apply, three and three-tenths (3.3) percent;

(ii) If the commissioner determines that there has been a Stage One Trigger Event, five (5) percent; or

(iii) If the commissioner determines that there has ~~have~~ been a ~~at least two~~Stage Two Trigger Event~~s in immediate succession~~; ten (10)~~five (5)~~ percent ~~of the CO_2 budget source's CO_2 emissions for the first three years of the control period, and twenty (20) percent of the CO_2 budget source's CO_2 emissions for each year after the third year of the control period~~.

20. Comment on section 22a-174-31(g)(5)(D)(i): One commenter noted that the regulation includes the definitions and reporting requirements for burning eligible biomass, but has omitted the provision allowing for deductions, and thus creates a disincentive to co-firing with biomass. The commenter recommends that this provision be restored to the regulation to maintain consistency with the Model Rule. This section of the regulation should be amended to read:

> "Until the amount of CO2 allowances deducted equals the number of tons of total CO2 emissions, <u>less any CO2 emissions attributable to the burning of eligible biomass</u>, determined in accordance with subsection (i) of this section, from all CO2 budget sources at the CO2 budget source for the control period;"

(Commenter: 28)

Response: The Department should make the change recommended above.

21. Comment on section 22a-174-31(g)(5)(G): When a budget source's emissions are greater than their allowances at the end of a compliance period, this section provides for the deduction of three times the excess emissions from the budget sources compliance account in the allocation years after the control period. One commenter suggested the Department remove this penalty provision from the regulations. (Commenter: 19)

Response: The Department should not make the requested change because the enforcement provisions in the proposed regulations are consistent with those set forth in other cap and trade programs administered by the Department, such as R.C.S.A. section 22a-174-22c.

B. Specific Comments on Proposed RCSA Section 22a-174-31a

1. Comments on section 22a-174-31a:

a. Comment: Several commenters suggested the Department should allow for additional offset categories. In particular, commenters suggested Energy from Waste (EfW), the AES Thames Guatemala carbon sequestration project, and small clean energy technologies that have not achieved meaningful market penetration should be allowed to participate as RGGI offset projects. Finally, one commenter recommends this section be revised to include "renewable energy as defined in C.G.S. section 16-1" as one of the listed offset types. (Commenters: 10, 19, 21, 24, 25, 31, and 33)

Response: At this time, the Department should not include any new offset categories beyond the five that were included in the original proposal. After extensive study during the RGGI planning process, the five project categories were selected with consideration of expected offset supply

within the borders of participating states, the relative ease of developing standards, and the likelihood of mandatory greenhouse gas regulations for that sector. The Department should continue to work toward the development of additional offset categories with the other participating states. Proposed categories will be evaluated based on the requirements included in section 31a(c). Specifically, the Department must ensure that any CO_2 offset allowances awarded from new offset categories meet the requirements of section 31a(c)(1) that offsets represent CO_2 equivalent emission reductions or carbon sequestration that are real, additional, verifiable, enforceable, and permanent within the framework of a standards-based approach.

b. Comment: One commenter recommends the Department require that all offset allowances must be real, additional, verifiable, enforceable and permanent. (Commenter: 26)

Response: See the Department's response to comment 1.a. above.

2. Comments on section 22a-174-31a(a): One commenter suggested the Department add definitions for "Life Cycle Assessment" and "Methane" to the definitions section of the regulation. (Commenter: 21)

Response: The Department should define the term "Methane" in the final proposed regulations. Because the Department is not proposing to adopt the changes suggested in comments 1.a. and 4 in this Part, the Department need not define the term "Life Cycle Assessment." The Department should add the definition of "CH_4" to new section 31a(a)(11) as follows:

(11) "CH_4" means methane.

3. Comment on section 22a-174-31a(a)(18): One commenter recommends the definition of "energy conservation measure" or "energy efficiency measure" should make clear that CHP is an energy conservation or efficiency measure. (Commenter: 27)

Response: The Department should cooperate with the states in RGGI and continue to evaluate the viability of new offset categories and expansion of the existing five categories. Until such time that these categories can be expanded in a regionally consistent manner, the Department should not modify the definition of "energy conservation measure."

4. Comment on section 22a-174-31a(c)(3): One commenter recommended the Department include international offsets as part of the eligible offset projects allowed in this program. (Commenter: 6)

Response: The proposed regulation allows for the used of CO_2 emissions credit retirements for international offset projects, in section 31a(c)(4), after the occurrence of a stage two trigger event. The Department should not make any additional revisions regarding international offsets at this time.

5. Comment on section 22a-174-31a(d), Landfill Methane (CH_4) Capture and Destruction: One commenter suggested the Department change the calculations in this section to include the concept of "life cycle assessments" in the calculation methodologies. (Commenter: 21)

Response: The Department has concluded that the methods described in the proposed regulations are sufficiently accurate to quantify emissions reductions associated with the destruction of methane gas from landfills. The Department should therefore finalize the CO_2 emissions offset project standards for landfill gas as proposed.

6. Comment on section 22a-174-31a(g):

a. Comment: One commenter recommends that the Department allow re-powering projects employing gas turbines in CHP applications to be eligible as an Energy Conservation Measure ("ECM") under this section. (Commenter: 3)

Response: See the Department's response to Comment 3 above.

b. Comment: One commenter believes the Department should not establish zero net energy as a prerequisite for new buildings, in this section of the regulations, as it may preclude the offset program from encouraging today's new buildings from making energy efficiency improvements. (Commenter: 27)

Response: See the Department's response to Comment 3 above.

7. Comments on section 22a-174-31a(g)(3): One commenter recommends that gas turbine CHP systems be included in this section along with commercial boilers. The commenter also stated that there is no measurement basis referenced to the boiler efficiency percentages in Table 31a-2, and recommends that efficiencies based on an annual average be used rather than peak efficiencies. In addition the commenter recommends that a table similar to Table 31a-2 be included for turbine CHP systems with qualifying efficiencies of 60% on an annual average basis. (Commenter: 3)

Response: The Department should continue to evaluate the viability of new offset categories and expansion of the existing five categories. Until such time that these categories can be expanded in a regionally consistent manner, the Department should not include CHP systems in this section. In addition the Department should not base efficiencies in Table 31a-2 on

annual average efficiencies. Using the AFUE or Thermal Efficiency calculations are sufficient to determine whether the thermal efficiencies are met.

8. Comments on section 22a-174-31a(i)(1)(A): One commenter requested the Department delineate in application instructions or guidance the type of documentation that would adequately demonstrate the necessary qualifications for accreditation specified in subsection 22a-174-31a(i)(1)(A)(ii) through (iv) and (vi) through (viii). (Commenter: 18)

Response: The Department should develop appropriate guidance to facilitate the implementation of section 31a consistent with this comment.

9. Comment on section 22a-174-31a(i)(1)(A)(vi): One commenter suggested the Department remove from the regulation the requirement for a person selected to perform certification activities to demonstrate that no financial relationship exists with any offset project developer or sponsor. Instead, the commenter recommended the Department include this language as a component of the independent third-party verification process, using specifically worded certification language that could be specified in the regulation or in the offset project application package. (Commenter: 18)

Response: The Department should retain this provision in the final proposed regulation. In addition, the Department should also consider inserting this provision into the offset project application forms when such forms are developed.

10. Comments on section 22a-174-31a(i)(1)(A)(viii): One commenter recommends the Department remove the requirement that persons selected to perform certification activities certify the truthfulness and accuracy of all documents, reports and conclusions submitted to the commissioner. Instead, the commenter believes this requirement should be a component of the independent third-party verification process, using language specified in the regulation or in the offset project application package. (Commenter: 18)

Response: Consistent with the commenters recommendations and the regional planning process, the Department should remove this section from the regulations. In addition, the Department should consider incorporating a certification of truthfulness and accuracy requirement as part of the offset project application.

11. Comments on section 22a-174-31a(i)(4): One commenter recommends the addition of subparagraph (G) and (H) for clarification in this subdivision. The following is the commenter's recommended language for the subparagraphs:

(G) Demonstrate that the applicant has the qualifications to meet the requirements specified in 22a-174-31a(i)(1)(A)(ii) through (iv); and

(H) Certify that records will be maintained for a period of 10 years from the certification report , and those records will be made available for audit by either the commissioner or its agent, pursuant to subdivision (1)(A)(x) of this subsection.

(Commenter: 18)

Response: The Department should make changes to the text of proposed section 31a(i)(4)(D) to clarify the requirements of that section, rather than creating a new subparagraph (H). The Department should also remove proposed subdivision 31a(i)(1)(A)(x) as it is unnecessary, and thus will not need to add subparagraph (H) for clarification. In addition, the Department should amend the language of section 31a(i)(4) to ensure the independent verifier's application for accreditation demonstrates the applicant meets all applicable accreditation standards. The Department should further clarify section 31a(i)(4) by making the changes as follows:

~~(4)~~ (3) Application for accreditation. An independent verifier shall submit an application for accreditation to the commissioner. The application shall include sufficient information to demonstrate that the applicant meets all accreditation standards required at subdivisions (1)(A)(i) through (vii) of this subsection. The independent verifier's application for accreditation shall ~~not contain any proprietary information, but shall include the following~~:

(A) Provide the applicant's name, address, e-mail address, telephone number, and facsimile transmission number;

(B) Demonstrate that the applicant has at least two years of experience in each of the knowledge areas specified in subdivisions (1)(A)(i) ~~through~~and (ii~~x~~) of this subsection, and as may be required pursuant to subdivision (1)(B) of this subsection;

(C) Verify that the applicant has successfully completed the requirements at subdivision (2) of this subsection, as applicable;

(D) Include a sample of at least one non-proprietary work product that provides supporting evidence that the applicant meets the requirements, as applicable, in subdivision (1)(A) of this subsection. The work product shall have been produced, in whole or part, by the applicant and shall consist of a final report or other material provided to a client under contract in previous work. For a work product that was jointly produced by the applicant and another entity, the role of the applicant in the work product shall

be clearly explained;

(E) Provide documentation that the applicant holds professional liability insurance as required pursuant to subdivision (1)(A)(vi~~i~~) of this subsection; and

(F) Provide documentation~~Demonstrate~~ that the applicant has implemented an adequate management protocol required pursuant to subdivision (1)(A)(vii) of this subsection to address and remedy any conflict of interest issues that may arise.

12. Comments on section 22a-174-31a(i)(4)(B): One commenter suggested this section should be reworded to state, "Demonstrate that the applicant has at least two years of experience in each of the knowledge areas specified in subdivision (1)(A)(i) through (iv) of this subsection." The commenter reasons that it is not possible for an individual to demonstrate that they have two years of experience with subdivisions (1)(A)(v) through (1)(A)(x). (Commenter: 18)

Response: The Department should amend the language in this section to require the applicant to demonstrate they have two years of experience in all "knowledge" areas, with the exception of proposed subclause (v), which required a demonstration of knowledge of sections 22a-174-31 and 22a-174-31a of the Regulations of Connecticut State Agencies. Proposed subclause (v) should still require knowledge of the regulations, however, the commenter was correct that it is impossible for an individual to demonstrate two years of experience in this knowledge area. See the Department's response to comment 10. In addition, the Department should amend the standards for accreditation of independent verifiers in section 22a-174-31a(i)(1) for clarity and to maintain consistency among the region as recommended in the comments received from Massachusetts Department of Environmental Protection. The Department should amend section 22a-174-31a(i)(1) as follows:

(1) Standards for accreditation. Independent verifiers may be accredited by the commissioner or the commissioner's designee to provide verification services as required of project sponsors under this section, provided that independent verifiers meet all of the requirements of this subsection.~~in accordance with the requirements of this subsection. To be considered for accreditation, a person must submit an application to the commissioner. The application shall include sufficient information to demonstrate that the applicant meets all accreditation standards:~~

(A) Persons selected to perform ~~certification activities~~ verification services shall:

~~(i) Possess experience in quantifying greenhouse gas emissions;~~

(~~ii~~)(i)Demonstrate knowledge of utilizing engineering,~~and~~ accounting and auditing principles sufficient to quantify greenhouse gas emissions, and develop and evaluate air emissions ~~inventories and audit the work product of others engaged in similar activities~~;

~~(iii) Demonstrate knowledge of auditing and accounting principles and information systems sufficient to carry out this section;~~

(~~iv~~)(ii)Demonstrate knowledge of information management systems;

(~~v~~)(iii)Demonstrate knowledge of the requirements of this section and section 22a-174-31 of the Regulations of Connecticut State Agencies;

(~~vi~~)(iv)Demonstrate that no direct or indirect financial relationship, beyond a contract for provision of verification services, exists with any offset project developer or sponsor;

(v) Employ staff with, knowledge, experience, and where appropriate, professional licenses appropriate to the specific category(ies) of offset projects specified in subsections (d) through (h) of this section that they seek to verify;

(~~vii~~)(vi)Certify that such person holds a minimum of one million U.S. dollars of professional liability insurance. If the insurance is in the name of a related entity, the verifier shall disclose the financial relationship between the verifier and the related entity, and provide documentation supporting the description of the relationship; and

~~(viii)Certify the truthfulness and accuracy of all documents, reports and conclusions submitted to the commissioner or the commissioner's designee;~~

(~~ix~~)(vii)Demonstrate that adequate protocols are established to avoid conflicts of interest with regard to an offset project, offset project developer, or project sponsor, or any other party with a direct or indirect financial interest in an offset project that is seeking or has been granted an approval under subsection (c) of this section; and

~~(x)Maintain records for a period of 10 years from the certification report which will be made available for audit by either the commissioner or its agent.~~

(B) Applicants shall possess such other qualifications ~~necessary~~ as may be required by the commissioner to provide competent verification services for individual CO_2 emissions offset categories specified in subsections (d) through (h) of this section ~~provide competent certification services as required for specific CO2 emissions offset project types set forth in this section~~.

13. Comments on section 22a-174-31a(i)(4)(D): One commenter believes this section should be reworded as follows, "Include a sample of at least one work product that provides supporting evidence that the applicant meets the requirements in subdivision (1)(A)(i) and (v) of this subsection." The commenter reasons that most of the subclauses in subdivision (1)(A) do not lend themselves to demonstration in a work product. (Commenter: 18)

Response: See the Department's response to Comment 10 above.

14. Comments on section 22a-174-31a(i)(4)(F): One commenter recommended that this section be modified for consistency with 22a-174-31a(i)(4)(E) to state, "Demonstrate that the applicant has implemented an adequate management protocol to address and remedy any conflict of interest issues that may arise, pursuant to subdivision (1)(A)(ix) of this subsection." (Commenter: 18)

Response: The Department should make the recommended changes in order to maintain consistency within the document, in addition to providing greater clarity as to the requirements of the application for accreditation. The proposed section 22a-174-31a(i)(4)(E) should be revised as follows:

(F) Provide documentation ~~Demonstrate~~ that the applicant has implemented an adequate management protocol required pursuant to subdivision (1)(A)(vii) of this subsection to address and remedy any conflict of interest issues that may arise.

IX. Additional Comments of the Hearing Officer

The Department should make the following technical/grammatical corrections to the proposed regulations:

A. Section 31

Subsection (a)

(2) "Acid rain emissions limitation" means "Acid Rain emissions limitation", as defined in 40 CFR 72.2, regarding emissions of sulfur dioxide or nitrogen oxides under the Acid Rain Program.

(3) "Acid Rain Program" means a multi-state sulfur dioxide and nitrogen oxides air pollution control and emissions reduction program established by the Administrator under 5 CAA and 40 CFR 72-78.

~~(2)~~(4) "Allocate" or "allocation" means the determination by the commissioner of the number of CO_2 allowances to be recorded in the compliance account of a CO_2 budget source, the Connecticut Auction account, an allocation set-aside account, ~~the consumer benefit or strategic energy purpose account,~~ the general account of the sponsor of an approved CO_2 emissions offset project or an account established by any other person.

~~(3)~~(5) "Allocation year" means a calendar year for which the commissioner allocates CO_2 allowances pursuant to subsection (f) of this section. The allocation year of each CO_2 allowance is reflected in the unique identification number given to the allowance pursuant to subsection (g)(4)(H) ~~(g)(4)(C)~~ of this section.

~~(6)~~(8) "Award" means the determination by the commissioner of the number of CO_2 allowances to be recorded in the compliance account of a CO_2 budget unit for early reduction CO_2 allowances ~~Early Reduction CO_2 Allowances~~ pursuant to subsection (f)(6) of this section, or the determination by the commissioner of the number of CO_2 offset allowances to be recorded in the general account of a project sponsor pursuant to section 22a-174-31a of the Regulations of Connecticut State Agencies. Award is a type of allocation.

~~(11)~~(14) "CO_2 allowance" means a limited authorization by the commissioner or a participating ~~participatory~~ state under the CO_2 Budget Trading Program to emit up to one ton of CO_2, subject to all the applicable conditions contained in this section.

~~(17)~~(20) "CO_2 allowance transfer deadline" means midnight of March 1 occurring after the end of the relevant control period or, if that March 1 is not a business day, midnight of the first business day thereafter and is the deadline by which CO_2 allowances must be submitted for recordation in a CO_2 budget source's compliance account in order for the source to meet the

~~source's~~ CO_2 requirements of subsection (b)(3) of this section ~~budget emissions limitation~~ for the control period immediately preceding such deadline.

(30) "Combined Heat and Power Long-term PPA Set-aside Account" means a general account established by the commissioner to hold CO_2 allowances that are offered for sale pursuant to subsection (f)(3) of this section.

~~(26)~~(30) "Combined Heat and Power ~~(CHP)~~ Useful Thermal Energy Set-aside Account" means a general account established by the commissioner to hold CO_2 allowances that are allocated pursuant to subsection (f)(3) of this section.

~~(38)~~(42) "Continuous emissions monitoring system" or "CEMS" means the equipment required under subsection (i) of this section to sample, analyze, measure, and provide, by means of readings recorded at least once every 15 minutes, using an automated data acquisition and handling system, a permanent record of stack gas volumetric flow rate, stack gas moisture content, and oxygen or carbon dioxide concentration as applicable, in a manner consistent with 40 CFR 75 and subsection (i) of this section.

(59) "Long-term Power Purchase Agreement" or "Long-term PPA" means an agreement, executed prior to January 1, 2000, between a CO_2 budget source and a purchasing party to sell power from the CO_2 budget source for a period of 20 or more years.

(67) "Non-CO_2 budget unit" means a unit that does not meet the applicability criteria of subsection (b) of this section.

(80)(B) CPI (year) means the CPI for all urban consumers ~~for~~ calculated in August of the previous calendar year in which the adjustment is made; and

Subsection (b)

(2) Monitoring. In order to determine compliance with the CO_2 requirements of subdivision (3) of this subsection, the owner or operator of a CO_2 budget source subject to this section shall comply with the applicable monitoring requirements set forth in subsection (i) of this section. The commissioner shall determine compliance with subdivision (3) of this subsection using the emissions measurements recorded and reported in accordance with subsection (i) of this section.

(3)(F) A CO_2 allowance ~~allocated by the commissioner or a participating state or otherwise acquired by the owner or operator of the CO_2 budget source~~ under ~~the provisions of~~ the CO_2 Budget Trading Program is a limited authorization by the commissioner or a participating state to emit one ton of CO_2 in accordance with the CO_2 Budget Trading Program;

(3)(G) A CO_2 allowance ~~allocated by the commissioner or otherwise acquired by the owner or operator of the CO_2 budget source~~ under the CO_2 Budget Trading Program does not constitute a property right: and

(3)(H) For the purpose of determining compliance with the subparagraph (A) of this subdivision, total CO2 emissions, in tons, for a control period shall be calculated as the sum of all recorded hourly emissions, or the tonnage equivalent of the recorded hourly emissions rates, in accordance with subsection (i) of this section, with any remaining fraction of a ton equal to or greater than 0.50 ton deemed to equal one ton and any fraction of a ton less than 0.50 ton deemed to equal zero tons.

(5)(A) Forfeit the CO_2 allowances required for deduction under subsection (g)(5)(G) ~~(g)(5)(D)(i)~~ of this section;

(5)(C) Comply with any assessment imposed under subsection (g)(5)(G)~~(g)(5)(D)(iii)~~ of this section, provided that such assessment shall not limit additional enforcement action by the commissioner.

Subsection (c)

(1)(F) If the CO_2 budget source is also subject to section 22a-174-22c of the Regulations of Connecticut State Agencies or the Acid Rain Program, the CO_2 authorized account representative shall be the same person as the designated representative under such programs.

(2)(D) If the CO_2 budget source is also subject to section 22a-174-22c of the Regulations of Connecticut State Agencies or the Acid Rain Program, the alternate CO_2 authorized account representative shall be the same person as the designated representative under such programs.

(3)(A) Changing the CO_2 authorized account representative. The CO_2 authorized account representative may be changed at any time upon receipt by the commissioner of a superseding complete account certificate of representation under subdivision (4) ~~(1)(C)~~ of this subsection. Notwithstanding any such change, all representations, actions, inactions, and submissions by the previous CO_2 authorized account representative or alternate CO_2 authorized account representative prior to the time and date when the commissioner receives the superseding account certificate of representation shall be binding on the new CO_2 authorized account representative and the owner or operator of the CO_2 budget source and the CO_2 budget units at the source.

(3)(B) Changing the alternate CO_2 authorized account representative. The alternate CO_2 authorized account representative may be changed at any time upon receipt by the commissioner of a superseding complete account certificate of representation under subdivision (2)(B) of this subsection. Notwithstanding any such change, all representations, actions, inactions, and submissions by the previous CO_2 authorized account representative or alternate CO_2 authorized account representative prior to the time and date when the commissioner receives the superseding account certificate of representation shall be binding on the new alternate CO_2 authorized account representative and the owner or operator of the CO_2 budget source and the CO_2 budget units at the source.

Subsection (f)

(3)(C) IF $\Sigma A_{CHP1} <= A_{CHP1\text{-}AV}$, THEN

$A_{CHP1\text{-}ALLOCATED} = A_{CHP1}$.

IF $\Sigma A_{CHP1} > A_{CHP1\text{-}AV}$, THEN

$$A_{CHP\ 1-ALLOCATED} = A_{CHP\ 1} \times \left(\frac{A_{CHP\ 1-AV}}{\sum A_{CHP\ 1}} \right)$$

rounded to the nearest whole allowance.

Where:

A_{CHP1} = the number of CO_2 allowances calculated for each CO_2 budget source pursuant to subparagraph (B) of this subdivision

ΣA_{CHP1} = the total number of CO_2 allowances calculated for CO_2 budget sources pursuant to subparagraph (B) of this subdivision

$A_{CHP1\text{-}AV}$ = the number of CO_2 allowances available for allocation from the CHP Useful Thermal Output Set-aside Account

$A_{CHP1\text{-}ALLOCATED}$ = the number of CO_2 allowances the commissioner shall allocate to the compliance account of each CO_2 budget source

The commissioner may adjust an allowance allocation under this subparagraph as necessary to not exceed $A_{CHP1\text{-}AV}$.

(3)(D) If $\Sigma A_{CHP1} < A_{CHP1\text{-}AV}$, allowances from the CHP Useful Thermal Output Set-aside Account not allocated for a vintage year shall be transferred to the Connecticut Auction Account, from which such allowances will be auctioned in accordance with subdivision (4) of this subsection.

(3)(E) By ~~January~~ March 1, 2009 and ~~January~~ March 1 of each year thereafter, CO_2 budget sources shall submit, on forms prescribed by the commissioner, information required for the equation specified in subparagraph (B) of this subdivision ~~subdivision (3)(B) of this subsection~~ relating amount of useful net thermal energy generated by CO_2 budget units at the CO_2 budget source during the ~~second and third~~ two years preceding the allocation year of the allowances being allocated. Such information shall be submitted to the commissioner as part of the annual output report required pursuant to subsection (i)(9)(J)(ii) of this section.

(3)~~(F)~~(O) By February 28, 2010 and February 28 of each year thereafter, the commissioner shall allocate from the CDR Set-aside Account to the compliance account of each CO_2 budget source, which operates CO_2 budget units that are also customer-side distributed resources that received funds pursuant to the customer-side distributed resources program established by the Department of Public Utilities Control pursuant to Section 16-243 of the Connecticut General Statutes, the number of CO_2 allowances equal to the total number of tons of CO_2 emissions emitted by such CO_2 budget units in the previous calendar year (rounded to the nearest whole ton), subject to the limitation in subparagraph (P)~~(G)~~ of this subdivision.

(3)~~(G)~~(P) IF $\Sigma A_{CDR} <= A_{CDR\text{-}AV}$, THEN

$A_{CDR\text{-}ALLOCATED} = A_{CDR}$.

IF $\Sigma A_{CDR} > A_{CDR\text{-}AV}$, THEN

$$A_{CDR-ALLOCATED} = A_{CDR} \times \left(\frac{A_{CDR-AV}}{\sum A_{CDR}} \right)$$

rounded to the nearest whole allowance.

Where:

A_{CDR} = the number of CO_2 allowances calculated for each CO_2 budget source pursuant to subparagraph (F) of this subdivision

ΣA_{CDR} = the total number of CO_2 allowances calculated for CO_2 budget sources pursuant to subparagraph (F) of this subdivision

$A_{CDR\text{-}AV}$ = the number of CO_2 allowances available for a allocation from the CDR Set-aside Account

$A_{CDR\text{-}ALLOCATED}$ = the number of CO_2 allowances the commissioner shall allocate to the compliance account of each CO_2 budget source

The commissioner may adjust an allowance allocation under this subparagraph as necessary to not exceed $A_{CDR\text{-}AV}$~~$A_{CHP\text{-}AV}$~~.

(4)(C) CO_2 allowances which are transferred to the Connecticut Auction Account from the CHP Useful Thermal Energy Set-aside Account pursuant to subdivision (3)(D) of this subsection, from the CHP Long-term PPA Set-aside Account pursuant to subdivision (3)(N) of this subsection, from the CDR Set-aside Account pursuant to subdivision (3)(Q) ~~(3)(H)~~ or from the Voluntary Clean Energy Purchase Set-aside Account pursuant to subdivision (6)(C) ~~(5)(C)~~ of this subsection shall be offered for sale at the next auction held following the transfer of such allowances.

~~(D)~~(5) Distribution of auction proceeds. Proceeds derived from the sale of CO_2 allowances held in the Connecticut Auction Account shall be distributed as follows:

(7)(E) Once the commissioner ~~verifies~~ confirms a CO_2 budget source's early reductions of CO_2 emissions, the commissioner shall award the early reduction CO_2 allowances to the CO_2 budget source's compliance account by December 31, 2009.

Subsection (g)

(2)(G)(i) The CO_2 authorized account representative for a general account may be changed at any time upon receipt by the commissioner of a superseding complete application for a general account under subparagraph (B) of this subdivision of this subsection. Notwithstanding any such change, all representations, actions, inactions and submissions by the previous CO_2 authorized account representative or the previous alternate CO_2 authorized account representative prior to the time and date when the commissioner receives the superseding application for a general account shall be binding on the new CO_2 authorized account representative and the persons with an ownership interest with respect to the CO_2 allowances in the general account.

(2)(G)(ii) The alternate CO_2 authorized account representative for a general account may be changed at any time upon receipt by the commissioner of a superseding complete application for a general account under subparagraph (B) of this subdivision of this subsection. Notwithstanding any such change, all representations, actions, inactions and submissions by the previous CO_2 authorized account representative or the previous alternate CO_2 authorized account representative prior to the time and date when the commissioner receives the superseding application for a general account shall be binding on the new alternate CO_2 authorized account representative and the persons with an ownership interest with respect to the CO_2 allowances in the general account.

(4)(A) By January 1, 2009, the commissioner shall record in the Connecticut Auction Account, the CHP Useful Thermal Energy Set-aside Account, the CHP Long-term PPA Set-aside Account and the Voluntary Clean Energy Purchase Set-aside Account the CO_2 allowances for the allocation years of 2009, 2010, 2011, and 2012;

(4)(B) By January 1, 2010 and January 1 of each year thereafter, the commissioner shall record in the Connecticut Auction Account, the CHP Useful Thermal Energy Set-aside Account, the CHP Long-term PPA Set-aside Account and the Voluntary Clean Energy Purchase Set-aside Account the CO_2 allowances for the allocation year that commences three years after such applicable deadline for recordation;

(4)(D) By February 28, 2009 and February 28 of each year thereafter, the commissioner shall record any CO_2 allowances allocated pursuant to subsections (f)(3)(O) and (f)(3)(P) ~~(f)(3)(F) and (f)(3)(G)~~ of this section in the CO_2 budget source's compliance account;

(4)(E) By June 15, 2009 and June 15 of each year thereafter, the commissioner shall record any CO_2 allowances sold pursuant to subsections (f)(3)(F) through (f)(3)(L) of this section in the CO_2 budget source's compliance account;

(4)~~(E)~~(F) By October 1, 2009 and October 1 of each year thereafter, the commissioner shall record any CO_2 allowances retired pursuant to subsection (f)(6) ~~(f)(5)~~ of this section in the Connecticut CO_2 Allowance Retirement Account;

(4)~~(G)~~(H) By December 31, 2009, the commissioner shall record any ~~CO2~~ early reduction CO_2 allowances awarded pursuant to subsection (f)(7) ~~(f)(6)~~ of this section in the CO_2 budget source's compliance account; and

(5)(A) Allowances available for compliance deduction. CO_2 allowances that meet the following criteria are available to be deducted in order for ~~compliance with~~ a CO_2 budget source~~source's~~ to comply with the CO_2 requirements of subsection (b)(3) of this section ~~budget emissions limitation~~ for a control period.

(5)(A)(i) The CO_2 allowances are of allocation years that fall within a prior control period or the same control period for which the allowances will be deducted; and

Subsection (h)

(2)(B) A CO_2 allowance transfer into or out of a compliance account that is submitted for recordation following the CO_2 allowance transfer deadline and that includes any CO_2 allowances that are of allocation years that fall within a control period prior to or the same as the control period to which the CO_2 allowance transfer deadline applies will not be recorded until after completion of the process pursuant to subsection (g)(5)(D) of this section~~of recordation of CO_2 allowance allocations in subsection (g)(4)(B) of this section~~.

Subsection (i)

(2) The owner or operator and, to the extent applicable, the CO_2 authorized account representative of a CO_2 budget source shall comply with the monitoring, recordkeeping and reporting requirements as provided in this subsection and all applicable sections of 40 CFR 75. Owners or operators of a CO_2 budget unit who monitor a non-CO_2 budget unit pursuant to the common, multiple, or bypass stack procedures in 40 CFR 75.72(b)(2)(ii), or 40 CFR 75.16 (b)(2)(ii)(B) as pursuant to 40 CFR 75.13, for purposes of complying with this section, shall monitor and report CO_2 mass emissions from such non-CO_2 budget unit according to the procedures for CO_2 budget units established in subsections (i)(2) through (i)(8) of this section.

(2)(A)(i) Install all monitoring systems necessary to monitor ~~required under this subsection for monitoring~~ CO_2 mass emissions in accordance with 40 CFR 75, except for equation G-1. Equation G-1 in Appendix G of 40 CFR 75 shall not be used to determine CO_2 emissions under this section. This may require systems~~, including all systems required~~ to monitor CO_2

concentration, stack gas flow rate, O_2 concentration, heat input and fuel flow rate~~, as applicable, in accordance with 40 CFR 75.13 and 75.72 and Appendix G of 40 CFR 75~~;

(2)(B)(i) The owner or operator of a CO_2 budget source that intends to apply for early reduction allowances under subsection (f)(7) ~~(f)(6)~~ of this section must demonstrate that the data submitted in support of the early reduction application was recorded in compliance with the requirements of this subsection for all of the early reduction years for which the CO_2 budget source was required to report CO_2 data pursuant to 40 CFR 75. A CO_2 budget source that was not required to submit CO_2 data pursuant to 40 CFR 75 for any of the years contained in the early reduction application may petition the commissioner as part of its application under subsection (f)(7) ~~(f)(6)~~ of this section for the use of alternative data source or sources for the calculation of early reduction allowances;

(2)(B)(ii) The owner or operator of a CO_2 budget source, except for a CO_2 budget source under subparagraph (B)(i) of this subdivision~~subclause (i) of this subparagraph~~, that commences commercial operation before July 1, 2008, must comply with the requirements of this subsection by January 1, 2009; and

(2)(B)(iv) For the owner or operator of a CO_2 budget source for which construction of a new stack or flue installation is completed after the applicable deadline under subparagraphs (B)(i), (ii) or (iii) of this subdivision ~~subclauses (i), (ii) or (iii) of this subparagraph~~ by the earlier of ninety (90) source operating days after the date on which emissions first exit to the ambient air through the new stack or flue or one hundred and eighty (180) calendar days after the date on which emissions first exit to the ambient air through the new stack or flue.

(2)(C)(ii) Except as provided in subparagraph (C)(iii) of this subdivision ~~subclause (iii) of this subparagraph~~, the owner or operator of a CO_2 budget source that does not meet the applicable compliance date set forth in subparagraphs (B)(ii) and (B)(iii) of this subdivision for any monitoring system under subparagraph (A) of this subdivision shall, for each such monitoring system, determine, record and report maximum potential or, as appropriate, minimum potential, values for CO_2 concentration, CO_2 emission rate, stack gas moisture content, fuel flow rate, heat input and any other parameter required to determine CO_2 mass emissions ~~and heat input~~ in accordance with 40 CFR 75.31(b)(2) or (c)(3), 40 CFR 75, Appendix section 2.4 or 40 CFR 75 Appendix E~~F section 2.5 as applicable~~.

(2)(C)(iv) CO_2 budget units subject to an acid rain emissions limitation or to section 22a-174-22c of the Regulations of Connecticut State Agencies that qualify for the optional SO_2, NO_X, and CO_2 emissions calculations for low mass emissions (LME) units, as applicable, under 40 CFR 75.19 and report emissions for such programs using the calculations under 40 CFR 75.19, shall also use the CO_2 emissions calculations for LME units under 40 CFR 75.19 for purposes of demonstrating compliance with this section.

(2)(C)(v) CO_2 budget units subject to an acid rain emissions limitation or to section 22a-174-22c of the Regulations of Connecticut State Agencies that do not qualify for the optional SO_2, NO_X, and CO_2 emissions calculations for LME units, as applicable, under 40 CFR 75.19, shall not use the CO_2 emissions calculations for LME units under 40 CFR 75.19 for purposes of demonstrating compliance with this section.

(2)(C)(vi) CO_2 budget units not subject to an acid rain emissions limitation or to section 22a-174-22c of the Regulations of Connecticut State Agencies shall qualify for the optional CO_2 emissions calculation for LME units under 40 CFR 75.19, provided that such units emit less than 100 tons of NO_X annually and no more than 25 tons of SO_2 annually.

(2)(D) Prohibitions. No owner or operator of a CO_2 budget ~~source or a non-CO_2 budget source monitored under 40 CFR 75.72(b)(2)(ii)~~unit shall use any alternative monitoring system, alternative reference method, or any other alternative for the required continuous emission monitoring system without having obtained prior written approval in accordance with subsection (i)(6) of this section.

(2)(E) No owner or operator of a CO_2 budget ~~source or a non-CO_2 budget source monitored under 40 CFR 75.72(b)(2)(ii)~~unit shall operate the source so as to discharge, or allow to be discharged, CO_2 emissions to the atmosphere without accounting for all such emissions in accordance with the applicable provisions of this subsection and 40 CFR 75.

(2)(F) No owner or operator of a CO_2 Budget ~~source or a non-CO_2 budget source monitored under 40 CFR 75.72(b)(2)(ii)~~unit shall disrupt the continuous emission monitoring system, any portion thereof, or any other approved emission monitoring method, and thereby avoid monitoring and recording CO_2 mass emissions discharged into the atmosphere, except for periods of recertification or periods when calibration, quality assurance testing or maintenance is performed in accordance with the applicable provisions of this subsection and 40 CFR 75.

(2)(G) No owner or operator of a CO_2 budget ~~source or a non-CO_2 budget source monitored under 40 CFR 75.72(b)(2)(ii)~~unit shall retire or permanently discontinue use of the continuous emission monitoring system, any component thereof, or any other approved emission monitoring system under this subsection, except under any one of the following circumstances

(3)(B) ~~The following systems are the principal types of continuous~~ Continuous emission monitoring systems required under this section include, but are not limited to, the following:~~subsection:~~

(3)(D) If the Administrator has previously approved a petition under 40 CFR 75.72(b)(2)(ii), or 40 CFR 75.16(b)(2)(ii)(B) as pursuant to 40 CFR 75.13, ~~75.17(a) or (b)~~ for apportioning the CO_2 emission rate measured in a common stack or a petition under 40 CFR 75.66 of this chapter for an alternative requirement in 40 CFR 75~~.12, 40 CFR 75.17 or 40 CFR 75, Subpart H~~, the CO_2 authorized account representative shall submit ~~resubmit~~ the petition to the ~~Administrator~~ commissioner under subdivision (7)(A) of this subsection to determine whether the

Administrator's approval applies under this program.

(3)(G) Requirements for recertification. Whenever the owner or operator makes a replacement, modification, or change in a certified continuous emission monitoring system under subdivision (2)(A)(i) of this subsection that the Administrator or the ~~permitting authority~~commissioner determines significantly affects the ability of the system to accurately measure or record CO_2 mass emissions ~~or heat input~~ or to meet the quality-assurance and quality-control requirements of 40 CFR 75.21 or ~~appendix~~ Appendix B to 40 CFR 75, the owner or operator shall recertify the monitoring system according to 40 CFR 75.20(b). Furthermore, whenever the owner or operator makes a replacement, modification or change to the flue gas handling system or the source's operation that the Administrator or the permitting authority determines to significantly change the flow or concentration profile, the owner or operator shall recertify the continuous emissions monitoring system according to 40 CFR 75.20(b). Examples of changes that require recertification include, but are not limited to: replacement of the analyzer, change in location or orientation of the sampling probe or site, or changing of flow rate monitor polynomial coefficients.

(3)(L) Initial certification and recertification procedures for low mass emission units using the excepted methodologies under subdivisions (2)(C)(iv) or (2)(C)(vi) of this subsection~~40 CFR 75.19~~. The owner or operator of a source qualified to use the low mass emissions excepted methodology under subdivisions (2)(C)(iv) or (2)(C)(vi) of this subsection ~~40 CFR 75.19~~ shall meet the applicable certification and recertification requirements of 40 CFR 75.19(a)(2), 40 CFR 75.20(h) and subdivision (3) of this subsection. If the owner or operator of such a source elects to certify a fuel flow meter system for heat input determinations, the owner or operator shall also meet the certification and recertification requirements in 40 CFR 75.20(g).

(6)(D) Quarterly reports. The CO_2 authorized account representative shall report the CO_2 mass emission data ~~and heat input data~~ for the CO_2 budget source, in an electronic format prescribed by the commissioner for each calendar quarter as follows:

(7)(C)(ii) In the event that the Administrator declines to review a petition under ~~subclause (i) of this~~ subparagraph (C)(i) of this subdivision, the CO_2 authorized account representative of a CO_2 budget unit that is not subject to an Acid Rain emissions limitation may submit a petition to the commissioner requesting approval to apply an alternative to any requirement of subsection (i) of this section. That petition shall contain all of the relevant information specified in 40 CFR 75.66. Application of an alternative to any requirement of subsection (i) of this section is in accordance with subsection (i) of this section only to the extent that the petition is approved in writing by the commissioner.

~~(7)(D) In the event that the Administrator declines to review a petition under subparagraph (C) of this subdivision, the CO_2 authorized account representative of a CO_2 budget unit that is not subject to an Acid Rain emissions limitation may submit a petition to the commissioner requesting approval to apply an alternative to any requirement of subsection (i) of this section. That petition shall contain all of the relevant information specified in 40 CFR 75.66.~~

~~Application of an alternative to any requirement of subsection (i) of this section is in accordance with subsection (i) of this section only to the extent that the petition is approved in writing by the commissioner.~~

(8)(A)(i) ~~Chemical analysis of eligible biomass fired, including carbon content~~ For each shipment of solid eligible biomass fuel fired at the CO_2 budget unit, the total eligible biomass fuel input, on an as-fired basis, in pounds;

(8)(A)(ii) ~~Moisture content of eligible biomass for each shipment received for firing at the CO_2 budget unit~~ For each shipment of solid eligible biomass fuel fired at the CO_2 budget unit, the moisture content, on an as-fired basis, as a fraction by weight;

(8)(A)(iii) ~~Total eligible biomass fuel input, in tons, to the CO_2 budget unit~~ For each distinct type of gaseous eligible biomass fuel fired at the CO_2 budget unit, the density of the biogas, on an as-fired basis, in pounds per standard cubic foot;

(8)(A)(iv) ~~Total eligible biomass heat input on an as-fired basis to the CO_2 budget unit~~ For each distinct type of gaseous eligible biomass fuel fired at the CO_2 budget unit, the moisture content of the biogas, as a fraction by total weight;

(8)(A)(v) ~~Heat input rate of eligible biomass to the CO_2 Budget unit in MMBtu/hr~~ For each distinct type of gaseous eligible biomass fuel fired at the CO_2 budget unit, the total eligible biomass fuel input, in standard cubic feet;

(8)(A)(vi) ~~Fuel feed rate of eligible biomass to the CO_2 budget unit in tons/hr~~ For each distinct type of eligible biomass fuel fired at the CO_2 budget unit, the dry basis carbon content of the fuel type, as a fraction by dry weight;

(8)(A)(vii) ~~Total operating hours for which eligible biomass was co-fired~~ For each distinct type of eligible biomass fuel fired at the CO_2 budget unit, the dry basis higher heating value, in MMBtu per dry pound;

(8)(A)(viii) ~~CO_2 tons emitted from the CO_2 budget unit due to firing of eligible biomass~~ For each distinct type of eligible biomass fuel fired at the CO_2 budget unit, the total dry basis eligible biomass fuel input, in pounds, calculated in accordance with subparagraph (B) of this subdivision;

(8)(A)(ix) ~~Description and documentation of fuel sampling frequency and methodology~~ The total amount of CO_2 emitted from the CO_2 budget unit due to firing eligible biomass fuel, in tons, calculated in accordance with subparagraph (C) of this subdivision;

(8)(A)(x) ~~Description and documentation of monitoring technology employed~~ For each distinct type of eligible biomass fuel fired at the CO_2 budget unit, the total eligible biomass fuel heat input, in MMBtu, calculated in accordance with subparagraph (D)(i) of this subdivision;

(8)(A)(xi) The total amount of heat input to the CO_2 budget unit due to firing eligible biomass fuel, in MMBtu, calculated in accordance with subparagraph (D)(ii) of this subdivision;

(8)(A)(xii) Description and documentation of monitoring technology employed, and description and documentation of fuel sampling methodology employed, including sampling frequency; and,

(8)(A)(xiii) For each distinct type of eligible biomass fuel fired at the CO_2 budget unit, chemical analysis, including heating value and carbon content.

(8)(B) An owner or operator of a CO_2 budget unit shall calculate and submit to the commissioner on a quarterly basis the ~~as-fired biomass CO_2 emissions factor for~~ total dry weight for each distinct type of eligible biomass fired by the CO_2 budget unit ~~for each distinct type of eligible biomass fired~~ during the reporting quarter~~;~~. ~~represented as CO_2 lbs per MMBtu of biomass heat input. The as-fired CO_2 emissions factor shall be the lower of the following~~ The total dry weight shall be determined for each fuel type as follows:

(8)(B)~~(i) as measured and recorded by the continuous emissions monitor during all periods when firing eligible biomass alone; or~~

(8)(B)(~~ii~~)(i) ~~for~~ For solid ~~fuels~~ fuel types~~, as determined as follows~~:

~~CO_2 lbs/MMBtu = ((C x FI_{TOTAL}) / HI) x (44/12)~~

$$F_j = \sum_{i=1}^{m} (1 - M_i) \times F_i$$

Where:

~~C = Carbon content of biomass (fraction by dry weight) for the distinct fuel type~~

~~FI_{TOTAL} = Total biomass fuel input, in pounds, for each distinct fuel type~~

~~HI = Heat input, as-fired, in MMBtu, for the distinct fuel type, derived as follows:~~

~~$HI = \sum (HHV_{DRY} \times (1-MCW_S)) \times FI_S$~~

~~Where:~~

~~HHV_{DRY} = MMBtu/lb (higher heating value) dry basis for each distinct fuel type fired~~

~~MCW_S = Moisture content wet basis (fraction) for each shipment fired~~

~~FI_S = Biomass fuel input, in pounds, for each shipment fired~~

F_j = Total eligible biomass dry basis fuel input (lbs) for fuel type j;

F_i = Eligible biomass as fired fuel input (lbs) for fired shipment i;

M_i = Moisture content (fraction) for fired shipment i;

i = Fired fuel shipment;

j = Fuel type; and,

m = Number of shipments.

(8)(B)~~(iii)~~(ii) ~~for gaseous~~For gaseous~~fuels, as determined as follows~~ fuel types:

~~CO_2 lbs/MMBtu = ((C x D) / HHV) x (44/12)~~

$F_j = D_j \times V_j \times (1 - Mj)$

Where:

~~C = Carbon content of biogas (fraction by weight) for distinct fuel type~~

~~D = Density of biogas, in lb/scf for distinct fuel type~~

~~HHV = Higher heating value, in MMBtu/scf, for distinct fuel type~~

F_j = Total eligible biomass dry basis fuel input (lbs) for fuel type j;

D_j = Density of biogas (lbs/scf) for fuel type j;

V_j = Total volume (scf) for fuel type j;

M_j = Moisture content (fraction) for fuel type j; and

j = Fuel type.

(8)(C) CO_2 emissions due to firing of eligible biomass shall be determined as follows:

~~$CO_{2\ BIOMASS} = \sum (B_{HI} \times B_{EF} \times B_{OF})/2000$~~

~~where:~~

~~$CO_{2\ BIOMASS}$ = Total CO_2 emissions, in tons, due to firing of eligible biomass for the reporting quarter~~

~~B_{HI} = Eligible biomass heat input on an as-fired basis, in MMBtu, for the reporting quarter for each distinct type of eligible biomass fired~~

~~B_{EF} = Eligible biomass emissions factor for the reporting quarter, in lbs. CO_2/MMBtu, for each distinct type of eligible biomass fired~~

~~B_{OF} = Eligible biomass oxidation factor for each distinct type of eligible biomass fired, derived for solid fuels based on the ash content of the eligible biomass fired and the carbon content of this ash, as determined pursuant to subparagraph (A)(i) of this subdivision; for gaseous biomass fuels, a default oxidation factor of 0.995 may be used~~

(8)(C)(i) For any full calendar quarter during which no fuel other than eligible biomass is combusted at the CO_2 budget unit, as measured and recorded in accordance with subdivisions (1) through (7) of this subsection; or

(8)(C)(ii) For any full calendar quarter during which fuels other than eligible biomass are combusted at the CO_2 budget unit, as determined using the following equation:

$$CO_2 \text{ tons} = \sum_{j=1}^{n} F_j \times C_j \times O_j \times 44/12 \times 0.0005$$

Where:

CO_2 tons = CO_2 emissions due to firing of eligible biomass for the reporting quarter;

F_j = Total eligible biomass dry basis fuel input (lbs) for fuel type j, as calculated in subparagraph (B) of this subdivision;

C_j = Carbon fraction (dry basis) for fuel type j;

O_j = Oxidation factor for eligible biomass fuel type j, derived for solid fuels based on the ash content of the eligible biomass fired and the carbon content of this ash, as determined pursuant to subparagraph (A)(xii) of this subdivision; for gaseous eligible biomass fuels, a default oxidation factor of 0.995 may be used;

44/12 = Number of tons of carbon dioxide that are created when one ton of carbon is combusted (44/12);

0.0005 = Number of short tons which is equal to one pound;

j = Fuel type; and,

n = Number of distinct fuel types.

(8)(D) ~~Fuel sampling methods and fuel sampling technology shall be consistent with the New York State Renewable Portfolio Standard Biomass Guidebook, May 2006~~Heat input due to firing of eligible biomass for each quarter shall be determined as follows:.

(8)(D)(i) For each distinct fuel type:

$$H_j = F_j \times HHV_j$$

Where:

H_j = Heat input (MMBtu) for fuel type j;

F_j = Total eligible biomass dry basis fuel input (lbs) for fuel type j, as calculated in subparagraph (B) of this subdivision;

HHV_j = Higher heating value (MMBtu/lb), dry basis, for fuel type j, as determined through chemical analysis; and

j = Fuel type.

(8)(D)(ii) For all fuel types:

$$\text{Heat Input MMBtu} = \sum_{j=1}^{n} H_j$$

where:

H_j = Heat input (MMBtu) for fuel type j;

j = Fuel type; and,

n = Number of distinct fuel types.

(8)(E) Fuel sampling methods and fuel sampling technology shall be consistent with the New York State renewable Portfolio Standard Biomass Guidebook, May 2006.

(9) Additional requirements to provide ~~net~~ output data.

(9)(A) By March 1, 2009 and March 1 of each year thereafter, CO_2 budget sources shall submit to the commissioner electricity generation data, in MWhs, associated with operation of CO_2 budget units at the CO_2 budget sources. The following MWh data should be included, if applicable:

(9)~~(A)~~(i) ~~A~~ CO_2 budget sources that are required to submit generation data ~~in a state that requires the use of information submitted~~ to the Independent System Operator (ISO) ~~to document megawatt-hours (MWh) the CO_2 budget source~~ shall submit to the commissioner the same CO_2 budget unit-level MWh ~~value~~ values submitted to the ISO and a statement certifying that the MWh of electrical output reported reflects the total actual electrical output of the CO_2 budget units at the CO_2 budget source ~~sources at the facility~~ used by the ISO to determine settlement resources of energy market participants.

(9)~~(B)~~(ii) ~~A~~ CO_2 budget sources ~~source in a state that requires gross output to be used~~ that ~~also reports~~ report gross hourly MW data to the Administrator, shall submit to the commissioner ~~use the same electronic data report (EDR)~~ an annual summation of the CO_2 budget unit-level gross output data~~(in MW), as~~ submitted to the Administrator~~, for the hour times operating time in the hour, added for all hours in a year. A CO_2 budget source that does not report gross hourly MW to the Administrator shall submit to the commissioner information in accordance with subparagraph (F) of this subdivision.~~

(9)~~(C)~~(iii) ~~A~~ CO_2 budget sources that do not submit generation data to the ISO or to the Administrator ~~source in a state that requires net electrical output,~~ shall submit to the commissioner net electrical output information in accordance with subparagraph (D)~~(F)~~ of this subdivision. A CO_2 budget source whose electrical output is not used in ISO energy market settlement determinations shall propose to the commissioner a method for quantification of net electrical output.

(9)~~(D)~~(B) CO_2 budget sources creating useful thermal energy and selling steam should use billing meters to determine net steam output. A CO_2 budget source whose steam output is not measured by billing meters or whose steam output is combined with output from a non-CO_2 budget source prior to measurement by the billing meter shall propose to the commissioner an alternative method for quantification of net steam output. If data for steam output is not available, the CO_2 budget source may report heat input providing useful steam output as a surrogate for steam output.

(9)~~(E)~~(C) Monitoring. By March 1, 2009, CO_2 budget sources shall provide an output monitoring plan containing the elements described in subparagraphs (D) through (G) of this subdivision.~~The owner or operator of each CO_2 budget source, in a state that has chosen to~~

~~allocate allowances based on the CO_2 budget source's net output, shall meet the following requirements. Each CO_2 budget source must provide a description of its net output monitoring approach in an output monitoring plan application required by the CO_2 Budget Trading Program under this subdivision. The output monitoring plan application must include the elements described in subparagraphs (F) through (O) of this subdivision.~~

(9)~~(F)~~(D) The output monitoring plan submitted by the CO_2 budget source pursuant to subparagraph (C) of this subdivision shall include ~~The owner or operator of a CO_2 budget source shall submit, to the commissioner,~~ a diagram of the electrical or steam system for which output is being monitored, specifically including:

(9)~~(G)~~(E) The output monitoring plan submitted by the CO_2 budget source pursuant to subparagraph (C) of this subdivision shall include ~~The owner or operator of a subject facility shall submit, to the commissioner,~~ a description of each output monitoring system. The description of the output monitoring system should include a written description of the output system and the equations used to calculate output. For net thermal output systems descriptions and justifications of each useful load should be included.

(9)~~(H)~~(F) The output monitoring plan submitted by the CO_2 budget source pursuant to subparagraph (C) of this subdivision shall include ~~The owner or operator of a subject facility shall submit, to the commissioner,~~ a detailed description of all quality assurance and quality control activities that will be performed to maintain the output system in accordance with subparagraph (M) of this subdivision.

(9)~~(I)~~(G) The output monitoring plan submitted by the CO_2 budget source pursuant to subparagraph (C) of this subdivision shall include ~~The owner or operator of a subject facility shall submit, to the commissioner,~~ documentation supporting any output values to be used as a missing data value should there be periods of invalid output data. The missing data output value must be either zero or an output value that is likely to be lower than a measured value and that is approved as part of the monitoring plan required under this section.

(9)~~(J)~~(H) Initial Certification. ~~A certification statement must be submitted by the~~ CO_2 authorized account ~~representative~~ representatives shall submit a certification statement stating that either the output monitoring system consists entirely of billing meters or that the output monitoring system meets one of the accuracy requirements for non-billing meters below. This statement may be submitted with the certification application required ~~by the CO_2 Budget Trading Program~~pursuant to subdivision (6)(C) of this subsection.

(9)~~(J)~~(H)~~(K)~~(i)Billing Meters. The billing meter must record the electric or thermal output. Any electric or thermal output values that the facility reports must be the same as the values used in billing for the output. Any output measurement equipment used as a billing meter in commercial transactions requires no additional certification or testing requirements.

(9)~~(J)~~(H)~~(I.)~~(ii) Non-Billing Meters. For non-billing meters, the output monitoring system must either meet~~,~~ an accuracy of ten (10) percent of the reference value, or each component monitor for the output system must meet an accuracy of three (3) percent of the full scale value, whichever is less stringent, as determined pursuant to subparagraphs (H)(iii) or (H)(iv) of this subdivision~~as follows~~:

(9)~~(J)~~(H)~~(i)~~(iii) The system approach to accuracy must include a determination of how the system accuracy of ten (10) percent is achieved using the individual components in the system and should include data loggers and any watt meters used to calculate the final net electric output data or any flow meters for steam or condensate, temperature measurement devices, absolute pressure measurement devices and differential pressure devices used for measuring thermal energy; or

(9)~~(J)~~(H)~~(ii)~~(iv) A component approach to accuracy. If testing a piece of output measurement equipment shows that the output readings are not accurate to three (3) percent or less of the full scale, then retest or replace the measurement equipment and meet that requirement. Data should be considered invalid, prospectively, for purposes of determining allocations. Data remain invalid until the output measurement equipment passes an accuracy test or is replaced with another piece of equipment that passes the accuracy test.

(9)~~(M)~~(I) Ongoing quality assurance and quality control. Ongoing quality assurance and quality control activities must be performed by the CO_2 budget source in order to maintain the output system, which shall include the following.

(9)~~(M)~~(I)(ii) Non-Billing Meters. Certain types of equipment such as potential transformers, current transformers, nozzle and venture type meters, and the primary element of an orifice plate only require an initial certification of calibration and do not require periodic recalibration unless the equipment is physically changed. However, the pressure and temperature transmitters accompanying an orifice plate will require periodic retesting. For other types of equipment, either recalibrate or re-verify the meter accuracy at least once every two years, unless a consensus standard allows for less frequent calibrations or accuracy tests. The system approach to accuracy or a component approach to accuracy shall be in accordance with ~~subparagraph (L)(i) or (ii)~~subparagraphs (H)(ii) through (H)(iv) of this subdivision. If testing a piece of output measurement equipment shows that the output readings are not accurate to 3.0 percent or less of the full scale value, then retest or replace the measurement equipment and meet that requirement.

(9)~~(M)~~(I)~~(N)~~(iii) Out of Control Periods. If testing a piece of output measurement equipment shows that the output readings are not accurate to the certification value, data remain valid until the output measurement equipment passes an accuracy test or is replaced with another piece of equipment that passes an accuracy test. All invalid data shall be replaced by either zero output or an output value that is likely to be lower than a measured value and that is approved as part of the output monitoring plan under subparagraph ~~(E)~~(C) of this subdivision.

(9)~~(O)~~(J) Recordkeeping and Reporting. The CO_2 authorized account representative shall comply with all recordkeeping and reporting requirements in this subparagraph and with the requirements of ~~subsection~~subsections (b)(6) and (c)(1)(E) of this section:

(9)~~(O)~~(J)(ii) Annual output reports. By March 1, 2009 and March 1 of each year thereafter, the ~~The~~ CO_2 authorized account representative shall ~~electronically~~ submit to the commissioner an annual ~~net~~ output report containing until-level MWh data and all useful thermal output information by March 1 for the immediately preceding year~~control period~~; and

(9)~~(O)~~(J)(ii) The annual report shall be certified as follows:

> "I am authorized to make this submission on behalf of the owners and operators of CO_2 budget sources or CO_2 budget sources for which the submission is made. ~~I am authorized to make this submission on behalf of the persons having an ownership interest with respect to the Annual Report.~~ I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."

B. Section 31(a)

1. **Section 22a-174-31a(a):** The department should add the following definition to the regulations:

> (40) "SF_6" means sulfur hexafluoride;

2. Section 22a-174-31a(c)(5)(C). Any internal citation should be amended to reflect the final proposed changes to section 31, as follows:

> (C) Offset projects may not receive funding or other incentives from any systems benefit fund, or funds or other incentives provided through the auction reserves described in section ~~22a-174-31(f)(4)(D)(ii) and 22a-174-31(f)(4)(D)(iii)~~ 22a-174-31(f)(5)(B) through (D) of the Regulations of Connecticut State Agencies.

3. Section 22a-174-31(f)(3)(F). The footnote should be removed and the referenced text should be included in this subparagraph as follows:

(F) Total carbon contained within the offset project boundary represented in tons of carbon shall be calculated as follows:

$TC_{pb} = TC_{latb} + TC_{lbtb} + TC_{s}$ [$+ TC_{lantb} + TC_{doff} + TC_{docwd}$]

Where:

TC_{pb} = Total carbon content within the offset project boundary (TC_{pb}) (sum of carbon content of all carbon pools in all reporting sub-populations)

TC_{latb} = Sum of carbon content of live above-ground tree biomass in all reporting sub-populations

TC_{lbtb} = Sum of carbon content of live below-ground tree biomass in all reporting sub-populations

TC_{s} = Sum of carbon content of soil carbon in all reporting sub-populations

TC_{lantb} [option] = Sum of carbon content of live above-ground non-tree biomass in each reporting sub-populations

TC_{doff} [option] = Sum of carbon content of dead organic matter, forest floor in all reporting sub-populations

TC_{docwd}[mandatory/option~~5~~] = Sum of carbon content of dead organic matter, coarse woody debris in all reporting sub-populations pursuant to subdivision (3)(A)(iv) of this subsection

4. Section 22a-174-31a(i)(2): The Department should amend the language in proposed section 22a-174-31a(i)(2) to establish consistency regarding pre-qualification for persons applying to the Department for independent verifier status. Section 22a-174-31a(i)(2) should be amended as follows:

(2) Pre-qualification of verifiers ~~Training workshop~~. The commissioner or the commissioner's designee may require prospective independent verifiers to successfully complete a training course, workshop or ~~workshops~~ test developed by the commissioner or the commissioner's designee prior to submitting an

~~5 Pursuant to the requirements of sub clause (3)(A)(iv) of this subsection.~~

application for accreditation.

5. Section 22a-174-31a(i)(3): The Department should amend section 22a-174-31a(i)(3) to ensure regional consistency regarding the conduct of accredited verifiers. The section should be amended as follows:

(6) Conduct of accredited verifiers.

(A) Prior to engaging in verification services for an offset project sponsor, the accredited verifier shall disclose all relevant information to the commissioner or the commissioner's designee to allow for an evaluation of potential conflict of interest with respect to an offset project, offset project developer, or project sponsor. The accredited verifier shall disclose information concerning its ownership, past and current clients, related entities, as well as any other facts or circumstances that have the potential to create a conflict of interest

(B) Accredited verifiers shall have an ongoing obligation to disclose to the commissioner or the commissioner's designee any facts or circumstances that may give rise to a conflict of interest with respect to an offset project, offset project developer, or project sponsor.

6. Section 22a-174-31a(i): With respect to proposed section 22a-174-31a(i), the Department should make clear the process following submittal of an application for independent verifier. The new subdivision of this subsection (i) should be included as follows:

(4) The commissioner shall approve or deny a complete application for accreditation within 90 days after submission. Upon approval of an application for accreditation, the independent verifier shall be accredited for a period of three years from the date of application approval.

7. Section 22a-174-31a(i)(5): The Department should delete proposed section 22a-174-31a(i)(5) to maintain regional consistency.

8. Section 22a-174-31a(i)(6): The Department should amend proposed section 22a-174-31a(i)(6) to maintain the commissioners discretion in selecting independent verifiers who are accredited in Connecticut. The Department should amend the section as follows:

~~(6)~~(5) ~~Independent verifiers accredited in participating states.~~ Independent verifiers that have been accredited in other participating states shall be deemed accredited in Connecticut at the discretion of the commissioner.

9. Section 22a-174-31a(i)(8)(C): The Department should amend proposed section 22a-174-31a(i)(8)(C) as follows:

(C)(iii) Negligence or neglect of responsibilities pursuant to the requirements of this section ~~Subpart~~; and

10. Section 22a-174-31a(j)(6)(C): The Department should amend proposed section 22a-174-31a(j)(6)(C) as follows:

(C) The following statement signed by the offset project sponsor:

> "The undersigned project sponsor hereby confirms and attests that the offset project upon which this monitoring and verification report is based is in full compliance with all of the requirements of Section 22a-174-31a of the Regulations of Connecticut State Agencies. The project sponsor holds the legal rights to the offset project, or has been granted the right to act on behalf of a party that holds the legal rights to the offset project. I understand that eligibility for the award of CO_2 offset allowances under Section 22a-174-31a of the Regulations of Connecticut State Agencies is contingent on meeting the requirements of this section. I authorize the ~~Connecticut Department of Environmental Protection~~ commissioner or the commissioner's designee to audit this offset project for purposes of verifying that the offset project, including the monitoring and verification plan, has been implemented as described in the consistency application that was the subject of a consistency determination by the ~~Connecticut Department of Environmental Protection~~ commissioner or the commissioner's designee. I understand that this right to audit shall include the right to enter the physical location of the offset project. I submit to the legal jurisdiction of the State of Connecticut.";

11. Section 22a-174-31a(j)(6)(D): The Department should delete proposed section 22a-174-31a(j)(6)(D) as proposed section 22a-174-31a(j)(6)(E) provides a more accurate certification that the offset project is in compliance with the applicable requirements of the CO_2 Budget Trading Program.

X. Final Text of Proposed Regulations

Section 1. The Regulations of Connecticut State Agencies are amended by adding section 22a-174-31 as follows:

(NEW) Section 22a-174-31. Control of Carbon Dioxides Emissions

(a) Definitions and Abbreviations. For the purposes of this section and section 22a-174-31a of the Regulations of Connecticut State Agencies:

(1) "Account number" means the identification number given by the commissioner to each CO_2 Allowance Tracking System account.

(2) "Acid rain emissions limitation" means "Acid Rain emissions limitation", as defined in 40 CFR 72.2, regarding emissions of sulfur dioxide or nitrogen oxides under the Acid Rain Program.

(3) "Acid Rain Program" means a multi-state sulfur dioxide and nitrogen oxides air pollution control and emissions reduction program established by the Administrator under 5 CAA and 40 CFR 72-78.

(4) "Allocate" or "allocation" means the determination by the commissioner of the number of CO_2 allowances to be recorded in the compliance account of a CO_2 budget source, the Connecticut Auction account, an allocation set-aside account, the general account of the sponsor of an approved CO_2 emissions offset project or an account established by any other person.

(5) "Allocation year" means a calendar year for which the commissioner allocates CO_2 allowances pursuant to subsection (f) of this section. The allocation year of each CO_2 allowance is reflected in the unique identification number given to the allowance pursuant to subsection (g)(4)(H) of this section.

(6) "Attribute" means a characteristic associated with electricity generated using a particular renewable fuel, such as its generation date, facility geographic location, source vintage, emissions output, fuel, state program eligibility, or other characteristic that can be identified, accounted for, and tracked.

(7) "Automated data acquisition and handling system" or "DAHS" means that component of the continuous emissions monitoring system, or other emissions monitoring system approved for use under subsection (i) of this section, designed to interpret and convert individual output signals from pollutant concentration monitors, flow monitors, diluent gas monitors, and other component parts of the monitoring system to produce a continuous record of the measured parameters in the measurement units required by subsection (i) of this section.

(8) "Award" means the determination by the commissioner of the number of CO_2 allowances to be recorded in the compliance account of a CO_2 budget unit for early reduction CO_2 allowances pursuant to subsection (f)(6) of this section, or the determination by the commissioner of the number of CO_2 offset allowances to be recorded in the general account of a project sponsor pursuant to section 22a-174-31a of the Regulations of Connecticut State Agencies. Award is a type of allocation.

(9) “Billing meter” means the measurement device used to measure electric or thermal output for commercial billing under a contract where the facility selling the electric or thermal output has different owners from the owners of the party purchasing the electric or thermal output.

(10) “Boiler” means a fossil or other fuel-fired device that produces steam or heats water or any other heat transfer medium.

(11) “BTU” means British Thermal Unit, a standard measurement used to quantify an amount of energy.

(12) "Class I renewable energy source" means "Class I renewable energy source" as defined in section 16-1(a)(26) of the Connecticut General Statutes.

(13) “CO_2” means carbon dioxide.

(14) “CO_2 allowance” means a limited authorization by the commissioner or a participating state under the CO_2 Budget Trading Program to emit up to one ton of CO_2, subject to all the applicable conditions contained in this section.

(15) “CO_2 allowance deduction” or “deduct CO_2 allowances” means the permanent withdrawal of CO_2 allowances by the commissioner from a CO_2 Allowance Tracking System compliance account.

(16) “CO_2 allowances held” or “hold CO_2 allowances” means the CO_2 allowances recorded by the commissioner, or submitted to the commissioner, in accordance with subsections (g) and (h) of this section, in a CO_2 Allowance Tracking System account.

(17) “CO_2 allowance price” means the price for CO_2 allowances across all participating states for a particular month as determined by the commissioner, calculated based on a volume-weighted average of transaction prices reported to the department, and taking into account publicly reported prices.

(18) “CO_2 Allowance Tracking System” means the system by which the commissioner records allocations, deductions, and transfers of CO_2 allowances under the CO_2 Budget Trading Program under this section, the system used to track CO_2 offset allowance projects under section 22a-174-31a of the Regulations of Connecticut State Agencies, and the system used to track CO_2 allowance prices and emissions from affected sources.

(19) “CO_2 Allowance Tracking System account” means an account in the CO_2 Allowance Tracking System established by the commissioner for purposes of recording the allocation, holding, transferring, or deducting of CO_2 allowances.

(20) "CO_2 allowance transfer deadline" means midnight of March 1 occurring after the end of the relevant control period or, if that March 1 is not a business day, midnight of the first business day thereafter and is the deadline by which CO_2 allowances must be submitted for recordation in a CO_2 budget source's compliance account in order for the source to meet the CO_2 requirements of subsection (b)(3) of this section for the control period immediately preceding such deadline.

(21) "CO_2 authorized account representative" means the individual who is authorized by the owners or operators of the source and all CO_2 budget sources at the source, in accordance with subsection (c) of this section, to represent and legally bind each owner or operator in matters pertaining to the CO_2 Budget Trading Program or, for a general account, the individual who is authorized, in accordance with subsection (g) of this section, to transfer or otherwise dispose of CO_2 allowances held in the general account.

(22) "CO_2 budget emissions limitation" means the tonnage equivalent, in CO_2 emissions in a control period, of the CO_2 allowances available for compliance deduction for the CO_2 budget source for a control period.

(23) "CO_2 budget source" means a facility that includes one or more CO_2 budget units.

(24) "CO_2 Budget Trading Program" means the multi-state CO_2 air pollution control and emissions reduction program established pursuant to this section and corresponding regulations in other states as a means of reducing emissions of CO_2 from CO_2 budget sources.

(25) "CO_2 budget unit" means an emissions unit that is subject to the CO_2 Budget Trading Program requirements under subsection (b) of this section.

(26) "CO_2 equivalent" means a metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential (GWP).

(27) "CO_2 offset allowance" means a CO_2 allowance that is awarded to the sponsor of a CO_2 emissions offset project pursuant to section 22a-174-31a of the Regulations of Connecticut State Agencies and is subject to the relevant compliance deduction limitations of this section.

(28) "Combined cycle system" means a system comprised of one or more combustion turbines, heat recovery steam generators, and steam turbines configured to improve overall efficiency of electricity generation or steam production.

(29) "Combined Heat and Power" or "CHP" means "Combined heat and power system" as defined in section 22a-174-22c of the Regulations of Connecticut State Agencies.

(30) “Combined Heat and Power Long-term PPA Set-aside Account” means a general account established by the commissioner to hold CO_2 allowances that are offered for sale pursuant to subsection (f)(3) of this section

(31) “Combined Heat and Power Useful Thermal Energy Set-aside Account” means a general account established by the commissioner to hold CO_2 allowances that are allocated pursuant to subsection (f)(3) of this section.

(32) “Combustion turbine” means an enclosed fossil or other fuel-fired device that is comprised of a compressor, if applicable, a combustor, and a turbine, and in which the flue gas resulting from the combustion of fuel in the combustor passes through the turbine, rotating the turbine.

(33) “Commence commercial operation” means, with regard to a unit that serves a generator, to have begun to produce steam, gas, or other heated medium used to generate electricity for sale or use, including test generation. For a unit that is a CO_2 budget unit on the date the unit commences commercial operation, such date shall remain the unit's date of commencement of commercial operation even if the unit is subsequently modified, reconstructed, or repowered. For a unit that is not a CO_2 budget unit on the date the unit commences commercial operation, the date the unit becomes a CO_2 budget unit for the purposes of this section shall be the unit's date of commencement of commercial operation.

(34) “Commence operation” means to have begun any mechanical, chemical, or electronic process, including, with regard to a unit, start-up of a unit's combustion chamber. For a unit that is a CO_2 budget unit on the date of commencement of operation, such date shall remain the unit's date of commencement of operation even if the unit is subsequently modified, reconstructed, or repowered. For a unit that is not a CO_2 budget unit on the date of commencement of operation, the date the unit becomes a CO_2 budget unit shall be the unit's date of commencement of operation.

(35) “Commissioner” means “commissioner” as defined in section 22a-174-1 of the Regulations of Connecticut State Agencies.

(36) “Compliance account” means a CO_2 Allowance Tracking System account, established by the commissioner for a CO_2 budget source under subsection (g) of this section, in which the CO_2 allowance allocations for the source are initially recorded and in which are held CO_2 allowances available for use by the source for a control period for the purpose of meeting the CO_2 requirements of subsection (b)(3) of this section.

(37) “Connecticut Auction Account” means a general account established by the commissioner to hold CO_2 allowances that are allocated pursuant to subsection (f)(3) of this section.

(38) "Connecticut Clean Energy Fund" or "CCEF" means the fund created by section 16a-40a of the Connecticut General Statutes to address Connecticut's increasing energy needs.

(39) "Connecticut CO_2 Allowance Retirement Account" means a general account established by the commissioner to hold CO_2 allowances that have been permanently retired.

(40) "Connecticut CO_2 Trading Program Base Budget" means the annual amount of CO_2 tons available in Connecticut for allocation in a given allocation year, in accordance with the CO_2 Budget Trading Program. CO_2 offset allowances allocated to project sponsors are separate from and additional to CO_2 allowances allocated from the Connecticut CO_2 Trading Program Base Budget.

(41) "Consumer Price Index" or "CPI" means the United States Department of Labor, Bureau of Labor Statistics, unadjusted Consumer Price Index for All Urban Consumers: U.S. city average, for All Items on the latest reference base, or if such index is no longer published, such other index as the commissioner determines is appropriate. The CPI for any calendar year is the twelve-month average of the CPI published by the United States Department of Labor, as of the close of the twelve-month period ending on August thirty-first of each calendar year.

(42) "Continuous emissions monitoring system" or "CEMS" means the equipment required under subsection (i) of this section to sample, analyze, measure, and provide, by means of readings recorded at least once every 15 minutes, using an automated data acquisition and handling system, a permanent record of stack gas volumetric flow rate, stack gas moisture content, and oxygen or carbon dioxide concentration as applicable, in a manner consistent with 40 CFR 75 and subsection (i) of this section.

(43) "Control period" means a three calendar-year period, unless extended by the commissioner to four years upon occurrence of a Stage Two Trigger Event.

(44) "Customer-side distributed resources" or "CDR" means "customer-side distributed resources" as defined in Section 16-1(a)(40) of the Connecticut General Statutes.

(45) "Customer-side Distributed Resources (CDR) Set-aside Account" means a general account established by the commissioner to hold CO_2 allowances that are allocated pursuant to subsection (f)(3) of this section.

(46) "Eligible biomass" means sustainably harvested, as determined by the commissioner, woody and herbaceous fuel sources that are available on a renewable or recurring basis, excluding old-growth timber, but including dedicated energy crops and trees, agricultural food and feed crop residues, aquatic plants, unadulterated wood and wood residues, animal wastes, other clean organic wastes not mixed with other solid wastes and biogas. Liquid biofuels do not qualify as eligible biomass.

(47) "Energy Conservation and Management Board" or "ECMB" means the group convened by the Department of Public Utility Control pursuant to section 16-245m of the Connecticut General Statutes for the purpose of advising and assisting electric distribution companies in the development and implementation of cost-effective energy conservation programs and market transformation initiatives.

(48) "Excess emissions" means any tonnage of CO_2 emitted by a CO_2 budget source during a control period that exceeds the CO_2 budget emissions limitation for the source.

(49) "Fossil fuel" means natural gas, petroleum, coal, or any form of solid, liquid, or gaseous fuel derived from such material, except that fossil fuel does not include tire-derived fuel.

(50) "Fossil fuel-fired" means, with regard to an emissions unit that commenced operation prior to January 1, 2005, the combustion of fossil fuel, alone or in combination with any other fuel, where the fossil fuel combusted comprises, or is projected to comprise, more than fifty percent of the annual heat input on a Btu basis during any year, or, with respect to an emissions unit that commences operation on or after January 1, 2005, the combustion of fossil fuel, alone or in combination with any other fuel, where the fossil fuel combusted comprises, or is projected to comprise, more than five percent of the annual heat input on a Btu basis during any year.

(51) "General account" means a CO_2 Allowance Tracking System account, established under subsection (g) of this section, which is not a compliance account.

(52) "Global warming potential" or "GWP" means a measure consistent with the values used in the Intergovernmental Panel on Climate Change (IPCC), Third Assessment Report of the radiative efficiency or heat-absorbing ability, of a particular gas relative to that of CO_2 after taking into account the decay rate of each gas, the amount removed from the atmosphere over a given number of years, relative to that of CO_2.

(53) "Gross generation" means the electrical output in MWe at the terminals of the generator.

(54) "H_2O" means water.

(55) "Heat input" means the gross calorific value of all fuels combusted by a CO_2 budget unit.

(56) "Hr" means hour.

(57) "Lb" means pound.

(58) "Life-of-the-unit contractual arrangement" means a power sales agreement under which a utility or industrial customer reserves, or is entitled to receive, a specified amount or percentage of the participating unit's nameplate capacity and energy associated therewith while agreeing to pay the proportional amount of such unit's total costs for either:

(A) The economic useful life of the unit,

(B) A cumulative term of no less than 25 years, including agreements that permit an election for early termination, or

(C) A period equal to or greater than 20 years or seventy percent of the economic useful life of the unit determined as of the time the unit is built, with option rights to purchase or release some portion of the nameplate capacity and associated energy generated by the unit at the end of the period.

(59) "Long-term Power Purchase Agreement" or "Long-term PPA" means an agreement, executed prior to January 1, 2000, between a CO_2 budget source and a purchasing party to sell power from the CO_2 budget source for a period of 20 or more years.

(60) "Market settling period" means the first fourteen months of any control period.

(61) "Maximum design heat input" means the ability of a unit to combust a stated maximum amount of fuel per hour on a steady state basis, as determined by the physical design and physical characteristics of the unit.

(62) "Maximum potential hourly heat input" means an hourly heat input used for reporting purposes when a unit lacks certified monitors to report heat input calculated in accordance with 40 CFR 75.

(63) "Monitoring system" means any monitoring system that meets the requirements of subsection (i) of this section, including a continuous emissions monitoring system, an excepted monitoring system, or an alternative monitoring system.

(64) "MWe" means megawatt electrical.

(65) "MWh" means megawatt-hour.

(66) "Nameplate capacity" means the maximum electrical output in MWe that an electric generating unit can sustain over a specified period of time when not restricted by seasonal or other deratings as measured in accordance with the United States Department of Energy Standards.

(67) "Non-CO_2 budget unit" means a unit that does not meet the applicability criteria of subsection (b) of this section.

(68) "NOx" means oxides of nitrogen.

(69) "O_2" mean oxygen.

(70) "Operator" means any person who operates, controls, or supervises a CO_2 budget unit or a CO_2 budget source and shall include, but not be limited to, any holding company, utility system, or plant manager of such a unit or source.

(71) "Owner" means any of the following persons:

(A) Any holder of any portion of the legal or equitable title in a CO_2 budget unit,

(B) Any holder of a leasehold interest in a CO_2 budget unit, other than a passive lessor, or a person who has an equitable interest through such lessor, whose rental payments are not based, either directly or indirectly, upon the revenues or income from the CO_2 budget unit,

(C) Any purchaser of power from a CO_2 budget unit under a life-of-the-unit contractual arrangement in which the purchaser controls the dispatch of the unit, or

(D) With respect to any general account, any person who has an ownership interest in the CO_2 allowances held in the general account and who is subject to the binding agreement for the CO_2 authorized account representative to represent that person's ownership interest with respect to the CO_2 allowances.

(72) "Participating state" means a state that has established a regulation implementing a CO_2 Budget Trading Program consistent with the Regional Greenhouse Gas Initiative model rule.

(73) "Receive" or "receipt of" means, when referring to the commissioner, to come into possession of a document, information, or correspondence, as indicated in an official correspondence log, or by a notation made on the document, information, or correspondence, by the commissioner in the regular course of business.

(74) "Recordation", "record" or "recorded" means, with regard to CO_2 allowances, the movement of CO_2 allowances by the commissioner from one CO_2 Allowance Tracking System account to another, for purposes of allocation, transfer or deduction.

(75) "Renewable energy" means electricity generated from eligible biomass, wind, solar thermal, photovoltaic, geothermal, hydroelectric facilities certified by the Low Impact Hydropower Institute, wave and tidal action, and fuel cells powered by renewable fuels.

(76) "Renewable Energy Certificate" or "REC" means a certificate that represents the attributes related to one megawatt-hour of electricity generation.

(77) "Serial number" means, when referring to CO_2 allowances, the unique identification number assigned to each CO_2 allowance by the commissioner.

(78) "SO_2" means sulfur dioxide.

(79) "Source" means "source" as defined in section 22a-174-1(101) of the Regulations of Connecticut State Agencies, provided that a source with multiple units, shall be considered a single facility.

(80) "Stage one threshold price" means the product, in dollars, resulting from the multiplication of seven dollars by an annual adjustment factor, where the annual adjustment factor is determined as follows:

Annual adjustment factor = 1 + {[CPI (year) – CPI (2005)] / CPI (2005)}, where:

(A) CPI means, for purposes of the CO_2 Budget Trading Program, the United States Department of Labor, Bureau of Labor Statistics unadjusted Consumer Price Index for All Urban Consumers: U.S. city average, for all items on the latest reference base, or if such index is no longer published, such other index as the commissioner determines is appropriate;

(B) CPI (year) means the CPI for all urban consumers calculated in August of the previous calendar year in which the adjustment is made; and

(C) CPI (2005) means the CPI for all urban consumers for the month of August 2005. The CPI (2005) is 196.4 (with 1982-84=100). Beginning in the month for which a new reference base is established, CPI (2005) will be the CPI value for August 2005 on the new reference base.

(81) "Stage two threshold price" means the product, in dollars, resulting from the multiplication of ten dollars by an annual adjustment factor, where the annual adjustment factor is determined as follows:

Annual adjustment factor = 1.02 + {[CPI (year) – CPI (2005)] / CPI (2005)}, where:

(A) CPI means, for purposes of the CO_2 Budget Trading Program, the United States Department of Labor, Bureau of Labor Statistics unadjusted Consumer Price Index for All Urban Consumers: U.S. city average, for All Items on the latest reference base, or if such index is no longer published, such other index as the commissioner determines is appropriate;

(B) CPI (year) means the CPI for all urban consumers for August of the year in which the adjustment is made; and

(C) CPI (2005) means the CPI for all urban consumers for the month of August 2005. The CPI (2005) is 196.4 (with 1982-84=100). Beginning in the month for which

a new reference base is established, CPI (2005) will be the CPI value for August 2005 on the new reference base.

(82) "Stage One Trigger Event" means any complete twelve month period following the market settling period during which average CO_2 allowance prices are equal to or greater than the stage one threshold price.

(83) "Stage Two Trigger Event" means any complete twelve month period following the market settling period during which average CO_2 allowance prices are equal to or greater than the stage two threshold price.

(84) "State" means, notwithstanding the definition set forth in section 22a-174-1(104) of the Regulations of Connecticut State Agencies, any state of the United States of America, the District of Columbia, and the following territories of the United States: the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa and the Commonwealth of the Northern Mariana Islands.

(85) "Submit" means to send or transmit a document, information, or correspondence to the person specified in accordance with the applicable regulation either in person, by United States Postal Service, or by other means of dispatch or transmission and delivery. The date of dispatch, transmission or mailing, and not the date of receipt shall determine compliance with any submission deadline.

(86) "Ton" or "short ton" means a measure of weight equal to two thousand pounds or 0.9072 metric tons.

(87) "Twelve month period" means a period of twelve consecutive months determined on a rolling basis beginning January 1, 2009. On and after February 1, 2009, a new twelve month period will begin on the first day of each subsequent calendar month.

(88) "Unit" means a fossil fuel-fired stationary boiler, combustion turbine or combined cycle system.

(89) "Unit operating day" means a calendar day in which a unit combusts any fuel.

(90) "Useful net thermal energy" means the energy output of thermal energy used for heating, cooling, industrial processes or other beneficial uses.

(91) "Voluntary clean energy purchase" means electricity from renewable energy generation or renewable energy attribute credits representing such renewable energy generation, purchased by a retail electricity customer on a voluntary basis, provided that purchases used to meet any regulatory mandate, such as a renewable portfolio standard, shall not be a voluntary renewable energy purchase.

(92) "Voluntary Clean Energy Purchase Set-aside Account" means a general account established by the commissioner to hold CO_2 allowances that are allocated pursuant to subsection (f)(3) of this section.

(b) Applicability and General Provisions

(1) Applicability. Any unit that, at any time on or after January 1, 2000, serves an electricity generator with a nameplate capacity equal to or greater than 25 MWe shall be a CO_2 budget source, and any owner or operator of such source that includes one or more such units shall be the owner or operator of a CO_2 budget source subject to the requirements of this section.

(2) Monitoring. In order to determine compliance with the CO_2 requirements of subdivision (3) of this subsection, the owner or operator of a CO_2 budget source subject to this section shall comply with the applicable monitoring requirements set forth in subsection (i) of this section. The commissioner shall determine compliance with subdivision (3) of this subsection using the emissions measurements recorded and reported in accordance with subsection (i) of this section.

(3) CO_2 requirements. The owner or operator of a CO_2 budget source subject to this section shall be subject to and comply with the following requirements:

(A) The owners and operators of each CO_2 budget source shall hold CO_2 allowances available for compliance deductions under subsection (g)(5) of this section, as of the CO_2 allowance transfer deadline, in the source's compliance account in an amount not less than the total CO_2 emissions for the control period from all CO_2 budget sources at the source, as determined in accordance with subsections (g) and (i) of this section;

(B) Each ton of CO_2 emitted in excess of the CO_2 budget emissions limitation shall constitute a separate violation of this section;

(C) A CO_2 budget source shall be subject to the requirements under subsection (c)(1) of this section starting on the later, of January 1, 2009 or the date on which the source commences operation;

(D) CO_2 allowances shall be held in, deducted from, or transferred among CO_2 Allowance Tracking System accounts in accordance with subsections (f), (g) and (h) of this section and section 22a-174-31a(j) of the Regulations of Connecticut State Agencies;

(E) A CO_2 allowance shall not be deducted, in order to comply with the requirements under subparagraph (A) of this subdivision, for a control period that ends prior to the year for which the CO_2 allowance was allocated. A CO_2 offset allowance

shall not be deducted, in order to comply with the requirements under subparagraph (A) of this subdivision, to cover emissions beyond the applicable percent limitations set forth in subsection (g)(5)(B)(iii) of this section;

(F) A CO_2 allowance under the CO_2 Budget Trading Program is a limited authorization by the commissioner or a participating state to emit one ton of CO_2 in accordance with the CO_2 Budget Trading Program;

(G) A CO_2 allowance under the CO_2 Budget Trading Program does not constitute a property right: and

(H) For the purpose of determining compliance with the subparagraph (A) of this subdivision, total CO2 emissions, in tons, for a control period shall be calculated as the sum of all recorded hourly emissions, or the tonnage equivalent of the recorded hourly emissions rates, in accordance with subsection (i) of this section, with any remaining fraction of a ton equal to or greater than 0.50 ton deemed to equal one ton and any fraction of a ton less than 0.50 ton deemed to equal zero tons.

(4) Control period. The first control period is from January 1, 2009 to December 31, 2011, inclusive, provided if a Stage Two Trigger Event occurs during the first control period, then the first control period will be extended one year to December 31, 2012, inclusive. Each subsequent sequential three calendar year period is a separate control period that may be subject to a single one year extension upon occurrence of a Stage Two Trigger Event during the control period.

(5) Excess emissions. The owner and operator of a CO_2 budget source that has excess emissions in any control period shall after such control period on a time frame established by the commissioner:

(A) Forfeit the CO_2 allowances required for deduction under subsection (g)(5)(G) of this section;

(B) Not be authorized to cover any part of such excess emissions with CO_2 offset allowances under section 22a-174-31a of the Regulations of Connecticut State Agencies; and

(C) Comply with any assessment imposed under subsection (g)(5)(G) of this section, provided that such assessment shall not limit additional enforcement action by the commissioner.

(6) Recordkeeping and reporting. The owner and operator of a CO_2 budget source shall comply with the following recordkeeping and reporting requirements:

(A) Unless otherwise provided, the owner or operator of a CO_2 budget source and each CO_2 budget unit at the source shall make and keep at the source each of the following documents for a period of ten years from the date the document is created. This period may be extended by the commissioner for cause at any time prior to the end of the ten year period;

(i) Notwithstanding the above, the account certificate of representation for the CO_2 authorized account representative for the source and each CO_2 budget unit at the source and all documents that demonstrate the truthfulness and accuracy of the statements made in the account certificate of representation, in accordance with subsection (c)(4) of this section, shall be retained on site at the source indefinitely until such documents are superseded because of the submission of a new account certificate of representation changing the CO_2 authorized account representative;

(ii) All emissions monitoring information in accordance with subsection (i) of this section;

(iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the CO_2 Budget Trading Program; and

(iv) Copies of all documents used to complete any submission under the CO_2 Budget Trading Program or to demonstrate compliance with the requirements of the CO_2 Budget Trading Program.

(B) The CO_2 authorized account representative of a CO_2 budget source shall submit the reports and compliance certifications required under the CO_2 Budget Trading Program, including those under subsection (e) of this section.

(7) Liability. The owner and operator of a CO_2 budget source shall be subject to the following:

(A) Any provision of the CO_2 Budget Trading Program that applies to a CO_2 budget source, or the CO_2 authorized account representative of a CO_2 budget source, shall also apply to the owner or operator of such source; and

(B) Any provision of the CO_2 Budget Trading Program that applies to a CO_2 budget unit, or the CO_2 authorized account representative of a CO_2 budget unit, shall also apply to the owner or operator of such unit.

(8) Effect on other authorities. No provision of the CO_2 Budget Trading Program shall be construed as exempting or excluding the owner or operator and, to the extent applicable, the CO_2 authorized account representative of a CO_2 budget source from compliance with the provision of any other applicable state or federal law or regulation.

(9) Computation of time. Notwithstanding section 22a-3a-2(d) of the Regulations of Connecticut State Agencies, the owner or operator of a CO_2 budget source shall be subject to the following computation of time requirements:

(A) Unless otherwise stated, any time period scheduled, under the CO_2 Budget Trading Program, to begin on the occurrence of an act or event shall begin on the day the act or event occurs;

(B) Unless otherwise stated, any time period scheduled, under the CO_2 Budget Trading Program, to begin before the occurrence of an act or event shall be computed so that the period ends the day before the act or event occurs; and

(C) Unless otherwise stated, if the final day of any time period, under the CO_2 Budget Trading Program, falls on a weekend or a state or federal holiday, the time period shall be extended to the next business day.

(10) Copies of documents incorporated by reference into this section are available by contacting the Connecticut Department of Environmental Protection.

Table 31-1
Incorporated Reference Material

Citation	Title or Subject	Date on Document
40 CFR 75 including Appendices A, B, D & E	Part 75-Continuous Emission Monitoring, Appendix A Specification and Test Procedures, Appendix B Quality Assurance and Quality Control Procedures Fired and Oil-Fired Units Appendix E Optional NOx Emissions Estimation Protocol For Gas-Fired Peaking Units and Oil-Fired Peaking Units.	July 2007 Edition
	New York State Renewable Portfolio Standard Biomass Guidebook, Appendix B	May 2006

(11) Duty to comply. An owner or operator of a CO_2 budget source subject to the requirements of this section shall comply with the requirements of this section.

(c) CO_2 Authorized Account Representative for CO_2 Budget Sources

(1) With respect to the CO_2 authorized account representative, the owner or operator of each CO_2 budget source subject to this section shall comply with the following:

(A) Except as provided under subdivision (3)(B) of this subsection, each CO_2 budget source, including all CO_2 budget units at the source, shall have only one CO_2

authorized account representative, with regard to all matters under the CO_2 Budget Trading Program concerning such source;

(B) The CO_2 authorized account representative of the CO_2 budget source shall be selected by an agreement binding on the owners or operators of the source;

(C) Upon receipt by the commissioner of a complete account certificate of representation under subsection (c)(4) of this section, the CO_2 authorized account representative of the source shall represent and, by such representations, actions, inactions, or submissions, legally bind each owner or operator of the CO_2 budget source represented and each CO_2 budget unit at the source in all matters pertaining to the CO_2 Budget Trading Program, notwithstanding any agreement between the CO_2 authorized account representative and such owners or operators. The owners or operators shall be bound by any decision or order issued to the CO_2 authorized account representative by the commissioner or a court regarding the source;

(D) No CO_2 Allowance Tracking System account shall be established for a CO_2 budget unit at a source, until the commissioner has received a complete account certificate of representation under subsection (c)(4) of this section for a CO_2 authorized account representative; and

(E) Each submission under the CO_2 Budget Trading Program shall be submitted, signed, and certified by the CO_2 authorized account representative for each CO_2 budget source on behalf of which the submission is made, and shall:

(i) Include the following certification statement by the CO_2 authorized account representative: "I am authorized to make this submission on behalf of the owners and operators of the CO_2 budget sources or CO_2 budget sources for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."; and

(ii) Be made, signed and certified in accordance with subsection (e)(1) of this section. Otherwise the commissioner shall not accept or act on a submission made on behalf of owners or operators of a CO_2 budget source.

(F) If the CO_2 budget source is also subject to section 22a-174-22c of the Regulations of Connecticut State Agencies or the Acid Rain Program, the CO_2 authorized account representative shall be the same person as the designated representative under such programs.

(2) With respect to the alternate CO_2 authorized account representative, the owner or operator of each CO_2 budget source subject to this section shall comply with the following:

(A) An account certificate of representation may designate one and only one alternate CO_2 authorized account representative who may act on behalf of the CO_2 authorized account representative. The agreement by which the alternate CO_2 authorized account representative is selected shall include a procedure for authorizing the alternate CO_2 authorized account representative to act in lieu of the CO_2 authorized account representative;

(B) Upon receipt by the commissioner of a complete account certificate of representation under subsection (c)(4) of this section, any representation, action, inaction, or submission by the alternate CO_2 authorized account representative shall be deemed to be a representation, action, inaction, or submission by the CO_2 authorized account representative; and

(C) Except in this section and subsections (c)(1)(A), (c)(3), (c)(4), and (g)(2) of this section, wherever the term "CO_2 authorized account representative" is used such term shall be construed to include the alternate CO_2 authorized account representative.

(D) If the CO_2 budget source is also subject to section 22a-174-22c of the Regulations of Connecticut State Agencies or the Acid Rain Program, the alternate CO_2 authorized account representative shall be the same person as the designated representative under such programs.

(3) Transfers and name changes. With respect to changing the CO_2 authorized account representative and the alternate CO_2 authorized account representative or a change in ownership or operation of a CO_2 budget source, the owner or operator of each CO_2 budget source shall comply with the following:

(A) Changing the CO_2 authorized account representative. The CO_2 authorized account representative may be changed at any time upon receipt by the commissioner of a superseding complete account certificate of representation under subdivision (4) of this subsection. Notwithstanding any such change, all representations, actions, inactions, and submissions by the previous CO_2 authorized account representative or alternate CO_2 authorized account

representative prior to the time and date when the commissioner receives the superseding account certificate of representation shall be binding on the new CO_2 authorized account representative and the owner or operator of the CO_2 budget source and the CO_2 budget units at the source.

(B) Changing the alternate CO_2 authorized account representative. The alternate CO_2 authorized account representative may be changed at any time upon receipt by the commissioner of a superseding complete account certificate of representation under subdivision (2)(B) of this subsection. Notwithstanding any such change, all representations, actions, inactions, and submissions by the previous CO_2 authorized account representative or alternate CO_2 authorized account representative prior to the time and date when the commissioner receives the superseding account certificate of representation shall be binding on the new alternate CO_2 authorized account representative and the owner or operator of the CO_2 budget source and the CO_2 budget units at the source.

(C) Changes in the owners and operators. With respect to a change in ownership or control of the CO_2 budget source, the owner or operator of each CO_2 budget source shall comply with the following:

(i) In the event a new owner or operator of a CO_2 budget source is not included in the list of owners and operators submitted in the account certificate of representation, such new owner or operator shall be deemed to be subject to and bound by the account certificate of representation, the representations, actions, inactions, and submissions of the CO_2 authorized account representative and any alternate CO_2 authorized account representative of the source, and the decisions, orders, actions, and inactions of the commissioner, as if the new owner or operator were included in such list; and

(ii) Within thirty (30) days following any change in the owner or operator of a CO_2 budget source or a CO_2 budget unit, including the addition of a new owner or operator, the CO_2 authorized account representative or alternate CO_2 authorized account representative shall submit a revision to the account certificate of representation amending the list of owners and operators to include such change.

(4) Account certificate of representation. With respect to an account certificate of representation, the owner or operator of each CO_2 budget source shall comply with the following:

(A) A complete account certificate of representation for a CO_2 authorized account representative or an alternate CO_2 authorized account representative shall include the following elements in a format prescribed by the commissioner:

(i) Identification of the CO_2 budget source for which the account certificate of representation is submitted;

(ii) The name, address, electronic mail address, telephone number, and facsimile transmission number of the CO_2 authorized account representative and any alternate CO_2 authorized account representative;

(iii) A list of the owners and operators of the CO_2 budget source;

(iv) The following certification statement by the CO_2 authorized account representative and any alternate CO_2 authorized account representative:

"I certify that I was selected as the CO_2 authorized account representative or alternate CO_2 authorized account representative, as applicable, by an agreement binding on the owners and operators of the CO_2 budget source and each CO_2 budget source at the source. I certify that I have all the necessary authority to carry out my duties and responsibilities under the CO_2 Budget Trading Program on behalf of the owners and operators of the CO_2 Budget source and that each such owner and operator shall be fully bound by my representations, actions, inactions or submissions and by any decision or order issued to me by the commissioner or a court regarding the source."; and

(v) The signature of the CO_2 authorized account representative and any alternate CO_2 authorized account representative and the dates signed.

(B) Unless otherwise required by the commissioner, documents of agreement referred to in the account certificate of representation shall not be submitted to the commissioner. The commissioner shall not be under any obligation to review or evaluate the sufficiency of such documents, if submitted.

(5) Objections to the CO_2 authorized account representative.

(A) Once a complete account certificate of representation under subsection (c)(4) of this section has been submitted and received, the commissioner shall rely on the account certificate of representation unless and until the commissioner receives a superseding complete account certificate of representation under subsection (c)(4) of this section; and

(B) Except as provided in subdivision (3)(A) or (B) of this subsection, no objection or other communication submitted to the commissioner concerning the authorization, or any representation, action, inaction, or submission of the CO_2 authorized account representative shall affect any representation, action, inaction,

or submission of the CO_2 authorized account representative or the finality of any decision or order by the commissioner under the CO_2 Budget Trading Program.

(6) Delegation by CO_2 authorized account representative and alternate CO_2 authorized account representative.

(A) A CO_2 authorized account representative may delegate, to one or more individuals, such representative's authority to make an electronic submission to the commissioner under this section.

(B) An alternate CO_2 authorized account representative may delegate, to one or more individuals, such representative's authority to make an electronic submission to the commissioner under this section.

(C) In order to delegate authority to make an electronic submission to the commissioner in accordance with subparagraphs (A) and (B) of this subdivision, the CO_2 authorized account representative or alternate CO_2 authorized account representative, as appropriate, must submit to the commissioner a notice of delegation, in a format prescribed by the commissioner that includes the following elements:

(i) The name, address, electronic mail address, telephone number, and facsimile transmission number of such CO_2 authorized account representative or alternate CO_2 authorized account representative;

(ii) The name, address, electronic mail address, telephone number and facsimile transmission number of each such individual, herein referred to as the "electronic submission agent"; and

(iii) For each individual, a list of the type of electronic submissions under subparagraphs (A) or (B) of this subdivision for which authority is delegated to him or her.

(D) A notice of delegation submitted under subsection (c)(6)(C) of this section shall also include the following certification statements by such CO_2 authorized account representative or alternate CO_2 authorized account representative:

(i) "I agree that any electronic submission to the commissioner that is by the individual identified in this notice of delegation and of a type listed for such electronic submission agent in this notice of delegation and that is made when I am a CO_2 authorized account representative or alternate CO_2 authorized account representative, as appropriate, and before this notice of delegation is superseded by another notice of delegation under section

22a-174-31(c)(6)(E) of the Regulations of Connecticut State Agencies shall be deemed to be an electronic submission by me."

(ii) "Until this notice of delegation is superseded by another notice of delegation under section 22a-174-31(c)(6)(E) of the Regulations of Connecticut State Agencies, I agree to maintain an e-mail account and to notify the commissioner immediately of any change in my e-mail address unless all delegation authority by me under section 22a-174-31(c)(6) of the Regulations of Connecticut State Agencies is terminated."

(E) A notice of delegation submitted under subsection (c)(6)(C) of this section shall be effective, with regard to the CO_2 authorized account representative or alternate CO_2 authorized account representative identified in such notice, upon receipt of such notice by the commissioner and until receipt by the commissioner of a superseding notice of delegation by such CO_2 authorized account representative or alternate CO_2 authorized account representative as appropriate. The superseding notice of delegation may replace any previously identified electronic submission agent, add a new electronic submission agent, or eliminate entirely any delegation of authority.

(F) Any electronic submission covered by the certification in subsection (c)(6)(D)(i) of this section and made in accordance with a notice of delegation effective under subsection (c)(6)(E) of this section shall be deemed to be an electronic submission by the CO_2 authorized account representative or alternate CO_2 authorized account representative submitting such notice of delegation.

(d) Reserved

(e) Compliance Certification

(1) Compliance certification report. The owner or operator of each CO_2 budget source shall comply with the following compliance certification report requirements:

(A) Applicability and deadline. For each control period in which a CO_2 budget source is subject to the CO_2 requirements of subsection (b)(3) of this section, the CO_2 authorized account representative of the source shall submit to the commissioner by March 1st following the applicable control period, a compliance certification report;

(B) Contents of report. The CO_2 authorized account representative shall include in the compliance certification report required under subparagraph (A) of this subdivision the following elements, in a format prescribed by the commissioner:

(i) Identification of the source and each CO_2 budget source at the source;

(ii) At the CO_2 authorized account representative's option, the serial numbers of the CO_2 allowances that are to be deducted from the source's compliance account under subsection (g)(5) of this section for the control period; and

(iii) The compliance certification under subparagraph (C) of this subdivision; and

(C) Compliance certification. In the compliance certification report required under subparagraph (A) of this subdivision, the CO_2 authorized account representative shall certify, based on reasonable inquiry of those persons with primary responsibility for operating the source and the CO_2 budget sources in compliance with the CO_2 Budget Trading Program, whether the source and each CO_2 budget source for which the compliance certification is submitted was operated during the calendar year covered by the report in compliance with the requirements of the CO_2 Budget Trading Program, including:

(i) Whether the source was operated in compliance with the CO_2 requirements of subsection (b)(3) of this section;

(ii) Whether the monitoring plan applicable to each unit at the source has been maintained to reflect the actual operation and monitoring of the unit, and contains all information necessary to attribute CO_2 emissions to the unit, in accordance with subsection (i) of this section;

(iii) Whether all the CO_2 emissions from the units at the source were monitored or accounted for through the missing data procedures and reported in the quarterly monitoring reports, including whether conditional data were reported in the quarterly reports in accordance with subsection (i) of this section. If conditional data were reported, the owner or operator shall indicate whether the status of all conditional data has been resolved and all necessary quarterly report resubmissions have been made;

(iv) Whether the facts that form the basis for certification under subsection (i) of this section of each monitor at each unit at the source, or for using an excepted monitoring method or alternative monitoring method approved under subsection (i) of this section, if any, has changed; and

(v) If a change is required to be reported under subsection (c)(4) of this section, specify the nature of the change, the reason for the change, when the change occurred, and how the unit's compliance status was determined subsequent to the change, including what method was used to determine emissions when a change mandated the need for monitor recertification.

(2) Commissioner's action on compliance certifications.

(A) The commissioner may review and conduct independent audits concerning any compliance certification or any other submission under the CO_2 Budget Trading Program and make appropriate adjustments of the information in the compliance certifications or other submissions.

(B) The commissioner may deduct CO_2 allowances from or transfer CO_2 allowances to a source's compliance account based on the information in the compliance certifications or other submissions, as approved during the commissioner's review under subparagraph (A) of this subdivision.

(f) CO_2 Allowance Allocations

(1) The Connecticut CO_2 Trading Program Base Budget is as follows:

(A) For the 2009 through 2014 allocation years, the Connecticut CO_2 Trading Program Base Budget is 10,695,036 tons;

(B) For the 2015 allocation year, the Connecticut CO_2 Trading Program Base Budget is 10,427,660 tons;

(C) For the 2016 allocation year, the Connecticut CO_2 Trading Program Base Budget is 10,160,284 tons;

(D) For the 2017 allocation year, the Connecticut CO_2 Trading Program Base Budget is 9,892,908 tons; and

(E) For the 2018 allocation year and each succeeding allocation year, the Connecticut CO_2 trading program base budget is 9,625,532 tons.

(2) Timing requirements for CO_2 allowance allocations.

(A) By January 1, 2009, the commissioner will determine the initial CO_2 allowance allocations, in accordance with subdivision (3) of this subsection, for the 2009, 2010, 2011 and 2012 allocation years.

(B) By January 1, 2010 and January 1 of each year thereafter, the commissioner will determine the initial CO_2 allowance allocations, in accordance with subdivision (3) of this subsection, for the allocation year that commences three years after such applicable deadline for allocation.

(3) CO_2 allowance allocations.

(A) In accordance with the timing provisions of subdivision (2) of this subsection, the commissioner shall allocate each annual CO_2 base budget as follows:

(i) One and one-half (1.5) percent to the Voluntary Clean Energy Purchase Set-aside Account,
(ii) Three and one-half (3.5) percent to the Customer-side Distributed Resources (CDR) Set-aside Account,
(iii) Five (5) percent to the Combined Heat and Power (CHP) Useful Thermal Energy Set-aside Account,
(iv) Up to thirteen (13) percent to the Combined Heat and Power (CHP) Long-term PPA Set-aside Account, and
(v) A minimum seventy-seven (77) percent shall be allocated to the Connecticut Auction Account

(B) By April 1, 2009 and April 1 of each year thereafter, the commissioner shall allocate from the CHP Useful Thermal Energy Set-aside Account to the compliance account of each CO_2 budget source generating useful net thermal energy from its CO_2 budget units the number of CO_2 allowances equal to the amount determined by the following equation (rounded to the nearest whole ton), subject to the limitation in subparagraph (C) of this subdivision. CO_2 budget units that are eligible for allowances from the CDR Set-aside Account pursuant to subparagraph (O) of this subdivision shall not be eligible for allowances from the CHP Useful Thermal Output Set-aside Account.

$$\frac{\left((TEG \div 0.80) \times 136 \frac{lb}{mmBtu} \right)}{2000 \frac{lb}{ton}}$$

Where:

TEG = the average useful net thermal energy (in mmBtu) generated by CO_2 budget units at the CO_2 budget source during the two years preceding the allocation year of the allowances being allocated.

(C) IF $\Sigma A_{CHP1} <= A_{CHP1\text{-}AV}$, THEN

$A_{CHP1\text{-}ALLOCATED} = A_{CHP1}$.

IF $\Sigma A_{CHP1} > A_{CHP1\text{-}AV}$, THEN

$$A_{CHP\ 1-ALLOCATED} = A_{CHP\ 1} \times \left(\frac{A_{CHP\ 1-AV}}{\sum A_{CHP\ 1}} \right)$$

rounded to the nearest whole allowance.

Where:

A_{CHP1} = the number of CO_2 allowances calculated for each CO_2 budget source pursuant to subparagraph (B) of this subdivision

ΣA_{CHP1} = the total number of CO_2 allowances calculated for CO_2 budget sources pursuant to subparagraph (B) of this subdivision

$A_{CHP1\text{-}AV}$ = the number of CO_2 allowances available for allocation from the CHP Useful Thermal Output Set-aside Account

$A_{CHP1\text{-}ALLOCATED}$ = the number of CO_2 allowances the commissioner shall allocate to the compliance account of each CO_2 budget source

The commissioner may adjust an allowance allocation under this subparagraph as necessary to not exceed $A_{CHP1\text{-}AV}$.

(D) If $\Sigma A_{CHP1} < A_{CHP1\text{-}AV}$, allowances from the CHP Useful Thermal Output Set-aside Account not allocated for a vintage year shall be transferred to the Connecticut Auction Account, from which such allowances will be auctioned in accordance with subdivision (4) of this subsection.

(E) By March 1, 2009 and March 1 of each year thereafter, CO_2 budget sources shall submit, on forms prescribed by the commissioner, information required for the equation specified in subparagraph (B) of this subdivision relating amount of useful net thermal energy generated by CO_2 budget units at the CO_2 budget source during the two years preceding the allocation year of the allowances being allocated. Such information shall be submitted to the commissioner as part of the annual output report required pursuant to subsection (i)(9)(J)(ii) of this section.

(F) Subject to the requirements set forth in subparagraphs (G) through (M) of this subdivision, by June 1, 2009 and by June 1, 2010 and June 1, 2011, the commissioner shall offer for sale allowances from the CHP Long-term PPA Set-aside Account to eligible CO_2 budget sources which operate CO_2 budget units that are also CHP units with existing long-term power purchase agreements. CO_2 budget units that are eligible for allowances from the CDR Set-aside Account pursuant to subparagraph (O) of this subdivision shall not be eligible for allowances from the CHP Long-term PPA Set-aside Account.

(G) In order to purchase allowances from the CHP Long-term PPA Set aside Account, a CO_2 budget source shall, on or before October 31, 2008, or within 30 days of revising a long-term PPA, submit an application to the commissioner. Such application shall include:

(i) A copy of the long-term PPA for the electricity generated from the CO_2 budget units at the CO_2 budget source,

(ii) A demonstration that the long-term PPA was executed prior to January 1, 2001,

(iii) Certification that the CO_2 budget source can not pass along to the purchasing party in a long-term PPA any additional operating costs resulting from the implementation of this section,

(iv) Certification that the CO_2 budget source can not recover the costs of CO_2 allowances as a result of participation in electricity markets,

(v) A disclosure of any renegotiations or revisions to the long-term PPA that have been executed on or after January 1, 2001, and

(vi) Any other information the commissioner may require.

(H) A CO_2 budget source shall remain eligible to purchase allowances from the CHP Long-term PPA Set-aside Account established pursuant to subparagraph (G) of this subdivision until the expiration date of the long-term PPA, the date on which the long-term PPA is revised, or December 31, 2011, whichever occurs first. Provided that:

(i) If the long-term PPA is revised after the submission of the application pursuant to subparagraph (G) of this subdivision, the CO_2 budget source shall notify the commissioner of such revision within thirty days of execution; and

(ii) The CO_2 budget source shall no longer be eligible to purchase CO_2 allowances from the CHP Long-term PPA Set-aside Account until eligibility is re-established by submitting an application under subparagraph (G) of this subdivision. The CO_2 budget source shall document the reasons that the revised long-term PPA does not include provisions related to the cost of CO_2 allowances.

(I) The commissioner shall offer for sale allowances from the CHP Long-term PPA Set-aside Account to eligible CO_2 budget source at the following prices:

(i) Two dollars in 2009, and

(ii) Two dollars as indexed for inflation in years 2010 and 2011 as follows: two dollars multiplied by the ratio of the Consumer Price Index for all-Urban consumers published by the United States Department of Labor, as of August 31 of the previous calendar year to the Consumer Price Index for all-Urban consumers for August 2008.

(J) The maximum number of allowances that an eligible CO_2 budget source may purchase from the CHP Long-term PPA Set-aside Account shall be equal to the total number of tons of CO_2 emissions emitted by CO_2 budget units at the CO_2 budget source in the previous calendar year (rounded to the nearest whole ton), less any allowances allocated to the compliance account of the CO_2 budget source pursuant to subparagraphs (B) and (C) of this subdivision, subject to the limitations in subparagraphs (K) and (L) of this subdivision.

(K) If an existing long-term PPA is set to expire mid-year in any given year, the commissioner shall adjust the maximum number of allowances that may be purchased from the CHP Long-term PPA Set-aside Account to reflect the number of days in the current year for which the long-term PPA will be valid.

(L) IF $\Sigma\ A_{CHP2} <= A_{CHP2\text{-}AV}$, THEN

$A_{CHP2\text{-}OFFERED} = A_{CHP2}$.

IF $\Sigma\ A_{CHP2} > A_{CHP2\text{-}AV}$, THEN

$$A_{CHP\ 2-OFFERED} = A_{CHP\ 2} \times \left(\frac{A_{CHP\ 2-AV}}{\sum A_{CHP\ 2}} \right)$$

rounded to the nearest whole allowance.

Where:

A_{CHP2} = the maximum number of CO_2 allowances determined for each CO_2 budget source pursuant to subparagraphs (J) and (K) of this subdivision

$\Sigma\ A_{CHP2}$ = the total number of CO_2 allowances determined for CO_2 budget sources pursuant to subparagraphs (J) and (K) of this subdivision

$A_{CHP2\text{-}AV}$ = the number of CO_2 allowances available for allocation from the CHP Useful Thermal Output Set-aside Account

$A_{CHP2\text{-}OFFERED}$ = the number of CO_2 allowances the commissioner shall offer for sale of each eligible CO_2 budget source

The commissioner may adjust an allowance allocation under this subparagraph as necessary to not exceed $A_{CHP2\text{-}AV}$.

(M) Allowances sold to a CO_2 budget source from the CHP Long-term PPA Set-aside Account may be used for compliance only and shall not be resold by or transferred from the compliance account of a CO_2 budget source.

(N) If $\Sigma A_{CHP2} < A_{CHP2\text{-}AV}$, allowances from the CHP Long-term PPA Set-aside Account not sold for a vintage year shall be transferred to the Connecticut Auction Account, from which such allowances will be auctioned in accordance with subdivision (4) of this subsection.

(O) By February 28, 2010 and February 28 of each year thereafter, the commissioner shall allocate from the CDR Set-aside Account to the compliance account of each CO_2 budget source, which operates CO_2 budget units that are also customer-side distributed resources that received funds pursuant to the customer-side distributed resources program established by the Department of Public Utilities Control pursuant to Section 16-243 of the Connecticut General Statutes, the number of CO_2 allowances equal to the total number of tons of CO_2 emissions emitted by such CO_2 budget units in the previous calendar year (rounded to the nearest whole ton), subject to the limitation in subparagraph (P) of this subdivision.

(P) IF $\Sigma A_{CDR} <= A_{CDR\text{-}AV}$, THEN

$A_{CDR\text{-}ALLOCATED} = A_{CDR}$.

IF $\Sigma A_{CDR} > A_{CDR\text{-}AV}$, THEN

$$A_{CDR-ALLOCATED} = A_{CDR} \times \left(\frac{A_{CDR-AV}}{\sum A_{CDR}} \right)$$

rounded to the nearest whole allowance.

Where:

A_{CDR} = the number of CO_2 allowances calculated for each CO_2 budget source pursuant to subparagraph (F) of this subdivision

ΣA_{CDR} = the total number of CO_2 allowances calculated for CO_2 budget sources pursuant to subparagraph (F) of this subdivision

$A_{CDR\text{-}AV}$ = the number of CO_2 allowances available for a allocation from the CDR Set-aside Account

$A_{CDR\text{-}ALLOCATED}$ = the number of CO_2 allowances the commissioner shall allocate to the compliance account of each CO_2 budget source

The commissioner may adjust an allowance allocation under this subparagraph as necessary to not exceed $A_{CDR\text{-}AV}$.

(Q) If $\Sigma A_{CDR} < A_{CDR\text{-}AV}$, allowances from the CDR Set-aside Account not allocated for a vintage year shall be transferred to the Connecticut Auction Account, from which such allowances will be auctioned in accordance with subdivision (4) of this subsection.

(4) CO_2 allowance auctions.

(A) For purposes of this subdivision, "auction" means the open and transparent process by which the commissioner or a contractor or trustee selected by the commissioner, in consultation with the Department of Public Utility Control, shall offer for sale and sell the CO_2 allowances in the Connecticut Auction Account at least once per year.

(B) Except as provided by subparagraph (C) of this subdivision, by December 31 of each allocation year, the commissioner or a contractor or trustee selected by the commissioner shall offer for sale the CO_2 allowances with the same allocation year that are held in the Connecticut Auction Account. Such auction shall be conducted under the oversight of the commissioner and the Department of Public Utility Control.

(C) CO_2 allowances which are transferred to the Connecticut Auction Account from the CHP Useful Thermal Energy Set-aside Account pursuant to subdivision (3)(D) of this subsection, from the CHP Long-term PPA Set-aside Account pursuant to subdivision (3)(N) of this subsection, from the CDR Set-aside Account pursuant to subdivision (3)(Q) or from the Voluntary Clean Energy Purchase Set-aside Account pursuant to subdivision (6)(C) of this subsection shall be offered for sale at the next auction held following the transfer of such allowances.

(5) Distribution of auction proceeds. Proceeds derived from the sale of CO_2 allowances held in the Connecticut Auction Account shall be distributed as follows:

(A) Seven and one-half (7.5) percent of auction proceeds shall be retained by the commissioner for use in accordance with section 22a-200c(c) of the Connecticut General Statutes.

(B) By December 31, 2009 and December 31 of each year thereafter, up to twenty-three (23) percent of proceeds from auctions held in the previous 12 months may be transferred to an account held by the Connecticut Clean Energy Fund. Proceeds are to be used to support the development of Class I renewable energy sources. The amount of proceeds to be transferred to CCEF shall be determined based on the following criteria;

(i) By October 31, 2009 and October 31 of each year thereafter, CCEF shall apply for such funds on forms prescribed by the commissioner, and

(ii) The commissioner shall transfer funds to CCEF provided that CCEF demonstrates such funds will be committed within twelve months from the date of receipt to support the development of Class I renewable energy sources and further provided that for the prior year ending June 30 there is no more than ten million dollars unallocated.

(C) By December 31, 2009 and December 31 of each year thereafter, up to one (1) percent of proceeds from auctions held in the previous 12 months may be transferred to an account held by the Connecticut Municipal Electric Energy Cooperative (CMEEC). The commissioner shall determine the amount of proceeds to be transferred to CMEEC as follows:

(i) By October 31, 2009 and October 31 of each year thereafter, CMEEC shall apply for such funds on forms prescribed by the commissioner,

(ii) The actual percent of the proceeds that CMEEC may receive in a calendar year shall be the lower of one percent or the percentage representing the amount of electricity generated in MWhs by CO_2 budget units operating in the CMEEC service territory relative to the amount of electricity generated in MWhs by all CO_2 budget units in Connecticut in the previous calendar year.

(iii) If the commissioner transfers proceeds to CMEEC in accordance with the provisions of subparagraph (C)(i) of this subdivision, CMEEC shall provide a full accounting of the use of such funds to the commissioner, the Department of Public Utility Control, the Energy Conservation and Management Board and all CMEEC municipal utilities no later than March 31, 2010 and annually thereafter following the year in which CMEEC received such funding.

(D) By December 31, 2009 and December 31 of each year thereafter, a minimum sixty-eight and one-half (68.5) percent of proceeds from auctions held in the previous 12 months shall be transferred to accounts held by Connecticut Light & Power (CL&P) and United Illuminating (UI) and overseen by the Connecticut Energy Conservation Management Board. Eighty (80) percent of this subtotal shall be distributed to the CL&P account and twenty (20) percent shall be distributed to the UI account. Proceeds are to be used to support the development of energy efficiency measures.

(6) Retirement of Allowances for Clean Energy Purchases. The commissioner shall permanently retire a number of CO_2 allowances from the Voluntary Clean Energy Purchase Set-aside Account based upon documented voluntary renewable energy purchases by customers in Connecticut that represent RECs sold through the Connecticut Clean Energy Options program or renewable energy generated from within any participating state. Any retirement of allowances shall be determined as follows:

(A) The commissioner shall retire the number of CO_2 allowances equal to the amount determined by the following equation (rounded to the nearest whole ton), subject to the limitations in subparagraph (B) and requirements of subparagraphs (E) and (F) of this subdivision:

$(MWH_{CCEO} + MWH_{RECS}) \times (0.554 \text{ tons } CO_2 / MWh)$

Where:

MWH_{CCEO} = the total number of RECs sold (in MWhs) to Connecticut customers through the Connecticut Clean Energy Options program in the year prior to the vintage year of the CO_2 allowances to be retired.

MWH_{RECS} = the total number of RECs from renewable energy sources located within any participating state sold (in MWhs) to Connecticut customers through means other than the Connecticut Clean Energy Options program in the year prior to the vintage year of the CO_2 allowances to be retired.

(B) If the total number of allowances calculated to be retired pursuant to subparagraph (A) of this subdivision exceeds the number of CO_2 allowances held in the Voluntary Clean Energy Purchase Set-aside Account, then the number of CO_2 allowances to be retired shall be equal to the total number of CO_2 allowances allocated in the Voluntary Clean Energy Purchase Set-aside Account pursuant to subdivision (3)(A) of this subsection.

(C) If the total number of allowances calculated to be retired pursuant to subparagraph (A) of this subdivision is less than the number of CO_2 allowances held in the Voluntary Clean Energy Purchase Set-aside Account, then allowances from the Voluntary Clean Energy Purchase Set-aside Account not allocated for a vintage year shall be transferred to the Connecticut Auction Account, from which such allowances will be auctioned in accordance with subdivision (4) of this subsection.

(D) By October 1, 2009 and October 1 of each year thereafter, the commissioner shall retire the number of allowances determined pursuant to subparagraphs (A) and (B) of this subdivision by transferring them to the Connecticut CO_2 Allowance Retirement Account.

(E) Data for the total number of RECs sold to Connecticut customers through the Connecticut Clean Energy Options program required for the equation specified in subparagraph (A) of this subdivision shall be obtained from the Department of Public Utility Control.

(F) By June 30, 2009 and June 30 of each year thereafter, information required for the equation specified in subparagraph (A) of this subdivision relating to the number of RECs from renewable energy sources located within any participating state sold to Connecticut customers through means other than the Connecticut Clean Energy Options program in the previous year may be submitted by the retail provider that sold such RECs. Such information shall also include:

(i) Documentation that the retail provider procured the renewable energy or renewable energy attributes related to voluntary renewable energy or renewable energy attribute credit,

(ii) The time period when the retail purchase(s) was made,

(iii) The state where the REC was created, including documentation of facility name, unique generator identification number and fuel type, and

(iv) Any additional information required by the commissioner necessary to demonstrate that such REC purchase is not being credited in more than one participating state.

(7) Early reduction CO_2 allowances. The commissioner may award early reduction CO_2 allowances to a CO_2 budget source for reductions in the CO_2 budget source's CO_2 emissions, including all emissions from CO_2 budget units at the CO_2 budget source, that are achieved by the source during the early reduction period of 2006, 2007 and 2008, subject to the following requirements. For the purposes of this subdivision, the baseline

period shall be defined as calendar years 2003, 2004 and 2005, and the early reduction period shall be defined as calendar years 2006, 2007 and 2008.

(A) The owner or operator of the CO_2 budget source shall submit its application for the award of CO_2 allowances by May 1, 2009.

(B) The owner or operator of the CO_2 budget source shall demonstrate that all CO_2 budget units that existed at the CO_2 budget source during the baseline period are included as CO_2 budget units for the early reduction period. New CO_2 budget units added at the CO_2 budget source must also be accounted for during the early reduction period.

(C) The owner or operator of the CO_2 budget source shall demonstrate that the data submitted in support of the early reduction application was recorded in compliance with the requirements of subsection (i) of this section for each of the baseline period years, and also for the early reduction period years, for which the CO_2 budget source was required to report CO_2 data pursuant to 40 CFR 75. An owner or operator of a CO_2 budget source that was not required to submit CO_2 data pursuant to 40 CFR 75 for any of the years contained in the baseline period or early reduction period may request, as part of its application to the commissioner under this subsection, to use an alternative data source or sources for the calculation of early reduction allowances.

(D) The commissioner shall calculate the number of early reduction CO_2 allowances to be awarded to a particular CO_2 budget source pursuant to the following formula:

(i) If total heat input to all CO_2 budget units at the CO_2 budget source during the early reduction period is less than or equal to the total heat input to all the CO_2 budget units at the CO_2 budget source during the baseline period, then:

$$ERAs = ((AEER_{BASELINE} - AEER_{ERP}) \times (EO_{ERP} + (TO_{ERP} / 3.413)))/2000$$

Where:

ERAs are early reduction CO_2 allowances;

$AEER_{BASELINE}$ is the average CO_2 emissions rate resulting from electric energy output and thermal energy output for all of the CO_2 budget units at the CO_2 budget source during the baseline period (in pounds of CO_2/MWh_{th+e});

$AEER_{ERP}$ is the average CO_2 emissions rate resulting from electric energy output and thermal energy output for all of the CO_2 budget units at the CO_2 budget source during the early reduction period (in pounds of CO_2/ MWh_{th+e});

EO_{ERP} is the total electric energy output from all CO_2 budget units at the CO_2 budget source during the early reduction period (in MWh_e);

TO_{ERP} is the total useful thermal energy output from all CO_2 budget units at the CO_2 budget source during the early reduction period (in MMBtu);

(ii) For the purposes of this subparagraph, thermal energy output will be converted to units of MWh by the conversion factor 1 MWh = 3.413 MMBtu.

(iii) For the purposes of this subparagraph, output shall be monitored in accordance with subsection (i) of this section.

(iv) If total heat input to all CO_2 budget units at the CO_2 budget source during the early reduction period is greater than or equal to the total heat input to all the CO_2 budget units at the CO_2 budget source during the baseline period, then:

$ERAs = E_{BASELINE} - E_{ERP}$

Where:

ERAs are early reduction CO_2 allowances;

$E_{BASELINE}$ are total CO_2 emissions from all of the CO_2 budget units at the CO_2 budget source during the baseline period (in tons); and

E_{ERP} are total CO_2 emissions from all of the CO_2 budget units at the CO_2 budget source during the early reduction period (in tons).

(E) Once the commissioner confirms a CO_2 budget source's early reductions of CO_2 emissions, the commissioner shall award the early reduction CO_2 allowances to the CO_2 budget source's compliance account by December 31, 2009.

(g) Allowance Tracking System

(1) CO_2 Allowance Tracking System accounts.

(A) Nature and function of compliance accounts. Consistent with subdivision (2)(A) of this subsection, the commissioner shall establish one compliance account for each CO_2 budget source. Allocations of CO_2 allowances pursuant to subsection (f) of this section and deductions or transfers of CO_2 allowances pursuant to subsections (e)(2), (g)(5), (g)(7), or (h) of this section will be recorded in the compliance accounts in accordance with this subsection.

(B) Nature and function of general accounts. Consistent with subdivision (2)(B) of this subsection, the commissioner shall establish, upon request, a general account for any person. Transfers of CO_2 allowances pursuant to subsection (h) of this section will be recorded in the general account in accordance with this subsection.

(2) Establishment of accounts.

(A) Compliance accounts. Upon receipt of a complete account certificate of representation under subsection (c)(4) of this section, the commissioner shall establish a compliance account for each CO_2 budget source for which the account certificate of representation was submitted.

(B) General accounts. Any person may apply to open a general account for the purpose of holding and transferring CO_2 allowances. Such application shall:

(i) Designate only one CO_2 authorized account representative and only one alternate CO_2 authorized account representative who may act on behalf of the CO_2 authorized account representative; and

(ii) Include a procedure for authorizing the alternate CO_2 authorized account representative to act in lieu of the CO_2 authorized account representative.

(C) A complete application for a general account shall be submitted to the commissioner and shall include the following elements on forms prescribed by the commissioner:

(i) Name, address, electronic mail address, telephone number, and facsimile transmission number of the CO_2 authorized account representative and any alternate CO_2 authorized account representative;

(ii) At the option of the CO_2 authorized account representative, organization name and type of organization;

(iii) A list of all persons subject to a binding agreement for the CO_2 authorized account representative or any alternate CO_2 authorized account representative to represent their ownership interest with respect to the CO_2 allowances held in the general account;

(iv) The following certification statement by the CO_2 authorized account representative and any alternate CO_2 authorized account representative: "I certify that I was selected as the CO_2 authorized account representative or the CO_2 alternate authorized account representative, as applicable, by an agreement that is binding on all persons who have an ownership interest with respect to CO_2 allowances held in the general account. I certify that I have all the necessary authority to carry out my duties and responsibilities under the CO_2 Budget Trading Program on behalf of such persons and that each such person shall be fully bound by my representations, actions, inactions, or submissions and by any order or decision issued to me by the commissioner or a court regarding the general account.";

(v) The signature of the CO_2 authorized account representative and any alternate CO_2 authorized account representative and the dates signed; and

(vi) Unless otherwise required by the commissioner, documents of agreement referred to in the application for a general account shall not be submitted to the commissioner. The commissioner shall not be under any obligation to review or evaluate the sufficiency of such documents, if submitted.

(D) Authorization of CO_2 authorized account representative. Upon receipt by the commissioner of a complete application for a general account under subparagraph (C) of this subdivision:

(i) The commissioner shall establish a general account for the person or persons for whom the application is submitted;

(ii) The CO_2 authorized account representative and any alternate CO_2 authorized account representative for the general account shall represent and, by such representations, actions, inactions or submissions, legally bind each person who has an ownership interest with respect to CO_2 allowances held in the general account in all matters pertaining to the CO_2 Budget Trading Program, notwithstanding any agreement between the CO_2 authorized account representative or any alternate CO_2 authorized account representative and such person. Any such person shall be bound by any order or decision issued to the CO_2 authorized account representative or any alternate CO_2 authorized account representative by the commissioner or a court regarding the general account; and

(iii) Any representation, action, inaction or submission by any alternate CO_2 authorized account representative shall be deemed to be a representation, action, inaction or submission by the CO_2 authorized account representative.

(E) Each submission concerning the general account shall be submitted, signed and certified by the CO_2 authorized account representative or any alternate CO_2 authorized account representative for the persons having an ownership interest with respect to CO_2 allowances held in the general account. Each such submission shall include the following certification statement by the CO_2 authorized account representative or any alternate CO_2 authorized account representative:

> "I am authorized to make this submission on behalf of the persons having an ownership interest with respect to the CO_2 allowances held in the general account. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."

(F) The commissioner shall accept or act on a submission concerning the general account only if the submission has been made, signed and certified in accordance with subparagraph (E) of this subdivision.

(G) Changing CO_2 authorized account representative and alternate CO_2 authorized account representative; changes in persons with ownership interest.

(i) The CO_2 authorized account representative for a general account may be changed at any time upon receipt by the commissioner of a superseding complete application for a general account under subparagraph (B) of this subdivision of this subsection. Notwithstanding any such change, all representations, actions, inactions and submissions by the previous CO_2 authorized account representative or the previous alternate CO_2 authorized account representative prior to the time and date when the commissioner receives the superseding application for a general account shall be binding on the new CO_2 authorized account representative and the persons with an ownership interest with respect to the CO_2 allowances in the general account.

(ii) The alternate CO_2 authorized account representative for a general account may be changed at any time upon receipt by the commissioner of a superseding complete application for a general account under

subparagraph (B) of this subdivision of this subsection. Notwithstanding any such change, all representations, actions, inactions and submissions by the previous CO_2 authorized account representative or the previous alternate CO_2 authorized account representative prior to the time and date when the commissioner receives the superseding application for a general account shall be binding on the new alternate CO_2 authorized account representative and the persons with an ownership interest with respect to the CO_2 allowances in the general account.

(H) In the event a new person having an ownership interest:

(i) With respect to CO_2 allowances in the general account is not included in the list of such persons in the application for a general account, such new person shall be deemed to be subject to and bound by the application for a general account, the representations, actions, inactions and submissions of the CO_2 authorized account representative and any alternate CO_2 authorized account representative of the source, and the decisions, orders, actions and inactions of the commissioner, as if the new individual were included in such list; and

(ii) Within 30 days following any change in the persons having an ownership interest with respect to CO_2 allowances in the general account, including the addition of persons, the CO_2 authorized account representative or any alternate CO_2 authorized account representative shall submit a revision to the application for a general account amending the list of persons having an ownership interest with respect to the CO_2 allowances in the general account to include the change.

(I) Objections concerning CO_2 authorized account representative.

(i) Once a complete application for a general account under subparagraph (B) of this subdivision has been submitted and received, the commissioner shall rely on such application unless and until the commissioner receives a superseding complete application for a general account under subparagraph (B) of this subdivision.

(ii) Except as provided in subparagraphs (G)(i) and (ii) of this subdivision, no objection or other communication submitted to the commissioner concerning the authorization, or any representation, action, inaction or submission of the CO_2 authorized account representative or any alternate CO_2 authorized account representative for a general account shall affect any representation, action, inaction or submission of the CO_2 authorized account representative or any alternate CO_2 authorized account

representative or the finality of any decision or order by the commissioner under the CO_2 Budget Trading Program.

(J) Account identification. The commissioner shall assign a unique identifying number to each account established under subparagraph (A) or (B) of this subdivision.

(3) CO_2 Allowance Tracking System responsibilities of CO_2 authorized account representative. Following the establishment of a CO_2 Allowance Tracking System account, all submissions to the commissioner pertaining to the account, including, but not limited to, submissions concerning the deduction or transfer of CO_2 allowances in the account, shall be made only by the CO_2 authorized account representative for the account.

(4) Recordation of CO_2 allowance allocations**.**

(A) By January 1, 2009, the commissioner shall record in the Connecticut Auction Account, the CHP Useful Thermal Energy Set-aside Account, the CHP Long-term PPA Set-aside Account and the Voluntary Clean Energy Purchase Set-aside Account the CO_2 allowances for the allocation years of 2009, 2010, 2011, and 2012;

(B) By January 1, 2010 and January 1 of each year thereafter, the commissioner shall record in the Connecticut Auction Account, the CHP Useful Thermal Energy Set-aside Account, the CHP Long-term PPA Set-aside Account and the Voluntary Clean Energy Purchase Set-aside Account the CO_2 allowances for the allocation year that commences three years after such applicable deadline for recordation;

(C) By April 1, 2009 and April 1 of each year thereafter, the commissioner shall record any CO_2 allowances allocated pursuant to subsections (f)(3)(B) and (f)(3)(C) of this section in the CO_2 budget source's compliance account;

(D) By February 28, 2009 and February 28 of each year thereafter, the commissioner shall record any CO_2 allowances allocated pursuant to subsections (f)(3)(O) and (f)(3)(P) of this section in the CO_2 budget source's compliance account;

(E) By June 15, 2009 and June 15 of each year thereafter, the commissioner shall record any CO_2 allowances sold pursuant to subsections (f)(3)(F) through (f)(3)(L) of this section in the CO_2 budget source's compliance account;

(F) By October 1, 2009 and October 1 of each year thereafter, the commissioner shall record any CO_2 allowances retired pursuant to subsection (f)(6) of this section in the Connecticut CO_2 Allowance Retirement Account;

(G) Within seven business days of the results of an auction conducted pursuant to subsection (f)(4) of this section being deemed final by the commissioner, the commissioner or the commissioner's trustee shall record CO_2 allowances purchased from the Connecticut Auction Account;

(H) By December 31, 2009, the commissioner shall record any early reduction CO_2 allowances awarded pursuant to subsection (f)(7) of this section in the CO_2 budget source's compliance account; and

(I) Serial numbers for allocated CO_2 allowances. When allocating CO_2 allowances to and recording them in an account, the commissioner shall assign each CO_2 allowance a unique identification number that will include digits identifying the year for which the CO_2 allowance is allocated.

(5) Compliance.

(A) Allowances available for compliance deduction. CO_2 allowances that meet the following criteria are available to be deducted in order for a CO_2 budget source to comply with the CO_2 requirements of subsection (b)(3) of this section for a control period.

(i) The CO_2 allowances are of allocation years that fall within a prior control period or the same control period for which the allowances will be deducted; and

(ii) The CO_2 allowances are held in the CO_2 budget source's compliance account as of the CO_2 allowance transfer deadline for that control period or are transferred into the compliance account by a CO_2 allowance transfer correctly submitted for recordation under subsection (h)(1) of this section by the CO_2 allowance transfer deadline for that control period.

(B) For CO_2 offset allowances, the number of CO_2 offset allowances that are available to be deducted in order for a CO_2 budget source to comply with the CO_2 requirements of subsection (b)(3) of this section for a control period may not exceed the number of tons representing the following percentages of the CO_2 budget source's CO_2 emissions for that control period as determined in accordance with subsection (i) of this section:

(i) Unless the provisions of subparagraphs (B)(ii) or (iii) of this subdivision apply, three and three-tenths (3.3) percent;

(ii) If the commissioner determines that there has been a Stage One Trigger Event, five (5) percent; or

(iii) If the commissioner determines that there has been a Stage Two Trigger Event; ten (10) percent.

(C) The CO_2 allowances are not necessary for deductions for excess emissions for a prior control period under subsection (d) of this section.

(D) Deductions for compliance. Following the recordation, in accordance with subsection (h)(2) of this section, of CO_2 allowance transfers submitted for recordation in the CO_2 budget source's compliance account by the CO_2 allowance transfer deadline for a control period, the commissioner shall deduct CO_2 allowances available under subparagraph (A) of this subdivision to cover the source's CO_2 emissions, as determined in accordance with subsection (i) of this section, for the control period, as follows:

(i) Until the amount of CO_2 allowances deducted equals the number of tons of total CO_2 emissions, less any CO_2 emissions attributable to the burning of eligible biomass, determined in accordance with subsection (i) of this section, from all CO_2 budget sources at the CO_2 budget source for the control period; or

(ii) If there are insufficient CO_2 allowances to complete the deductions in subparagraph (B)(i) of this subdivision, until no more CO_2 allowances available under subparagraph (A) of this subdivision remain in the compliance account.

(E) Identification of CO_2 allowances by serial number. The CO_2 authorized account representative for a source's compliance account may request that specific CO_2 allowances, identified by serial number, in the compliance account be deducted for emissions or excess emissions for a control period in accordance with subparagraph (B), or (D) of this subdivision. Such identification shall be made in the compliance certification report submitted in accordance with subsection (e)(1) of this section.

(F) The commissioner shall deduct CO_2 allowances for a control period from the CO_2 budget source's compliance account, in the absence of an identification or in the case of a partial identification of CO_2 allowances by serial number under subparagraph (E) of this subdivision, in the following descending order:

(i) Any CO_2 allowances, other than CO_2 offset allowances, that are available for deduction under subparagraph (A) of this subdivision and were allocated to the units at the source, in the order of recordation; and then

(ii) Any CO_2 allowances, other than CO_2 offset allowances, that are available for deduction under subparagraph (A) of this subdivision and were

allocated other than to units at the source and transferred and recorded in the compliance account pursuant to subsection (h), in the order of recordation; and

(iii) Subject to the relevant compliance deduction limitations under subsection (g)(5) of this section, any CO_2 allowances that were awarded as CO_2 offset allowances and transferred and recorded in the compliance account pursuant to subsection (h) of this section, in order of recordation.

(G) Deductions for excess emissions. After making the deductions for compliance under subparagraph (D) of this subdivision, the commissioner shall deduct from the CO_2 budget source's compliance account a number of CO_2 allowances, from allocation years that occur after the control period in which the source has excess emissions, equal to three times the number of the source's excess emissions. No CO_2 offset allowances shall be deducted to account for the source's excess emissions. Any such CO_2 allowance deduction shall not affect the liability of the owners and operators of the CO_2 budget source or the CO_2 budget sources at the source for any fine, penalty or assessment, or their obligation to comply with any other remedy, for the same violation, as ordered under applicable state law. When assessing fines, penalties or other obligations, the commissioner shall:

(i) When determining the number of days of violation if a CO_2 budget source has excess emissions for a control period, consider each day in the control period a day in violation unless the owner or operator of the source demonstrate that a lesser number of days should be considered; and

(ii) Consider each ton of excess emissions as a separate violation.

(H) The commissioner shall record in the appropriate compliance account all deductions from such an account pursuant to subparagraphs (D) and (G) of this subdivision.

(I) Action by the commissioner on submissions. The commissioner may review and conduct independent audits concerning any submission under the CO_2 Budget Trading Program and make appropriate adjustments of the information in the submissions, including but not limited to, deductions of CO_2 allowances from or transfer of CO_2 allowances to a source's compliance account based on information in the submissions, as adjusted under subparagraph (H)(i) of this subdivision.

(6) Banking. Each CO_2 allowance that is held in a compliance account or a general account will remain in such account unless and until the CO_2 allowance is deducted or transferred under this subsection, subsection (e)(2), (g)(5), (g)(7), or (h) of this section.

(7) Account error. The commissioner may correct any error in any CO_2 Allowance Tracking System account. Within ten (10) business days of making such correction, the commissioner shall notify the CO_2 authorized account representative for the account.

(8) Closing of general accounts. The commissioner may close a general account for one of the following reasons:

(A) A CO_2 authorized account representative of a general account may instruct the commissioner to close the account by submitting a statement requesting deletion of the account from the CO_2 Allowance Tracking System and by correctly submitting for recordation under subsection (h)(1) of this section a CO_2 allowance transfer of all CO_2 allowances in the account to one or more other CO_2 Allowance Tracking System accounts.

(B) If a general account shows no activity for a period of six years or more and does not contain any CO_2 allowances, the commissioner may notify the CO_2 authorized account representative for the account that the account will be closed and deleted from the CO_2 Allowance Tracking System following twenty business days after the notice is sent. The account will be closed after the twenty day period unless before the end of such twenty day period the commissioner receives a correctly submitted transfer of CO_2 allowances into the account under section subsection (h)(1) of this section or a statement submitted by the CO_2 authorized account representative demonstrating to the satisfaction of the commissioner good cause as to why the account should not be closed.

(h) CO_2 Allowance Transfers

(1) Submission of CO_2 allowance transfers. The CO_2 authorized account representatives seeking recordation of a CO_2 allowance transfer shall submit the transfer to the commissioner. The CO_2 allowance transfer shall include the following information:

(A) The numbers identifying both the transferor and transferee accounts;

(B) A specification by serial number of each CO_2 allowance to be transferred; and

(C) The printed name and signature of the CO_2 authorized account representative of the transferor account and the date signed.

(2) Recordation.

(A) Within five business days of receiving a CO_2 allowance transfer, except as provided in subparagraph (B) of this subdivision, the commissioner shall record a CO_2 allowance transfer by moving each CO_2 allowance from the transferor account to the transferee account as specified by the request, provided that:

(i) The transfer is correctly submitted under subdivision (1) of this subsection; and

(ii) The transferor account includes each CO_2 allowance identified by serial number in the transfer.

(B) A CO_2 allowance transfer into or out of a compliance account that is submitted for recordation following the CO_2 allowance transfer deadline and that includes any CO_2 allowances that are of allocation years that fall within a control period prior to or the same as the control period to which the CO_2 allowance transfer deadline applies will not be recorded until after completion of the process pursuant to subsection (g)(5)(D) of this section.

(C) Where a CO_2 allowance transfer submitted for recordation fails to meet the requirements of subparagraph (A) of this subdivision, the commissioner shall not record such transfer.

(3) Notification.

(A) Notification of recordation. Within 5 business days of recordation of a CO_2 allowance transfer under subdivision (2) of this subsection, the commissioner shall notify each party to the transfer. Notice will be given to the CO_2 authorized account representatives of both the transferor and transferee accounts.

(B) Notification of non-recordation. Within ten business days of receipt of a CO_2 allowance transfer that fails to meet the requirements of subdivision (2)(A) of this subsection, the commissioner shall notify the CO_2 authorized account representatives of both accounts subject to the transfer of:

(i) A decision not to record the transfer; and

(ii) The reasons for such non-recordation.

(C) Nothing in this section shall preclude the submission of a CO_2 allowance transfer for recordation following notification of non-recordation.

(i) Monitoring and Reporting

(1) For the purposes of this subsection the definitions in subsection (a) of this section and in 40 CFR 72.2 shall apply. The terms "Administrator", "affected unit", and "designated representative" in 40 CFR 75 shall be replaced by the terms "commissioner", "CO_2 budget source", and "CO_2 authorized account representative", respectively, as defined in subsection (a) of this section. The definition of "continuous emission monitoring

system" or "CEMs" in 40 CFR 75 shall be replaced with the definition in subsection (a) of this section.

(2) The owner or operator and, to the extent applicable, the CO_2 authorized account representative of a CO_2 budget source shall comply with the monitoring, recordkeeping and reporting requirements as provided in this subsection and all applicable sections of 40 CFR 75. Owners or operators of a CO_2 budget unit who monitor a non-CO_2 budget unit pursuant to the common, multiple, or bypass stack procedures in 40 CFR 75.72(b)(2)(ii), or 40 CFR 75.16 (b)(2)(ii)(B) as pursuant to 40 CFR 75.13, for purposes of complying with this section, shall monitor and report CO_2 mass emissions from such non-CO_2 budget unit according to the procedures for CO_2 budget units established in subsections (i)(2) through (i)(8) of this section.

(A) Requirements for installation, certification, and data accounting. The owner or operator of each CO_2 budget source shall:

(i) Install all monitoring systems necessary to monitor CO_2 mass emissions in accordance with 40 CFR 75, except for equation G-1. Equation G-1 in Appendix G of 40 CFR 75 shall not be used to determine CO_2 emissions under this section. This may require systems to monitor CO_2 concentration, stack gas flow rate, O_2 concentration, heat input and fuel flow rate;

(ii) Successfully complete all certification tests required under this subsection and meet all other requirements of this subsection and 40 CFR 75 applicable to the monitoring systems installed under subparagraph (A)(i) of this subdivision; and

(iii) Make and keep records, report and quality assure the data from the monitoring systems installed under subparagraph (A)(i) of this subdivision.

(B) Compliance dates. The owner or operator shall meet the monitoring system certification and other requirements of subparagraphs (A)(i) through (A)(iii) of this subdivision on or before the following dates:

(i) The owner or operator of a CO_2 budget source that intends to apply for early reduction allowances under subsection (f)(7) of this section must demonstrate that the data submitted in support of the early reduction application was recorded in compliance with the requirements of this subsection for all of the early reduction years for which the CO_2 budget source was required to report CO_2 data pursuant to 40 CFR 75. A CO_2 budget source that was not required to submit CO_2 data pursuant to 40 CFR 75 for any of the years contained in the early reduction application

may petition the commissioner as part of its application under subsection (f)(7) of this section for the use of alternative data source or sources for the calculation of early reduction allowances;

(ii) The owner or operator of a CO_2 budget source, except for a CO_2 budget source under subparagraph (B)(i) of this subdivision, that commences commercial operation before July 1, 2008, must comply with the requirements of this subsection by January 1, 2009; and

(iii) The owner or operator of a CO_2 budget source that commences commercial operation on or after July 1, 2008, must comply with the requirements of this subsection by the later of January 1, 2009, or one hundred and eighty (180) calendar days after the date on which the source commences commercial operation.

(iv) For the owner or operator of a CO_2 budget source for which construction of a new stack or flue installation is completed after the applicable deadline under subparagraphs (B)(i), (ii) or (iii) of this subdivision by the earlier of ninety (90) source operating days after the date on which emissions first exit to the ambient air through the new stack or flue or one hundred and eighty (180) calendar days after the date on which emissions first exit to the ambient air through the new stack or flue.

(C) Reporting data.

(i) The owner or operator of a CO_2 budget source that misses the certification deadline under subparagraph (B)(i) of this subdivision is not eligible to apply for early reduction allowances. The owner or operator of the source becomes subject to the certification deadline under subparagraph (B)(ii) of this subdivision.

(ii) Except as provided in subparagraph (C)(iii) of this subdivision, the owner or operator of a CO_2 budget source that does not meet the applicable compliance date set forth in subparagraphs (B)(ii) and (B)(iii) of this subdivision for any monitoring system under subparagraph (A) of this subdivision shall, for each such monitoring system, determine, record and report maximum potential or, as appropriate, minimum potential, values for CO_2 concentration, CO_2 emission rate, stack gas moisture content, fuel flow rate, heat input and any other parameter required to determine CO_2 mass emissions in accordance with 40 CFR 75.31(b)(2) or (c)(3), 40 CFR 75, Appendix section 2.4 or 40 CFR 75 Appendix E.

(iii) The owner or operator of a CO_2 budget source that does not meet the applicable compliance date set forth in subparagraph (B)(iv) of this

subdivision for any monitoring system under subparagraph (A)(i) of this subdivision shall, for each such monitoring system, determine, record and report substitute data using the applicable missing data procedures in 40 CFR 75, Subpart D, or 40 CFR 75, Appendix D or E, in lieu of the maximum potential or, as appropriate, minimum potential, values for a parameter if the owner or operator demonstrates that there is continuity between the data streams for that parameter before and after the construction or installation under subparagraph (B)(iv) of this subdivision.

(iv) CO_2 budget units subject to an acid rain emissions limitation or to section 22a-174-22c of the Regulations of Connecticut State Agencies that qualify for the optional SO_2, NO_X, and CO_2 emissions calculations for low mass emissions (LME) units, as applicable, under 40 CFR 75.19 and report emissions for such programs using the calculations under 40 CFR 75.19, shall also use the CO_2 emissions calculations for LME units under 40 CFR 75.19 for purposes of demonstrating compliance with this section.

(v) CO_2 budget units subject to an acid rain emissions limitation or to section 22a-174-22c of the Regulations of Connecticut State Agencies that do not qualify for the optional SO_2, NO_X, and CO_2 emissions calculations for LME units, as applicable, under 40 CFR 75.19, shall not use the CO_2 emissions calculations for LME units under 40 CFR 75.19 for purposes of demonstrating compliance with this section.

(vi) CO_2 budget units not subject to an acid rain emissions limitation or to section 22a-174-22c of the Regulations of Connecticut State Agencies shall qualify for the optional CO_2 emissions calculation for LME units under 40 CFR 75.19, provided that such units emit less than 100 tons of NO_X annually and no more than 25 tons of SO_2 annually.

(D) Prohibitions. No owner or operator of a CO_2 budget unit shall use any alternative monitoring system, alternative reference method, or any other alternative for the required continuous emission monitoring system without having obtained prior written approval in accordance with subsection (i)(6) of this section.

(E) No owner or operator of a CO_2 budget unit shall operate the source so as to discharge, or allow to be discharged, CO_2 emissions to the atmosphere without accounting for all such emissions in accordance with the applicable provisions of this subsection and 40 CFR 75.

(F) No owner or operator of a CO_2 Budget unit shall disrupt the continuous emission monitoring system, any portion thereof, or any other approved emission monitoring method, and thereby avoid monitoring and recording CO_2 mass emissions discharged into the atmosphere, except for periods of recertification or

periods when calibration, quality assurance testing or maintenance is performed in accordance with the applicable provisions of this subsection and 40 CFR 75.

(G) No owner or operator of a CO_2 budget unit shall retire or permanently discontinue use of the continuous emission monitoring system, any component thereof, or any other approved emission monitoring system under this subsection, except under any one of the following circumstances:

(i) The owner or operator is monitoring emissions from the source with another certified monitoring system approved, in accordance with the applicable provisions of this subsection and 40 CFR 75, by the permitting authority for use at that source that provides emission data for the same pollutant or parameter as the retired or discontinued monitoring system; or

(ii) The CO_2 authorized account representative submits notification of the date of certification testing of a replacement monitoring system in accordance with subparagraph (B)(ii) of this subdivision.

(3) Initial certification and recertification procedures.

(A) The owner or operator of a CO_2 Budget source shall be exempt from the initial certification requirements of this section for a monitoring system under subdivision (2)(A)(i) of this subsection if the following conditions are met:

(i) The monitoring system has been previously certified in accordance with 40 CFR 75; and

(ii) The applicable quality-assurance and quality-control requirements of 40 CFR 75.21 and 40 CFR 75 Appendices B, D, and E are fully met for the certified monitoring system described in subdivision (2)(A) of this subsection.

(B) Continuous emission monitoring systems required under this section include, but are not limited to, the following:

(i) A flow monitoring system, consisting of a stack flow rate monitor and an automated data acquisition and handling system and providing a permanent, continuous record of stack gas volumetric flow rate, in standard cubic feet per hour;

(ii) A nitrogen oxides emission rate or NOx-diluent monitoring system, consisting of a NOx pollutant concentration monitor, a diluent gas monitor, and an automated data acquisition and handling system and providing a permanent, continuous record of NOx concentration, in parts

per million, diluent gas concentration, in percent CO_2 or O_2; and NOx emission rate, in lb/MMBtu;

(iii) A moisture monitoring system, as defined in 40 CFR 75.11(b)(2), which provides a permanent, continuous record of the stack gas moisture content, in percent H_2O;

(iv) A carbon dioxide monitoring system, consisting of a CO_2 pollutant concentration monitor, or an oxygen monitor plus suitable mathematical equations from which the CO_2 concentration is derived, and an automated data acquisition and handling system and providing a permanent, continuous record of CO_2 emissions, in percent CO_2; and

(v) An oxygen monitoring system, consisting of an O_2 concentration monitor and an automated data acquisition and handling system and providing a permanent, continuous record of O_2 in percent O_2.

(C) The recertification provisions of this section shall apply to a monitoring system under subdivision (2)(A) of this subsection exempt from initial certification requirements under subparagraph (A) of this subdivision.

(D) If the Administrator has previously approved a petition under 40 CFR 75.72(b)(2)(ii), or 40 CFR 75.16(b)(2)(ii)(B) as pursuant to 40 CFR 75.13, for apportioning the CO_2 emission rate measured in a common stack or a petition under 40 CFR 75.66 of this chapter for an alternative requirement in 40 CFR 75, the CO_2 authorized account representative shall submit the petition to the commissioner under subdivision (7)(A) of this subsection to determine whether the Administrator's approval applies under this program.

(E) Except as provided in subparagraph (A) of this subdivision, the owner or operator of a CO_2 budget source shall comply with the following initial certification and recertification procedures for a continuous emission monitoring system and an excepted monitoring system under 40 CFR 75, Appendices D and E, and under subdivision (2)(A)(i) of this subsection. The owner or operator of a source that qualifies to use the low mass emissions excepted monitoring methodology in 40 CFR 75.19 or that qualifies to use an alternative monitoring system under 40 CFR 75, Subpart E, shall comply with the procedures in subparagraph (A) or (B)(iv) of this subdivision.

(F) Requirements for initial certification. The owner or operator shall ensure that each continuous emissions monitoring system required under subdivision (2)(A)(i) of this subsection completes all of the initial certification testing required under 40 CFR 75.20 by the applicable deadlines specified in subdivision (2)(B) of this subsection. In addition, whenever the owner or operator installs a

monitoring system in order to meet the requirements of this subsection in a location where no such monitoring system was previously installed, initial certification in accordance with 40 CFR 75.20 is required.

(G) Requirements for recertification. Whenever the owner or operator makes a replacement, modification, or change in a certified continuous emission monitoring system under subdivision (2)(A)(i) of this subsection that the Administrator or the commissioner determines significantly affects the ability of the system to accurately measure or record CO_2 mass emissions or to meet the quality-assurance and quality-control requirements of 40 CFR 75.21 or Appendix B to 40 CFR 75, the owner or operator shall recertify the monitoring system according to 40 CFR 75.20(b). Furthermore, whenever the owner or operator makes a replacement, modification or change to the flue gas handling system or the source's operation that the Administrator or the permitting authority determines to significantly change the flow or concentration profile, the owner or operator shall recertify the continuous emissions monitoring system according to 40 CFR 75.20(b). Examples of changes that require recertification include, but are not limited to: replacement of the analyzer, change in location or orientation of the sampling probe or site, or changing of flow rate monitor polynomial coefficients.

(H) Approval process for initial certifications and recertification.

(i) Notification of certification. The CO_2 authorized account representative shall submit to the commissioner a written notice of the dates of certification in accordance with subdivision (5) of this subsection.

(ii) Certification application. The CO_2 authorized account representative shall submit to the commissioner a certification application for each monitoring system. A complete certification application shall include the information specified in 40 CFR 75.63.

(iii) Provisional certification data. The provisional certification date for a monitor shall be determined in accordance with 40 CFR 75.20(a)(3). A provisionally certified monitor may be used under the CO_2 Budget Trading Program for a period not to exceed 120 days after receipt by the commissioner of the complete certification application for the monitoring system or component thereof under subparagraph (H)(ii) of this subdivision. Data measured and recorded by the provisionally certified monitoring system or component thereof, in accordance with the requirements of 40 CFR 75, will be considered valid quality-assured data, provided that the permitting authority does not invalidate the provisional certification by issuing a notice of disapproval within 120 days of receipt of the complete certification application by the commissioner.

(I) Certification application approval process. The commissioner shall issue a written notice of approval or disapproval of the certification application to the owner or operator within 120 days of receipt of the complete certification application subparagraph (H)(ii) of this subdivision. In the event the commissioner does not issue such a notice within such 120-day period, each monitoring system that meets the applicable performance requirements of 40 CFR 75 and is included in the certification application will be deemed certified for use under the CO_2 Budget Trading Program.

(i) Approval notice. If the certification application is complete and shows that each monitoring system meets the applicable performance requirements of 40 CFR 75, then the commissioner shall issue a written notice of approval of the certification application within 120 days of receipt of such complete application.

(ii) Incomplete application notice. If the certification application is not complete, then the commissioner will issue a written notice of incompleteness and set a reasonable date by which the CO_2 authorized account representative must submit the additional information required to complete the certification application. The commissioner may issue a notice of disapproval under subparagraph (I)(iii) of this subdivision if the CO_2 authorized account representative does not comply with the notice of incompleteness by the specified date. The 120 day review period shall not begin before receipt of a complete certification application

(iii) Disapproval notice. If the certification application shows that any monitoring system or component thereof does not meet the performance requirements of 40 CFR 75, or if the certification application is incomplete and the requirement for disapproval under subparagraph (I)(ii) of this subdivision is met, then the commissioner shall issue a written notice of disapproval of the certification application. Upon issuance of such notice of disapproval, the provisional certification is no longer valid and the data measured and recorded by each uncertified monitoring system or component thereof shall not be considered valid quality assured data beginning with the date and hour of provisional certification. The owner or operator shall follow the procedures for loss of certification in subparagraph (J) of this subdivision for each monitoring system or component thereof, which is disapproved for initial certification.

(iv) Audit decertification. The commissioner may issue a notice of disapproval of the certification status of a monitor in accordance with subdivision (4)(B) of this subsection.

(J) Procedures for loss of certification. If the commissioner issues a notice of disapproval of a certification application under subparagraph (I)(iii) of this subdivision or a notice of disapproval of certification status under subparagraph (I)(iv) of this subdivision, then the owner or operator shall substitute the following values for each disapproved monitoring system, for each hour of source operation during the period of invalid data beginning with the date and hour of provisional certification and continuing until the time, date, and hour specified under 40 CFR 75.20(a)(5)(i) or 40 CFR 75.20(g)(7):

(i) For sources using or intending to monitor for CO_2 mass emissions using heat input or for sources using the low mass emission excepted methodology under 40 CFR 75.19, the maximum potential hourly heat input of the source; and

(ii) For sources intending to monitor for CO_2 mass emissions using a CO_2 pollutant concentration monitor and a flow monitor, the maximum potential concentration of CO_2 and the maximum potential flow rate of the source under 40 CFR 75, Appendix A section 2.1.

(K) For each disapproved monitoring system, the CO_2 authorized account representative shall submit a notification of certification retest dates and a new certification application in accordance with subparagraphs (H)(i) and (ii) of this subdivision; and the owner or operator shall repeat all certification tests or other requirements, as indicated in the commissioner's notice of disapproval, no later than 30 source operating days after the date of issuance of the notice of disapproval.

(L) Initial certification and recertification procedures for low mass emission units using the excepted methodologies under subdivisions (2)(C)(iv) or (2)(C)(vi) of this subsection. The owner or operator of a source qualified to use the low mass emissions excepted methodology under subdivisions (2)(C)(iv) or (2)(C)(vi) of this subsection shall meet the applicable certification and recertification requirements of 40 CFR 75.19(a)(2), 40 CFR 75.20(h) and subdivision (3) of this subsection. If the owner or operator of such a source elects to certify a fuel flow meter system for heat input determinations, the owner or operator shall also meet the certification and recertification requirements in 40 CFR 75.20(g).

(M) Certification and recertification procedures for alternative monitoring systems. The CO_2 authorized account of each source for which the owner or operator intends to use an alternative monitoring system approved by the commissioner under 40 CFR 75, Subpart E, shall apply for certification to the commissioner prior to use of the system under the CO_2 Budget Trading Program. The CO_2 authorized account representative shall apply for recertification following a

replacement, modification or change according to the procedures in subparagraph (C) of this subdivision. The owner or operator of an alternative monitoring system shall comply with the notification and application requirements for certification according to the procedures specified in subparagraph (H) of this subdivision and 40 CFR 75.20(f).

(4) Out of control periods.

(A) Whenever any monitoring system fails to meet the quality assurance and quality control requirements or data validation requirements of 40 CFR 75, data shall be substituted using the applicable procedures in 40 CFR 75, Subpart D, Appendix D or E.

(B) Audit decertification. Whenever both an audit of a monitoring system and a review of the initial certification or recertification application reveal that any monitoring system should not have been certified or recertified because it did not meet a particular performance specification or other requirement under subdivision (3) of this subsection or the applicable provisions of 40 CFR 75, both at the time of the initial certification or recertification application submission and at the time of the audit, the commissioner will issue a notice of disapproval of the certification status of such monitoring system. For the purposes of this paragraph, an audit shall be either a field audit or an audit of any information submitted to the commissioner. By issuing the notice of disapproval, the commissioner revokes prospectively the certification status of the monitoring system. The data measured and recorded by the monitoring system shall not be considered valid quality-assured data from the date of issuance of the notification of the revoked certification status until the date and time that the owner or operator completes subsequently approved initial certification or recertification tests for the monitoring system. The owner or operator shall follow the initial certification or recertification procedures in subdivision (3) of this subsection for each disapproved monitoring system.

(5) Notifications. The CO_2 authorized account representative for a CO_2 budget source shall submit written notice to the commissioner in accordance with 40 CFR 75.61.

(6) Recordkeeping and reporting**.**

(A) General provisions. The CO_2 authorized account representative shall comply with all recordkeeping and reporting requirements in this section, the applicable record keeping and reporting requirements under 40 CFR 75.73 and with the certification requirements of subsection (c)(1)(E) of this section.

(B) Monitoring plans. The owner or operator of a CO_2 budget source shall comply with requirements of 40 CFR 75.62.

(C) Certification applications. The CO_2 authorized account representative shall submit an application to the commissioner within 45 days after completing all initial certification or recertification tests required under subdivision (3) of this subsection including the information required under CFR 75.63 and 40 CFR 75.73 (c) and (e).

(D) Quarterly reports. The CO_2 authorized account representative shall report the CO_2 mass emission data for the CO_2 budget source, in an electronic format prescribed by the commissioner for each calendar quarter as follows:

(i) For a source that commences commercial operation before July 1, 2008, the calendar quarter covering January 1, 2009 through March 31, 2009; or

(ii) For a source commencing commercial operation on or after July 1, 2008, the calendar quarter corresponding to, the earlier of the date of provisional certification or the applicable deadline for initial certification under subdivision (2)(B) of this subsection or, unless that quarter is the third or fourth quarter of 2008, in which case reporting shall commence in the quarter covering January 1, 2009 through March 31, 2009.

(E) The CO_2 authorized account representative shall submit each quarterly report to the commissioner within 30 days following the end of the calendar quarter covered by the report. Quarterly reports shall be submitted in the manner specified in 40 CFR 75, Subpart H, and 40 CFR 75.64.

(F) Quarterly reports shall include all of the data and information required in 40 CFR 75, Subpart H, for each CO_2 budget source, or group of sources using a common stack, as well as information required in 40 CFR 75, Subpart G except for opacity and SO_2 provisions.

(G) Compliance certification. The CO_2 authorized account representative shall submit to the commissioner a compliance certification in support of each quarterly report based on reasonable inquiry of those persons with primary responsibility for ensuring that all of the source's emissions are correctly and fully monitored. T he certification shall state that:

(i) The monitoring data submitted were recorded in accordance with the applicable requirements of this subsection and 40 CFR 75, including the quality assurance procedures and specifications;

(ii) For a source with add-on CO_2 emission controls and for all hours where data are substituted in accordance with 40 CFR 75.34(a)(1), the add-on emission controls were operating within the range of parameters listed in

the quality assurance quality control program under 40 CFR 75, Appendix B and the substitute values do not systematically underestimate CO_2 emissions; and

(iii) The CO_2 concentration values substituted for missing data under 40 CFR 75, Subpart D do not systematically underestimate CO_2 emissions.

(7) Petitions.

(A) Except as provided in subparagraph (B) of this subdivision, the CO_2 authorized account representative of a CO_2 budget unit that is subject to an Acid Rain emissions limitation may submit a petition to the Administrator under 40 CFR 75.66 and to the commissioner requesting approval to apply an alternative to any requirement of 40 CFR Part 75. Application of an alternative to any requirement of 40 CFR Part 75 is in accordance with subsection (i) of this section only to the extent that the petition is approved in writing by the Administrator, and subsequently approved in writing by the commissioner.

(B) The CO_2 authorized account representative of a CO_2 budget unit that is subject to an Acid Rain emissions limitation may submit a petition to the Administrator under 40 CFR 75.66 and to the commissioner requesting approval to apply an alternative to a requirement concerning any additional CEMS required under the common stack provisions of 40 CFR 75.72 or a CO_2 concentration CEMS used under 40 CFR 75.71(a)(2). Application of an alternative to any such requirement is in accordance with subsection (i) of this section only to the extent the petition is approved in writing by the Administrator, and subsequently approved in writing by the commissioner.

(C) Petitions for a CO_2 budget unit that is not subject to an Acid Rain emissions limitation.

(i) The CO_2 authorized account representative of a CO_2 budget unit that is not subject to an Acid Rain emissions limitation may submit a petition to the Administrator under 40 CFR 75.66 and to the commissioner requesting approval to apply an alternative to any requirement of 40 CFR 75. Application of an alternative to any requirement of 40 CFR 75 is in accordance with subsection (i) of this section only to the extent that the petition is approved in writing by the Administrator, and subsequently approved in writing by the commissioner

(ii) In the event that the Administrator declines to review a petition under subparagraph (C)(i) of this subdivision, the CO_2 authorized account representative of a CO_2 budget unit that is not subject to an Acid Rain emissions limitation may submit a petition to the commissioner requesting

approval to apply an alternative to any requirement of subsection (i) of this section. That petition shall contain all of the relevant information specified in 40 CFR 75.66. Application of an alternative to any requirement of subsection (i) of this section is in accordance with subsection (i) of this section only to the extent that the petition is approved in writing by the commissioner.

(8) CO_2 budget units that co-fire eligible biomass.

(A) The CO_2 authorized account representative of a CO_2 budget unit that co-fires eligible biomass as a compliance mechanism under this subsection, shall report the following information to the commissioner for each calendar quarter:

(i) For each shipment of solid eligible biomass fuel fired at the CO_2 budget unit, the total eligible biomass fuel input, on an as-fired basis, in pounds;

(ii) For each shipment of solid eligible biomass fuel fired at the CO_2 budget unit, the moisture content, on an as-fired basis, as a fraction by weight;

(iii) For each distinct type of gaseous eligible biomass fuel fired at the CO_2 budget unit, the density of the biogas, on an as-fired basis, in pounds per standard cubic foot;

(iv) For each distinct type of gaseous eligible biomass fuel fired at the CO_2 budget unit, the moisture content of the biogas, as a fraction by total weight;

(v) For each distinct type of gaseous eligible biomass fuel fired at the CO_2 budget unit, the total eligible biomass fuel input, in standard cubic feet;

(vi) For each distinct type of eligible biomass fuel fired at the CO_2 budget unit, the dry basis carbon content of the fuel type, as a fraction by dry weight;

(vii) For each distinct type of eligible biomass fuel fired at the CO_2 budget unit, the dry basis higher heating value, in MMBtu per dry pound;

(viii) For each distinct type of eligible biomass fuel fired at the CO_2 budget unit, the total dry basis eligible biomass fuel input, in pounds, calculated in accordance with subparagraph (B) of this subdivision;

(ix) The total amount of CO_2 emitted from the CO_2 budget unit due to firing eligible biomass fuel, in tons, calculated in accordance with subparagraph

(C) of this subdivision;

(x) For each distinct type of eligible biomass fuel fired at the CO_2 budget unit, the total eligible biomass fuel heat input, in MMBtu, calculated in accordance with subparagraph (D)(i) of this subdivision;

(xi) The total amount of heat input to the CO_2 budget unit due to firing eligible biomass fuel, in MMBtu, calculated in accordance with subparagraph (D)(ii) of this subdivision;

(xii) Description and documentation of monitoring technology employed, and description and documentation of fuel sampling methodology employed, including sampling frequency; and,

(xiii) For each distinct type of eligible biomass fuel fired at the CO_2 budget unit, chemical analysis, including heating value and carbon content.

(B) An owner or operator of a CO_2 budget unit shall calculate and submit to the commissioner on a quarterly basis the total dry weight for each distinct type of eligible biomass fired by the CO_2 budget unit during the reporting quarter. The total dry weight shall be determined for each fuel type as follows:

(i) For solid fuel types:

$$F_j = \sum_{i=1}^{m} (1 - M_i) \times F_i$$

Where:

F_j = Total eligible biomass dry basis fuel input (lbs) for fuel type j;

F_i = Eligible biomass as fired fuel input (lbs) for fired shipment i;

M_i = Moisture content (fraction) for fired shipment i;

i = Fired fuel shipment;

j = Fuel type; and,

m = Number of shipments.

(ii) For gaseous fuel types:

$F_j = D_j \times V_j \times (1 - M_j)$

Where:

F_j = Total eligible biomass dry basis fuel input (lbs) for fuel type j;

D_j = Density of biogas (lbs/scf) for fuel type j;

V_j = Total volume (scf) for fuel type j;

M_j = Moisture content (fraction) for fuel type j; and

j = Fuel type.

(C) CO_2 emissions due to firing of eligible biomass shall be determined as follows:

(i) For any full calendar quarter during which no fuel other than eligible biomass is combusted at the CO_2 budget unit, as measured and recorded in accordance with subdivisions (1) through (7) of this subsection; or

(ii) For any full calendar quarter during which fuels other than eligible biomass are combusted at the CO_2 budget unit, as determined using the following equation:

$$CO_2 \text{ tons} = \sum_{j=1}^{n} F_j \times C_j \times O_j \times 44/12 \times 0.0005$$

Where:

CO_2 tons = CO_2 emissions due to firing of eligible biomass for the reporting quarter;

F_j = Total eligible biomass dry basis fuel input (lbs) for fuel type j, as calculated in subparagraph (B) of this subdivision;

C_j = Carbon fraction (dry basis) for fuel type j;

O_j = Oxidation factor for eligible biomass fuel type j, derived for solid fuels based on the ash content of the eligible biomass fired and the carbon content of this ash, as determined pursuant to subparagraph (A)(xii) of this

subdivision; for gaseous eligible biomass fuels, a default oxidation factor of 0.995 may be used;

44/12 = Number of tons of carbon dioxide that are created when one ton of carbon is combusted (44/12);

0.0005 = Number of short tons which is equal to one pound;

j = Fuel type; and,

n = Number of distinct fuel types.

(D) Heat input due to firing of eligible biomass for each quarter shall be determined as follows:

(i) For each distinct fuel type:

$$H_j = F_j \times HHV_j$$

Where:

H_j = Heat input (MMBtu) for fuel type j;

F_j = Total eligible biomass dry basis fuel input (lbs) for fuel type j, as calculated in subparagraph (B) of this subdivision;

HHV_j = Higher heating value (MMBtu/lb), dry basis, for fuel type j, as determined through chemical analysis; and

j = Fuel type.

(ii) For all fuel types:

$$\text{Heat Input MMBtu} = \sum_{j=1}^{n} H_j$$

Where:

H_j = Heat input (MMBtu) for fuel type j;

j = Fuel type; and,

n = Number of distinct fuel types.

(E) Fuel sampling methods and fuel sampling technology shall be consistent with the New York State renewable Portfolio Standard Biomass Guidebook, May 2006.

(9) Additional requirements to provide output data.

(A) By March 1, 2009 and March 1 of each year thereafter, CO_2 budget sources shall submit to the commissioner electricity generation data, in MWhs, associated with operation of CO_2 budget units at the CO_2 budget sources. The following MWh data should be included, if applicable:

(i) CO_2 budget sources that are required to submit generation data to the Independent System Operator (ISO) shall submit to the commissioner the same CO_2 budget unit-level MWh values submitted to the ISO and a statement certifying that the MWh of electrical output reported reflects the total actual electrical output of the CO_2 budget units at the CO_2 budget source used by the ISO to determine settlement resources of energy market participants.

(ii) CO_2 budget sources that report gross hourly MW data to the Administrator, shall submit to the commissioner an annual summation of the CO_2 budget unit-level gross output data submitted to the Administrator.

(iii) CO_2 budget sources that do not submit generation data to the ISO or to the Administrator shall submit to the commissioner net electrical output information in accordance with subparagraph (D) of this subdivision. A CO_2 budget source whose electrical output is not used in ISO energy market settlement determinations shall propose to the commissioner a method for quantification of net electrical output.

(B) CO_2 budget sources creating useful thermal energy and selling steam should use billing meters to determine net steam output. A CO_2 budget source whose steam output is not measured by billing meters or whose steam output is combined with output from a non-CO_2 budget source prior to measurement by the billing meter shall propose to the commissioner an alternative method for quantification of net steam output. If data for steam output is not available, the CO_2 budget source may report heat input providing useful steam output as a surrogate for steam output.

(C) Monitoring. By March 1, 2009, CO_2 budget sources shall provide an output monitoring plan containing the elements described in subparagraphs (D) through (G) of this subdivision.

(D) The output monitoring plan submitted by the CO_2 budget source pursuant to subparagraph (C) of this subdivision shall include a diagram of the electrical or steam system for which output is being monitored, specifically including:

(i) For net electric output, the diagram should contain all CO_2 budget sources and all generators served by each CO_2 budget source and the relationship between CO_2 Budget sources and generators. If a generator served by a CO_2 budget source is also served by a non-affected source, the non-affected source and its relationship to each generator should be indicated on the diagram as well. The diagram should indicate where the net electric output is measured and should include all electrical inputs and outputs to and from the plant. If net electric output is determined using a billing meter, the diagram should show each billing meter used to determine net sales of electricity and should show that all electricity measured at the point of sale is generated by the CO_2 budget sources; and

(ii) For net thermal output, the diagram should include all steam or hot water coming into the net steam system, including steam from CO_2 budget sources and non-affected sources, and all exit points of steam or hot water from the net steam system. In addition, each input and output stream will have an estimated temperature, pressure and phase indicator, and an enthalpy in Btu/lb. The diagram of the net steam system should identify all useful loads, house loads, parasitic loads, any other steam loads and all boiler feed water returns. The diagram will represent all energy losses in the system as either usable or unusable losses. The diagram will also indicate all flow meters, temperature or pressure sensors or other equipment used to calculate gross thermal output. If a sales agreement is used to determine net thermal output, the diagram should show the monitoring equipment used to determine the sales of steam.

(E) The output monitoring plan submitted by the CO_2 budget source pursuant to subparagraph (C) of this subdivision shall include a description of each output monitoring system. The description of the output monitoring system should include a written description of the output system and the equations used to calculate output. For net thermal output systems descriptions and justifications of each useful load should be included.

(F) The output monitoring plan submitted by the CO_2 budget source pursuant to subparagraph (C) of this subdivision shall include a detailed description of all quality assurance and quality control activities that will be performed to maintain the output system in accordance with subparagraph (M) of this subdivision.

(G) The output monitoring plan submitted by the CO_2 budget source pursuant to subparagraph (C) of this subdivision shall include documentation supporting any output values to be used as a missing data value should there be periods of invalid output data. The missing data output value must be either zero or an output value that is likely to be lower than a measured value and that is approved as part of the monitoring plan required under this section.

(H) Initial Certification. CO_2 authorized account representatives shall submit a certification statement stating that either the output monitoring system consists entirely of billing meters or that the output monitoring system meets one of the accuracy requirements for non-billing meters below. This statement may be submitted with the certification application required pursuant to subdivision (6)(C) of this subsection.

(i) Billing Meters. The billing meter must record the electric or thermal output. Any electric or thermal output values that the facility reports must be the same as the values used in billing for the output. Any output measurement equipment used as a billing meter in commercial transactions requires no additional certification or testing requirements.

(ii) Non-Billing Meters. For non-billing meters, the output monitoring system must either meet an accuracy of ten (10) percent of the reference value, or each component monitor for the output system must meet an accuracy of three (3) percent of the full scale value, whichever is less stringent, as determined pursuant to subparagraphs (H)(iii) or (H)(iv) of this subdivision:

(iii) The system approach to accuracy must include a determination of how the system accuracy of ten (10) percent is achieved using the individual components in the system and should include data loggers and any watt meters used to calculate the final net electric output data or any flow meters for steam or condensate, temperature measurement devices, absolute pressure measurement devices and differential pressure devices used for measuring thermal energy; or

(iv) A component approach to accuracy. If testing a piece of output measurement equipment shows that the output readings are not accurate to three (3) percent or less of the full scale, then retest or replace the measurement equipment and meet that requirement. Data should be considered invalid, prospectively, for purposes of determining allocations. Data remain invalid until the output measurement equipment passes an accuracy test or is replaced with another piece of equipment that passes the accuracy test.

(I) Ongoing quality assurance and quality control. Ongoing quality assurance and quality control activities must be performed by the CO_2 budget source in order to maintain the output system, which shall include the following.

(i) Billing Meters. In the case where billing meters are used to determine output, no quality assurance and quality control activities beyond those already performed are required; and

(ii) Non-Billing Meters. Certain types of equipment such as potential transformers, current transformers, nozzle and venture type meters, and the primary element of an orifice plate only require an initial certification of calibration and do not require periodic recalibration unless the equipment is physically changed. However, the pressure and temperature transmitters accompanying an orifice plate will require periodic retesting. For other types of equipment, either recalibrate or re-verify the meter accuracy at least once every two years, unless a consensus standard allows for less frequent calibrations or accuracy tests. The system approach to accuracy or a component approach to accuracy shall be in accordance with subparagraphs (H)(ii) through (H)(iv) of this subdivision. If testing a piece of output measurement equipment shows that the output readings are not accurate to 3.0 percent or less of the full scale value, then retest or replace the measurement equipment and meet that requirement.

(iii) Out of Control Periods. If testing a piece of output measurement equipment shows that the output readings are not accurate to the certification value, data remain valid until the output measurement equipment passes an accuracy test or is replaced with another piece of equipment that passes an accuracy test. All invalid data shall be replaced by either zero output or an output value that is likely to be lower than a measured value and that is approved as part of the output monitoring plan under subparagraph (C) of this subdivision.

(J) Recordkeeping and Reporting. The CO_2 authorized account representative shall comply with all recordkeeping and reporting requirements in this subparagraph and with the requirements of subsections (b)(6) and (c)(1)(E) of this section:

(i) Recordkeeping. The owner or operator of a CO_2 budget source shall retain data used to monitor, determine or calculate net generation for ten years;

(ii) Annual output reports. By March 1, 2009 and March 1 of each year thereafter, the CO_2 authorized account representative shall submit to the commissioner an annual output report containing until-level MWh data

and all useful thermal output information by March 1 for the immediately preceding year; and

(iii) The annual report shall be certified as follows:

> " I am authorized to make this submission on behalf of the owners and operators of the CO_2 budget sources or CO_2 budget sources for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."

(j) Severability.

Each provision of this section is deemed severable, and in the event that any provision of this section is held to be invalid, the remainder of this section shall continue in full force and effect.

Statement of Purpose

The purpose of the proposed new Regulations of Connecticut State Agencies ("R.C.S.A.") section 22a-174-31 is to adopt a state rule to implement the Regional Greenhouse Gas Initiative (RGGI), a regional program under which the states of New York, Massachusetts, Rhode Island, Vermont, New Hampshire, Maine, New Jersey, Delaware and Maryland will:

- Impose a cap on carbon dioxide emissions from large fossil fuel-fired electricity generating units in Connecticut,
- First stabilize (in 2009-2014), then reduce carbon dioxide emissions by 2.5% per year (in 2015-2018) from the region's utility sector,
- Allow allocation of emissions offsets to be used for compliance where real reduction of greenhouse gases are achieved outside the regulated sector,
- Require auctioning of CO_2 allowances and use auction proceeds for consumer benefit or strategic energy purposes as required by Public Act 07-242, Section 93,
- Require demonstration of compliance every three years.

Sec. 2. The Regulations of Connecticut State Agencies are amended by adding section 22a-174-31a as follows:

(NEW) Section 22a-174-31a. Greenhouse Gas Emission Offset Projects.

(a) Definitions and abbreviations. For the purposes of this section and section 22a-174-31 of the Regulations of Connecticut State Agencies:

(1) "Anaerobic digester" means a device that promotes the decomposition of organic material to simple organics and gaseous biogas products, usually accomplished by means of controlling temperature and volume, and including a methane recovery system;

(2) "Anaerobic digestion" means the degradation of organic material including manure brought about through the action of microorganisms in the absence of elemental oxygen;

(3) "Anaerobic storage" means the storage of organic material in an oxygen-free environment, or under oxygen-free conditions, including but not limited to, holding tanks, ponds, and lagoons;

(4) "ANSI" means the American National Standards Institute;

(5) "ASHRAE" means the American Society of Heating, Refrigerating and Air-Conditioner Engineers;

(6) "Award" means the determination by the commissioner of the number of CO_2 offset allowances to be recorded in the general account of a project sponsor. Award is a type of allocation;

(7) "Biogas" means the gas, primarily methane and CO_2, resulting from the decomposition of organic matter under anaerobic conditions;

(8) "Boiler" means a fossil or other fuel fired device that produces steam or heats water or any other heat transfer medium;

(9) "Building envelope" means the elements of a building, including walls, windows, foundation, basement slab, ceiling, roof and insulation, that separate conditioned space from unconditioned space, or that enclose semi-heated space, through which thermal energy may be transferred to or from the exterior, unconditioned space, or conditioned space;

(10) "Certification" means an independent third-party verification that a CO_2 emissions offset project application and all measurement, monitoring or verification associated therewith meets the requirements of this section;

(11) "CH_4" means methane.

(12) "CO_2 offset allowance" means "CO_2 offset allowance" as defined in section 22a-174-31

of the Regulations of Connecticut State Agencies;

(13) "CO_2 emissions offset project" means a project to reduce or avoid atmospheric loading of CO_2, CO_2e or sequestered carbon where such project yields reduced or avoided emissions that are real, additional, verifiable, enforceable and permanent;

(14) "CO_2e" means "carbon dioxide equivalent" as defined in section 22a-174-31 of the Regulations of Connecticut State Agencies;

(15) "Commercial building" means a non-residential building to which the provisions of ANSI/ASHRAE/IESNA Standard 90.1 apply;

(16) "Conflict of interest" means a situation under which an individual has a relationship with any specific project sponsor, CO_2 emissions offset project or category of offset projects, such that the individual's other activities or relationships with other persons or organizations render or may render the individual incapable of providing an impartial certification opinion, or otherwise compromise the individual's objectivity in performing certification functions;

(17) "Condensing mode" means the design and operation of furnaces or boilers in a mode that leads to the production of condensate in flue gases;

(18) "Cooperating regulatory agency" means a regulatory agency in a state or United States jurisdiction that is not a participating state that has entered into a memorandum of understanding with the commissioner and appropriate regulatory agencies of all participating states to carry out certain obligations relative to CO_2 emissions offset projects in that state or United States jurisdiction, including but not limited to the obligation to perform audits of offset project sites, and report noncompliance with this section;

(19) "Energy conservation measure" ("ECM") or "energy efficiency measure" ("EEM") means an activity or a set of activities designed to increase the energy efficiency of a building or improve the management of energy demand and may include, but not be limited to, physical changes to facility equipment, modifications to a building, revisions to operating and maintenance procedures, software changes, or new means of training or managing users of the building or operations and maintenance staff;

(20) "Energy performance" means a measure of the relative energy efficiency of a building, building equipment, or building components, as measured by the amount of energy required to provide building services. For building equipment and components, a relative measure of the impact of equipment or components on building energy usage;

(21) "Energy services" means the provision of useful services to building occupants, such as heating and hot water, cooling, and lighting;

(22) "Forested condition" means land that is at least 1.0 acre in size and 120.0 feet wide measured stem-to-stem from the outer-most edge with forested strips that must be 120.0 feet wide for a continuous length of at least 363.0 feet, and meets one of the following stocking criteria:

(A) The condition is at least 10-percent stocked by trees of any size or has been at least 10-percent stocked in the past, and the condition is not subject to non-forest use that prevent normal tree regeneration and succession such as regular mowing, intensive grazing, or recreation activities, or

(B) In several western woodland species where stocking cannot be determined, the condition has at least 5-percent crown cover by trees of any size, or has had at least 5-percent cover in the past, and the condition is not subject to non-forest use that prevents normal regeneration and succession such as regular mowing, chaining, or recreation activities;

(23) "Furnace (residential)" means a self-contained, indirect-fired appliance with a heat input rate of less than 225,000 Btu/hr that supplies heated air to a residential or commercial building through ducts to conditioned spaces;

(24) "HVAC system" means a system or systems that provide, either collectively or individually, heating, ventilation, or air conditioning to a building, including the equipment, distribution network, and terminals;

(25) "IESNA" means the Illuminating Engineering Society of North America;

(26) "Independent verifier" means an individual who has been approved by the commissioner or the commissioner's designee to conduct verification activities;

(27) "Market penetration rate" means a measure of the diffusion of a technology, product, or practice in a defined market, as represented by the percentage of annual sales for a product or practice, or as a percentage of the existing installed stock for a product or category of products, or as the percentage of existing installed stock that utilizes a practice;

(28) "Non-census water" means streams, sloughs, estuaries, and canals more than 120 feet and less than 1/8 of a mile wide. Lakes, reservoirs, and ponds one (1) to 40 acres in size.

(29) "Non-forested condition" means land that does not meet the definition of "forested condition" and any land that includes areas used for crops, improved pasture, residential areas, city parks, improved roads of any width and adjoining rights-of-way, power line clearings of any width, and non-census water. If intermingled in forested areas, unimproved roads and non-forest strips must be more than 120.0 feet wide, and clearings

more than one acre in size, to qualify as non-forest land;

(30) "Offset project" means all equipment, materials, items, or actions directly related to the reduction of CO_2 equivalent emissions or the sequestration of carbon specified in a consistency application submitted pursuant to this section;

(31) "On-site combustion" means the combustion of fossil fuel at a building to provide building services, such as heating, hot water, or electricity;

(32) "Passive solar" means a combination of building design features and building components that utilize solar energy to reduce or eliminate the need for mechanical heating and cooling and daytime artificial lighting;

(33) "Permanently retired" means a greenhouse gas allowance or credit has been placed in a retirement account controlled by the jurisdiction that generated the allowance or credit, or has been placed in an allowance retirement account controlled by the commissioner or is otherwise determined by the commissioner to be rendered unusable;

(34) "Project commencement" means the date on which physical construction, installation of equipment or materials or other work at an offset project site began; or the date on which a management activity or protocol is first utilized for an offset project;

(35) "Project sponsor" means any person who owns or operates an eligible CO_2 emission offset project or CO_2 emissions credit retirement;

(36) "Regional-type anaerobic digester" means an anaerobic digester using feedstock from more than one agricultural operation, or importing feedstock from more than one agricultural operation. Also referred to as a community digester or centralized digester;

(37) "Renewable portfolio standard" means the statutory requirement that a load-serving entity provide a certain portion of the electricity it supplies to its customers from renewable energy sources pursuant to section 16-245*a* of the Connecticut General Statute or any other statute or regulation requiring a certain portion of electricity supplied to the electricity grid be generated from renewable energy sources;

(38) "Residential building" means a low-rise structure used as a single family home, a multifamily home of three or fewer stories above grade, or a modular or mobile manufactured home for which the provisions of ANSI/ASHRAE/IESNA Standard 90.1 do not apply;

(39) "RESNET" means the Residential Energy Services Network;

(40) "SF_6" means sulfur hexafluoride.

(41) "SF_6-containing operating equipment" means any equipment used for the transmission or distribution of electricity that contains SF_6;

(42) "System benefit fund" means the monies collected directly from retail electricity or natural gas ratepayers pursuant section 16-245*l* of the Connecticut General Statutes or the statutes and regulations of other states;

(43) "Total solids" means the total of all solids in a sample, including total suspended solids, total dissolved solids, and volatile suspended solids;

(44) "Transmission or distribution entity" means the assets and equipment used to transmit and distribute electricity from an electric generator to the electrical load of a customer, including all related assets and equipment located within the service territory of the entity, defined as the service territory of a load-serving entity specified by the Connecticut Department of Public Utility Control;

(45) "Verification" means the determination by an independent verifier that certain parts of a CO_2 emissions offset project consistency application or measurement, monitoring and verification report conforms to the requirements of this section;

(46) "Volatile solids" means the fraction of total solids that is comprised primarily of organic matter;

(47) "Whole-building energy performance" means the overall energy performance of a building, taking into account the integrated impact on energy usage of all building components and systems;

(48) "Whole-building retrofit" means any building project that involves the replacement of more than one building system, or set of building components, and also requires a building permit; and

(49) "Zero net energy building" means a building designed to produce as much energy, using renewable energy sources, as the building is projected to use, as measured on an annual basis.

(b) Applicability and General Requirements.

(1) This section applies to the sponsor of any CO_2 emissions offset project undertaken to create CO_2 offset allowances for sale or use in the State of Connecticut in accordance with the requirements of section 22a-174-31 of the Regulations of Connecticut State Agencies or in any other participating state.

(2) Copies of documents incorporated by reference into this section are available by contacting:

Connecticut Department of Environmental Protection
Bureau of Air Management
79 Elm Street
Hartford, Connecticut 06106
(860) 424-3027

(c) General Requirements for CO_2 Emissions Offset Projects.

(1) The commissioner or commissioner's designee may award CO_2 offset allowances to sponsors of CO_2 emissions offset projects or CO_2 emissions credit retirements that have reduced or avoided atmospheric loading of CO_2 or CO_2 equivalent or sequestered carbon as demonstrated in accordance with the applicable provisions of this section provided that such projects represent CO_2 or CO_2 equivalent reductions or carbon sequestration that are real, additional, verifiable, enforceable, and permanent. The use of such offset allowances for compliance purposes are subject to the provisions of section 22a-174-31 of the Regulations of Connecticut State Agencies.

(2) Eligible CO_2 emissions offset projects. Offset projects shall satisfy all the applicable requirements of this section to qualify for the award of CO_2 offset allowances. As identified in subsections (d) through (h) of this section, projects that either capture and destroy landfill methane, avoid sulfur hexafluoride emissions, sequester carbon through afforestation, provide end-use energy efficiency, or avoid methane emissions from agricultural management operations are eligible for the award of CO_2 offset allowances.

(3) Eligible offset project locations. Eligible offset projects may be located in any participating state or in any state or other U.S. jurisdiction that has entered into a memorandum of understanding with the commissioner and the appropriate regulatory agencies of all participating states to carry out certain obligations relative to CO_2 emissions offset projects in such state or U.S. jurisdiction, including but not limited to the obligation to perform audits of offset project sites, and report violations of this section to the commissioner or the commissioner's designee.

(4) Eligible CO_2 emissions credit retirements. A CO_2 emissions credit retirement shall satisfy all the applicable requirements of this section, to qualify for the award of CO_2 offset allowances. CO_2 emissions credit retirements include the permanent retirement of greenhouse gas allowances or credits issued pursuant to any governmental mandatory carbon constraining program outside the United States that places a specific tonnage limit on greenhouse gas emissions, provided the allowances or credits are acceptable and valid for use in that program at the time the consistency application is filed pursuant to this subsection, or certified greenhouse gas emissions reductions credits issued pursuant to the United Nations Framework Convention on Climate Change (UNFCCC) or protocols adopted through the UNFCCC process. The commissioner or the commissioner's

designee may award CO_2 offset allowances for CO_2 emissions credit retirements only after the occurrence of a stage two trigger event.

(5) General Requirements. In addition to the requirements set forth in subsections (d) through (h) of this section, the following general requirements shall apply to each offset project:

(A) CO_2 offset allowances shall not be awarded for an offset project or CO_2 emissions credit retirement that is required pursuant to any local, state or federal law, regulation, or administrative or judicial order. If an offset project receives a consistency determination under this subsection and is later required by local, state or federal law, regulation, or administrative or judicial order, then the offset project shall only remain eligible for the award of CO_2 offset allowances until the end of its current allocation period.

(B) If an offset project includes an electric generation component, the project sponsor shall transfer to the commissioner or the commissioner's designee the legal rights to all attribute credits generated from the operation of the offset project, other than CO_2 offset allowances issued under this subsection, that may be used for compliance with a renewable portfolio standard or other regulatory requirement.

(C) Offset projects may not receive funding or other incentives from any systems benefit fund, or funds or other incentives provided through the auction reserves described in section 22a-174-31(f)(5)(B) through (D) of the Regulations of Connecticut State Agencies.

(D) CO_2 offset allowances shall not be awarded to an offset project or CO_2 emissions credit retirement that is awarded credits or allowances under any other mandatory or voluntary greenhouse gas program, by another participating state, or by any other carbon market.

(6) Maximum allocation periods for CO_2 emissions offset projects. The commissioner or the commissioner's designee may award CO_2 offset allowances under this section as follows:

(A) Maximum allocation periods. Except as provided in subparagraph (B) of this subdivision, the commissioner or the commissioner's designee shall award CO_2 offset allowances under this section for any offset project for an allocation period not to exceed ten years. At the end of the initial 10-year allocation period and upon a demonstration by the project sponsor that the offset project continues to meet all applicable requirements of this section, the commissioner or the commissioner's designee may award CO_2 offset allowances for a second 10-year allocation period. Prior to the expiration of the initial allocation period, the offset project sponsor must submit a consistency application pursuant to this section and receive a consistency determination from the commissioner or the commissioner's

designee.

(B) Maximum afforestation allocation period. The commissioner or the commissioner's designee may award CO_2 offset allowances under this subsection for any afforestation offset project for an initial 20-year allocation period. At the end of the initial 20-year allocation period the commissioner or the commissioner's designee may award CO_2 offset allowances for a second 20-year allocation period, provided the offset sponsor submitted a consistency application for the afforestation offset project prior to the expiration of the initial allocation period, and the commissioner or the commissioner's designee has issued a consistency determination pursuant to this subsection. At the end of the second 20-year allocation period, the commissioner or the commissioner's designee may award CO_2 offset allowances for a third 20-year allocation period, provided the offset sponsor has submitted a consistency application for the afforestation offset project prior to the expiration of the second allocation period, and the commissioner or the commissioner's designee has issued a consistency determination pursuant to this subsection. In no event shall an afforestation offset project be awarded CO_2 offset allowances for more than a total of 60 allocation years.

(7) Timing of offset projects. The commissioner or the commissioner's designee may award CO_2 offset allowances under this section only for offset projects that commenced on or after December 20, 2005.

(8) Offset project audit. Project sponsors shall provide the commissioner or the commissioner's designee access to the physical location of the offset project in order to determine compliance with this section.

(9) Ineligibility due to noncompliance. If at any time the commissioner or the commissioner's designee determines that a project sponsor has not complied with the requirements of this section, the commissioner or the commissioner's designee may revoke and retire any and all offset allowances in the project sponsor's general account. If at any time the commissioner or the commissioner's designee determines that an offset project does not comply with the requirements of this section, the commissioner or the commissioner's designee may revoke any prior approvals issued in relation to an offset project.

(10) Application Process. Any person may act as the sponsor of an eligible CO_2 emissions offset project or CO_2 emissions credit retirement, provided that person meets the requirements of this subdivision as follows:

(A) Establishment of general account. The sponsor of an offset project or CO_2 emissions credit retirement shall establish a general account under section 22a-174-31(g)(2)(B) of the Regulations of Connecticut State Agencies. All

submissions to the commissioner required for the award of CO_2 offset allowances under this subsection must be from the CO_2 authorized account representative for the general account of the sponsor of the relevant offset project or CO_2 emissions credit retirement;

(B) Consistency application time frames.

(i) For offset projects commenced prior to January 1, 2009, the project sponsor shall submit the consistency application no later than June 30, 2009,

(ii) For offset projects commenced on or after January 1, 2009, the project sponsor shall submit the consistency application no later than the date that is six months after the offset project is commenced, and

(iii) The commissioner or the commissioner's designee shall deny any application that fails to meet the time frames specified in this subparagraph.

(C) Consistency application contents. The sponsor of an offset project shall provide the following information to the commissioner or the commissioner's designee:

(i) The project's sponsor's name, address, e-mail address, telephone number, facsimile transmission number, and account number;

(ii) The offset project description as required by the relevant provisions of subsection (d) through (h) of this section;

(iii) The emissions baseline determination as required by relevant provisions of subsection (d) through (h) of this section;

(iv) An explanation of how the projected reduction or avoidance of atmospheric loading of CO_2 or CO_2 equivalent or the sequestration of carbon is to be quantified, monitored and verified as required by the relevant provisions of subsection (d) through (h) of this section;

(v) A completed application agreement that reads as follows: "The undersigned project sponsor recognizes and accepts that the application for, and the receipt of, CO_2 offset allowances under the CO_2 Budget Trading Program is predicated on the project sponsor following all the requirements of section 22a-174-31a of the Regulations of Connecticut State Agencies. The project sponsor holds the legal rights to the offset project, or has been granted the right to act on behalf of a party that holds the legal rights to the offset project. I understand that eligibility for the

award of offset allowances under section 22a-174-31a of the Regulations of Connecticut State Agencies is contingent on meeting the requirements of this section. I authorize the commissioner or the commissioner's designee to audit this offset project for purposes of verifying that the project, including the monitoring and verification plan, has been implemented as described in this application. I understand that this right to audit shall include the right to enter the physical location of the offset project. I submit to the legal jurisdiction of the State of Connecticut.";

(vi) A statement and certification report signed by the offset project sponsor certifying that all offset projects for which the sponsor has received offset allowances under this section (or similar provisions in the rules of other participating states), under the sponsor's ownership or control (or under the ownership or control of any entity which controls, is controlled by, or has common control with the sponsor) are in compliance with all applicable requirements of the CO_2 Budget Trading Program in all participating states;

(vii) A statement and certification report drafted and signed by an independent verifier, accredited pursuant to this section, indicating that the independent verifier has reviewed the entire application and evaluated the adequacy and validity of the following information in relation to the applicable requirements in this section: the demonstration that the offset project meets the applicable eligibility requirements of this section; baseline emissions in accordance with this section; the monitoring and verification plan submitted in accordance with this section; and such other statements as may be required by commissioner or the commissioner's designee;

(viii) Disclosure of any voluntary or mandatory programs, other than the CO_2 Budget Trading Program, to which greenhouse gas emissions data related to the offset project has been, or will be, reported;

(ix) For offset projects located in a state or United States jurisdiction that is not a participating state, a demonstration that the project sponsor has complied with all requirements of the cooperating regulatory agency in the state where the offset project is located; and

(x) Any other information the commissioner or the commissioner's designee may require in order to evaluate the proposed offset project.

(D) CO_2 emissions offset credit retirements. For a CO_2 emissions credit retirement, the consistency application must include sufficient information to demonstrate that the CO_2 emissions credit is eligible pursuant to this section, was lawfully held by the project sponsor, and has been permanently and irrevocably retired.

(11) Place for filing**.**

(A) For an offset project located in one participating state in whole or in part, the consistency application must be filed with the appropriate commissioner in that State.

(B) For an offset project located wholly outside all participating states, the consistency application may be filed with the appropriate commissioner in any one participating state. In addition, a copy of the consistency application shall be filed with the cooperating regulatory agency in the state or United States jurisdiction where the offset project is located.

(C) For an offset project located in more than one participating state, the consistency application must be filed in the participating state where the larger part of the emissions reduction or carbon sequestration due to the offset project activity is projected to occur.

(D) For CO_2 emissions credit retirements, the consistency application may be filed with the appropriate commissioner in any one participating state.

(12) Commissioner action on consistency applications.

(A) Completeness determination. Within 30 days following receipt of the application filed pursuant to subdivision (9)(B) of this subsection, the commissioner or the commissioner's designee will notify the project sponsor whether the consistency application is complete. A complete consistency application is one that is in an approved form and is determined by the commissioner or the commissioner's designee to be complete for the purpose of commencing review of the application. In no event shall a completeness determination prevent the commissioner or the commissioner's designee from requesting additional information in order to fully evaluate the proposed project in accordance with subparagraph (B) of this subdivision.

(B) Consistency determination. Within 150 days of making the completeness determination under subparagraph (A) of this subdivision, the commissioner or the commissioner's designee will issue a determination as to whether the offset project has met the requirements of this section and the requirements of the applicable offset project standard of subsection (d), (e), (f), (g) or (h) of this section. For any application found to lack consistency with these requirements, the commissioner or the commissioner's designee will inform the project sponsor of the offset project's deficiencies.

(d) Landfill Methane (CH_4) Capture and Destruction

(1) Eligibility. An offset project that captures and destroys methane from landfills shall meet the requirements of subsection (d) and all applicable requirements of this section, to qualify for the award of CO_2 offset allowances. In addition, eligible offset projects shall meet the following requirements:

(A) The offset project may only occur at a landfill that is not subject to the New Source Performance Standards for municipal solid waste landfills under subpart Cc and subpart WWW of 40 CFR 60, a non-NSPS landfill; and

(B) Offset project description. The project sponsor shall provide a detailed narrative of the offset project action(s) to be taken, including supporting materials as appropriate. The project narrative shall include the following:

(i) Owner and operator of the offset project;

(ii) Location and specifications of the landfill where the offset project will occur, including waste in place;

(iii) Owner and operator of the landfill where the offset project will occur; and

(iv) Specifications of the equipment to be installed and a technical schematic of the offset project.

(2) Emissions baseline determination. The emissions baseline shall represent the potential fugitive landfill emissions, in tons of CO_2e, of the methane (CH_4) collected and metered for thermal destruction as part of the offset project. Baseline CH_4 fugitive emissions shall be calculated as follows:

Emissions (tons CO_2e) = (V x M x (1-OX) x GWP)/2000

Where:

V = Volume of CH_4 collected (ft^3)

M = Mass of CH_4 per cubic foot (0.04246 lbs/ft^3 default value at 1 atmosphere and 20^o C)

OX = Oxidation factor (0.10), representing estimated portion of collected CH_4 that would have eventually oxidized to CO_2 if not collected

GWP = CO_2e global warming potential of CH_4 (23)

(3) Calculating emissions reductions. Emissions reductions shall be determined based on the

difference between potential fugitive CH_4 emissions that would have occurred if metered CH_4 collected from the landfill for thermal destruction as part of the offset project was not collected and destroyed. CO_2e emissions reductions shall be calculated as follows:

Emissions Reductions (tons CO_2e) = (V x M x (1 - OX) x C_{ef} x GWP)/2000

Where:

V = Volume of CH_4 collected (ft_3)

M = Mass of CH_4 per cubic foot (0.04246 lbs/ft^3 default value at 1 atmosphere and 20^o C)

OX = Oxidation factor (0.10), representing estimated portion of collected CH_4 that would have eventually oxidized to CO_2 if not collected

C_{ef} = Combustion efficiency of methane control technology (0.98)

GWP = CO_2e global warming potential of CH_4 (23)

(4) Monitoring and verification requirements. Offset projects shall employ a landfill gas collection system that provides continuous metering and data computation of landfill gas volumetric flow rate and CH_4 concentration. Annual monitoring and verification reports required pursuant to subsection (j) of this section shall include monthly volumetric flow rate and CH_4 concentration data, including documentation that the CH_4 was actually supplied to the combustion source. Monitoring and verification is also subject to the following requirements:

(A) The project sponsor shall submit a monitoring and verification plan as part of the consistency application that includes a quality assurance and quality control program associated with equipment used to determine landfill gas volumetric flow rate and CH_4 composition. The monitoring and verification plan shall also include provisions for ensuring that measuring and monitoring equipment is maintained, operated and calibrated based on manufacturer recommendations, as well as provisions for the retention of maintenance records for audit purposes. The monitoring and verification plan shall be certified by an independent verifier accredited pursuant to subsection (i) of this section.

(B) The project sponsor shall annually verify landfill gas CH_4 composition through landfill gas sampling and third party laboratory analysis using applicable U.S. Environmental Protection Agency laboratory test methods.

(e) Reduction in emissions of sulfur hexafluoride (SF_6).

(1) Eligibility. Offset projects that prevent emissions of sulfur hexafluoride to the atmosphere from equipment in the electricity transmission and distribution sector, through capture and storage, recycling, or destruction, shall meet the requirements of subsection (e) and all applicable requirements of this section, to qualify for the award of CO2 offset allowances. In addition, eligible offset projects shall meet the following requirements:

(A) Eligible offset projects shall consist of the incremental actions to be taken, beyond current actions, to achieve a reduction in emissions of SF_6 beyond the transmission and distribution entity's emissions in the baseline reporting year. The identified actions to be taken shall be consistent with the guidance provided in International Electrotechnical Commission (IEC) 1634, and "High-voltage switchgear and control gear – Use and handling of sulfur hexafluoride (SF_6) in high-voltage switchgear and control gear," (CEI/IEC 1634, 1995-04).

(B) Except as provided in subparagraph (C) of this subdivision, eligible offset projects shall take place where the SF_6 entity-wide emissions rate for the baseline year is less than the applicable emissions rate in Table 31a-1B. The entity-wide SF_6 emissions rate shall be calculated as follows:

SF_6 Emissions Rate (%) = (Total SF_6 Emissions for Reporting Year)/ (Total SF_6 Nameplate Capacity at End of Reporting Year)

Where:

SF_6 Nameplate Capacity refers to all SF_6-containing equipment owned or operated by the entity, at full and proper SF_6 charge of the equipment rather than the actual charge of the equipment, which may reflect leakage.

Table 31a-1A and B
SF_6 Emissions Rate Performance Standards

Table 31a-1A. Emission Regions

Region A	Region B	Region C	Region D	Region E
Connecticut	Alabama	Colorado	Arkansas	Alaska
Delaware	District of Columbia	Illinois	Iowa	Arizona
Maine	Florida	Indiana	Kansas	California
Massachusetts	Georgia	Michigan	Louisiana	Hawaii
New Jersey	Kentucky	Minnesota	Missouri	Idaho
New York	Maryland	Montana	Nebraska	Nevada
New Hampshire	Mississippi	North Dakota	New Mexico	Oregon

Pennsylvania	North Carolina	Ohio	Oklahoma	Washington
Rhode Island	South Carolina	South Dakota	Texas	
Vermont	Tennessee	Utah		
	Virginia	Wisconsin		
	West Virginia	Wyoming		

Table 31a-1B. Emissions Rate Performance Standards

Region	Emission Rate[a]
Region A	9.68%
Region B	5.22%
Region C	9.68%
Region D	5.77%
Region E	3.65%
U.S. (National)	9.68%

[a] Based on weighted average 2004 emissions rates for U.S. EPA SF_6 Partnership utilities in each region. If the weighted average emissions rate in a region is higher than the national weighted average, the default performance standard is the national weighted average emissions rate.

(C) An SF_6 offset project located at a transmission or distribution entity serving a predominantly urban service territory shall be eligible even if the entity does not meet the emissions rate requirement at subparagraph (B) Table 31a- 1B of this subdivision, provided the project sponsor demonstrates and the commissioner or the commissioner's designee determines that two or more of the following factors functionally impede management of SF_6 and prevent such entities from meeting the entity-wide emissions rate requirement:

(i) The entity is comprised of older than average installed transmission and distribution equipment in relation to the national average age of equipment,

(ii) A majority of the entity's electricity load is served by equipment that is located underground, and poor accessibility of such underground equipment precludes management of SF_6 emissions through regular ongoing maintenance,

(iii) The inability to take a substantial portion of equipment out of service, as such activity would jeopardize system reliability as set forth in applicable regulatory criteria documents, and

(iv) Required equipment purpose or design for a substantial portion of entity transmission and distribution equipment results in inherently leak-prone equipment.

(2) Offset project description. The offset project sponsor shall provide a detailed narrative of the offset project actions to be taken, including supporting materials as appropriate. The offset project narrative shall include the following:

(A) A description of the transmission or distribution entity specifying the service territory served by the entity.

(B) The owner and operator of the transmission or distribution entity.

(3) Emissions baseline determination. Baseline SF_6 emissions shall be determined based on annual entity-wide reporting of SF_6 emissions for the calendar year immediately preceding the calendar year in which the consistency application is filed and such calendar year shall be designated as the baseline year. If the consistency application is filed prior to 2009, the baseline year may be 2005, but no earlier. The reporting entity shall systematically track and account for all entity-wide uses of SF_6 in order to determine entity-wide emissions of SF_6. The scope of such tracking and accounting shall include all electric transmission and distribution assets and all SF_6-containing and SF_6-handling equipment owned or operated by the reporting entity.

(A) Emissions shall be determined based on the following mass balance method:

SF_6 Emissions (lbs.) = (SF_6 Change in Inventory) + (SF_6 Purchases and Acquisitions) – (SF_6 Sales and Disbursements) – (Change in Total SF_6 Nameplate Capacity of Equipment)

Where:

Change in Inventory means the difference between the quantity of SF_6 gas in storage at the beginning of the reporting year and the quantity in storage at the end of the reporting year. The change in inventory will be negative if the quantity of SF_6 gas in storage increases over the course of the year.

Quantity in Storage means all SF_6 gas contained in cylinders, including 115-pound storage cylinders, gas carts, and other storage containers. This term does not refer to SF_6 gas held in SF_6-using operating equipment.

Purchases and Acquisitions of SF_6 means the sum of all the SF_6 gas acquired from other parties during the reporting year, as contained in storage containers or SF_6-using operating equipment.

Sales and Disbursements of SF_6 means the sum of all the SF_6 gas sold or otherwise disbursed to other parties during the reporting year, as contained in storage containers and SF_6-using operating equipment.

Change in Total SF_6 Nameplate Capacity of Equipment means the net change in the total volume of SF_6-containing operating equipment during the reporting year. The net change in nameplate capacity is equal to new equipment nameplate capacity, minus retired nameplate capacity. This quantity will be negative if the retired equipment has a total nameplate capacity larger than the total nameplate capacity of the new equipment. "Total nameplate capacity" refers to the full and proper SF_6 charge of the equipment rather than to the actual charge, which may reflect leakage.

(B) Emissions shall be calculated as follows:

Emissions (tons CO_2e) = $[(V_{iby} - V_{iey}) + (PA_{psd} + PA_e + PA_{rre}) - (SD_{op} + SD_{rs} + SD_{df} + SD_{sor}) - (CNP_{ne} - CNP_{rse})] \times GWP/2000$

Where (all SF_6 values in lbs):

V_{iby} = SF_6 inventory in cylinders, gas carts, and other storage containers (not SF_6–containing operating equipment) at the beginning of the reporting year

V_{iey} = SF_6 inventory in cylinders, gas carts, and other storage containers (not SF_6–containing operating equipment) at the end of the reporting year

PA_{psd} = SF_6 purchased from suppliers or distributors in cylinders

PA_e = SF_6 provided by equipment manufacturers with or inside equipment

PA_{rre} = SF_6 returned to the reporting entity after off-site recycling

SD_{op} = Sales of SF_6 to other parties, including gas left in equipment that is sold

SD_{rs} = Returns of SF_6 to supplier (producer or distributor)

SD_{df} = SF_6 sent to destruction facilities

SD_{sor} = SF_6 sent off-site for recycling

CNP_{ne} = Total SF_6 nameplate capacity of new equipment at proper full charge

CNP_{rse} = Total SF_6 nameplate capacity of retired or sold equipment at proper full charge

GWP = CO_2e global warming potential of SF_6 (22,200)

(C) As part of the project consistency application required pursuant to subsection (c) of this section and in annual monitoring and verification reports required pursuant to subsection (j) of this section, the project sponsor shall provide the documentation required at subdivision (5)(A) through (C) of this subsection to support emissions calculations.

(4) Calculating emissions reductions. Emissions reductions shall represent the annual entity-wide avoided fugitive emissions of SF_6 for the reporting entity. Emissions reductions shall be determined as follows using the quantification method outlined in subdivision (3)(B) of this subsection to determine emissions in both the baseline year and reporting years:

Emissions Reduction (short tons CO_2e) = (Total Pounds of SF_6 Emissions in Baseline Reporting Year) – (Total Pounds of SF_6 Emissions in Reporting Year) x GWP/2000

Where:

GWP = CO_2e global warming potential of SF_6 (22,200)

(5) Annual monitoring and verification requirements. The annual monitoring and verification report shall include supporting material detailing the calculations and data used to determine SF_6 emissions reductions and shall also provide the following documentation:

(A) The project sponsor shall identify all facilities managed by the entity from which all SF_6 gas is procured and disbursed and maintain an entity-wide log of all SF_6 gas procurements and disbursals. The entity-wide log shall include the weight of each cylinder transported before shipment from the facilities and the weight of each cylinder after return to the facilities. A specific cylinder log shall also be maintained for each cylinder that is used to fill equipment with SF_6 or reclaim SF_6 from equipment. The cylinder log shall be retained with the cylinder and indicate the location and specific identifying information of the equipment being filled, or from which SF_6 is reclaimed, and the weight of the cylinder before and after this activity. The cylinder log shall be returned with the cylinder to the facility when

the activity is complete or the cylinder is empty.

(B) A current entity-wide inventory of all SF_6-containing operating equipment and all other SF_6-related items, including cylinders, gas carts, and other storage containers used by the entity. The inventory shall be certified by an independent verifier accredited pursuant to subsection (i) of this section.

(C) The project sponsor shall provide a monitoring and verification plan as part of the consistency application, which shall include an SF_6 inventory management and auditing protocol and a process for quality assurance and quality control of inventory data. The monitoring and verification plan shall be certified by an independent verifier accredited pursuant to subsection (i) of this section.

(f) Sequestration of Carbon Due To Afforestation.

(1) Eligibility. Offset projects that result in the conversion of land from a non-forested to forested state shall meet the requirements in subsection (f) and all applicable requirements in this section, to qualify for the award of CO_2 offset allowances. In addition, eligible offset projects shall meet the following requirements:

(A) Eligible offset projects have been in a non-forested state for at least the ten (10) years preceding the commencement of the offset project.

(B) Eligible offset projects shall be managed in accordance with widely accepted environmentally sustainable forestry practices and designed to promote the restoration of native forests by using mainly native species and avoiding the introduction of invasive non-native species. If commercial timber harvest activities are to occur, certification must be obtained, prior to any harvest activities at the site, through the Forest Stewardship Council (FSC), Sustainable Forestry Institute (SFI), American Tree Farm System (ATFS), or such other similar organizations as may be approved by the commissioner or the commissioner's designee.

(2) Offset project description. The project sponsor shall provide a detailed narrative of the offset project actions to be taken, including supporting materials as appropriate. The offset project narrative shall include the following:

(A) Owner of the land within the offset project boundary;

(B) Detailed map of the land within the offset project boundary and areas adjacent to the offset project boundary;

(C) A copy of the permanent conservation easement required pursuant to subdivision (6) of this subsection;

(D) A written legal opinion from an attorney licensed to practice in the state where the offset project is located, or from the cooperating regulatory agency, confirming the enforceability of the permanent conservation easement for those offset projects located in a state or United States jurisdiction that is not a participating state; and

(E) Plant species to be planted or established via natural regeneration, and a forest management plan consistent with the requirements of subdivision (3) of this subsection.

(3) Carbon sequestration baseline determination. The existing sequestered carbon within the project boundary shall be calculated prior to commencement of the offset project. The carbon sequestration baseline shall be determined based on a sum of measurements, made no more than 12 months prior to offset project commencement, of the carbon content of the following carbon pools:

(A) Carbon content shall be calculated for the following required carbon pools:

(i) Live above-ground tree biomass,

(ii) Live below-ground tree biomass,

(iii) Soil carbon; and

(iv) Dead organic matter, coarse woody debris, unless the baseline measurement for this carbon pool is at or near zero, in which case measurement of this carbon pool during the allocation period is optional.

(B) Carbon content may be calculated for the following optional carbon pools:

(i) Live above-ground non-tree biomass, and

(ii) Dead organic matter, forest floor.

(C) Carbon content shall be calculated individually for each carbon pool within the offset project boundary;

(D) To increase the accuracy of measurement and verification, the area within both the offset project boundary shall be divided into strata and sub-populations that form relatively homogenous units. When defining strata, the project sponsor shall consider vegetation and tree species, including existing vegetation and trees and those to be utilized as part of the offset project activity, and site factors such as soil type, elevation, slope and other factors as warranted;

(E) Calculation of sequestered carbon for each carbon pool in each reporting stratum shall be based on the following:

CO_2 tons = [(A x C/ha)(44/12)] / 0.9072

Where:

A = Area in hectares within each reporting stratum

C = Carbon content (metric tons of carbon for each carbon pool)

C/ha = Mean carbon content per hectare for each carbon pool

(F) Total carbon contained within the offset project boundary represented in tons of carbon shall be calculated as follows:

$TC_{pb} = TC_{latb} + TC_{lbtb} + TC_s$ [+ $TC_{lantb} + TC_{doff} + TC_{docwd}$]

Where:

TC_{pb} = Total carbon content within the offset project boundary (TC_{pb}) (sum of carbon content of all carbon pools in all reporting sub-populations)

TC_{latb} = Sum of carbon content of live above-ground tree biomass in all reporting sub-populations

TC_{lbtb} = Sum of carbon content of live below-ground tree biomass in all reporting sub-populations

TC_s = Sum of carbon content of soil carbon in all reporting sub-populations

TC_{lantb} [option] = Sum of carbon content of live above-ground non-tree biomass in each reporting sub-populations

TC_{doff} [option] = Sum of carbon content of dead organic matter, forest floor in all reporting sub-populations

TC_{docwd}[mandatory/option] = Sum of carbon content of dead organic matter, coarse woody debris in all reporting sub-populations pursuant to subdivision (3)(A)(iv) of

this subsection

(G) Each individual carbon pool to be measured must be directly measured using a measurement protocol and sample size that achieves a demonstrated quantified accuracy such that there is 95% confidence that the resulting reported value is within 10% of the true mean. Measurement and sampling practices shall meet the following requirements:

(i) An adequate sample size that meets the requirements of subparagraph (ii) of this subparagraph shall be determined for each stratum.

(ii) The minimum number of required sampling plots for each reporting stratum shall be determined based on the following:

$$n = (s \times 1.960)/(mean \times re)^2$$

Where:

n	=	required number of sample plots for each reporting sub-populations
s	=	standard deviation
mean	=	mean reported carbon content for the sample population
re	=	level of sampling error (0.08) to assure a total maximum error of 10% for the 95% confidence interval, that assumes total error due to measurement error of 0.02

(H) Direct measurement procedures shall be consistent with current forestry good practice and the guidance contained in U.S. Department of Energy, *Technical Guidelines for Voluntary Reporting of Greenhouse Gases (1605(b)) Program; Chapter 1, Emissions Inventories; Part I Appendix: Forestry; Section 3: Measurement Protocols for Forest Carbon Sequestration* (March 2006).

(4) Calculating carbon sequestered. Carbon sequestration shall be determined using a base year approach, where the amount of carbon sequestered is measured as a net increase in carbon relative to the base year measurement. Carbon sequestration, represented in tons of carbon, shall be the amount of net additional carbon sequestered during each calculation period, based upon aggregate carbon uptake and carbon emissions for the sum of carbon pools, relative to the baseline carbon content or the carbon content as of the previous calculation period, if above the baseline carbon content, as applicable. CO_2 offset allowances shall be issued based on the amount of net additional carbon sequestered within the offset project boundary during each reporting period, and

represented in tons of CO_2 equivalent. Sequestered carbon shall be calculated using a stock-change approach as follows:

$$NCS_t = I_t - I_{t-1}$$

Where:

NCS_t = Net carbon sequestered in reporting period t

I_t = Inventory of carbon stock for all carbon pools in all reporting sub-populations within the offset project boundary in reporting period t

I_{t-1} = Inventory of carbon stock for all carbon pools in all reporting sub-populations within the offset project boundary in the reporting period immediately preceding reporting period t

(A) Except as provided in subdivision (3)(A)(iv) of this subsection, each of the carbon pools that were measured as part of the baseline determination must be re-measured using the same methodology, and to the same or better quantified accuracy consistent with the requirements of subdivisions (3)(G) and (H) of this subsection, as that used for the baseline determination.

(B) The net change in each pool's carbon stock in each reporting stratum is calculated by subtracting the baseline carbon stock (or stock at the previous monitoring) from the carbon stock at the time of the current monitoring. Determination of carbon stock shall be in accordance with the formulas and procedures in subdivision (3) of this subsection.

(C) Net carbon stock change for the offset project is the sum of the net changes in the carbon stock of all applicable pools in all reporting sub-populations within the offset project boundary, less ten percent (10%) to account for potential losses of sequestered carbon. This 10% discount shall not be required, provided the project sponsor retains long-term insurance, approved by the commissioner or their designee, that guarantees replacement of any lost sequestered carbon for which CO_2 allowances were issued pursuant to subsection (j) of this section.

(5) Monitoring and verification requirements. Total carbon stock shall be calculated not less than every five years. Monitoring and verification is subject to the following requirements:

(A) Monitoring and verification reports shall include data from direct measurement of carbon content for all plots used to determine baseline and reporting period carbon content.

(B) The consistency application shall include a monitoring and verification plan certified by the commissioner or their designee or an independent verifier accredited pursuant to subsection (i) of this section. The monitoring and verification plan shall include the following:

(i) Direct carbon measurement procedures consistent with the requirements at subdivision (3)(H) of this subsection,

(ii) The designation of sub-populations pursuant to subdivision (3)(D) of this subsection. The determination of the minimum number of sampling plots pursuant to subdivision (3)(G) of this subsection, and

(iii) If commercial timber harvest activities have occurred or will occur, an assessment of management practices to ensure that the offset project has been managed in accordance with environmentally sustainable forestry practices consistent with the Forest Stewardship Council (FSC), Sustainable Forestry Institute (SFI), American Tree Farm System (ATFS), or such other similar organizations as may be approved by the commissioner or their designee.

(C) The applicant shall allow access to the project site and the reserve set-aside site to the accredited independent verifier, or as requested by the commissioner or the commissioner's designee.

(6) Carbon sequestration permanence. The offset project shall meet the following requirements to address permanence of sequestered carbon:

(A) The project sponsor shall place the land within the offset project boundary under a legally binding permanent conservation easement, approved by the commissioner or the commissioner's designee, which requires the land to be maintained in a forested state in perpetuity;

(B) The conservation easement shall include a requirement that the carbon density within the offset project boundary be maintained at long-term levels at or above that achieved as of the end of the CO_2 offset crediting period pursuant to subsection (c)(5) of this section; and

(C) The conservation easement shall require that the land be managed in accordance with environmentally sustainable forestry practices.

(g) Reduced or Avoided CO_2 Emissions Due to End-Use Energy Efficiency

(1) Eligibility. An offset project that reduces CO_2 emissions by reducing on-site combustion

of natural gas, oil, or propane for end-use in an existing or new commercial or residential building by improving the energy efficiency of fuel usage and the energy-efficient delivery of energy services shall meet the requirements of subsection (g) and all other applicable requirements of this section, to qualify for the award of CO_2 offset allowances. Eligible new buildings are limited to new buildings that are designed to replace an existing building on the offset project site, or new buildings designed to be zero net energy buildings. Eligible offset projects may include the following energy conservation measures (ECMs):

(A) Improvements in the energy efficiency of combustion equipment that provide space heating and hot water, including a reduction in fossil fuel consumption through the use of solar and geothermal energy;

(B) Improvements in the efficiency of heating distribution systems, including proper sizing and commissioning of heating systems;

(C) Installation or improvement of energy management systems;

(D) Improvement in the efficiency of hot water distribution systems and reduction in demand for hot water;

(E) Measures that improve the thermal performance of the building envelope or reduce building envelope air leakage;

(F) Measures that improve the passive solar performance of buildings and utilization of active heating systems using renewable energy; and

(G) Fuel switching to a less carbon-intensive fuel for use in combustion systems, including the use of liquid or gaseous renewable fuels, provided that conversions to electricity are not eligible.

(2) Offset project description. The project sponsor shall provide a detailed narrative of the offset project actions to be taken, including supporting materials as appropriate. The offset project narrative shall include the following:

(A) Location and specifications of the building(s) where the offset project actions will occur;

(B) Owner and operator of the building(s);

(C) The parties implementing the offset project, including lead contractor(s), subcontractors, and consulting firms;

(D) Specifications of equipment and materials to be installed as part of the offset

project; and

(E) Building plans and offset project technical schematics, as applicable.

(3) Performance standards. For offset projects initiated on or after January 1, 2009, the project sponsor shall demonstrate, to the satisfaction of the commissioner or the commissioner's designee, that energy conservation measures implemented as part of eligible offset projects listed in subdivision (1) of this subsection have a market penetration rate of less than 5%. Offset projects initiated on or after January 1, 2009 shall also meet the applicable requirements set forth in subdivisions (3)(A)(iii) and (3)(C) of this subsection. For offset projects initiated prior to 2009, energy conservation measures implemented as part of eligible offset projects listed in subdivision (1) of this subsection shall meet the following performance or prescriptive criteria, as applicable:

(A) Combustion equipment. Combustion equipment shall meet the following energy efficiency performance and other requirements, as applicable:

(i) Commercial boilers. Commercial boilers shall meet the following energy efficiency criteria set forth in Table 31a-2:

Table 31a-2
Minimum Commercial Boiler Energy Efficiency

Technology	Size (Btu/hr)	Rating Method	Minimum Efficiency
Gas-fired[b]	125,000-300,000	AFUE	≥ 88.0%
	300,000-12,500,000	Thermal Efficiency[a]	≥ 90.0%
Oil-fired	> 300,000	Thermal Efficiency	≥ 84.0%

[a] Thermal Efficiency is defined as useful energy output (Btu) divided by energy input (Btu) and presented as a percentage. This shall be measured under steady state conditions, at full rated useful thermal output, 140°F supply from and 120°F return water temperature to the boiler.

[b] Gas-fired boilers shall be installed with controls that allow the boiler to operate in condensing mode and installed with vents designed for positive vent static pressure and vent gas temperature that leads to condensate production in the vent.

(ii) Residential combustion equipment. Residential combustion equipment, furnaces, boilers and water heaters, shall meet or exceed the following energy efficiency criteria set forth in Table 31a-3:

Table 31a-3
Minimum Residential Combustion Equipment[a] Energy Efficiency

Technology	Rating Method	Min. Efficiency
Gas-fired furnace	AFUE	≥ 94%
Oil-fired furnace	AFUE	≥ 92%
Gas/oil-fired boiler	AFUE	≥ 90%
Gas/oil-fired water heater	Energy Factor	≥ 0.62

[a] For furnaces, defined as equipment with a heat input rate of less than 225,000 Btu/hr; for boilers, defined as equipment with a heat input rat of less than 300,000 Btu/hr; for water heaters, defined as equipment subject to 10 CFR 430.

(iii) Installation best practice for commercial HVAC systems. Combustion equipment and related air handling equipment (HVAC systems) shall be sized and installed in accordance with ANSI/ASHRAE/IESNA Standard 90.1-2004: Energy Standard for Buildings Except Low-Rise Residential Buildings and ANSI/ASHRAE Standard 62.1-2004: Ventilation for Acceptable Indoor Air Quality; and

(iv) Installation best practice for residential HVAC systems. Residential HVAC systems shall meet the applicable sizing and installation specifications of "Specification of Energy-Efficient Installation and Maintenance Practices for Residential HVAC Systems," Consortium for Energy Efficiency, 2000.

(B) Non-combustion energy conservation measures. Energy conservation measures implemented as part of an offset project or actions pursuant to subdivision (1)(B) through (G) of this subsection shall meet the applicable requirements, as specified, in *Energy Benchmark for High Performance Buildings, Version 1.1*, New Buildings Institute, 2005 (herein referred to as EBHPB), or state building energy codes, whichever are more stringent as demonstrated by the offset project sponsor. Energy conservation measures without specified performance criteria in the referenced EBHPB shall meet the requirements of Federal Energy Management Program (FEMP) Product Energy Efficiency Recommendations, issued pursuant to Executive Orders 13123 and 13221, or Energy Star criteria issued jointly by the U.S. Environmental Protection Agency and U.S. Department of Energy, whichever result in better energy performance as demonstrated by the offset project sponsor.

(C) Whole-building energy performance. New buildings or whole building retrofits that incorporate offsets projects or actions shall also meet the following requirements:

(i) Commercial buildings. Commercial buildings shall exceed the energy performance requirements of ANSI/ASHRAE/IESNA Standard 90.1-2004: Energy Standard for Buildings Except Low-Rise Residential Buildings by 30%, with the exception of multi-family residential buildings classified as commercial by ANSI/ASHRAE/IESNA Standard 90.1-2004, which shall exceed these energy performance requirements by 20%, and

(ii) Residential buildings. Residential buildings shall exceed the energy performance requirements of the 2004 International Energy Conservation Code Supplement by 30%.

(4) Emissions baseline determination. Emissions baseline shall be determined based on energy usage (MMBtu) by fuel type for each energy conservation measure, derived using historic fuel use data from the most recent calendar year for which data is available, multiplied by an emission factor and oxidation factor for each respective fuel set forth in Table 31a-4:

Table 31a-4

Fuel	Emission Factor (lbs. CO_2/MMBtu)	Oxidation Factor
Natural Gas	116.98	0.995
Propane	139.04	0.995
Distillate Fuel Oil	161.27	0.99
Kerosene	159.41	0.99

(A) Isolation of applicable energy conservation measure baseline. The project sponsor shall isolate the baseline energy usage of the application to be targeted by the energy conservation measure, in a manner consistent with the requirements set forth in subdivision (6) of this subsection.

(B) Annual baseline energy usage shall be determined as follows:

Energy Usage (MMBtu) = BEU_{AECM} x A

Where:

BEU_{AECM} = Annual pre-installation baseline energy use by fuel type (MMBtu) attributable to the application(s) to be targeted by the energy conservation measure(s). If applicable building codes or equipment standards require that equipment or materials installed as part of the offset project meet certain

minimum energy performance requirements, baseline energy usage for the application shall assume that equipment or materials are installed that meet such minimum requirements. For offset projects that replace existing combustion equipment, the assumed minimum energy performance required by applicable building codes or equipment standards shall be that which applies to new equipment that uses the same fuel type as the equipment being replaced. Baseline energy usage shall be determined in accordance with the applicable requirements set forth in subdivision (6) of this subsection.

A = Adjustments to account for differing conditions during the two time periods, pre-installation and post-installation, such as weather and building occupancy. Adjustments shall be determined in accordance with the applicable requirements in subdivision (6) of this subsection.

(C) Annual baseline emissions shall be determined as follows:

$$\text{Emissions (lbs. } CO_2) = \sum_{i=1}^{n} BEU_i \times EF_i \times OF_i$$

Where:

BEU_i = Annual baseline energy usage for fuel type i (MMBtu) demonstrated pursuant to the requirements at subdivision (6)(A) through (D) of this subsection.

EF_i = Emissions factor (lbs. CO_2/MMBtu) for fuel type i listed at subdivision (4), Table 31a-4 of this subsection.

OF_i = Oxidation factor for fuel type i listed at subdivision (4), Table 31a-4 of this subsection.

(5) Calculating emissions reductions. Emissions reductions shall be determined based upon annual energy savings by fuel type (MMBtu) for each energy conservation measure, multiplied by the emission factor and oxidation factor for the respective fuel type in subdivision (4), Table 31a-4 of this subsection.

(A) Annual energy savings shall be determined as follows:

$$\text{Energy Savings (MMBtu)} = (BEU_{AECM} \times A) - (PIEU_{ECM} \times A)$$

Where:

BEU_{AECM} = Annual pre-installation baseline energy use by fuel type (MMBtu) calculated pursuant to subdivision (6)(A) through (D) of this subsection.

$PIEU_{ECM}$ = Annual post-installation energy use by fuel type (MMBtu) attributable to the energy conservation measure. Post-installation energy usage shall be determined in accordance with the applicable requirements in subdivision (6) of this subsection.

A = Adjustments to account for any differing conditions during the two time periods, pre-installation and post-installation, including but not limited to weather, building occupancy, and changes in building use or function. Adjustments shall be determined in accordance with the applicable requirements at subdivision (6) of this subdivision.

(B) Annual emissions reductions shall be determined as follows:

$$\text{Emissions Reduction (lbs. } CO_2) = \sum_{i=1}^{n} ES_i \times EF_i \times OF_i$$

Where:

ES_i = Energy savings for fuel type i (MMBtu) demonstrated pursuant to the requirements at subdivision (6) of this subsection.

EF_i = Emissions factor (lbs. CO_2/MMBtu) for fuel type i listed at subdivision (4), Table 31a-4 of this subsection.

OF_i = Oxidation factor for fuel type i listed in subdivision (4), Table 31a-4 of this subsection.

(6) Monitoring and verification requirements. As part of the consistency application, the project sponsor shall provide a monitoring and verification plan certified by an independent verifier accredited pursuant to subsection (i) of this section. Annual monitoring and verification reports shall be certified by an independent verifier accredited pursuant to subsection (i) of this section. Independent verifiers must conduct a site audit when reviewing the first monitoring and verification report submitted by the project sponsor, except for offset projects that save less than 1,500 MMBtu per year. For offset projects that save less than 1,500 MMBtu per year, the project sponsor must provide the independent verifier with equipment specifications and copies of equipment invoices and other relevant offset project-related invoices. All offset project documentation, including the consistency application and monitoring and verification

reports, shall be signed by a Professional Engineer, identified by license number. Monitoring and verification shall also meet the following requirements:

(A) General energy measurement and verification requirements. Monitoring and verification of energy usage shall be demonstrated through a documented process consistent with the following protocols and procedures, as applicable:

(i) For existing commercial buildings, determination of baseline energy usage shall be consistent with the International Performance Measurement & Verification Protocol, Volume I: Concepts and Options for Determining Energy and Water Savings (IPMVP), "Option B. Retrofit Isolation" and "Option D. Calibrated Simulation." If a building project involves only energy conservation measures implemented as part of a CO_2 emissions offset project, a process consistent with IPMVP "Option C. Whole Facility" may be used, as applicable. Application of the IPMVP general guidance shall be consistent with the applicable detailed specifications in ASHRAE Guideline 14-2002, Measurement of Energy and Demand Savings.

(ii) For new commercial buildings, determination of baseline energy usage shall be consistent with the International Performance Measurement & Verification Protocol, Volume III: Concepts and Options for Determining Energy Savings in New Construction (IPMVP), "Option D. Calibrated Simulation." Application of the IPMVP general guidance shall be consistent with the applicable detailed specifications in ASHRAE Guideline 14-2002, Measurement of Energy and Demand Savings.

(iii) For existing and new residential buildings, determination of baseline energy usage shall be consistent with the requirements of the RESNET National Home Energy Rating Technical Guidelines, 2006 (Chapter 3 and Appendix A of 2006 Mortgage Industry National Home Energy Rating System Standards).

(B) Isolation of applicable energy conservation measure. In calculating both baseline energy usage and energy savings, the applicant shall isolate the impact of each eligible energy conservation measure (ECM), either through direct metering or energy simulation modeling. For offset projects with multiple ECMs, and where individual ECMs can affect the performance of others, the sum of energy savings due to individual ECMs shall be adjusted to account for the interaction of ECMs. For commercial buildings, this process shall be consistent with the requirements of ASHRAE Guideline 14-2002, Measurement of Energy and Demand Savings, and ANSI/ASHRAE/IESNA Standard 90.1-2004: Energy Standard for Buildings Except Low-Rise Residential Buildings. For residential buildings, this process shall be consistent with the requirements of RESNET National Home Energy

Rating Technical Guidelines, 2006 (Chapter 3 and Appendix A of 2006 Mortgage Industry National Home Energy Rating System Standards). Reductions in energy usage due to the energy conservation measure shall be based upon actual energy usage data. Energy simulation modeling shall only be used to determine the relative percentage contribution to total fuel usage (for each respective fuel type) of the application targeted by the energy conservation measure.

(C) Calculation of energy savings. Annual energy savings are to be determined based on the following:

Energy Savings (MMBtu) = $(BEU_{AECM} \times A) - (PIEU_{ECM} \times A)$

Where:

BEU_{AECM} = Annual pre-installation baseline energy use by fuel type (MMBtu) attributable to the application(s) to be targeted by the energy conservation measure(s), based upon annual fuel usage data for the most recent calendar year for which data is available. For new buildings, baseline energy use for a reference building equivalent in basic configuration, orientation, and location to the building in which the eligible energy conservation measure(s) is implemented shall be determined according to ASHRAE Guideline 14-2002, Measurement of Energy and Demand Savings and ANSI/ASHRAE/IESNA Standard 90.1-2004, Section 11 and Appendix G. Where energy simulation modeling is used to evaluate an existing building, modeling shall be conducted in accordance with ASHRAE Guideline 14-2002, Measurement of Energy and Demand Savings, and ANSI/ASHRAE/IESNA Standard 90.1-2004, Section 11 and Appendix G. For existing and new residential buildings, energy simulation modeling shall be conducted in accordance with the requirements of RESNET National Home Energy Rating Technical Guidelines, 2006 (Chapter 3 and Appendix A of 2006 Mortgage Industry National Home Energy Rating System Standards).

$PIEU_{ECM}$ = Annual post-installation energy use by fuel type (MMBtu) attributable to the energy conservation measure, to be verified based on annual energy use after installation of the energy conservation measure(s), consistent with the requirements of ASHRAE Guideline 14-2002, Measurement of Energy and Demand Savings. Where energy simulation modeling is used to evaluate a new or existing building, modeling shall be conducted in accordance with ASHRAE Guideline 14-2002, Measurement of Energy and Demand Savings, and ANSI/ASHRAE/IESNA

Standard 90.1-2004, Section 11 and Appendix G. For existing and new residential buildings, energy simulation modeling shall be consistent with the requirements of RESNET National Home Energy Rating Technical Guidelines, 2006 (Chapter 3 and Appendix A of 2006 Mortgage Industry National Home Energy Rating System Standards).

A = Adjustments to account for any differing conditions during the two time periods (pre-installation and post-installation), such as weather (weather normalized energy usage based on heating and cooling degree days), building occupancy, and changes in building use or function. For commercial buildings, adjustments shall be consistent with the specifications of ASHRAE Guideline 14-2002, Measurement of Energy and Demand Savings, and ANSI/ASHRAE/IESNA Standard 90.1-2004, Section 11 and Appendix G. For residential buildings, adjustments shall be consistent with the specifications of RESNET National Home Energy Rating Technical Guidelines, 2006 (Chapter 3 and Appendix A of 2006 Mortgage Industry National Home Energy Rating System Standards).

(D) Provision for sampling of multiple like offset projects in residential buildings. Offset projects that implement similar measures in multiple residential buildings may employ representative sampling of buildings to determine aggregate baseline energy usage and energy savings. The commissioner or their designee shall approve sampling protocols. All sampling plans shall be certified by an independent verifier, accredited pursuant to subsection (i) of this section.

(h) Avoided Methane (CH_4) Emissions from Agricultural Manure Management Operations

(1) Eligibility. Offset projects that capture and destroy methane from animal manure and organic food waste using anaerobic digesters shall meet the requirements of subsection (h) and all other applicable requirements of this section, to qualify for the award of CO_2 offset allowances. In addition, eligible offset projects shall meet the following requirements:

(A) CO_2 offset allowances may be awarded for the destruction of that portion of methane generated by the anaerobic digester that would have been generated in the absence of the offset project through the uncontrolled anaerobic storage of manure or organic food wastes.

(B) Eligible offset projects shall employ only manure-based anaerobic digester systems using livestock manure as the majority of digester feedstock, defined as

50% or more of the mass input into the digester on an annual basis. Organic food waste used by an anaerobic digester shall only be that which would have been stored in anaerobic conditions in the absence of the offset project.

(C) The provisions of subsection (c)(5)(B) and (C) of this section shall not apply to agricultural manure methane offset projects provided either:

(i) The offset project is located in a state that has a market penetration rate for anaerobic digester projects of 5% or less. The market penetration determination shall utilize the most recent market data available at the time of submission of the consistency application and shall be determined as follows:

$$MP\ (\%) = MG_{AD} / MG_{STATE}$$

Where:

MG_{AD} = Average annual manure generation for the number of dairy cows and swine serving all anaerobic digester projects in the applicable U.S. state at the time of submission of a consistency application pursuant to subsection (c)(10) of this section.

MG_{STATE} = Average annual manure production of all dairy cows and swine in that U.S. state at the time of submission of a consistency application pursuant to subsection (c)(10) of this section.

or

(ii) The offset project is located at a farm with 4,000 or less head of dairy cows, or a farm with equivalent animal units, assuming an average live weight for dairy cows (lbs./cow) of 1,400 lbs., or, if the project is a regional-type digester, total annual manure input to the digester is designed to be less than the average annual manure produced by a farm with 4,000 or less head of dairy cows, or a farm with equivalent animal units, assuming an average live weight for dairy cows (lbs./cow) of 1,400 lbs.

(2) Offset project description. The project sponsor shall provide a detailed narrative of the offset project, including supporting materials as appropriate. The offset project narrative shall include the following:

(A) Owner and operator of the offset project;

(B) Location and specifications of the facility where the offset project will occur;

(C) Owner and operator of the facility where the offset project will occur;

(D) Specifications of the equipment to be installed and a technical schematic of the offset project; and

(E) Location and specifications of the facilities from which anaerobic digester influent will be received, if different from the facility where the offset project will occur.

(3) Emissions baseline determination. The emissions baseline shall represent the potential emissions of the CH_4 that would have been produced in a baseline scenario under uncontrolled anaerobic storage conditions and released directly to the atmosphere in the absence of the offset project.

(A) Baseline CH_4 emissions shall be calculated as follows**:**

CO_2e (tons) = (V_m x M)/2000 x GWP

Where:

CO_2e = Potential CO_2e emissions due to calculated CH_4 production under site-specific anaerobic storage and weather conditions

V_m = Volume of CH_4 produced each month from degradation of volatile solids in a baseline uncontrolled anaerobic storage scenario under site-specific storage and weather conditions for the facility at which the manure is generated (ft^3)

M = Mass of CH_4 per cubic foot (0.04246 lb/ft³ default value at one atmosphere and 20°C)

GWP = Global warming potential of CH_4 (23)

(B) The estimated amount of volatile solids degraded each month under the uncontrolled anaerobic storage baseline scenario (kg) shall be calculated as follows:

$VS_{deg} = VS_{avail}$ x f

Where:

VS = volatile solids as determined from the equation:

$VS = M_m \times TS_{\%} \times VS_{\%}$

where:

M_m = mass of manure or organic good waste produced per month (kg)

$TS_{\%}$ = Concentration (percent) of total solids in manure or organic food waste as determined through EPA 160.3 testing method (U.S.EPA Method Number 160.3, Methods for the Chemical Analysis of Water and Wastes (MCAWW) (EPA/600/4-79/020))

$VS_{\%}$ = Concentration (percent) of volatile solids in total solids as determined through EPA 160.4 testing method (USEPA Method Number 160.4, Methods for the Chemical Analysis of Water and Wastes (MCAWW) (EPA/600/4-79/020))

VS_{avail} = Volatile solids available for degradation in manure or organic food waste storage each month as determined from the equation:

$VS_{avail} = VS_p + ½\ VS_{in} - VS_{out}$

where:

VS_p = Volatile solids present in manure or organic food waste storage at beginning of month (left over from previous month) (kg)

VS_{in} = Volatile solids added to manure or organic food waste storage during the course of the month (kg). The factor of ½ is multiplied by this number to represent the average mass of volatile solids available for degradation for the entire duration of the month.

VS_{out} = Volatile solids removed from the manure or organic food waste storage for land application or export (assumed value based on standard farm practice)

f = Van't Hoff-Arrhenius factor for the specific month as determined using the equation below. Using a base temperature of 30^o C, the equation is as follows:

$f = \exp[E \times (T_2 - T_1)]/[(GC \times T_1 \times T_2)]$

Where:

f = conversion efficiency of VS to CH_4 per month

E = Activation energy constant (15,175 cal/mol)

T_2 = Average monthly ambient temperature for farm (converted from ^{o} Celsius to ^{o} Kelvin) as determined from the nearest National Weather Service certified weather station (if reported temperature ^{o} C > 5^{o} C; if reported temperature ^{o}C < 5^{o} C, then F = 0.104)

T_1 = 303.16 (30^{o} C converted to ^{o}K)

GC = Ideal gas constant (1.987 cal/K mol)

(C) The volume of CH_4 produced (ft^3) from degradation of volatile solids shall be calculated as follows:

$V_m = (VS_{deg} \times B_o) \times 35.3147$

Where:

V_m = Volume of CH_4 (ft^3)

VS_{deg} = Volatile solids degraded (kg)

B_o = Manure or organic food waste type-specific maximum methane generation constant (m^3 CH_4/kg VS degraded). For dairy cow manure, B_o = 0.24 m^3 CH_4/kg VS degraded. The methane generation constant for other types of manure shall be those cited at U.S. EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2001*, Annex 3, Table A-162 (U.S. EPA, April 2007), unless the project sponsor proposes an alternate methane generation constant. If the project sponsor proposes to use a methane generation constant other than the one found in the above-cited reference, the project sponsor must provide justification and documentation to the commissioner or their designee.

(4) Calculating emissions reductions. Emissions reductions shall be determined based on the potential emissions (in tons of CO_2e) of the CH_4 that would have been produced in the absence of the offset project under a baseline scenario that represents uncontrolled anaerobic storage conditions, as calculated pursuant to subdivision (3) of this subsection, and released directly to the atmosphere. Emissions reductions may not exceed the potential emissions of the digester, as represented by the annual volume of CH_4 produced by the anaerobic digester, as monitored pursuant to subdivision (5) of this subsection. If the project is a regional-type digester, CO_2 emissions due to transportation from the site where the manure or organic food waste was generated to the anaerobic digester shall be

subtracted from the emissions reduction calculated pursuant to subdivision (3) of this subsection. Transportation related CO_2 emissions shall be determined through one of the following methods:

(A) Documentation of transportation fuel use for all shipments of manure or organic food waste to the anaerobic digester during each reporting year and a log of transport miles for each shipment. CO_2 emissions shall be determined through the application of an emissions factor for the fuel type used. If this option is chosen, the following emission factors shall be applied as appropriate:

(i) Diesel fuel: 22.912 lbs. CO_2/gallon,

(ii) Gasoline: 19.878 lbs. CO_2/gallon, or

(iii) Other fuel: submitted emission factor approved by the commissioner or the commissioner's designee.

(B) Documentation of total tons of manure or organic food waste transported from off-site for input into the anaerobic digester during each reporting year, as monitored pursuant to subdivision (5)(A) of this subsection, and a log of transport miles and fuel type used for each shipment. CO_2 emissions shall be determined through the application of a ton-mile transport emission factor for the fuel type used. If this option is chosen, the following emission factors shall be applied as appropriate for each ton of manure delivered, and multiplied by the number of miles transported:

(i) Diesel fuel: 0.131 lbs. CO_2 per ton-mile,

(ii) Gasoline: 0.133 lbs. CO_2 per ton-mile, or

(iii) Other fuel: submitted emission factor approved by the commissioner or the commissioner's designee.

(5) Monitoring and verification requirements. Offset projects shall employ a system that provides metering of biogas volumetric flow rate and determination of CH_4 concentration. Annual monitoring and verification reports shall include monthly biogas volumetric flow rate and CH_4 concentration determination. Monitoring and verification shall also meet the following requirements:

(A) If the offset project is a regional-type digester, manure and organic food waste from each distinct supply source supplying to the anaerobic digester shall be sampled monthly to determine the amount of volatile solids present. Any emissions reduction will be calculated according to mass of manure and organic food waste (kg) being digested and percentage of volatile solids present before

digestion, consistent with the requirements at subdivisions (3) and (5)(C) of this subsection, and apportioned accordingly. The project sponsor shall provide supporting material and receipts tracking the monthly receipt of manure and organic food waste (kg) used to supply the anaerobic digester from each manure supplier.

(B) If the offset project includes the digestion of organic food wastes eligible pursuant to subdivision (1)(A) of this subsection, organic food wastes shall be sampled monthly to determine the amount of volatile solids present before digestion, consistent with the requirements at subdivision (3) of this subsection, and apportioned accordingly.

(C) The project sponsor shall submit a monitoring and verification plan as part of the consistency application that includes a quality assurance and quality control program associated with equipment used to determine biogas volumetric flow rate and CH_4 composition. The monitoring and verification plan shall be specified in accordance with the monitoring requirements listed in Table 31a-5, Input Monitoring Requirements, as applicable. The monitoring and verification plan shall also include provisions for ensuring that measuring and monitoring equipment is maintained, operated, and calibrated based on manufacturer's recommendations, as well as provisions for the retention of maintenance records for audit purposes. The monitoring and verification plan shall be certified by an independent verifier accredited pursuant to subsection (i) of this section.

(D) The project sponsor shall quarterly verify biogas CH_4 composition through gas sampling and third party laboratory analysis using applicable U.S. EPA test methods.

Table 31a-5
Input Monitoring Requirements

Input Parameter	Measurement Unit	Frequency of Sampling	Sampling Method(s)
Influent flow (mass) into the digester	Kilograms (kg) per month (wet weight)	Monthly total into the digester	a) Average herd population and American Society of Agricultural and Biological Engineers (ASABE) standard (ASAE D384.2, March 2005) b) Digester influent pump flow c) Recorded weight
Influent total solids concentration (TS)	Percent (of sample)	Monthly, depending upon recorded variations	U.S. EPA Method Number 160.3, Methods for the Chemical Analysis of Water and Wastes (MCAWW) (EPA/600/4-79/020)
Influent volatile solids (VS) concentration	Percent (of TS)	Monthly, depending upon recorded variations	USEPA Method Number 160.4, Methods for the Chemical Analysis of Water and Wastes (MCAWW) (EPA/600/4-79/020)
Average monthly ambient temperature	Temperature ^{o}C	Monthly (based on farm averages)	Closest National Weather Service-certified weather station

(i) Accreditation of Independent Verifiers

(1) Standards for accreditation. Independent verifiers may be accredited by the commissioner or the commissioner's designee to provide verification services as required of project sponsors under this section, provided that independent verifiers meet all of the requirements of this subsection.

(A) Persons selected to perform verification services shall:

(i) Demonstrate knowledge of utilizing engineering, accounting and auditing principles sufficient to quantify greenhouse gas emissions, and develop and evaluate air emissions inventories;

(ii) Demonstrate knowledge of information management systems;

(iii) Demonstrate knowledge of the requirements of this section and section 22a-174-31 of the Regulations of Connecticut State Agencies;

(iv) Demonstrate that no direct or indirect financial relationship, beyond a contract for provision of verification services, exists with any offset project developer or sponsor;

(v) Employ staff with, knowledge, experience, and where appropriate, professional licenses appropriate to the specific category(ies) of offset projects specified in subsections (d) through (h) of this section that they seek to verify;

(vi) Certify that such person holds a minimum of one million U.S. dollars of professional liability insurance. If the insurance is in the name of a related entity, the verifier shall disclose the financial relationship between the verifier and the related entity, and provide documentation supporting the description of the relationship; and

(vii) Demonstrate that adequate protocols are established to avoid conflicts of interest with regard to an offset project, offset project developer, or project sponsor, or any other party with a direct or indirect financial interest in an offset project that is seeking or has been granted an approval under subsection (c) of this section; and

(B) Applicants shall possess such other qualifications as may be required by the commissioner to provide competent verification services for individual CO_2 emissions offset categories specified in subsections (d) through (h) of this section.

(2) Pre-qualification of verifiers. The commissioner or the commissioner's designee may require prospective independent verifiers to successfully complete a training course, workshop or test developed by the commissioner or the commissioner's designee prior to submitting an application for accreditation.

(3) Application for accreditation. An independent verifier shall submit an application for accreditation to the commissioner. The application shall include sufficient information to demonstrate that the applicant meets all accreditation standards required at subdivisions

(1)(A)(i) through (vii) of this subsection. The independent verifier's application for accreditation shall:

(A) Provide the applicant's name, address, e-mail address, telephone number, and facsimile transmission number;

(B) Demonstrate that the applicant has at least two years of experience in each of the knowledge areas specified in subdivisions (1)(A)(i) and (ii) of this subsection, and as may be required pursuant to subdivision (1)(B) of this subsection;

(C) Verify that the applicant has successfully completed the requirements at subdivision (2) of this subsection, as applicable;

(D) Include a sample of at least one non-proprietary work product that provides supporting evidence that the applicant meets the requirements, as applicable, in subdivision (1)(A) of this subsection. The work product shall have been produced, in whole or part, by the applicant and shall consist of a final report or other material provided to a client under contract in previous work. For a work product that was jointly produced by the applicant and another entity, the role of the applicant in the work product shall be clearly explained;

(E) Provide documentation that the applicant holds professional liability insurance as required pursuant to subdivision (1)(A)(vi) of this subsection; and

(F) Provide documentation that the applicant has implemented an adequate management protocol required pursuant to subdivision (1)(A)(vii) of this subsection to address and remedy any conflict of interest issues that may arise.

(4) The commissioner shall approve or deny a complete application for accreditation within 90 days after submission. Upon approval of an application for accreditation, the independent verifier shall be accredited for a period of three years from the date of application approval.

(5) Independent verifiers that have been accredited in other participating states shall be deemed accredited in Connecticut at the discretion of the commissioner.

(6) Conduct of accredited verifiers.

(A) Prior to engaging in verification services for an offset project sponsor, the accredited verifier shall disclose all relevant information to the commissioner or the commissioner's designee to allow for an evaluation of potential conflict of interest with respect to an offset project, offset project developer, or project sponsor. The accredited verifier shall disclose information concerning its ownership, past and current clients, related entities, as well as any other facts or

circumstances that have the potential to create a conflict of interest

(B) Accredited verifiers shall have an ongoing obligation to disclose to the commissioner or the commissioner's designee any facts or circumstances that may give rise to a conflict of interest with respect to an offset project, offset project developer, or project sponsor.

(C) Rejection of verification reports. The commissioner or the commissioner's designee may reject a verification report and certification statement from an accredited verifier, submitted as part of a consistency application required pursuant to subsection (c) of this section or submitted as part of a monitoring and verification report submitted pursuant to subsection (j) of this section, if the commissioner or the commissioner's designee determines that the accredited verifier has a conflict of interest related to the offset project, offset project developer, or project sponsor.

(D) Revocation of accreditation. The commissioner or the commissioner's designee may revoke the accreditation of a verifier at any time given cause, for any of the following:

(i) Failure to fully disclose any issues that may lead to a conflict of interest situation with respect to an offset project, offset project developer, or project sponsor;

(ii) The verifier is no longer qualified due to changes in staffing or other criteria;

(iii) Negligence or neglect of responsibilities pursuant to the requirements of this section; and

(iv) Intentional misrepresentation of data or other intentional fraud.

(j) Award and Recordation of CO_2 Offset Allowances

(1) Quantities of CO_2 offset allowances awarded. Following the issuance of a consistency determination under subsection (c)(12) of this section and the approval of a monitoring and verification report under the provisions of subdivision (5) of this subsection, the commissioner or their designee will award one CO_2 offset allowance for each ton of demonstrated reduction in CO_2 or CO_2 equivalent emissions or sequestration of CO_2.

(2) CO_2 emissions credit retirement. If a project sponsor received a consistency determination pursuant to subsection (c)(12) of this section, one CO_2 offset allowance will be awarded for each ton of reduction of CO_2 or CO_2 equivalent or sequestration of CO_2, represented by the relevant credits or allowances retired. If a credit or allowance is

represented in metric tons, 1.1023 tons will be awarded for every metric ton, provided that total CO_2 offset allowances awarded shall be rounded down to the nearest whole ton.

(3) Recordation of CO_2 offset allowances. After CO_2 offset allowances are awarded under this subsection the commissioner or the commissioner's designee shall record such CO_2 offset allowances in the project sponsor's general account.

(4) Place for filing monitoring and verification reports. The monitoring and verification report must be filed with the same participating state that issued the consistency determination for the offset project pursuant to subsection (c)(12) of this section.

(5) Deadlines for submittal of monitoring and verification reports.

(A) For CO_2 emissions offset projects undertaken prior to January 1, 2009, the project sponsor must submit the monitoring and verification report covering the pre-2009 period by June 30, 2009.

(B) For CO_2 emissions offset projects undertaken on or after January 1, 2009, the monitoring and verification report must be submitted within 6 months following the completion of the last calendar year during which the offset project achieved CO_2 equivalent reductions or sequestration of CO2 for which the project sponsor seeks the award of CO_2 offset allowances.

(6) Contents of monitoring and verification reports. For an offset project, the monitoring and verification report shall include the following information:

(A) The project's sponsor's name, address, e-mail address, telephone number, facsimile transmission number, and account number;

(B) The CO_2 emissions reduction or CO_2 sequestration determination as required by the relevant provisions of this section, including a demonstration that the project sponsor complied with the required quantification, monitoring, and verification procedures under this section, as well as those outlined in the consistency application approved pursuant to subsection (c)(12) of this section;

(C) The following statement signed by the offset project sponsor:

> "The undersigned project sponsor hereby confirms and attests that the offset project upon which this monitoring and verification report is based is in full compliance with all of the requirements of Section 22a-174-31a of the Regulations of Connecticut State Agencies. The project sponsor holds the legal rights to the offset project, or has been granted the right to act on behalf of a party that holds the legal rights to the offset project. I understand that eligibility for the award

of CO_2 offset allowances under Section 22a-174-31a of the Regulations of Connecticut State Agencies is contingent on meeting the requirements of this section. I authorize the commissioner or the commissioner's designee to audit this offset project for purposes of verifying that the offset project, including the monitoring and verification plan, has been implemented as described in the consistency application that was the subject of a consistency determination by the commissioner or the commissioner's designee. I understand that this right to audit shall include the right to enter the physical location of the offset project. I submit to the legal jurisdiction of the State of Connecticut.";

(D) A verification report and certification statement signed by an independent verifier accredited pursuant to subsection (i) of this section documenting that the independent verifier has reviewed the monitoring and verification report and evaluated the following in relation to the applicable requirements of this section, and any applicable guidance issued by the commissioner or the commissioner's designee. Such verification report and certification statement shall also state:

(i) The adequacy and validity of information supplied by the project sponsor to determine CO_2 emissions reductions or CO_2 sequestration pursuant to the applicable requirements in this section,

(ii) The adequacy and consistency of methods used to quantify, monitor, and verify CO_2 emissions reductions and CO_2 sequestration in accordance with the applicable requirements of this section and as outlined in the consistency application approved pursuant to subsection (c)(12) of this section, and

(iii) Such other evaluations and verification reviews as may be required by the commissioner or the commissioner's designee to determine the adequacy and validity of information supplied by the project sponsor to demonstrate that the offset project meets the applicable eligibility requirements of this section;

(E) Disclosure of any voluntary or mandatory programs, other than the CO_2 Budget Trading Program, to which greenhouse gas emissions data related to the offset project has been, or will be reported; and

(F) For offset projects located in a state or United States jurisdiction that is not a participating state, a demonstration that the project sponsor has complied with all requirements of the cooperating regulatory agency in the state or United States jurisdiction where the offset project is located.

(7) Commissioner action on monitoring and verification reports. The commissioner or the commissioner's designee will approve or deny, with or without conditions, a complete monitoring and verification report within 90 days following receipt of a complete report.

(k) Statement of Purpose:

To adopt a new regulation to implement the provisions of the Regional Greenhouse Gas Initiative (RGGI) necessary to provide for the creation and use of carbon dioxide offset credits through five specific activities: landfill methane capture and destruction; avoided sulfur hexafluoride emissions; sequestration due to afforestation; end-use energy efficiency; and avoided methane.

XI. Conclusion

Based upon the comments submitted by interested parties and addressed in this Hearing Report, I recommend that sections 31 and 31a, as set forth in Part VIII of this report, be submitted by the Commissioner of Environmental Protection for approval by the Attorney General and the Legislative Regulations Review Committee.

/S/ April 15, 2008

Paul E. Farrell Date

Hearing Officer

Attachment 1
List of Commenters

1. Eric Brown, Connecticut Business and Industry Association (CBIA)
2. Brian Jones, Northeast Regional Greenhouse Gas Coalition
3. Anthony Pocengal, Solar Turbines, Inc.
4. Andy Bauer, Portland Clean Energy Task Force
5. John Fonfara, State Senator, 1st District and Henry Genga, State Representative, 10th District
6. Charles Adams, CARE USA, Northeast Region
7. Susanne Krivit, Redding Clean Energy Committee
8. Chris Wentlent, AES Thames, LLC
9. Nicholas Bianco, Commonwealth of Massachusetts Department of Environmental Protection
10. Allison Schumacher, Business Council for Sustainable Development
11. Gary LeBeau, State Senator, 3rd District
12. Emmet Pepper, Citizens Campaign for the Environment
13. Christie Bradway, Northeast Utilities
14. Roger Smith, Clean Water Action
15. Eric Brown, CBIA
16. Brian Jones, Northeast Regional Greenhouse Gas Coalition
17. Jeffrey Garrison, Constellation Energy Group, Inc.
18. Tom Scelfo, Woodard & Curran
19. Garret Bissell, Couch White, LLP on behalf of Connecticut Industrial Energy Consumers
20. Christopher Sherman, New England Power Generators Association, Inc.
21. Brian Bahor, Covanta Energy Corporation
22. Henry Link
23. Pamela Fagger, Dominion Resource Services, Inc.
24. Daniel Cunningham, PSEG Services Corporation
25. James Ginnetti, First Light Power Resources, Inc.

Attachment 1
List of Commenters

26. Cynthia Karlic, NRG Energy, Inc.

27. Michael Brown, United Technologies (UTC Power)

28. Derek Murrow and Alice Liddell, Environment Northeast

29. Natalie Lovett, Northeast Energy Efficiency Partnerships, Inc.

30. Maurice Scully, Connecticut Municipal Electric Energy Cooperative

31. Lynn Smallridge, FPL Energy, LLC

32. Cindy Jacobs, Connecticut Department of Public Utility Control

33. David Sutherland, The Nature Conservancy

34. Christopher Phelps, Environment Connecticut

35. Robert Silvestri, PSEG Power Connecticut

36. Michael K. Garofalo, Renewable Energy Marketer's Association