

IMPORTANT: Read Instructions on bottom of Certification Page before completing this form. Failure to comply with instructions may cause disapproval of proposed Regulations.

REGULATION OF

NAME OF AGENCY

Environmental Protection

Concerning

Adoption of Section 22a-174-31 – Control of Carbon Dioxides Emissions
Adoption of Section 22a-174-31a – Greenhouse Gas Emissions Offsets Projects

Section: 1

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. Except as otherwise provided, 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 CO2 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 Title IV of the federal Clean Air Act and 40 CFR 72 to 78, inclusive.
(4) "Administrator" means "Administrator" as defined in section 22a-174-1 of the Regulations of Connecticut State Agencies.
(5) "Allocate" or "allocation" means the determination by the commissioner of the number of CO2 allowances to be recorded in the compliance account of a CO2 budget source, the Connecticut Auction account, an allocation set-aside account, the general account of the sponsor of an approved CO2 emissions offset project or an account established by any other person.
(6) "Allocation year" means a calendar year for which the commissioner allocates CO2 allowances pursuant to subsection (f) of this section. The allocation year of each CO2 allowance is reflected in the unique identification number given to the allowance pursuant to subsection (g)(4)(I) of this section.
(7) "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.
(8) "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.
(9) "Award" means an allocation through which the commissioner determines the number of CO2 allowances to be recorded in the compliance account of a CO2 budget unit for early reduction CO2 allowances pursuant to subsection (f)(6) of this section, or the commissioner determines the number of CO2 offset allowances to be recorded

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in the general account of a project sponsor pursuant to section 22a-174-31a of the Regulations of Connecticut State Agencies.

- (10) “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.
- (11) “Boiler” means a fossil or other fuel-fired device that produces steam or heats water or any other heat transfer medium.
- (12) “Btu” means British Thermal Unit, a standard measurement used to quantify an amount of energy.
- (13) "Class I renewable energy source" means "Class I renewable energy source" as defined in section 16-1(a) of the Connecticut General Statutes.
- (14) “CO₂” means carbon dioxide.
- (15) “CO₂ allowance” means a limited authorization by the commissioner or a participating state under the CO₂ Budget Trading Program to emit up to one ton of CO₂, subject to all the applicable conditions contained in this section.
- (16) “CO₂ allowance deduction” or “deduct CO₂ allowances” means the permanent withdrawal of CO₂ allowances by the commissioner from a CO₂ Allowance Tracking System compliance account.
- (17) “CO₂ allowances held” or “hold CO₂ allowances” means the CO₂ allowances recorded by the commissioner, or submitted to the commissioner, in accordance with subsections (g) and (h) of this section, in a CO₂ Allowance Tracking System account.
- (18) “CO₂ allowance price” means the price for CO₂ 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 commissioner, and taking into account publicly reported prices.
- (19) “CO₂ Allowance Tracking System” means the system by which the commissioner records allocations, deductions, and transfers of CO₂ allowances under the CO₂ Budget Trading Program under this section, the system used to track CO₂ offset allowance projects under section 22a-174-31a of the Regulations of Connecticut State Agencies, and the system used to track CO₂ allowance prices and emissions from affected sources.
- (20) “CO₂ Allowance Tracking System account” means an account in the CO₂ Allowance Tracking System established by the commissioner for purposes of recording the allocating, holding, transferring, or deducting of CO₂ allowances.
- (21) “CO₂ 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.
- (22) “CO₂ authorized account representative” means the individual who is authorized by the owners or operators of the source and all CO₂ 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 CO₂ Budget Trading Program or, for a general account, the individual who is authorized, in accordance with subsection (g)

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of this section, to transfer or otherwise dispose of CO₂ allowances held in the general account.

- (23) “CO₂ budget emissions limitation” means the tonnage equivalent, in CO₂ emissions in a control period, of the CO₂ allowances available for compliance deduction for the CO₂ budget source for a control period.
- (24) “CO₂ budget source” means a facility that includes one or more CO₂ budget units.
- (25) “CO₂ Budget Trading Program” means the multi-state CO₂ 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 CO₂ from CO₂ budget sources.
- (26) “CO₂ budget unit” means an emissions unit that is subject to the CO₂ Budget Trading Program requirements under subsection (b) of this section.
- (27) “CO₂ equivalent” means a metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential (GWP).
- (28) “CO₂ offset allowance” means a CO₂ allowance that is awarded to the sponsor of a CO₂ 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.
- (29) “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.
- (30) “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.
- (31) “Combined Heat and Power Long-term PPA Set-aside Account” means a general account established by the commissioner to hold CO₂ allowances that are offered for sale pursuant to subsection (f)(3) of this section
- (32) “Combined Heat and Power Useful Thermal Energy Set-aside Account” means a general account established by the commissioner to hold CO₂ allowances that are allocated pursuant to subsection (f)(3) of this section.
- (33) “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.
- (34) “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 provided that:
- (A) If the unit is a CO₂ budget unit on the date it commences commercial operation and such unit is subsequently modified, reconstructed or repowered, the date on which the CO₂ budget unit commences commercial operation shall remain the unit's date of commencement of commercial operation; and
- (B) If the unit is not a CO₂ budget unit on the date it commences commercial operation, the date the unit becomes a CO₂ budget unit for the purposes of this section shall be the unit's date of commencement of commercial operation.

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- (35) “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 provided that:
- (A) If the unit is a CO₂ 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; and
 - (B) If the unit is not a CO₂ budget unit on the date of commencement of operation, the date the unit becomes a CO₂ budget unit shall be the unit's date of commencement of operation.
- (36) “Commissioner” means “commissioner” as defined in section 22a-174-1 of the Regulations of Connecticut State Agencies.
- (37) “Compliance account” means a CO₂ Allowance Tracking System account, established by the commissioner for a CO₂ budget source under subsection (g) of this section, in which the CO₂ allowance allocations for the source are initially recorded and in which are held CO₂ allowances available for use by the source for a control period for the purpose of meeting the requirements of subsection (b)(3) of this section.
- (38) “Connecticut Auction Account” means a general account established by the commissioner to hold CO₂ allowances that are allocated pursuant to subsection (f)(3) of this section.
- (39) “Connecticut Clean Energy Fund” or “CCEF” means the fund created by section 16-245n of the Connecticut General Statutes to address Connecticut's increasing energy needs and any individual authorized to act on behalf of such fund.
- (40) “Connecticut CO₂ Allowance Retirement Account” means a general account established by the commissioner to hold CO₂ allowances that have been permanently retired.
- (41) “Connecticut CO₂ Trading Program Base Budget” means the annual amount of CO₂ tons available in Connecticut for allocation in a given allocation year, in accordance with the CO₂ Budget Trading Program. CO₂ offset allowances allocated to project sponsors are separate from and additional to CO₂ allowances allocated from the Connecticut CO₂ Trading Program Base Budget.
- (42) “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.
- (43) “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.

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- (44) “Control period” means a three calendar-year period, unless extended by the commissioner to four years upon occurrence of a Stage Two Trigger Event.
- (45) “Customer-side distributed resources” or “CDR” means “customer-side distributed resources” as defined in Section 16-1(a) of the Connecticut General Statutes.
- (46) “Customer-side Distributed Resources (CDR) Set-aside Account” means a general account established by the commissioner to hold CO₂ allowances that are allocated pursuant to subsection (f)(3) of this section.
- (47) “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. Eligible biomass does not include liquid biofuels.
- (48) “Energy Conservation 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.
- (49) “Excess emissions” means any tonnage of CO₂ emitted by a CO₂ budget source during a control period that exceeds the CO₂ budget emissions limitation for the source.
- (50) “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.
- (51) “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.
- (52) “General account” means a CO₂ Allowance Tracking System account, established under subsection (g) of this section, which is not a compliance account.
- (53) “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 CO₂ 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 CO₂.
- (54) “Gross generation” means the electrical output in MWe at the terminals of the generator.
- (55) “H₂O” means water.
- (56) “Heat input” means the gross calorific value of all fuels combusted by a CO₂ budget unit.

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- (57) "Hr" means hour.
- (58) "Lb" means pound.
- (59) "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.
- (60) "Long-term Power Purchase Agreement" or "Long-term PPA" means an agreement, executed prior to January 1, 2000, between a CO₂ budget source and a purchasing party to sell power from the CO₂ budget source for a period of 20 or more years.
- (61) "Market settling period" means the first fourteen months of any control period.
- (62) "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.
- (63) "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.
- (64) "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.
- (65) "MMBtu" means million Btu of heat input.
- (66) "MWe" means megawatt electrical.
- (67) "MWh" means megawatt-hour.
- (68) "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.
- (69) "Non-CO₂ budget unit" means a unit that does not meet the applicability criteria of subsection (b) of this section.
- (70) "NOx" means oxides of nitrogen.
- (71) "O₂" mean oxygen.

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- (72) “Operator” means any person who operates, controls, or supervises a CO₂ budget unit or a CO₂ budget source and shall include, but not be limited to, any holding company, utility system, or plant manager of such a unit or source.
- (73) “Owner” means any of the following persons:
- (A) Any holder of any portion of the legal or equitable title in a CO₂ budget unit;
 - (B) Any holder of a leasehold interest in a CO₂ 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 CO₂ budget unit;
 - (C) Any purchaser of power from a CO₂ 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 CO₂ allowances held in the general account and who is subject to the binding agreement for the CO₂ authorized account representative to represent that person's ownership interest with respect to the CO₂ allowances.
- (74) “Participating state” means a state that has established a regulation implementing a CO₂ Budget Trading Program consistent with the Regional Greenhouse Gas Initiative model rule.
- (75) “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.
- (76) “Recordation”, “record” or “recorded” means, with regard to CO₂ allowances, the movement of CO₂ allowances by the commissioner from one CO₂ Allowance Tracking System account to another, for purposes of allocation, transfer or deduction.
- (77) “Regional Independent System Operator” or “Regional ISO” means “regional independent system operator” as defined in section 16-1 of the Connecticut General Statutes.
- (78) “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.
- (79) “Renewable Energy Certificate” or “REC” means a certificate that represents the attributes related to one megawatt-hour of electricity generation.
- (80) “Serial number” means, when referring to CO₂ allowances, the unique identification number assigned to each CO₂ allowance by the commissioner.
- (81) “SO₂” means sulfur dioxide.
- (82) “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, is a single facility.

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- (83) “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 = $1 + \{[CPI(\text{year}) - CPI(2005)] / CPI(2005)\}$, where:

- (A) CPI means, for purposes of the CO₂ 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.
- (84) “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 = $1.02 + \{[CPI(\text{year}) - CPI(2005)] / CPI(2005)\}$, where:

- (A) CPI means, for purposes of the CO₂ 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.
- (85) “Stage One Trigger Event” means any complete twelve month period following the market settling period during which average CO₂ allowance prices are equal to or greater than the stage one threshold price.
- (86) “Stage Two Trigger Event” means any complete twelve month period following the market settling period during which average CO₂ allowance prices are equal to or greater than the stage two threshold price.
- (87) “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.
- (88) “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

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United States Postal Service, or by other means of dispatch or transmission and delivery.

- (89) “Ton” or “short ton” means a measure of weight equal to two thousand pounds or 0.9072 metric tons.
- (90) “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 shall begin on the first day of each subsequent calendar month.
- (91) “Unit” means a fossil fuel-fired stationary boiler, combustion turbine or combined cycle system.
- (92) “Unit operating day” means a calendar day in which a unit combusts any fuel.
- (93) “Useful net thermal energy” means the energy output of thermal energy used for heating, cooling, industrial processes or other beneficial uses.
- (94) “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.
- (95) “Voluntary Clean Energy Purchase Set-aside Account” means a general account established by the commissioner to hold CO₂ 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 CO₂ 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 CO₂ budget source subject to the requirements of this section.
- (2) **Monitoring.** In order to determine compliance with the CO₂ requirements of subdivision (3) of this subsection, the owner or operator of a CO₂ 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) **General Provisions and CO₂ Requirements.**
- (A) The owners and operators of each CO₂ budget source shall hold CO₂ allowances available for compliance deductions under subsection (g)(5) of this section, not later than the CO₂ allowance transfer deadline, in the source’s compliance account in an amount equal to or greater than the total CO₂ emissions for the control period from all CO₂ budget sources at the source, as determined in accordance with subsections (g) and (i) of this section. In addition:
- (i) A CO₂ allowance shall not be deducted to cover emissions for a control period that ends prior to the year for which the CO₂ allowance was allocated; and

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- (ii) A CO₂ offset allowance shall not be deducted to cover emissions beyond the applicable percent limitations set forth in subsection (g)(5)(B) of this section;
 - (B) A CO₂ budget source shall be subject to the requirements under subsection (c)(1) of this section starting on January 1, 2009 or the date on which the source commences operation, whichever is later;
 - (C) CO₂ allowances shall be held in, deducted from, or transferred among CO₂ 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;
 - (D) A CO₂ allowance under the CO₂ Budget Trading Program is a limited authorization by the commissioner or a participating state to emit one ton of CO₂ in accordance with the CO₂ Budget Trading Program;
 - (E) A CO₂ allowance under the CO₂ Budget Trading Program does not constitute a property right;
 - (F) 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; and
 - (G) Each ton of CO₂ emitted in excess of the CO₂ budget emissions limitation shall constitute a separate violation of this section.
- (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 shall 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 CO₂ 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 CO₂ 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 CO₂ offset allowances under section 22a-174-31a of the Regulations of Connecticut State Agencies; and
 - (C) Comply with the assessment of any fine, penalty or other obligation 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 CO₂ budget source shall comply with the following recordkeeping and reporting requirements:

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- (A) Unless otherwise provided or extended by the commissioner prior to the end of the applicable ten year period, the owner or operator of a CO₂ budget source and each CO₂ 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:
- (i) Notwithstanding the provisions of subparagraph (A) of this subdivision, the account certificate of representation for the CO₂ authorized account representative for the source and each CO₂ 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 by the submission of a new account certificate of representation changing the CO₂ 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 CO₂ Budget Trading Program; and
 - (iv) Copies of all documents used to complete any submission under the CO₂ Budget Trading Program or to demonstrate compliance with the requirements of the CO₂ Budget Trading Program.
- (B) The CO₂ authorized account representative of a CO₂ budget source shall submit the reports and compliance certifications required under the CO₂ Budget Trading Program, including those required under subsection (e) of this section.
- (7) Liability. The owner and operator of a CO₂ budget source shall be subject to the following:
- (A) Any provision of the CO₂ Budget Trading Program that applies to a CO₂ budget source, or the CO₂ authorized account representative of a CO₂ budget source, shall also apply to the owner or operator of such source; and
 - (B) Any provision of the CO₂ Budget Trading Program that applies to a CO₂ budget unit, or the CO₂ authorized account representative of a CO₂ budget unit, shall also apply to the owner or operator of such unit.
- (8) Effect on other authorities. No provision of the CO₂ Budget Trading Program shall be construed as exempting or excluding the owner or operator and, to the extent applicable, the CO₂ authorized account representative of a CO₂ 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 and unless otherwise stated, the owner or operator of a CO₂ budget source shall be subject to the following computation of time requirements:
- (A) Any time period scheduled, under the CO₂ Budget Trading Program, to begin on the occurrence of an act or event shall begin on the day the act or event occurs;

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- (B) Any time period scheduled, under the CO₂ 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) If the final day of any time period, under the CO₂ Budget Trading Program, falls on a weekend or a state or federal holiday, the time period shall be extended to the next business day.

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) 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) CO₂ Authorized Account Representative for CO₂ Budget Sources

- (1) With respect to the CO₂ authorized account representative, the owner or operator of each CO₂ budget source subject to this section shall comply with the following:
 - (A) Except as provided under subdivision (3)(B) of this subsection, each CO₂ budget source, including all CO₂ budget units at the source, shall have only one CO₂ authorized account representative, with regard to all matters under the CO₂ Budget Trading Program concerning such source;
 - (B) The CO₂ authorized account representative of the CO₂ budget source shall be selected by an agreement binding on the owners or operators of the source;
 - (C) The owner or operator of each CO₂ budget source shall:
 - (i) Be legally bound by any decision or order issued to the CO₂ authorized account representative by the commissioner or a court regarding the source; and
 - (ii) Be legally bound by any representations, including any actions, inactions or submissions, by the CO₂ authorized account representative;
 - (D) No CO₂ Allowance Tracking System account shall be established for a CO₂ budget unit at a source, until the commissioner has received a complete account certificate of representation under subdivision (4) of this subsection for a CO₂ authorized account representative;

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- (E) Each submission under the CO₂ Budget Trading Program shall be submitted, signed, and certified by the CO₂ authorized account representative for each CO₂ budget source on behalf of which the submission is made, and shall:
- (i) Include the following certification statement by the CO₂ authorized account representative: "I am authorized to make this submission on behalf of the owners and operators of the CO₂ budget sources or CO₂ 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 CO₂ budget source; and
- (F) If the CO₂ budget source is also subject to section 22a-174-22c of the Regulations of Connecticut State Agencies or the Acid Rain Program, the CO₂ authorized account representative shall be the same person as the designated representative under such programs.
- (2) With respect to the alternate CO₂ authorized account representative, the owner or operator of each CO₂ budget source subject to this section shall comply with the following:
- (A) An account certificate of representation may designate only one alternate CO₂ authorized account representative who may act on behalf of the CO₂ authorized account representative. The agreement by which the alternate CO₂ authorized account representative is selected shall include a procedure for authorizing the alternate CO₂ authorized account representative to act in lieu of the CO₂ authorized account representative;
 - (B) Upon receipt by the commissioner of a complete account certificate of representation under subdivision (4) of this subsection, any representation, action, inaction, or submission by the alternate CO₂ authorized account representative shall be deemed to be a representation, action, inaction, or submission by the CO₂ authorized account representative;
 - (C) Except in this subdivision, subdivisions (1)(A), (3) and (4) of this subsection, and subsection (g)(2) of this section, wherever the term "CO₂ authorized account representative" is used, such term shall be construed to include the alternate CO₂ authorized account representative; and
 - (D) If the CO₂ budget source is also subject to section 22a-174-22c of the Regulations of Connecticut State Agencies or the Acid Rain Program, the alternate CO₂ authorized account representative shall be the same person as the alternate designated representative under such programs.
- (3) Transfers and name changes. With respect to changing the CO₂ authorized account representative and the alternate CO₂ authorized account representative or a change in

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ownership or operation of a CO₂ budget source, the owner or operator of each CO₂ budget source shall comply with the following:

- (A) Changing the CO₂ authorized account representative. The CO₂ 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 CO₂ authorized account representative or alternate CO₂ 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 CO₂ authorized account representative and the owner or operator of the CO₂ budget source and the CO₂ budget units at the source;
- (B) Changing the alternate CO₂ authorized account representative. The alternate CO₂ 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 CO₂ authorized account representative or alternate CO₂ 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 CO₂ authorized account representative and the owner or operator of the CO₂ budget source and the CO₂ budget units at the source;
- (C) Changes in the owners and operators. With respect to a change in ownership or control of the CO₂ budget source, the owner or operator of each CO₂ budget source shall comply with the following:
 - (i) In the event a new owner or operator of a CO₂ 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 CO₂ authorized account representative and any alternate CO₂ 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) Not later than thirty (30) days following any change in the owner or operator of a CO₂ budget source or a CO₂ budget unit, including the addition of a new owner or operator, the CO₂ authorized account representative or alternate CO₂ 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 CO₂ budget source shall comply with the following:
 - (A) A complete account certificate of representation for a CO₂ authorized account representative or an alternate CO₂ authorized account representative shall be submitted on forms prescribed by the commissioner and shall include the following elements :
 - (i) Identification of the CO₂ budget source for which the account certificate of representation is submitted;

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- (ii) The name, address, electronic mail address, telephone number, and facsimile transmission number of the CO₂ authorized account representative and any alternate CO₂ authorized account representative;
 - (iii) A list of the owners and operators of the CO₂ budget source;
 - (iv) The following certification statement by the CO₂ authorized account representative and any alternate CO₂ authorized account representative:

“I certify that I was selected as the CO₂ authorized account representative or alternate CO₂ authorized account representative, as applicable, by an agreement binding on the owners and operators of the CO₂ budget source and each CO₂ budget source at the source. I certify that I have all the necessary authority to carry out my duties and responsibilities under the CO₂ Budget Trading Program on behalf of the owners and operators of the CO₂ 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.”;
 - (v) A statement that such CO₂ authorized account representative is authorized to legally bind each owner or operator of the CO₂ budget source represented by such CO₂ authorized account representative in all matters pertaining to the CO₂ Budget Trading Program, notwithstanding any agreement between the CO₂ authorized account representative and such owners or operators; and
 - (vi) The signature of the CO₂ authorized account representative and any alternate CO₂ authorized account representative and the dates signed; and
- (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 CO₂ authorized account representative.
- (A) Once a complete account certificate of representation under subdivision (4) of this subsection 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 subdivision (4) of this subsection; 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 CO₂ authorized account representative shall affect any representation, action, inaction, or submission of the CO₂ authorized account representative or the finality of any decision or order by the commissioner under the CO₂ Budget Trading Program.
- (6) Delegation by CO₂ authorized account representative and alternate CO₂ authorized account representative.
- (A) A CO₂ 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;

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- (B) An alternate CO₂ 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 CO₂ authorized account representative or alternate CO₂ authorized account representative, as appropriate, shall 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 CO₂ authorized account representative or alternate CO₂ authorized account representative;
 - (ii) The name, address, electronic mail address, telephone number and facsimile transmission number of each such individual, in this section 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 CO₂ authorized account representative or alternate CO₂ 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 CO₂ authorized account representative or alternate CO₂ 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."; and
 - (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 pursuant to subparagraph (C) of this subdivision shall be effective, with regard to the CO₂ authorized account representative or alternate CO₂ 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 CO₂ authorized account representative or alternate CO₂ 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; and
- (F) Any electronic submission covered by the certification in subparagraph (D)(i) of this subdivision and made in accordance with a notice of delegation effective under subparagraph (E) of this subdivision shall be deemed to be an electronic

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submission by the CO₂ authorized account representative or alternate CO₂ authorized account representative submitting such notice of delegation.

(d) Reserved

(e) Compliance Certification

- (1) Compliance certification report. The owner or operator of each CO₂ budget source shall comply with the following compliance certification report requirements:
- (A) Applicability and deadline. For each control period in which a CO₂ budget source is subject to the requirements of subsection (b)(3) of this section, the CO₂ authorized account representative of the source shall submit to the commissioner not later than March 1st following the applicable control period, a compliance certification report;
- (B) Contents of report. The CO₂ authorized account representative shall include in the compliance certification report required under subparagraph (A) of this subdivision the following elements, on forms prescribed by the commissioner:
- (i) Identification of the source and each CO₂ budget source at the source;
 - (ii) At the CO₂ authorized account representative's option, the serial numbers of the CO₂ 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 required by subparagraph (C) of this subdivision; and
- (C) Compliance certification. In the compliance certification report required under subparagraph (A) of this subdivision, the CO₂ authorized account representative shall certify, based on reasonable inquiry of those persons with primary responsibility for operating the source and the CO₂ budget sources in compliance with the CO₂ Budget Trading Program, whether the source and each CO₂ 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 CO₂ Budget Trading Program, including:
- (i) Whether the source was operated in compliance with the 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 CO₂ emissions to the unit, in accordance with subsection (i) of this section;
 - (iii) Whether all the CO₂ 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

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excepted monitoring method or alternative monitoring method approved under subsection (i) of this section, if applicable, 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 CO₂ Budget Trading Program and make appropriate adjustments of the information in the compliance certifications or other submissions and
- (B) The commissioner may deduct CO₂ allowances from or transfer CO₂ 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) CO₂ Allowance Allocations

(1) The Connecticut CO₂ Trading Program Base Budget is as follows:

- (A) For the 2009 to 2014 allocation years, inclusive, the Connecticut CO₂ Trading Program Base Budget is 10,695,036 tons;
- (B) For the 2015 allocation year, the Connecticut CO₂ Trading Program Base Budget is 10,427,660 tons;
- (C) For the 2016 allocation year, the Connecticut CO₂ Trading Program Base Budget is 10,160,284 tons;
- (D) For the 2017 allocation year, the Connecticut CO₂ Trading Program Base Budget is 9,892,908 tons; and
- (E) For the 2018 allocation year and each succeeding allocation year, the Connecticut CO₂ trading program base budget is 9,625,532 tons.

(2) Timing requirements for CO₂ allowance allocations.

- (A) Not later than January 1, 2009, the commissioner shall determine the initial CO₂ allowance allocations, in accordance with subdivision (3) of this subsection, for the 2009, 2010, 2011 and 2012 allocation years.
- (B) Not later than January 1, 2010 and January 1 of each year thereafter, the commissioner shall determine the initial CO₂ 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) CO₂ allowance allocations.

- (A) In accordance with the timing provisions of subdivision (2) of this subsection, the commissioner shall allocate each annual CO₂ base budget as follows:

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- (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) Not later than 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 CO₂ budget source generating useful net thermal energy from its CO₂ budget units the number of CO₂ 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. CO₂ 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;

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

Where:

TEG = the average useful net thermal energy (in mmBtu) generated by CO₂ budget units at the CO₂ budget source during the two years preceding the allocation year of the allowances being allocated;

(C) IF $\sum A_{CHP1} \leq A_{CHP1-AV}$, THEN

$$A_{CHP1-ALLOCATED} = A_{CHP1}$$

IF $\sum A_{CHP1} > A_{CHP1-AV}$, THEN

$$A_{CHP1-ALLOCATED} = A_{CHP1} \times \left(\frac{A_{CHP1-AV}}{\sum A_{CHP1}} \right)$$

rounded to the nearest whole allowance.

Where:

A_{CHP1} = the number of CO₂ allowances calculated for each CO₂ budget source pursuant to subparagraph (B) of this subdivision;

$\sum A_{CHP1}$ = the total number of CO₂ allowances calculated for CO₂ budget sources pursuant to subparagraph (B) of this subdivision;

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$A_{CHP1-AV}$ = the number of CO₂ allowances available for allocation from the CHP Useful Thermal Output Set-aside Account;

$A_{CHP1-ALLOCATED}$ = the number of CO₂ allowances the commissioner shall allocate to the compliance account of each CO₂ budget source;

The commissioner may adjust an allowance allocation under this subparagraph as necessary to not exceed $A_{CHP1-AV}$;

- (D) If $\Sigma A_{CHP1} < A_{CHP1-AV}$, 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 shall be auctioned in accordance with subdivision (4) of this subsection;
- (E) Not later than March 1, 2009 and March 1 of each year thereafter, CO₂ 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 CO₂ budget units at the CO₂ 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) to (M), inclusive, of this subdivision, on three separate occasions, not later than June 1, 2009, not later than June 1, 2010 and not later than June 1, 2011, the commissioner shall offer for sale allowances from the CHP Long-term PPA Set-aside Account to eligible CO₂ budget sources which operate CO₂ budget units that are also CHP units with existing long-term power purchase agreements. CO₂ 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 CO₂ budget source shall, on or before October 31, 2008, or not later than 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 CO₂ budget units at the CO₂ budget source;
 - (ii) A demonstration that the long-term PPA was executed prior to January 1, 2001;
 - (iii) Certification that the CO₂ 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 CO₂ budget source can not recover the costs of CO₂ 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;

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- (H) A CO₂ 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 CO₂ budget source shall notify the commissioner of such revision not later than 30 days of execution; and
 - (ii) The CO₂ budget source shall no longer be eligible to purchase CO₂ 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 CO₂ budget source shall document the reasons that the revised long-term PPA does not include provisions related to the cost of CO₂ allowances;
- (I) The commissioner shall offer for sale allowances from the CHP Long-term PPA Set-aside Account to eligible CO₂ 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 CO₂ budget source may purchase from the CHP Long-term PPA Set-aside Account shall be equal to the total number of tons of CO₂ emissions emitted by CO₂ budget units at the CO₂ budget source in the previous calendar year (rounded to the nearest whole ton), less any allowances allocated to the compliance account of the CO₂ 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 $\sum A_{CHP2} \leq A_{CHP2-AV}$, THEN

$$A_{CHP2-OFFERED} = A_{CHP2}.$$

- IF $\sum A_{CHP2} > A_{CHP2-AV}$, THEN

$$A_{CHP2-OFFERED} = A_{CHP2} \times \left(\frac{A_{CHP2-AV}}{\sum A_{CHP2}} \right)$$

rounded to the nearest whole allowance.

Where:

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A_{CHP2} = the maximum number of CO₂ allowances determined for each CO₂ budget source pursuant to subparagraphs (J) and (K) of this subdivision;

ΣA_{CHP2} = the total number of CO₂ allowances determined for CO₂ budget sources pursuant to subparagraphs (J) and (K) of this subdivision;

$A_{\text{CHP2-AV}}$ = the number of CO₂ allowances available for allocation from the CHP Useful Thermal Output Set-aside Account;

$A_{\text{CHP2-OFFERED}}$ = the number of CO₂ allowances the commissioner shall offer for sale of each eligible CO₂ budget source;

The commissioner may adjust an allowance allocation under this subparagraph as necessary to not exceed $A_{\text{CHP2-AV}}$;

(M) Allowances sold to a CO₂ 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 CO₂ budget source;

(N) If $\Sigma A_{\text{CHP2}} < A_{\text{CHP2-AV}}$, 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 shall be auctioned in accordance with subdivision (4) of this subsection;

(O) Not later than 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 CO₂ budget source, which operates CO₂ 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 16-243i of the Connecticut General Statutes, the number of CO₂ allowances equal to the total number of tons of CO₂ emissions emitted by such CO₂ 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 $\Sigma A_{\text{CDR}} \leq A_{\text{CDR-AV}}$, THEN

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

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

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

rounded to the nearest whole allowance.

Where:

A_{CDR} = the number of CO₂ allowances calculated for each CO₂ budget source pursuant to subparagraph (F) of this subdivision;

ΣA_{CDR} = the total number of CO₂ allowances calculated for CO₂ budget sources pursuant to subparagraph (F) of this subdivision;

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$A_{\text{CDR-AV}}$ = the number of CO₂ allowances available for a allocation from the CDR Set-aside Account;

$A_{\text{CDR-ALLOCATED}}$ = the number of CO₂ allowances the commissioner shall allocate to the compliance account of each CO₂ budget source;

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

- (Q) If $\sum A_{\text{CDR}} < A_{\text{CDR-AV}}$, 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 shall be auctioned in accordance with subdivision (4) of this subsection.
- (4) CO₂ 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 CO₂ 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 CO₂ 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; and
- (C) CO₂ 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 CO₂ 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 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 may apply for such funds on forms prescribed by the commissioner; and

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- (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, at least sixty-nine and one-half (69.5) percent of proceeds from auctions 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 and to an account held by the Connecticut Municipal Electric Energy Cooperative (CMEEC). Seventy five (75) percent of this subtotal shall be distributed to the CL&P account, eighteen and three-fourths (18.75) percent shall be distributed to the UI account and six and one-fourth (6.25) percent shall be distributed to the CMEEC account. Proceeds are to be used to support the development of energy efficiency measure; and
- (D) CMEEC shall provide a full accounting of the use of funds transferred to the CMEEC account in accordance with the provisions of subparagraph (C) of this subdivision. Such report shall be submitted to the commissioner, the chairperson of the Department of Public Utility Control, the chairpersons of the Energy Conservation and Management Board and the chief elected officials in any municipality served by CMEEC municipal utilities no later than March 31, 2010 and annually thereafter through the year following the date of the final expenditure of any funds received pursuant to subparagraph (C) of this subdivision.
- (6) Retirement of Allowances for Clean Energy Purchases. The commissioner shall permanently retire a number of CO₂ 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 CO₂ allowances equal to the amount determined by the following equation (rounded to the nearest whole ton), subject to the limitations in subparagraph (B) of this subdivision and the requirements of subparagraphs (E) and (F) of this subdivision:

$$(MWH_{CCEO} + MWH_{RECS}) \times (0.554 \text{ tons CO}_2 / \text{MWh})$$

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 CO₂ 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 CO₂ allowances to be retired;

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- (B) If the total number of allowances calculated to be retired pursuant to subparagraph (A) of this subdivision exceeds the number of CO₂ allowances held in the Voluntary Clean Energy Purchase Set-aside Account, then the number of CO₂ allowances to be retired shall be equal to the total number of CO₂ 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 CO₂ 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 shall be auctioned in accordance with subdivision (4) of this subsection;
- (D) Not later than 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 CO₂ 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) Not later than 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 or purchases were 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 CO₂ allowances. 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. The commissioner may award early reduction CO₂ allowances to a CO₂ budget source for reductions in the CO₂ budget source's CO₂ emissions, including all emissions from CO₂ budget units at the CO₂ budget source, that are achieved by the source during the early reduction period of 2006, 2007 and 2008, subject to the following requirements:
- (A) The owner or operator of the CO₂ budget source shall submit its application for the award of CO₂ allowances not later than May 1, 2009;

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- (B) The owner or operator of the CO₂ budget source shall demonstrate that all CO₂ budget units that existed at the CO₂ budget source during the baseline period are included as CO₂ budget units for the early reduction period. New CO₂ budget units added at the CO₂ budget source shall also be accounted for during the early reduction period;
- (C) The owner or operator of the CO₂ 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 CO₂ budget source was required to report CO₂ data pursuant to 40 CFR 75. An owner or operator of a CO₂ budget source that was not required to submit CO₂ 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 CO₂ allowances to be awarded to a particular CO₂ budget source pursuant to the following formula:

- (i) If total heat input to all CO₂ budget units at the CO₂ budget source during the early reduction period is less than or equal to the total heat input to all the CO₂ budget units at the CO₂ 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 CO₂ allowances;

AEER_{BASELINE} is the average CO₂ emissions rate resulting from electric energy output and thermal energy output for all of the CO₂ budget units at the CO₂ budget source during the baseline period (in pounds of CO₂/MWh_{th+e});

AEER_{ERP} is the average CO₂ emissions rate resulting from electric energy output and thermal energy output for all of the CO₂ budget units at the CO₂ budget source during the early reduction period (in pounds of CO₂/MWh_{th+e});

EO_{ERP} is the total electric energy output from all CO₂ budget units at the CO₂ budget source during the early reduction period (in MWh_e); and

TO_{ERP} is the total useful thermal energy output from all CO₂ budget units at the CO₂ budget source during the early reduction period (in MMBtu);

- (ii) For the purposes of this subparagraph, thermal energy output shall 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 CO₂ budget units at the CO₂ budget source during the early reduction period is greater than or equal to the total heat input to

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all the CO₂ budget units at the CO₂ budget source during the baseline period, then:

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

Where:

ERAs are early reduction CO₂ allowances;

E_{BASELINE} are total CO₂ emissions from all of the CO₂ budget units at the CO₂ budget source during the baseline period (in tons); and

E_{ERP} are total CO₂ emissions from all of the CO₂ budget units at the CO₂ budget source during the early reduction period (in tons); and

- (E) Once the commissioner confirms a CO₂ budget source's early reductions of CO₂ emissions, the commissioner shall award the early reduction CO₂ allowances to the CO₂ budget source's compliance account not later than December 31, 2009.

(g) Allowance Tracking System

(1) CO₂ 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 CO₂ budget source. Allocations of CO₂ allowances pursuant to subsection (f) of this section and deductions or transfers of CO₂ allowances pursuant to subsections (e)(2), (g)(5), (g)(7), or (h) of this section shall be recorded in the compliance accounts in accordance with this subsection; and
- (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 CO₂ allowances pursuant to subsection (h) of this section shall 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 CO₂ 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 CO₂ allowances. Such application shall:
- (i) Designate only one CO₂ authorized account representative and only one alternate CO₂ authorized account representative who may act on behalf of the CO₂ authorized account representative; and
- (ii) Include a procedure for authorizing the alternate CO₂ authorized account representative to act in lieu of the CO₂ 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:

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- (i) Name, address, electronic mail address, telephone number, and facsimile transmission number of the CO₂ authorized account representative and any alternate CO₂ authorized account representative;
- (ii) At the option of the CO₂ authorized account representative, organization name and type of organization;
- (iii) A list of all persons subject to a binding agreement for the CO₂ authorized account representative or any alternate CO₂ authorized account representative to represent their ownership interest with respect to the CO₂ allowances held in the general account;
- (iv) The following certification statement by the CO₂ authorized account representative and any alternate CO₂ authorized account representative: "I certify that I was selected as the CO₂ authorized account representative or the CO₂ alternate authorized account representative, as applicable, by an agreement that is binding on all persons who have an ownership interest with respect to CO₂ allowances held in the general account. I certify that I have all the necessary authority to carry out my duties and responsibilities under the CO₂ 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 CO₂ authorized account representative and any alternate CO₂ 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 CO₂ 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 CO₂ authorized account representative and any alternate CO₂ 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 CO₂ allowances held in the general account in all matters pertaining to the CO₂ Budget Trading Program, notwithstanding any agreement between the CO₂ authorized account representative or any alternate CO₂ authorized account representative and such person. Any such person shall be bound by any order or decision issued to the CO₂ authorized account representative or any alternate CO₂ authorized account representative by the commissioner or a court regarding the general account; and
- (iii) Any representation, action, inaction or submission by any alternate CO₂ authorized account representative shall be deemed to be a representation, action, inaction or submission by the CO₂ authorized account representative;

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- (E) Each submission concerning the general account shall be submitted, signed and certified by the CO₂ authorized account representative or any alternate CO₂ authorized account representative for the persons having an ownership interest with respect to CO₂ allowances held in the general account. Each such submission shall include the following certification statement by the CO₂ authorized account representative or any alternate CO₂ authorized account representative:

"I am authorized to make this submission on behalf of the persons having an ownership interest with respect to the CO₂ 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 CO₂ authorized account representative and alternate CO₂ authorized account representative; changes in persons with ownership interest.
- (i) The CO₂ 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 CO₂ authorized account representative or the previous alternate CO₂ 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 CO₂ authorized account representative and the persons with an ownership interest with respect to the CO₂ allowances in the general account; and
- (ii) The alternate CO₂ 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 CO₂ authorized account representative or the previous alternate CO₂ 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 CO₂ authorized account representative and the persons with an ownership interest with respect to the CO₂ allowances in the general account;
- (H) In the event a new person having an ownership interest:
- (i) With respect to CO₂ 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

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general account, the representations, actions, inactions and submissions of the CO₂ authorized account representative and any alternate CO₂ 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) Not later than 30 days following any change in the persons having an ownership interest with respect to CO₂ allowances in the general account, including the addition of persons, the CO₂ authorized account representative or any alternate CO₂ 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 CO₂ allowances in the general account to include the change;

(I) Objections concerning CO₂ authorized account representative.

- (i) Once a complete application for a general account under subparagraph (C) 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 (C) of this subdivision; and
- (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 CO₂ authorized account representative or any alternate CO₂ authorized account representative for a general account shall affect any representation, action, inaction or submission of the CO₂ authorized account representative or any alternate CO₂ authorized account representative or the finality of any decision or order by the commissioner under the CO₂ Budget Trading Program ; and

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

- (3) CO₂ Allowance Tracking System responsibilities of CO₂ authorized account representative. Following the establishment of a CO₂ 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 CO₂ allowances in the account, shall be made only by the CO₂ authorized account representative for the account.

(4) Recordation of CO₂ allowance allocations.

- (A) Not later than 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 CO₂ allowances for the allocation years of 2009, 2010, 2011, and 2012;
- (B) Not later than 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 CO₂ allowances for the allocation year that commences three years after such applicable deadline for recordation;

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- (C) Not later than April 1, 2009 and April 1 of each year thereafter, the commissioner shall record any CO₂ allowances allocated pursuant to subsections (f)(3)(B) and (f)(3)(C) of this section in the CO₂ budget source's compliance account;
 - (D) Not later than February 28, 2009 and February 28 of each year thereafter, the commissioner shall record any CO₂ allowances allocated pursuant to subsections (f)(3)(O) and (f)(3)(P) of this section in the CO₂ budget source's compliance account;
 - (E) Not later than June 15, 2009 and June 15 of each year thereafter, the commissioner shall record any CO₂ allowances sold pursuant to subsections (f)(3)(F) to (f)(3)(L), inclusive, of this section in the CO₂ budget source's compliance account;
 - (F) Not later than October 1, 2009 and October 1 of each year thereafter, the commissioner shall record any CO₂ allowances retired pursuant to subsection (f)(6) of this section in the Connecticut CO₂ Allowance Retirement Account;
 - (G) Not later than 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 CO₂ allowances purchased from the Connecticut Auction Account;
 - (H) Not later than December 31, 2009, the commissioner shall record any early reduction CO₂ allowances awarded pursuant to subsection (f)(7) of this section in the CO₂ budget source's compliance account; and
 - (I) Serial numbers for allocated CO₂ allowances. When allocating CO₂ allowances to and recording them in an account, the commissioner shall assign each CO₂ allowance a unique identification number that shall include digits identifying the year for which the CO₂ allowance is allocated.
- (5) Compliance.
- (A) Allowances available for compliance deduction. CO₂ allowances that meet the following criteria are available to be deducted in order for a CO₂ budget source to comply with the requirements of subsection (b)(3) of this section for a control period.
 - (i) The CO₂ 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 CO₂ allowances are held in the CO₂ budget source's compliance account as of the CO₂ allowance transfer deadline for that control period or are transferred into the compliance account by a CO₂ allowance transfer correctly submitted for recordation under subsection (h)(1) of this section by the CO₂ allowance transfer deadline for that control period;
 - (B) For CO₂ offset allowances, the number of CO₂ offset allowances that are available to be deducted in order for a CO₂ budget source to comply with the 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 CO₂ budget source's CO₂ emissions for that control period as determined in accordance with subsection (i) of this section:

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- (i) Unless the provisions of clause (ii) or (iii) of this subparagraph 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) CO₂ allowances are not necessary for deductions for excess emissions for a prior control period under subparagraph (G) of this subdivision;
- (D) Deductions for compliance. Following the recordation, in accordance with subsection (h)(2) of this section, of CO₂ allowance transfers submitted for recordation in the CO₂ budget source's compliance account by the CO₂ allowance transfer deadline for a control period, the commissioner shall deduct CO₂ allowances available under subparagraph (A) of this subdivision to cover the source's CO₂ emissions, as determined in accordance with subsection (i) of this section, for the control period, as follows:
- (i) Until the amount of CO₂ allowances deducted equals the number of tons of total CO₂ emissions, less any CO₂ emissions attributable to the burning of eligible biomass, determined in accordance with subsection (i) of this section, from all CO₂ budget sources at the CO₂ budget source for the control period; or
 - (ii) If there are insufficient CO₂ allowances to complete the deductions in subparagraph (B)(i) of this subdivision, until no more CO₂ allowances available under subparagraph (A) of this subdivision remain in the compliance account;
- (E) Identification of CO₂ allowances by serial number. The CO₂ authorized account representative for a source's compliance account may request that specific CO₂ 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 CO₂ allowances for a control period from the CO₂ budget source's compliance account, in the absence of an identification or in the case of a partial identification of CO₂ allowances by serial number under subparagraph (E) of this subdivision, in the following descending order:
- (i) Any CO₂ allowances, other than CO₂ 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;
 - (ii) Any CO₂ allowances, other than CO₂ 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 subdivision (5) of this subsection, any CO₂ allowances that were awarded as CO₂

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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 CO₂ budget source's compliance account a number of CO₂ 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 CO₂ offset allowances shall be deducted to account for the source's excess emissions. Any such CO₂ allowance deduction shall not affect the liability of the owners and operators of the CO₂ budget source or the CO₂ 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) Consider each day in the control period a day in violation when determining the number of days of violation if a CO₂ budget source has excess emissions for a control period 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; and
- (I) Action by the commissioner on submissions. The commissioner may review and conduct independent audits concerning any submission under the CO₂ Budget Trading Program and make appropriate adjustments of the information in the submissions, including but not limited to, deductions of CO₂ allowances from or transfer of CO₂ allowances to a source's compliance account based on information in any such submissions.
- (6) Banking. Each CO₂ allowance that is held in a compliance account or a general account shall remain in such account unless and until the CO₂ allowance is deducted or transferred under subdivision (5) or (7) of this subsection and under subsection (e)(2), or (h) of this section.
- (7) Account error. The commissioner may correct any error in any CO₂ Allowance Tracking System account. Not later than ten (10) business days of making such correction, the commissioner shall notify the CO₂ 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 CO₂ 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 CO₂ Allowance Tracking System and by correctly submitting for recordation under subsection (h)(1) of this section a CO₂ allowance transfer of all CO₂ allowances in the account to one or more other CO₂ Allowance Tracking System accounts; or
 - (B) If a general account shows no activity for a period of six years or more and does not contain any CO₂ allowances, the commissioner may notify the CO₂ authorized account representative for the account that the account shall be closed and deleted from the CO₂ Allowance Tracking System following twenty business days after

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the notice is sent. The account shall be closed after the twenty day period unless before the end of such twenty day period the commissioner receives a correctly submitted transfer of CO₂ allowances into the account under subsection (h)(1) of this section or a statement submitted by the CO₂ authorized account representative demonstrating to the satisfaction of the commissioner good cause as to why the account should not be closed.

(h) CO₂ Allowance Transfers

- (1) Submission of CO₂ allowance transfers. The CO₂ authorized account representatives seeking recordation of a CO₂ allowance transfer shall submit the transfer to the commissioner. The CO₂ 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 CO₂ allowance to be transferred; and
 - (C) The printed name and signature of the CO₂ authorized account representative of the transferor account and the date signed.
- (2) Recordation.
- (A) Not later than five (5) business days of receiving a CO₂ allowance transfer, except as provided in subparagraph (B) of this subdivision, the commissioner shall record a CO₂ allowance transfer by moving each CO₂ 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 CO₂ allowance identified by serial number in the transfer;
 - (B) A CO₂ allowance transfer into or out of a compliance account that is submitted for recordation following the CO₂ allowance transfer deadline and that includes any CO₂ allowances that are of allocation years that fall within a control period prior to or the same as the control period to which the CO₂ allowance transfer deadline applies shall not be recorded until after completion of the process pursuant to subsection (g)(5)(D) of this section; and
 - (C) Where a CO₂ 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. Not later than five (5) business days of recordation of a CO₂ allowance transfer under subdivision (2) of this subsection, the commissioner shall notify each party to the transfer. Notice shall be given to the CO₂ authorized account representatives of both the transferor and transferee accounts;
 - (B) Notification of non-recordation. Not later than ten (10) business days of receipt of a CO₂ allowance transfer that fails to meet the requirements of subdivision (2)(A) of this subsection, the commissioner shall notify the CO₂ authorized account representatives of both accounts subject to the transfer of:

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- (i) A decision not to record the transfer; and
 - (ii) The reasons for such non-recording; and
- (C) Nothing in this section shall preclude the submission of a CO₂ allowance transfer for recording following notification of non-recording.

(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 “affected unit” and “designated representative” in 40 CFR 75 shall be replaced by the terms “CO₂ budget unit”, and “CO₂ authorized account representative”, respectively, as defined in subsection (a) of this section, except as otherwise provided. 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. If a CO₂ budget unit is not subject to an acid rain emissions limitation, the term “Administrator” shall be replaced by the term “commissioner” as defined in subsection (a) of this section.
- (2) The owner or operator and, to the extent applicable, the CO₂ authorized account representative of a CO₂ budget source shall comply with the monitoring, recordkeeping and reporting requirements as provided in this subsection. The owner or operator of a CO₂ budget source shall comply with the monitoring, recordkeeping and reporting requirements set forth in 40 CFR 75 applicable to CO₂ mass emissions. The owner or operator of a CO₂ budget unit who monitors a non-CO₂ 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 CO₂ mass emissions from such non-CO₂ budget unit according to the procedures for CO₂ budget units established in subdivisions (2) to (8), inclusive, of this subsection.
- (A) Requirements for installation, certification, and data accounting. The owner or operator of each CO₂ budget source shall:
- (i) Install all monitoring systems necessary to monitor CO₂ 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 CO₂ emissions under this section. This may require systems to monitor CO₂ concentration, stack gas flow rate, O₂ 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 test for quality assurance of 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) to (A)(iii), inclusive, of this subdivision on or before the following dates:
- (i) The owner or operator of a CO₂ budget source who intends to apply for early reduction allowances under subsection (f)(7) of this section shall demonstrate that the data submitted in support of the early reduction

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application was recorded in compliance with the requirements of this subsection for all of the early reduction years for which the CO₂ budget source was required to report CO₂ data pursuant to 40 CFR 75. A CO₂ budget source that was not required to submit CO₂ 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 an alternative data source or sources for the calculation of early reduction allowances;

- (ii) The owner or operator of a CO₂ budget source, except for a CO₂ budget source under clause (i) of this subparagraph, that commences commercial operation before July 1, 2008, shall comply with the requirements of this subsection not later than January 1, 2009;
- (iii) The owner or operator of a CO₂ budget source that commences commercial operation on or after July 1, 2008, shall 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; and
- (iv) For the owner or operator of a CO₂ budget source for which construction of a new stack or flue installation is completed after the applicable deadline under clauses (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) An owner or operator of a CO₂ budget source who misses the certification deadline under subparagraph (B)(i) of this subdivision shall not be eligible to apply for early reduction allowances and shall become subject to the certification deadline under subparagraph (B)(ii) of this subdivision;
- (ii) Except as provided in clause (iii) of this subparagraph, the owner or operator of a CO₂ 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 CO₂ concentration, CO₂ emission rate, stack gas moisture content, fuel flow rate, heat input and any other parameter required to determine CO₂ mass emissions in accordance with 40 CFR 75.31(b)(2) or 40 CFR 75.31(c)(3), 40 CFR 75, Appendix section 2.4 or 40 CFR 75 Appendix E;
- (iii) The owner or operator of a CO₂ 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 of a new stack or flue installation under subparagraph (B)(iv) of this subdivision;

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- (iv) CO₂ 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 SO₂, NO_x, and CO₂ emissions calculations for low mass emissions (LME) units, as applicable, under 40 CFR 75.19 and report emissions for such programs using the calculations provided in 40 CFR 75.19, shall also use the CO₂ emissions calculations for LME units under 40 CFR 75.19 for purposes of demonstrating compliance with this section;
- (v) CO₂ 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 SO₂, NO_x, and CO₂ emissions calculations for LME units, as applicable, under 40 CFR 75.19, shall not use the CO₂ emissions calculations for LME units under 40 CFR 75.19 for purposes of demonstrating compliance with this section; and
- (vi) CO₂ 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 CO₂ 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 SO₂ annually;
- (D) Prohibitions. No owner or operator of a CO₂ 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 CO₂ budget unit shall operate the source so as to discharge, or allow to be discharged, CO₂ 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 CO₂ 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 CO₂ 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; and
- (G) No owner or operator of a CO₂ 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 by the permitting authority, in accordance with the applicable provisions of this subsection and 40 CFR 75, 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 CO₂ 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.

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- (A) The owner or operator of a CO₂ 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 NO_x-diluent monitoring system, consisting of a NO_x pollutant concentration monitor, a diluent gas monitor, and an automated data acquisition and handling system and providing a permanent, continuous record of NO_x concentration, in parts per million, diluent gas concentration, in percent CO₂ or O₂; and NO_x emission rate, in lb/MMBtu;
 - (iii) A moisture monitoring system, as described in 40 CFR 75.11(b)(2), which provides a permanent, continuous record of the stack gas moisture content, in percent H₂O;
 - (iv) A carbon dioxide monitoring system, consisting of a CO₂ pollutant concentration monitor, or an oxygen monitor plus suitable mathematical equations from which the CO₂ concentration is derived, and an automated data acquisition and handling system and providing a permanent, continuous record of CO₂ emissions, in percent CO₂; and
 - (v) An oxygen monitoring system, consisting of an O₂ concentration monitor and an automated data acquisition and handling system and providing a permanent, continuous record of O₂ in percent O₂;
- (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 CO₂ 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 CO₂ 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 CO₂ 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

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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 CO₂ 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 commissioner 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 CO₂ 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 CO₂ 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; and
 - (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 CO₂ 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, shall be considered valid quality-assured data, provided that the permitting authority does not invalidate the provisional certification by issuing a notice of disapproval not later than 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 not later than 120 days of receipt of the complete certification

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application in accordance with subparagraph (H)(ii) of this subdivision. In the event the commissioner does not issue such a notice not later than such 120-day period, each monitoring system that meets the applicable performance requirements of 40 CFR 75 and is included in the certification application shall be deemed certified for use under the CO₂ 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 not later than 120 days of receipt of such complete application;
 - (ii) Incomplete application notice. If the certification application is not complete, then the commissioner shall issue a written notice of incompleteness and set a reasonable date by which the CO₂ authorized account representative shall 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 CO₂ 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 shall no longer be 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; and
 - (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 CO₂ 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 CO₂ mass emissions using a CO₂ pollutant concentration monitor and a flow monitor, the maximum

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potential concentration of CO₂ 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 CO₂ 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. 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 of 40 CFR 75.20(g); and
- (M) Certification and recertification procedures for alternative monitoring systems. The CO₂ 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 CO₂ Budget Trading Program. The CO₂ 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; and
- (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 shall issue a notice of disapproval of the certification status of such monitoring system. For the purposes of this subparagraph, 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 shall revoke 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 set forth in subdivision (3) of this subsection for each disapproved monitoring system.

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- (5) Notifications. The CO₂ authorized account representative for a CO₂ budget source shall submit written notice to the commissioner in accordance with 40 CFR 75.61.
- (6) Recordkeeping and reporting.
- (A) General provisions. The CO₂ 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 CO₂ budget source shall comply with requirements of 40 CFR 75.62;
- (C) Certification applications. The CO₂ authorized account representative shall submit an application to the commissioner not later than 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 CO₂ authorized account representative shall report the CO₂ mass emission data for the CO₂ 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 to March 31, 2009, inclusive; 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 such quarter is the third or fourth quarter of 2008, in which case reporting shall commence in the quarter covering January 1, 2009 to March 31, 2009, inclusive;
- (E) The CO₂ authorized account representative shall submit each quarterly report to the commissioner not later than 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) For each CO₂ budget unit, or group of units using a common stack, quarterly reports shall include all of the data and information required in 40 CFR 75, Subpart G, except for the provisions concerning opacity, NO_x and SO₂;
- (G) Compliance certification. The CO₂ 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. The 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 CO₂ emission controls and for all hours where data are substituted in accordance with 40 CFR 75.34(a)(1), the add-on

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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 CO₂ emissions; and

- (iii) The CO₂ concentration values substituted for missing data under 40 CFR 75, Subpart D do not systematically underestimate CO₂ emissions;

(7) Petitions.

(A) Except as provided in subparagraph (B) of this subdivision, the CO₂ authorized account representative of a CO₂ 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. The application of an alternative to any requirement of 40 CFR Part 75 shall be in accordance with this subsection only if the petition is approved in writing by the Administrator, and subsequently approved in writing by the commissioner;

(B) The CO₂ authorized account representative of a CO₂ 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 CO₂ concentration CEMS used under 40 CFR 75.71(a)(2). The application of an alternative to any such requirement shall be in accordance with this subsection only if the petition is approved in writing by the Administrator, and subsequently approved in writing by the commissioner; and

(C) Petitions for a CO₂ budget unit that is not subject to an acid rain emissions limitation.

(i) The CO₂ authorized account representative of a CO₂ 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. The application of an alternative to any requirement of 40 CFR 75 shall be in accordance with this subsection only if the petition is approved in writing by the Administrator, and subsequently approved in writing by the commissioner; and

(ii) In the event that the Administrator declines to review a petition under clause (i) of this subparagraph, the CO₂ authorized account representative of a CO₂ 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 this subsection. That petition shall contain all of the relevant information specified in 40 CFR 75.66. The application of an alternative to any requirement of this subsection shall be in accordance with this subsection only if the petition is approved in writing by the commissioner;

(8) CO₂ budget units that co-fire eligible biomass.

(A) The CO₂ authorized account representative of a CO₂ 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:

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- (i) For each shipment of solid eligible biomass fuel fired at the CO₂ 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 CO₂ 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 CO₂ 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 CO₂ 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 CO₂ budget unit, the total eligible biomass fuel input, in standard cubic feet;
 - (vi) For each distinct type of eligible biomass fuel fired at the CO₂ 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 CO₂ 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 CO₂ 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 CO₂ emitted from the CO₂ 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 CO₂ 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 CO₂ budget unit due to firing eligible biomass fuel, in MMBtu, calculated in accordance with subparagraph (D)(ii) of this subdivision;
 - (xii) A description and documentation of monitoring technology employed, and a description and documentation of fuel sampling methodology employed, including sampling frequency; and
 - (xiii) For each distinct type of eligible biomass fuel fired at the CO₂ budget unit, chemical analysis, including heating value and carbon content;
- (B) An owner or operator of a CO₂ 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 CO₂ budget unit during the reporting quarter. The total dry weight shall be determined for each fuel type as follows:

- (i) For solid fuel types:

$$F_j = \sum_{i=1}^m (1 - M_i) \times F_i$$

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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) CO₂ 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 CO₂ budget unit, as measured and recorded in accordance with subdivisions (1) to (7), inclusive, of this subsection; or

(ii) For any full calendar quarter during which fuels other than eligible biomass are combusted at the CO₂ budget unit, as determined using the following equation:

$$\text{CO}_2 \text{ tons} = \sum_{j=1}^n F_j \times C_j \times O_j \times 44/12 \times 0.0005$$

Where:

CO₂ tons = CO₂ 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

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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 and

(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; and

(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) Not later than March 1, 2009 and March 1 of each year thereafter, CO₂ budget sources shall submit to the commissioner electricity generation data, in MWhs, associated with operation of CO₂ budget units at the CO₂ budget sources. The following MWh data shall be included, if applicable:

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- (i) CO₂ budget sources that are required to submit generation data to the Regional ISO shall submit to the commissioner the same CO₂ budget unit-level MWh values submitted to the Regional ISO and a statement certifying that the MWh of electrical output reported reflects the total actual electrical output of the CO₂ budget units at the CO₂ budget source used by the Regional ISO to determine settlement resources of energy market participants;
- (ii) CO₂ budget sources that report gross hourly MW data to the Administrator, shall submit to the commissioner an annual summation of the CO₂ budget unit-level gross output data submitted to the Administrator; and
- (iii) CO₂ budget sources that do not submit generation data to the Regional ISO or to the Administrator shall submit to the commissioner net electrical output information in accordance with subparagraph (D) of this subdivision. A CO₂ budget source whose electrical output is not used in Regional ISO energy market settlement determinations shall propose to the commissioner a method for quantification of net electrical output;
- (B) CO₂ budget sources creating useful thermal energy and selling steam shall use billing meters to determine net steam output. A CO₂ budget source whose steam output is not measured by billing meters or whose steam output is combined with output from a non-CO₂ 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 CO₂ budget source may report heat input providing useful steam output as a surrogate for steam output;
- (C) Monitoring. Not later than March 1, 2009, CO₂ budget sources shall provide an output monitoring plan containing the elements described in subparagraphs (D) to (G), inclusive, of this subdivision;
- (D) The output monitoring plan submitted by the CO₂ 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 shall contain all CO₂ budget sources and all generators served by each CO₂ budget source and the relationship between CO₂ Budget sources and generators. If a generator served by a CO₂ budget source is also served by a non-affected source, the non-affected source and its relationship to each generator shall be indicated on the diagram as well. The diagram shall indicate where the net electric output is measured and shall include all electrical inputs and outputs to and from the plant. If net electric output is determined using a billing meter, the diagram shall show each billing meter used to determine net sales of electricity and shall show that all electricity measured at the point of sale is generated by the CO₂ budget sources; and
- (ii) For net thermal output, the diagram shall include all steam or hot water coming into the net steam system, including steam from CO₂ 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 shall have an estimated temperature, pressure and phase indicator, and an enthalpy in Btu/lb. The diagram of the net steam system shall identify all useful loads, house loads, parasitic loads, any other steam loads and all boiler feed water returns. The diagram shall represent all energy losses in the system as either usable or unusable losses. The diagram shall also

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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 shall show the monitoring equipment used to determine the sales of steam;

- (E) The output monitoring plan submitted by the CO₂ 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 shall 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 shall be included;
- (F) The output monitoring plan submitted by the CO₂ budget source pursuant to subparagraph (C) of this subdivision shall include a detailed description of all quality assurance and quality control activities performed to maintain the output system in accordance with subparagraph (M) of this subdivision;
- (G) The output monitoring plan submitted by the CO₂ budget source pursuant to subparagraph (C) of this subdivision shall include documentation supporting any output values to be used as a missing data value if there are periods of invalid output data. The missing data output value shall 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. CO₂ 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 shall record the electric or thermal output. Any electric or thermal output values that the facility reports shall 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 shall either meet an accuracy of ten (10) percent of the reference value, or each component monitor for the output system shall meet an accuracy of three (3) percent of the full scale value, whichever is less stringent, as determined pursuant to clause (iii) or (iv) of this subparagraph;
- (iii) The system approach to accuracy shall include a determination of how the system accuracy of ten (10) percent is achieved using the individual components in the system and shall 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 the owner or operator of a CO₂ budget source shall retest or replace the measurement equipment to achieve such level of accuracy. Data shall be considered invalid, prospectively, for purposes of determining allocations. Data remain

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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 shall be performed by the owner or operator of a CO₂ 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;
 - (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, the owner or operator of a CO₂ budget source shall 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) to (H)(iv), inclusive, 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 the owner or operator of a CO₂ budget source shall retest or replace the measurement equipment and meet that requirement; and
 - (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; and
- (J) Recordkeeping and Reporting. The CO₂ 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 CO₂ budget source shall retain data used to monitor, determine or calculate net generation for ten (10) years;
 - (ii) Annual output reports. Not later than March 1, 2009 and March 1 of each year thereafter, the CO₂ authorized account representative shall submit to the commissioner an annual output report containing until-level MWh data and all useful thermal output information not later than 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 CO₂ budget sources or CO₂ budget sources for which the submission is made. I certify

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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.

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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.** Except as otherwise provided, 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) “Biogas” means the gas, primarily methane and CO₂, resulting from the decomposition of organic matter under anaerobic conditions.
 - (7) “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.
 - (8) “Certification” means an independent third-party verification that a CO₂ emissions offset project application and all measurement, monitoring or verification associated therewith meets the requirements of this section.
 - (9) “CH₄” means methane.
 - (10) “CO₂ emissions offset project” means a project to reduce or avoid atmospheric loading of CO₂, CO₂e or sequestered carbon where such project yields reduced or avoided emissions that are real, additional, verifiable, enforceable and permanent.
 - (11) “CO₂e” means “carbon dioxide equivalent” as defined in section 22a-174-31 of the Regulations of Connecticut State Agencies.
 - (12) “Commercial building” means a non-residential building to which the provisions of ANSI/ASHRAE/IESNA Standard 90.1 apply.
 - (13) “Conflict of interest” means a situation under which an individual has a relationship with any specific project sponsor, CO₂ 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.

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- (14) “Condensing mode” means the design and operation of furnaces or boilers in a mode that leads to the production of condensate in flue gases.
- (15) “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 the appropriate regulatory agencies of all participating states to carry out certain obligations relative to CO₂ 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.
- (16) “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.
- (17) “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 and for building equipment and components, means a relative measure of the impact of equipment or components on building energy usage.
- (18) “Energy services” means the provision of useful services to building occupants, such as heating and hot water, cooling, and lighting.
- (19) “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 are at least 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.
- (20) “Furnace” 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.
- (21) “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.
- (22) “IESNA” means the Illuminating Engineering Society of North America.
- (23) “Independent verifier” means an individual who has been approved by the commissioner or the commissioner’s designee to conduct verification activities.
- (24) “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

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product or practice, 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.

- (25) “Non-census water” means streams, sloughs, estuaries, and canals that are more than 120 feet and less than 1/8 of a mile wide and lakes, reservoirs, and ponds that are 1 to 40 acres in size.
- (26) “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 are more than 120.0 feet wide, and clearings more than one acre in size, to qualify as non-forest land.
- (27) “Offset project” means all equipment, materials, items, or actions directly related to the reduction of CO₂ equivalent emissions or the sequestration of carbon specified in a consistency application submitted pursuant to this section.
- (28) “On-site combustion” means the combustion of fossil fuel at a building to provide building services, such as heating, hot water, or electricity.
- (29) “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.
- (30) “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.
- (31) “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.
- (32) “Project sponsor” means any person who owns or operates an eligible CO₂ emission offset project or who owns a CO₂ emissions credit retirement.
- (33) “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.
- (34) “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 16-245a 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.
- (35) “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.
- (36) “RESNET” means the Residential Energy Services Network, a not-for-profit corporation that establishes nationally recognized standards for building energy efficiency rating systems.

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- (37) “SF₆” means sulfur hexafluoride.
- (38) “SF₆-containing operating equipment” means any equipment used for the transmission or distribution of electricity that contains SF₆.
- (39) “System benefit fund” means the monies collected directly from retail electricity or natural gas ratepayers pursuant to section 16-245l of the Connecticut General Statutes or the statutes and regulations of other states.
- (40) “Total solids” means the total of all solids in a sample, including total suspended solids, total dissolved solids, and volatile suspended solids.
- (41) “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.
- (42) “Verification” means the determination by an independent verifier that certain parts of a CO₂ emissions offset project consistency application or measurement, monitoring and verification report conform to the requirements of this section.
- (43) “Volatile solids” means the fraction of total solids that is comprised primarily of organic matter.
- (44) “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.
- (45) “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.
- (46) “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 CO₂ emissions offset project undertaken to create CO₂ 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 CO₂ Emissions Offset Projects.

- (1) The commissioner or commissioner’s designee may award CO₂ offset allowances to sponsors of CO₂ emissions offset projects or CO₂ emissions credit retirements that have

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reduced or avoided atmospheric loading of CO₂ or CO₂ equivalent or sequestered carbon as demonstrated in accordance with the applicable provisions of this section provided that such projects represent CO₂ or CO₂ equivalent reductions or carbon sequestration that are real, additional, verifiable, enforceable, and permanent. The use of such offset allowances for compliance purposes shall be subject to the provisions of section 22a-174-31 of the Regulations of Connecticut State Agencies.

- (2) Eligible CO₂ emissions offset projects. Offset projects shall satisfy all the applicable requirements of this section to qualify for the award of CO₂ offset allowances. As identified in subsections (d) to (h), inclusive, 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 CO₂ 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 CO₂ 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 CO₂ emissions credit retirements. A CO₂ emissions credit retirement shall satisfy all the applicable requirements of this section, to qualify for the award of CO₂ offset allowances. CO₂ 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 CO₂ offset allowances for CO₂ 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) to (h), inclusive, of this section, the following general requirements shall apply to each offset project:
 - (A) CO₂ offset allowances shall not be awarded for an offset project or CO₂ 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 CO₂ 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 CO₂ 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) to (D), inclusive, of the Regulations of

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- (D) CO₂ offset allowances shall not be awarded to an offset project or CO₂ 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 CO₂ emissions offset projects. The commissioner or the commissioner's designee may award CO₂ 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 CO₂ 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 CO₂ offset allowances for a second 10-year allocation period. Prior to the expiration of the initial allocation period, the offset project sponsor shall submit a consistency application pursuant to this section and receive a consistency determination from the commissioner or the commissioner's designee; and
- (B) Maximum afforestation allocation period. The commissioner or the commissioner's designee may award CO₂ 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 CO₂ offset allowances for a second 20-year allocation period, provided the offset sponsor has 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 CO₂ 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 CO₂ 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 CO₂ 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.

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- (10) Application Process. Any person may act as the sponsor of an eligible CO₂ emissions offset project or CO₂ emissions credit retirement, provided that such person meets the requirements of this subdivision as follows:
- (A) Establishment of general account. The sponsor of an offset project or CO₂ 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 CO₂ offset allowances under this subsection shall be from the CO₂ authorized account representative for the general account of the sponsor of the relevant offset project or CO₂ 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 offset project 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) to (h), inclusive, of this section;
- (iii) The emissions baseline determination as required by relevant provisions of subsection (d) to (h), inclusive, of this section;
- (iv) An explanation of how the projected reduction or avoidance of atmospheric loading of CO₂ or CO₂ equivalent or the sequestration of carbon is to be quantified, monitored and verified as required by the relevant provisions of subsection (d) to (h), inclusive, 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, CO₂ offset allowances under the CO₂ 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 said 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

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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 CO₂ 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 of 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 CO₂ 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; and
- (D) CO₂ emissions offset credit retirements. For a CO₂ emissions credit retirement, the consistency application shall include sufficient information to demonstrate that the CO₂ 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 shall be filed with the appropriate commissioner in such 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 shall 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; and

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- (D) For CO₂ 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. Not later than 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; and
- (B) Consistency determination. Not later than 150 days of making the completeness determination under subparagraph (A) of this subdivision, the commissioner or the commissioner's designee shall 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 shall inform the project sponsor of the offset project's deficiencies.
- (d) Landfill Methane (CH₄) Capture and Destruction**
- (1) Eligibility. An offset project that captures and destroys methane from landfills shall meet the requirements of this subsection 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) The offset project may only occur at a landfill that is not subject to the New Source Performance Standards for municipal solid waste landfills pursuant to 40 CFR 60, Subpart CC and Subpart WWW; and
- (B) Offset project description. The project sponsor shall provide a detailed narrative of the offset project action or actions to be taken, including supporting materials as appropriate. The project narrative shall include the following:
- (i) The name or names and addresses of the owner and operator of the offset project;
- (ii) Location and specifications of the landfill where the offset project is proposed to occur, including waste in place;
- (iii) The name or names and addresses of the owner and operator of the landfill where the offset project is proposed to 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 CO₂e, of the methane (CH₄) collected and metered for thermal destruction as part of the offset project. Baseline CH₄ fugitive emissions shall be calculated as follows:

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$$\text{Emissions (tons CO}_2\text{e)} = (V \times M \times (1 - \text{OX}) \times \text{GWP}) / 2000$$

Where:

- V = Volume of CH₄ collected (ft³);
- M = Mass of CH₄ per cubic foot (0.04246 lbs/ft³ default value at 1 atmosphere and 20° C);
- OX = Oxidation factor (0.10), representing estimated portion of collected CH₄ that would have eventually oxidized to CO₂ if not collected; and
- GWP = CO₂e global warming potential of CH₄ (23).

- (3) Calculating emissions reductions. Emissions reductions shall be determined based on the difference between potential fugitive CH₄ emissions that would have occurred if metered CH₄ collected from the landfill for thermal destruction as part of the offset project was not collected and destroyed. CO₂e emissions reductions shall be calculated as follows:

$$\text{Emissions Reductions (tons CO}_2\text{e)} = (V \times M \times (1 - \text{OX}) \times C_{\text{ef}} \times \text{GWP}) / 2000$$

Where:

- V = Volume of CH₄ collected (ft₃);
- M = Mass of CH₄ per cubic foot (0.04246 lbs/ft³ default value at 1 atmosphere and 20° C);
- OX = Oxidation factor (0.10), representing estimated portion of collected CH₄ that would have eventually oxidized to CO₂ if not collected;
- C_{ef} = Combustion efficiency of methane control technology (0.98); and
- GWP = CO₂e global warming potential of CH₄ (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 CH₄ concentration. Annual monitoring and verification reports required pursuant to subsection (j) of this section shall include monthly volumetric flow rate and CH₄ concentration data, including documentation that the CH₄ was actually supplied to the combustion source. The project sponsor shall also:
- (A) 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 CH₄ composition. The monitoring and verification plan shall 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; and
- (B) Annually verify landfill gas CH₄ composition through landfill gas sampling and third party laboratory analysis using applicable U.S. Environmental Protection Agency laboratory test methods.

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(e) Reduction in emissions of sulfur hexafluoride (SF₆).

(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 this subsection and all applicable requirements of this section, to qualify for the award of CO₂ offset allowances.

(A) Eligible offset projects shall consist of the incremental actions to be taken, beyond current actions, to achieve a reduction in emissions of SF₆ 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 (SF₆) 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 SF₆ entity-wide emissions rate for the baseline year is less than the applicable emissions rate in Table 31a-1B. The entity-wide SF₆ emissions rate shall be calculated as follows:

$$\text{SF}_6 \text{ Emissions Rate (\%)} = (\text{Total SF}_6 \text{ Emissions for Reporting Year}) / (\text{Total SF}_6 \text{ Nameplate Capacity at End of Reporting Year})$$

Where:

SF₆ Nameplate Capacity refers to all SF₆-containing operating equipment owned or operated by the entity, at full and proper SF₆ charge of the equipment rather than the actual charge of the equipment, which may reflect leakage.

**Table 31a-1A and B
 SF₆ 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%

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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 SF₆ 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 SF₆ 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 of 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 SF₆ 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 SF₆ emissions through regular ongoing maintenance;
 - (iii) The inability of the entity 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; and
 - (B) The owner and operator of the transmission or distribution entity.
- (3) Emissions baseline determination. Baseline SF₆ emissions shall be determined based on annual entity-wide reporting of SF₆ 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 SF₆ in order to determine entity-wide emissions of SF₆. The scope of such tracking and accounting shall include all electric transmission and distribution assets and all SF₆-containing and SF₆-handling equipment owned or operated by the reporting entity.
- (A) Emissions shall be determined based on the following mass balance method:

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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 -containing 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 -containing 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 -containing operating equipment; and

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:

$$\text{Emissions (tons CO}_2\text{e)} = [(V_{\text{iby}} - V_{\text{iey}}) + (PA_{\text{psd}} + PA_{\text{e}} + PA_{\text{rre}}) - (SD_{\text{op}} + SD_{\text{rs}} + SD_{\text{df}} + SD_{\text{sor}}) - (CNP_{\text{ne}} - CNP_{\text{rse}})] \times \text{GWP}/2000$$

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;

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- SD_{rs} = Returns of SF₆ to supplier, producer or distributor;
- SD_{df} = SF₆ sent to destruction facilities;
- SD_{sor} = SF₆ sent off-site for recycling;
- CNP_{ne} = Total SF₆ nameplate capacity of new equipment at proper full charge;
- CNP_{rse} = Total SF₆ nameplate capacity of retired or sold equipment at proper full charge; and
- GWP = CO_{2e} global warming potential of SF₆ (22,200); and

- (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) to (C), inclusive, of this subsection to support emissions calculations.
- (4) Calculating emissions reductions. Emissions reductions shall represent the annual entity-wide avoided fugitive emissions of SF₆ 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:
- $$\text{Emissions Reduction (short tons CO}_2\text{e)} = (\text{Total Pounds of SF}_6\text{ Emissions in Baseline Reporting Year}) - (\text{Total Pounds of SF}_6\text{ Emissions in Reporting Year}) \times \frac{GWP}{2000}$$
- Where:
- GWP = CO_{2e} global warming potential of SF₆ (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 SF₆ emissions reductions and the project sponsor shall also provide the following documentation:

- (A) An identification of all facilities managed by the entity from which all SF₆ gas is procured and disbursed and maintain an entity-wide log of all SF₆ 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 SF₆ or reclaim SF₆ 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 SF₆ 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 SF₆-containing operating equipment and all other SF₆-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; and

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- (C) A monitoring and verification plan as part of the consistency application, which shall include an SF₆ 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 this subsection and all applicable requirements of this section, to qualify for the award of CO₂ offset allowances.
- (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; and
- (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 shall 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) The name or names and addresses of the owner of the land within the offset project boundary;
- (B) A 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;

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- (ii) Live below-ground tree biomass;
 - (iii) Soil carbon; and
 - (iv) Dead organic matter, and 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, and 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 the offset project boundary shall be divided into sub-populations that form relatively homogenous units. When defining sub-populations, 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:

$$\text{CO}_2 \text{ tons} = [(A \times C/\text{ha})(44/12)] / 0.9072$$

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:

$$\text{TC}_{\text{pb}} = \text{TC}_{\text{latb}} + \text{TC}_{\text{lbtb}} + \text{TC}_s [+ \text{TC}_{\text{lantb}} + \text{TC}_{\text{doff}} + \text{TC}_{\text{docwd}}]$$

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;

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- 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; and
- 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 shall be directly measured using a measurement protocol and sample size that achieves a demonstrated quantified accuracy such that there is at least 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:

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

Where:

n = required number of sample plots for each reporting sub-populations;

s = standard deviation;

mean = mean reported carbon content for the sample population; and

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; and

- (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. CO₂ 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 CO₂ equivalent. Sequestered carbon shall be calculated using a stock-change approach as follows:

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

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; and

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 shall 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;
- (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 CO₂ 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.
- (A) A project sponsor shall submit monitoring and verification reports. Such 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 the commissioner's 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

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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; and

- (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 CO₂ 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 CO₂ Emissions Due to End-Use Energy Efficiency**
- (1) Eligibility. An offset project that reduces CO₂ 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 this subsection and all other applicable requirements of this section, to qualify for the award of CO₂ 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

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- (G) 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 or buildings where the offset project actions are proposed to occur;
 - (B) The name or names and address of the owner and operator of the building or buildings;
 - (C) The parties implementing the offset project, including the lead contractor or contractors, 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 subparagraphs (A)(iii) and (C) of this subdivision. 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

<u>Technology</u>	<u>Size (Btu/hr)</u>	<u>Rating Method</u>	<u>Minimum Efficiency</u>
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 For purposes of Table 31a-2, “Thermal Efficiency” means the useful energy output (Btu) divided by energy input (Btu) and presented as a percentage 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.

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- (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

<u>Technology</u>	<u>Rating Method</u>	<u>Min. Efficiency</u>
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 purposes of Table 31a-3, "furnace" means equipment with a heat input rate of less than 225,000 Btu/hr; "boiler" means equipment with a heat input rate of less than 300,000 Btu/hr; and "water heater" means 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) to (G), inclusive, of this subsection shall meet the applicable requirements, as specified, in *Energy Benchmark for High Performance Buildings, Version 1.1*, New Buildings Institute, 2005 (referred to as EBHPB in this section), 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; and
- (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

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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. The 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

<u>Fuel</u>	<u>Emission Factor (lbs. CO₂/MMBtu)</u>	<u>Oxidation Factor</u>
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:

$$\text{Energy Usage (MMBtu)} = \text{BEU}_{\text{AECM}} \times A$$

Where:

BEU_{AECM} = Annual pre-installation baseline energy use by fuel type (MMBtu) attributable to the application to be targeted by the energy conservation measure or measures. 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; and

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; and

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

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$$\text{Emissions (lbs. CO}_2\text{)} = \sum_{i=1} \text{BEU}_i \times \text{EF}_i \times \text{OF}_i$$

Where:

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

EF_i = Emissions factor (lbs. CO₂/MMBtu) for fuel type i listed at subdivision (4), Table 31a-4 of this subsection; and

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:

$$\text{Energy Savings (MMBtu)} = (\text{BEU}_{\text{AECM}} \times \text{A}) - (\text{PIEU}_{\text{ECM}} \times \text{A})$$

Where:

BEU_{AECM} = Annual pre-installation baseline energy use by fuel type (MMBtu) calculated pursuant to subdivision (6)(A) to (D), inclusive, 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; and

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 subsection; and

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

$$\text{Emissions Reduction (lbs. CO}_2\text{)} = \sum_{i=1}^n \text{ES}_i \times \text{EF}_i \times \text{OF}_i$$

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. CO₂/MMBtu) for fuel type i listed at subdivision (4), Table 31a-4 of this subsection; and

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

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- (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 shall 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 shall 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, the 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 CO₂ emissions offset project, a process consistent with IPMVP “Option C. Whole Facility” may be used, as applicable. Any 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, the 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.” Any 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; and
 - (iii) For existing and new residential buildings, the 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 the 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

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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:

$$\text{Energy Savings (MMBtu)} = (\text{BEU}_{\text{AECM}} \times A) - (\text{PIEU}_{\text{ECM}} \times A)$$

Where:

BEU_{AECM} = Annual pre-installation baseline energy use by fuel type (MMBtu) attributable to the application to be targeted by the energy conservation measure or measures, 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 or measures 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 or measures, 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; and

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

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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; and

- (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 (CH₄) 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 this subsection and all other 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) CO₂ 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; and

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$MG_{STATE} =$ 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) The name or names and addresses of the owner and operator of the offset project;
- (B) Location and specifications of the facility where the offset project is proposed to occur;
- (C) The name or names and addresses of the owner and operator of the facility where the offset project is proposed to 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 is proposed to 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:

$$CO_2e \text{ (tons)} = (V_m \times M) / 2000 \times GWP$$

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 $20^\circ C$); and

$GWP =$ Global warming potential of CH_4 (23);

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- (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)); and

VS_{avail} = Volatile solids available for degradation in manure or organic food waste storage each month as determined from the equation:

$$VS_{avail} = VS_p + \frac{1}{2} VS_{in} - VS_{out}$$

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 $\frac{1}{2}$ 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); and

f = Van't Hoff-Arrhenius factor for the specific month as determined using the equation below. Using a base temperature of 30°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);

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- T_2 = Average monthly ambient temperature for farm (converted from ° Celsius to ° Kelvin) as determined from the nearest National Weather Service certified weather station (if reported temperature ° C > 5° C; if reported temperature ° C < 5° C, then $F = 0.104$);
- T_1 = 303.16 (30° C converted to °K); and
- GC = Ideal gas constant (1.987 cal/K mol); and

- (C) The volume of CH₄ produced (ft³) 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 CH₄ (ft³);
- VS_{deg} = Volatile solids degraded (kg); and
- B_o = Manure or organic food waste type-specific maximum methane generation constant (m³ CH₄/kg VS degraded). For dairy cow manure, $B_o = 0.24$ m³ CH₄/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 that provided in said Table A-162, the project sponsor shall provide justification and documentation to the commissioner or the commissioner's designee.

- (4) Calculating emissions reductions. Emissions reductions shall be determined based on the potential emissions (in tons of CO₂e) of the CH₄ 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 CH₄ produced by the anaerobic digester, as monitored pursuant to subdivision (5) of this subsection. If the project is a regional-type digester, CO₂ 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 CO₂ 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. CO₂ 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. CO₂/gallon;
- (ii) Gasoline: 19.878 lbs. CO₂/gallon; or

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- (iii) Other fuel: submitted emission factor approved by the commissioner or the commissioner's designee; and

- (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. CO₂ 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. CO₂ per ton-mile;
 - (ii) Gasoline: 0.133 lbs. CO₂ 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 CH₄ concentration. Annual monitoring and verification reports shall include monthly biogas volumetric flow rate and CH₄ 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 shall 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 of 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 CH₄ 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; and
 - (D) The project sponsor shall quarterly verify biogas CH₄ composition through gas sampling and third party laboratory analysis using applicable U.S. EPA test methods.

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Table 31a-5
Input Monitoring Requirements

Input Parameter	Measurement Unit	Frequency of Sampling	Sampling Method or Methods
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 °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;

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- (v) Employ staff with, knowledge, experience, and where appropriate, professional licenses appropriate to the specific category(ies) of offset projects specified in subsections (d) to (h), inclusive, 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 CO₂ emissions offset categories specified in subsections (d) to (h), inclusive, 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) to (vii), inclusive, 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 of 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.

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- (4) The commissioner shall approve or deny a complete application for accreditation not later than 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.
- (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, that is 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; and
- (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) Lack of qualification 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 CO₂ Offset Allowances**
- (1) Quantities of CO₂ 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 shall award one CO₂ offset allowance for each ton of demonstrated reduction in CO₂ or CO₂ equivalent emissions or sequestration of CO₂.

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- (2) CO₂ emissions credit retirement. If a project sponsor received a consistency determination pursuant to subsection (c)(12) of this section, one CO₂ offset allowance shall be awarded for each ton of reduction of CO₂ or CO₂ equivalent or sequestration of CO₂, represented by the relevant credits or allowances retired. If a credit or allowance is represented in metric tons, 1.1023 tons shall be awarded for every metric ton, provided that total CO₂ offset allowances awarded shall be rounded down to the nearest whole ton.
- (3) Recordation of CO₂ offset allowances. After CO₂ offset allowances are awarded under this subsection the commissioner or the commissioner's designee shall record such CO₂ offset allowances in the project sponsor's general account.
- (4) Place for filing monitoring and verification reports. The monitoring and verification report shall 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 CO₂ emissions offset projects undertaken prior to January 1, 2009, the project sponsor shall submit the monitoring and verification report covering the pre-2009 period no later than June 30, 2009; and
- (B) For CO₂ emissions offset projects undertaken on or after January 1, 2009, the monitoring and verification report shall be submitted not later than 6 months following the completion of the last calendar year during which the offset project achieved CO₂ equivalent reductions or sequestration of CO₂ for which the project sponsor seeks the award of CO₂ 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 CO₂ emissions reduction or CO₂ 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 CO₂ offset allowances under Section 22a-174-31a of the Regulations of Connecticut State Agencies is contingent on meeting the requirements of said 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

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physical location of the offset project. I submit to the legal jurisdiction of the State of Connecticut.”; and

- (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 include:
- (i) A statement of the adequacy and validity of information supplied by the project sponsor to determine CO₂ emissions reductions or CO₂ sequestration pursuant to the applicable requirements of this section;
 - (ii) A statement of the adequacy and consistency of methods used to quantify, monitor, and verify CO₂ emissions reductions and CO₂ 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 and 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 CO₂ 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 shall approve or deny, with or without conditions, a complete monitoring and verification report not later than 90 days following receipt of a complete report.

Statement of Purpose:

To adopt two new regulations to implement the provisions of the Regional Greenhouse Gas Initiative (RGGI) as required by section 93 of Public Act 07-242.

RGGI is a program under which the Northeast and Mid-Atlantic states (Connecticut, New York, Massachusetts, Rhode Island, Vermont, New Hampshire, Maine, New Jersey, Maryland, and Delaware) have jointly designed and committed to individually implement a cooperative effort to stabilize, the reduce carbon dioxide (CO₂) emissions from the electric power generating sector. CO₂ is a greenhouse gas (GHG) that causes global warming. To help address climate change, the RGGI participating states have developed a regional strategy for controlling emissions from large fossil fuel-fired power plants. The 2008 session of Connecticut General Assembly adopted House Bill 5600, *An Act Concerning Connecticut Global Warming Solutions*, which establishes mandatory GHG reduction targets by 2020 and 2050. Central to this initiative and these requirements is the implementation of a multi-state cap-and-trade program with a market-based

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emissions trading system. The proposed program was developed with, and is to be implemented in consultation with, the Department of Public Utility as required by section 22a-200c of the Connecticut General Statutes. The proposed program will require electric power generators in Connecticut and the other participating states to first stabilize, then reduce CO₂ emissions.

An important part of the state's overall Climate Change Action Plan, the RGGI process began in 2003, and the governors of seven states signed a Memorandum of Understanding (MOU) in December of 2005. The following August, a final regional Model Rule was released and a corrected RGGI Model Rule was released in January of 2007. Individual states are now working to adapt the regional Model Rule to state-specific formatting, and state-specific policies are being developed to fill in blank sections of the Model Rule. The submission of these new sections is to satisfy both the statutory requirements set forth in the MOU as well as to fill in these blank, state-specific sections of the Model Rule.

Thus, in accordance with CO₂ reduction goals and requirements, Connecticut proposes to adopt new section 22a-174-31 and new section 22a-174-31a of the Regulations of Connecticut State Agencies as follows:

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 CO₂ emissions from electric power generators greater than 25 MW. While smaller customer side combined heat and power generators will be provided allowances equal to their emissions, most affected sources will be required to purchase CO₂ allowances on the open market or at a fixed price, under limited circumstances, and surrender an amount of allowances equivalent to the tons of CO₂ emitted over a three year compliance period. The Department will invest these funds, in accordance with the provisions of section 22a-200c, "on behalf of electric ratepayers in energy conservation, load management and Class I renewable energy programs" in Connecticut. The first compliance period will begin on January 1, 2009, requiring record keeping, monitoring and reporting of emissions.

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 CO₂ emissions due to end-use energy efficiency; and avoided CH₄ emissions from agricultural manure management operations.

Effect on other laws: The proposed regulations are designed to work with other state and federal environmental regulations to the extent that monitoring, record keeping and reporting requirements used in other programs can also be used in the proposed regulations. There is no effect on federal regulation of CO₂, as such a program does not exist. Should the federal government adopt a CO₂ emissions control program similar to that in the proposed regulations, the participating states have indicated they will review and amend their programs if necessary.

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CONCERNING

Abatement of Air Pollution -
Control of Carbon Dioxide Emissions

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Received and filed in the Office of the
Secretary of the State

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Approved by the Attorney General

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Approved by the Legislative Regulation
Review Committee or General Assembly

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Published in Connecticut Law Journal

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