

PUBLIC REVIEW MODEL RULE DRAFT 03/23/06

Part XX CO₂ Budget Trading Program

Subpart XX-1 CO₂ Budget Trading Program General Provisions

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1 Subpart XX-1 CO₂ Budget Trading Program General Provisions

3 XX-1.1 Purpose

5 This Part establishes the NAME OF RELEVANT RGGI STATE component of the
6 CO₂ Budget Trading Program, which is designed to stabilize and then reduce
7 anthropogenic emissions of CO₂, a greenhouse gas, from CO₂ budget sources in an
8 economically efficient manner.

10 XX-1.2 Definitions.

12 (a) *Account number.* The identification number given by the REGULATORY
13 AGENCY or its agent to each CO₂ Allowance Tracking System account.

15 (b) *Allocate or allocation.* The determination by the REGULATORY AGENCY of
16 the number of CO₂ allowances to be initially credited to a CO₂ budget unit, an allocation
17 set-aside account, the consumer benefit or strategic energy purpose account, or the
18 general account of the sponsor of an approved CO₂ emissions offset project. **[The
19 reference to the consumer benefit or strategic energy purpose account illustrates
20 how this account could be labeled and does not necessarily represent what an
21 individual RGGI State will propose.]**

23 (c) *Allocation year.* A calendar year for which the REGULATORY AGENCY
24 allocates CO₂ allowances pursuant to Subparts XX-5 and XX-10. The allocation year of
25 each CO₂ allowance is reflected in the unique identification number given to the allowance
26 pursuant to subdivision XX-6.4(c).

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1 (d) *Automated data acquisition and handling system or DAHS.* That component
2 of the continuous emission monitoring system, or other emissions monitoring system
3 approved for use under Subpart XX-8, designed to interpret and convert individual output
4 signals from pollutant concentration monitors, flow monitors, diluent gas monitors, and
5 other component parts of the monitoring system to produce a continuous record of the
6 measured parameters in the measurement units required by Subpart XX-8.
7

8 (e) *Billing meter.* To qualify as a billing meter, the measurement device must be
9 used to measure electric or thermal output for commercial billing under a contract. The
10 facility selling the electric or thermal output must have different owners from the owners of
11 the party purchasing the electric or thermal output.
12

13 (f) *Biomass.* Eligible biomass includes technologies that use unadulterated and
14 non-construction and demolition debris fuel stocks, which includes: brush, stumps, lumber
15 ends and trimmings, wood pallets, bark wood chips, shavings, sawdust and slash; energy
16 crops; biogas and liquid biofuels.
17

18 (g) *Boiler.* An enclosed fossil or other fuel-fired combustion device used to
19 produce heat and to transfer heat to recirculating water, steam, or other medium.
20

21 (h) *CO₂ allowance.* A limited authorization by the REGULATORY AGENCY
22 under the CO₂ Budget Trading Program to emit up to one ton of CO₂ during the control
23 period in which its allocation year falls. No provision of this regulation shall be construed
24 to limit the authority of the REGULATORY AGENCY to terminate or limit such
25 authorization. This limited authorization does not constitute a property right.
26

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1 (i) *CO₂ allowance deduction or deduct CO₂ allowances.* The permanent
2 withdrawal of CO₂ allowances by the REGULATORY AGENCY or its agent from a CO₂
3 Allowance Tracking System compliance account to account for the number of tons of CO₂
4 emitted from a CO₂ budget unit for a control period, determined in accordance with
5 Subpart XX-8, or for the forfeit or retirement of CO₂ allowances as provided by this Part.
6

7 (j) *CO₂ allowances held or hold CO₂ allowances.* The CO₂ allowances recorded
8 by the REGULATORY AGENCY or its agent, or submitted to the REGULATORY AGENCY
9 or its agent for recordation, in accordance with Subparts XX-6 and XX-7, in a CO₂
10 Allowance Tracking System account.
11

12 (k) *CO₂ Allowance Tracking System.* The system by which the REGULATORY
13 AGENCY or its agent records allocations, deductions, and transfers of CO₂ allowances
14 under the CO₂ Budget Trading Program. The tracking system may also be used to track
15 offset projects, spot prices and emissions from affected sources.
16

17 (l) *CO₂ Allowance Tracking System account.* An account in the CO₂ Allowance
18 Tracking System established by the REGULATORY AGENCY or its agent for purposes of
19 recording the allocation, holding, transferring, or deducting of CO₂ allowances.
20

21 (m) *CO₂ allowance transfer deadline.* Midnight of the March 1 occurring after the
22 end of the relevant control period or, if that March 1 is not a business day, midnight of the
23 first business day thereafter and is the deadline by which CO₂ allowances must be
24 submitted for recordation in a CO₂ budget source's compliance account in order to meet
25 the unit's CO₂ budget emissions limitation for the control period immediately preceding
26 such deadline.
27

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1 (n) *CO₂ authorized account representative.* For a CO₂ budget source and each
2 CO₂ budget unit at the source, the natural person who is authorized by the owners and
3 operators of the source and all CO₂ budget units at the source, in accordance with Subpart
4 XX-2, to represent and legally bind each owner and operator in matters pertaining to the
5 CO₂ Budget Trading Program or, for a general account, the natural person who is
6 authorized, under subpart XX-6, to transfer or otherwise dispose of CO₂ allowances held in
7 the general account.

8
9 (o) *CO₂ budget emissions limitation.* For a CO₂ budget source, the tonnage
10 equivalent of the CO₂ allowances required for compliance deduction for the source for a
11 control period.

12
13 (p) *CO₂ budget permit.* The portion of the legally binding permit issued by the
14 REGULATORY AGENCY pursuant to **[Insert Reference to State's Permitting**
15 **Regulation(s)]** to a CO₂ budget source or CO₂ budget unit which specifies the CO₂
16 Budget Trading Program requirements applicable to the CO₂ budget source, to each CO₂
17 budget unit at the CO₂ budget source, and to the owners and operators and the CO₂
18 authorized account representative of the CO₂ budget source and each CO₂ budget unit.

19
20 (q) *CO₂ budget source.* A source that includes one or more CO₂ budget units.

21
22 (r) *CO₂ Budget Trading Program.* A multi-state CO₂ air pollution control and
23 emission reduction program established pursuant to this Part and corresponding
24 regulations in other States as a means of reducing emissions of CO₂ from CO₂ budget
25 sources.

26

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1 (s) *CO₂ budget unit.* A unit that is subject to the CO₂ Budget Trading Program
2 requirements under section XX-1.4.

3
4 (t) *CO₂ equivalent.* The quantity of a given greenhouse gas multiplied by its
5 global warming potential (GWP).

6
7 (u) *CO₂ offset allowance.* A CO₂ allowance that is awarded to the sponsor of a
8 CO₂ emissions offset project pursuant to section XX-10.7 and is subject to the relevant
9 compliance deduction limitations of section XX-6.5(a)(3).

10
11 (v) *Combined cycle system.* A system comprised of one or more combustion
12 turbines, heat recovery steam generators, and steam turbines configured to improve
13 overall efficiency of electricity generation or steam production.

14
15 (w) *Combustion turbine.* An enclosed fossil or other fuel-fired device that is
16 comprised of a compressor (if applicable), a combustor, and a turbine, and in which the
17 flue gas resulting from the combustion of fuel in the combustor passes through the turbine,
18 rotating the turbine.

19
20 (x) *Commence commercial operation.* With regard to a unit that serves a
21 generator, to have begun to produce steam, gas, or other heated medium used to
22 generate electricity for sale or use, including test generation. For a unit that is a CO₂
23 budget unit under section XX-1.4 of this Subpart on the date the unit commences
24 commercial operation, such date shall remain the unit's date of commencement of
25 commercial operation even if the unit is subsequently modified, reconstructed, or
26 repowered. For a unit that is not a CO₂ budget unit under section XX-1.4 of this Subpart
27 on the date the unit commences commercial operation, the date the unit becomes a CO₂

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1 budget unit under section XX-1.4 of this Subpart shall be the unit's date of commencement
2 of commercial operation.

3
4 (y) *Commence operation.* To begin any mechanical, chemical, or electronic
5 process, including, with regard to a unit, start-up of a unit's combustion chamber. For a
6 unit that is a CO₂ budget unit under section XX-1.4 of this Subpart on the date of
7 commencement of operation, such date shall remain the unit's date of commencement of
8 operation even if the unit is subsequently modified, reconstructed, or repowered. For a
9 unit that is not a CO₂ budget unit under section XX-1.4 of this Subpart on the date of
10 commencement of operation, the date the unit becomes a CO₂ budget unit under section
11 XX-1.4 of this Subpart shall be the unit's date of commencement of operation.

12
13 (z) *Compliance account.* A CO₂ Allowance Tracking System account,
14 established by the REGULATORY AGENCY or its agent for a CO₂ budget unit under
15 Subpart XX-6, in which the CO₂ allowance allocations for the unit are initially recorded and
16 in which are held CO₂ allowances available for use by the unit for a control period for the
17 purpose of meeting the unit's CO₂ budget emissions limitation.

18
19 (aa) *Consumer benefit or strategic energy purpose account.* A general account
20 established by the CONSUMER BENEFIT OR STRATEGIC ENERGY PURPOSE FUND
21 ADMINISTRATOR from which allowances will be sold or distributed in order to provide
22 funds to encourage and foster the following: promotion of energy efficiency measures,
23 direct mitigation of electricity ratepayer impacts attributable to the implementation of the
24 CO₂ Budget Trading Program, promotion of renewable or non-carbon-emitting energy
25 technologies, stimulation or reward of investment in the development of innovative carbon
26 emissions abatement technologies with significant carbon reduction potential, and/or the
27 administration of NAME OF RELEVANT RGGI STATE component of the CO₂ Budget

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1 Trading Program. [This definition for the consumer benefit or strategic energy
2 account illustrates how this account could be defined and does not necessarily
3 represent what an individual RGGI State will propose.]
4

5 (ab) *Continuous emission monitoring system or CEMS.* The equipment required
6 under Subpart XX-8 to sample, analyze, measure, and provide, by means of readings
7 recorded at least once every 15 minutes (using an automated DAHS), a permanent record
8 of stack gas volumetric flow rate, stack gas moisture content, and oxygen or carbon
9 dioxide concentration (as applicable), in a manner consistent with 40 CFR Part 75 and
10 Subpart XX-8. The following systems are the principal types of continuous emission
11 monitoring systems required under Subpart XX-8.
12

13 (1) A flow monitoring system, consisting of a stack flow rate monitor and
14 an automated data acquisition and handling system and providing a permanent,
15 continuous record of stack gas volumetric flow rate, in standard cubic feet per hour (scfh);
16

17 (2) A nitrogen oxides emission rate (or NO_x-diluent) monitoring system,
18 consisting of a NO_x pollutant concentration monitor, a diluent gas (CO₂ or O₂) monitor, and
19 an automated data acquisition and handling system and providing a permanent,
20 continuous record of NO_x concentration, in parts per million (ppm), diluent gas
21 concentration, in percent CO₂ or O₂; and NO_x emission rate, in pounds per million British
22 thermal units (lb/MMBtu);
23

24 (3) A moisture monitoring system, as defined in 40 CFR 75.11(b)(2) and
25 providing a permanent, continuous record of the stack gas moisture content, in percent
26 H₂O;
27

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1 (4) A carbon dioxide monitoring system, consisting of a CO₂ pollutant
2 concentration monitor (or an oxygen monitor plus suitable mathematical equations from
3 which the CO₂ concentration is derived) and an automated data acquisition and handling
4 system and providing a permanent, continuous record of CO₂ emissions, in percent CO₂;
5 and

6
7 (5) An oxygen monitoring system, consisting of an O₂ concentration
8 monitor and an automated data acquisition and handling system and providing a
9 permanent, continuous record of O₂, in percent O₂.

10
11 (ac) *Control period.* Unless extended due to the occurrence of one or more stage
12 two trigger events, the control period is a three-year calendar year period. Unless
13 extended, the first control period is from January 1, 2009 to December 31, 2011, inclusive.
14 Each subsequent sequential three-year calendar year period is a separate control period
15 that may be subject to annual extensions. A control period will be extended by one year
16 upon the occurrence of a stage two trigger event. Each control period may be extended
17 up to three times for a maximum length of six years.

18
19 (ad) *Excess emissions.* Any tonnage of CO₂ emitted by a CO₂ budget unit during
20 a control period that exceeds the CO₂ budget emissions limitation for the unit.

21
22 (ae) *Fossil fuel.* Natural gas, petroleum, coal, or any form of solid, liquid, or
23 gaseous fuel derived from such material.

24
25 (af) *Fossil fuel-fired.* With regard to a unit: the combustion of fossil fuel, alone or
26 in combination with any other fuel, where the fossil fuel combusted comprises, or is

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1 projected to comprise, more than 50 percent of the annual heat input on a Btu basis during
2 any year.

3
4 (ag) *General account.* A CO₂ Allowance Tracking System account, established
5 under Subpart XX-6, that is not a compliance account.

6
7 (ah) *Global warming potential (GWP).* A measure of the radiative efficiency
8 (heat-absorbing ability) of a particular gas relative to that of carbon dioxide (CO₂) after
9 taking into account the decay rate of each gas (the amount removed from the atmosphere
10 over a given number of years) relative to that of CO₂.

11
12 (ai) *Gross generation.* The electrical output (in MWe) at the terminals of the
13 generator.

14
15 (aj) *Life-of-the-unit, firm power contractual arrangement.* A unit participation
16 power sales agreement under which a utility or industrial customer reserves, or is entitled
17 to receive, a specified amount or percentage of nameplate capacity and associated energy
18 from any specified unit and pays its proportional amount of such unit's total costs, pursuant
19 to a contract:

20
21 (1) for the life of the unit;

22
23 (2) for a cumulative term of no less than 30 years, including contracts that
24 permit an election for early termination; or

25
26 (3) for a period equal to or greater than 25 years or 70 percent of the
27 economic useful life of the unit determined as of the time the unit is built, with option rights

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1 to purchase or release some portion of the nameplate capacity and associated energy
2 generated by the unit at the end of the period.

3
4 (ak) *Market settling period.* The first fourteen months of any control period.

5
6 (al) *Maximum design heat input.* The ability of a unit to combust a stated
7 maximum amount of fuel per hour on a steady state basis, as determined by the physical
8 design and physical characteristics of the unit.

9
10 (am) *Maximum potential hourly heat input.* An hourly heat input used for reporting
11 purposes when a unit lacks certified monitors to report heat input. If the unit intends to use
12 appendix D of 40 CFR Part 75 to report heat input, this value should be calculated, in
13 accordance with 40 CFR Part 75, using the maximum fuel flow rate and the maximum
14 gross calorific value. If the unit intends to use a flow monitor and a diluent gas monitor, this
15 value should be reported, in accordance with 40 CFR Part 75, using the maximum
16 potential flowrate and either the maximum carbon dioxide concentration (in percent CO₂)
17 or the minimum oxygen concentration (in percent O₂).

18
19 (an) *Monitoring system.* Any monitoring system that meets the requirements of
20 Subpart XX-8, including a continuous emissions monitoring system, an excepted
21 monitoring system, or an alternative monitoring system.

22
23 (ao) ***NAME OF RELEVANT RGGI STATE CO₂ Trading Program Base Budget.***
24 The annual apportionment of CO₂ tons to NAME OF RELEVANT RGGI STATE, in
25 accordance with the CO₂ Budget Trading Program, for allocation in a given allocation year.
26 CO₂ offset allowances allocated to project sponsors are separate from and additional to

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1 CO₂ allowances allocated from the NAME OF RELEVANT RGGI STATE CO₂ Trading
2 Program Base Budget.

3
4 (ap) *Nameplate capacity*. The maximum electrical output (in MWe) that a
5 generator can sustain over a specified period of time when not restricted by seasonal or
6 other deratings as measured in accordance with the United States Department of Energy
7 standards.

8
9 (aq) *Operator*. Any person who operates, controls, or supervises a CO₂ budget
10 unit or a CO₂ budget source and shall include, but not be limited to, any holding company,
11 utility system, or plant manager of such a unit or source.

12
13 (ar) *Owner*. Any of the following persons:

14
15 (1) any holder of any portion of the legal or equitable title in a CO₂ budget
16 unit; or

17
18 (2) any holder of a leasehold interest in a CO₂ budget unit; or

19
20 (3) any purchaser of power from a CO₂ budget unit under a life-of-the-
21 unit, firm power contractual arrangement. However, unless expressly provided for in a
22 leasehold agreement, owner shall not include a passive lessor, or a person who has an
23 equitable interest through such lessor, whose rental payments are not based, either
24 directly or indirectly, upon the revenues or income from the CO₂ budget unit; or

25
26 (4) with respect to any general account, any person who has an
27 ownership interest with respect to the CO₂ allowances held in the general account and

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1 who is subject to the binding agreement for the CO₂ authorized account representative to
2 represent that person's ownership interest with respect to the CO₂ allowances.

3
4 (as) *Participating State*. A state that has established a corresponding regulation
5 as part of the CO₂ Budget Trading Program.

6
7 (at) *Receive or receipt of*. When referring to the REGULATORY AGENCY or its
8 agent, to come into possession of a document, information, or correspondence (whether
9 sent in writing or by authorized electronic transmission), as indicated in an official
10 correspondence log, or by a notation made on the document, information, or
11 correspondence, by the REGULATORY AGENCY or its agent in the regular course of
12 business.

13
14 (au) *Recordation, record, or recorded*. With regard to CO₂ allowances, the
15 movement of CO₂ allowances by the REGULATORY AGENCY or its agent from one CO₂
16 Allowance Tracking System account to another, for purposes of allocation, transfer, or
17 deduction.

18
19 (av) *Serial number*. When referring to CO₂ allowances, the unique identification
20 number assigned to each CO₂ allowance by the REGULATORY AGENCY or its agent
21 under section XX-6.4(c).

22
23 (aw) *Source*. Any governmental, institutional, commercial, or industrial structure,
24 installation, plant, building, or facility that emits or has the potential to emit any air
25 pollutant. A "source," including a "source" with multiple units, shall be considered a single
26 "facility."
27

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1 (ax) *Spot price.* The price for CO₂ allowances for a particular month as defined
2 by the REGULATORY AGENCY or its agent, calculated based on a volume-weighted
3 average of transaction prices reported to the REGULATORY AGENCY or its agent, and
4 taking into account prices as reported publicly through reputable sources.

5
6 (ay) *Stage one threshold price.* The monetary amount, established as of the first
7 day of each calendar year, derived annually from use of the following formula:

8
9
$$S1TP(2005+n) = S1TP(2005) \times [1 + (CPI(2005+n) - CPI(2005)) / CPI(2005)]$$

10 where:

11 “S1TP” is the stage one threshold price;

12 “S1TP(2005)” is \$7;

13 “n” is the number of years since 2005; and

14 “CPI” means, for purposes of the CO₂ Budget Trading Program, the U.S.

15 Department of Labor, Bureau of Labor Statistics unadjusted Consumer Price Index for All
16 Urban Consumers for the U.S. city average, for All Items on the latest reference base, or if
17 such index is no longer published, such other index as the REGULATORY AGENCY
18 determines is appropriate. The CPI for any calendar year is the twelve-month average of
19 the CPI published by the United States Department of Labor, as of the close of the twelve-
20 month period ending on August thirty-first of each calendar year.

21
22 (az) *Stage one trigger event.* The occurrence of any twelve month period that
23 completely transpires following the market settling period and is characterized by spot
24 prices for CO₂ allowances, calculated on a volume-weighted average basis, that have
25 been equal to or greater than the stage one threshold price.
26

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1 (ba) *Stage two threshold price.* The monetary amount, established as of the first
2 day of each calendar year, derived annually from use of the following formula:

$$3$$
$$4 \quad S2TP(2005+n) = [S2TP(2005+(n-1)) \times \left[\frac{CPI(2005+(n-1)) - CPI(2005+(n-2))}{CPI(2005+(n-2))} + 0.02 \right] + S2TP(2005+(n-1))$$

6 where:

7 "S2TP" is the stage two threshold price;

8 "S2TP(2005)" is \$10; and

9 "n" is the number of years since 2005.

10 "CPI" means, for purposes of the CO₂ Budget Trading Program, the U.S.
11 Department of Labor, Bureau of Labor Statistics unadjusted Consumer Price Index for All
12 Urban Consumers for the U.S. city average, for All Items on the latest reference base, or if
13 such index is no longer published, such other index as the REGULATORY AGENCY
14 determines is appropriate. The CPI for any calendar year is the twelve-month average of
15 the CPI published by the United States Department of Labor, as of the close of the twelve-
16 month period ending on August thirty-first of each calendar year.

17

18 (bb) *Stage two trigger event.* The occurrence of any twelve month period that
19 completely transpires following the market settling period and is characterized by spot
20 prices for CO₂ allowances, calculated on a volume-weighted average basis, that have
21 been equal to or greater than the stage two threshold price.

22

23 (bc) *State.* A State, the District of Columbia, the Commonwealth of Puerto Rico,
24 the Virgin Islands, Guam, and American Samoa and includes the Commonwealth of the
25 Northern Mariana Islands.

26

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1 (bd) *Submit or serve.* To send or transmit a document, information, or
2 correspondence to the person specified in accordance with the applicable regulation:

3
4 (1) in person;

5
6 (2) by United States Postal Service; or

7
8 (3) by other means of dispatch or transmission and delivery.

9 Compliance with any “submission,” “service,” or “mailing” deadline shall be determined by
10 the date of dispatch, transmission, or mailing and not the date of receipt.

11
12 (be) *Ton or tonnage.* Any “short ton”, or 2,000 pounds. For the purpose of
13 determining compliance with the CO₂ budget emissions limitation, total tons for a control
14 period shall be calculated as the sum of all recorded hourly emissions (or the tonnage
15 equivalent of the recorded hourly emissions rates) in accordance with Subpart XX-8, with
16 any remaining fraction of a ton equal to or greater than 0.50 ton deemed to equal one ton
17 and any fraction of a ton less than 0.50 ton deemed to equal zero tons.

18
19 (bf) *Twelve month period.* A period of twelve consecutive months determined on
20 a rolling basis where a new twelve month period begins on the first day of each calendar
21 month.

22
23 (bg) *Unit.* A fossil fuel-fired stationary boiler, combustion turbine, or combined
24 cycle system.

25
26 (bh) *Unit operating day.* A calendar day in which a unit combusts any fuel.
27

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XX-1.3 Measurements, abbreviations and acronyms.

Measurements, abbreviations, and acronyms used in this Part are defined as follows:

- (a) *CO₂-carbon dioxide.*
- (b) *hr-hour.*
- (c) *lb-pounds.*
- (d) *MWe-megawatt electrical.*

XX-1.4 Applicability.

(a) *Units.* Any unit that, at any time on or after January 1, 2005, serves an electricity generator with a nameplate capacity equal to or greater than 25 MWe shall be a CO₂ budget unit, and any source that includes one or more such units shall be a CO₂ budget source, subject to the requirements of this Part.

(b) *Limited exemption for units with electrical output to the electric grid restricted by permit conditions.* **[The text of this subdivision illustrates how a Participating State might provide for an exemption for units with electrical output to the electric grid restricted by permit conditions. Inclusion of this type of exemption is optional.]**

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1 (1) *Applicability.* Notwithstanding subdivision (a) of this section, a unit
2 under subdivision (a) of this section that has a permit containing a condition restricting the
3 supply of the unit's annual electrical output to the electric grid to less than or equal to 10
4 percent of the annual gross generation of the unit, and which complies with the provisions
5 in paragraph (b)(3) of this section, shall be exempt from the requirements of this Part,
6 except for the provisions of this section, section XX-1.2, section XX-1.3, section XX-1.6
7 and, if applicable because of the allocation of CO₂ allowances during the pre-exemption
8 time period, Subparts XX-5, XX-6 and XX-7.

9
10 (2) *Effective date.* The exemption under paragraph (b)(1) of this section
11 shall become effective as of the January 1 that is on or after the date on which the
12 restriction on the percentage of annual gross generation that may be supplied to the
13 electric grid and the provisions in the permit required under paragraph (b)(1) of this section
14 become final.

15
16 (3) *Compliance*

17
18 (i) A unit exempt under paragraph (b)(1) of this section shall
19 comply with the restriction on percentage of annual gross generation that may be supplied
20 to the electric grid described in paragraph (b)(1) of this section.

21
22 (ii) A unit exempt under paragraph (b)(1) shall report the amount of
23 annual gross generation and the amount of annual gross generation supplied to the
24 electric grid during the year by the following February 1.

25

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1 (iii) For a period of 10 years from the date the records are created,
2 the owners and operators of a unit exempt under paragraph (b)(1) of this section shall
3 retain, at the source that includes the unit, records demonstrating that the conditions of the
4 permit under paragraph (b)(1) of this section were met. The 10-year period for keeping
5 records may be extended for cause, at any time prior to the end of the period, in writing by
6 the REGULATORY AGENCY. The owners and operators bear the burden of proof that the
7 unit met the restriction on the percentage of annual gross generation that may be supplied
8 to the electric grid.

9
10 (iv) The owners and operators and, to the extent applicable, the
11 CO₂ authorized account representative of a unit exempt under paragraph (b)(1) of this
12 section shall comply with all the requirements of this Part concerning all time periods for
13 which the exemption is not in effect, even if such requirements arise, or must be complied
14 with, after the exemption takes effect.

15
16 (v) On the earlier of the following dates, a unit exempt under
17 paragraph (b)(1) of this section shall lose its exemption:

18
19 (a) the date on which the restriction on the percentage of
20 annual gross generation that may be supplied to the electric grid described in paragraph
21 (b)(1) of this section is removed from the unit's permit or otherwise becomes no longer
22 applicable in any year that commences on or after January 1, 2009; or

23
24 (b) the first date on which the unit fails to comply, or on
25 which the owners and operators fail to meet their burden of proving that the unit is
26 complying, with the restriction on the percentage of annual gross generation that may be

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1 supplied to the electric grid described in paragraph (b)(1) of this section during any year
2 that commences on or after January 1, 2009.

3
4 (vi) A unit that loses its exemption in accordance with
5 subparagraph (b)(3)(v) of this section shall be subject to the requirements of this Part. For
6 the purpose of applying permitting requirements under Subpart XX-3, allocating
7 allowances under Subpart XX-5, and applying monitoring requirements under Subpart XX-
8 8, the unit shall be treated as commencing operation on the date the unit loses its
9 exemption.

10 11 **XX-1.5 Standard requirements.**

12
13 (a) *Permit requirements.* **[Each State's text for this subdivision will likely be**
14 **different because the states have unique permitting requirements. The text below**
15 **illustrates how this subdivision could be drafted and does not necessarily represent**
16 **what an individual RGGI state will propose.]**

17
18 (1) The CO₂ authorized account representative of each CO₂ budget source
19 required to have an operating permit pursuant to **[Insert Reference to State's Permitting**
20 **Regulation(s)]** of this Title and each CO₂ budget unit required to have an operating permit
21 pursuant to **[Insert Reference to State's Permitting Regulation(s)]** of this Title shall:

22
23 (i) submit to the REGULATORY AGENCY a complete CO₂ budget
24 permit application under section XX-3.3 of this Part in accordance with the deadlines
25 specified in section XX-3.2 of this Part; and
26

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1 (ii) submit in a timely manner any supplemental information that
2 the REGULATORY AGENCY determines is necessary in order to review the CO₂ budget
3 permit application and issue or deny a CO₂ budget permit.
4

5 (2) The owners and operators of each CO₂ budget source required to
6 have an operating permit pursuant to **[Insert Reference to State's Permitting**
7 **Regulation(s)]** of this Title and each CO₂ budget unit required to have an operating permit
8 pursuant to **[Insert Reference to State's Permitting Regulation(s)]** of this Title for the
9 source shall have a CO₂ budget permit and operate the CO₂ budget source and the CO₂
10 budget unit at the source in compliance with such CO₂ budget permit.
11

12 (b) *Monitoring requirements.*
13

14 (1) The owners and operators and, to the extent applicable, the CO₂
15 authorized account representative of each CO₂ budget source and each CO₂ budget unit
16 at the source shall comply with the monitoring requirements of Subpart XX-8.
17

18 (2) The emissions measurements recorded and reported in accordance
19 with Subpart XX-8 shall be used to determine compliance by the unit with the CO₂ budget
20 emissions limitation under subdivision (c) of this section.
21

22 (c) *CO₂ requirements.*
23

24 (1) The owners and operators of each CO₂ budget source and each CO₂
25 budget unit at the source shall hold CO₂ allowances available for compliance deductions
26 under section XX-6.5, as of the CO₂ allowance transfer deadline, in the source's

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1 compliance account in an amount not less than the total CO₂ emissions for the control
2 period from all CO₂ budget units at the source, as determined in accordance with Subpart
3 XX-8.

4
5 (2) Each ton of CO₂ emitted in excess of the CO₂ budget emissions
6 limitation shall constitute a separate violation of this Part and applicable state law.

7
8 (3) A CO₂ budget unit shall be subject to the requirements under
9 paragraph (c)(1) of this section starting on the later, of January 1, 2009 or the date on
10 which the unit commences operation.

11
12 (4) CO₂ allowances shall be held in, deducted from, or transferred among
13 CO₂ Allowance Tracking System accounts in accordance with Subparts XX-5, XX-6, XX-7,
14 and XX-10.7.

15
16 (5) A CO₂ allowance shall not be deducted, in order to comply with the
17 requirements under paragraph (c)(1) of this section, for a control period that ends prior to
18 the year for which the CO₂ allowance was allocated.

19
20 (6) A CO₂ allowance allocated by the REGULATORY AGENCY under the
21 CO₂ Budget Trading Program is a limited authorization to emit one ton of CO₂ in
22 accordance with the CO₂ Budget Trading Program. No provision of the CO₂ Budget
23 Trading Program, the CO₂ budget permit application, or the CO₂ budget permit or any
24 provision of law shall be construed to limit the authority of the State to terminate or limit
25 such authorization.
26

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1 (7) A CO₂ allowance allocated by the REGULATORY AGENCY under the
2 CO₂ Budget Trading Program does not constitute a property right.

3
4 (d) *Excess emissions requirements.* The owners and operators of a CO₂ budget
5 unit that has excess emissions in any control period shall:

6
7 (1) forfeit the CO₂ allowances required for deduction under paragraph XX-
8 6.5(d)(1); and

9
10 (2) pay any fine, penalty, or assessment or comply with any other remedy
11 imposed under paragraph XX-6.5(d)(3).

12
13 (e) *Recordkeeping and reporting requirements.*

14
15 (1) Unless otherwise provided, the owners and operators of the CO₂
16 budget source and each CO₂ budget unit at the source shall keep on site at the source
17 each of the following documents for a period of 10 years from the date the document is
18 created. This period may be extended for cause, at any time prior to the end of 10 years,
19 in writing by the REGULATORY AGENCY.

20
21 (i) The account certificate of representation for the CO₂ authorized
22 account representative for the source and each CO₂ budget unit at the source and all
23 documents that demonstrate the truth of the statements in the account certificate of
24 representation, in accordance with section XX-2.4; provided that the certificate and
25 documents shall be retained on site at the source beyond such 10-year period until such

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1 documents are superseded because of the submission of a new account certificate of
2 representation changing the CO₂ authorized account representative.

3
4 (ii) All emissions monitoring information, in accordance with
5 Subpart XX-8.

6
7 (iii) Copies of all reports, compliance certifications, and other
8 submissions and all records made or required under the CO₂ Budget Trading Program.

9
10 (iv) Copies of all documents used to complete a CO₂ budget permit
11 application and any other submission under the CO₂ Budget Trading Program or to
12 demonstrate compliance with the requirements of the CO₂ Budget Trading Program.

13
14 (2) The CO₂ authorized account representative of a CO₂ budget source
15 and each CO₂ budget unit at the source shall submit the reports and compliance
16 certifications required under the CO₂ Budget Trading Program, including those under
17 Subparts XX-4.

18
19 (f) *Liability.*

20
21 (1) No permit revision shall excuse any violation of the requirements of
22 the CO₂ Budget Trading Program that occurs prior to the date that the revision takes
23 effect.

24
25 (2) Any provision of the CO₂ Budget Trading Program that applies to a
26 CO₂ budget source (including a provision applicable to the CO₂ authorized account

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1 representative of a CO₂ budget source) shall also apply to the owners and operators of
2 such source and of the CO₂ budget units at the source.

3
4 (3) Any provision of the CO₂ Budget Trading Program that applies to a
5 CO₂ budget unit (including a provision applicable to the CO₂ authorized account
6 representative of a CO₂ budget unit) shall also apply to the owners and operators of such
7 unit.

8
9 (g) *Effect on other authorities.*

10
11 (1) No provision of the CO₂ Budget Trading Program, a CO₂ budget
12 permit application, or a CO₂ budget permit, shall be construed as exempting or excluding
13 the owners and operators and, to the extent applicable, the CO₂ authorized account
14 representative of a CO₂ budget source or CO₂ budget unit from compliance with any other
15 provisions of applicable State and federal law and regulations.

16 **XX-1.6 Computation of time.**

17
18
19 (a) Unless otherwise stated, any time period scheduled, under the CO₂ Budget
20 Trading Program, to begin on the occurrence of an act or event shall begin on the day the
21 act or event occurs.

22
23 (b) Unless otherwise stated, any time period scheduled, under the CO₂ Budget
24 Trading Program, to begin before the occurrence of an act or event shall be computed so
25 that the period ends the day before the act or event occurs.

26

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1 (c) Unless otherwise stated, if the final day of any time period, under the CO₂
2 Budget Trading Program, falls on a weekend or a State or Federal holiday, the time period
3 shall be extended to the next business day.
4

5 **XX-1.7 Severability.**

6
7 If any provision of this Part, or its application to any particular person or
8 circumstances, is held invalid, the remainder of this Part, and the application thereof to
9 other persons or circumstances, shall not be affected thereby.
10
11

12 **Subpart XX-2 CO₂ Authorized Account Representative for CO₂ Budget Sources**

13 14 **XX-2.1 Authorization and responsibilities of the CO₂ authorized account** 15 **representative.** 16

17 (a) Except as provided under section XX-2.2, each CO₂ budget source, including
18 all CO₂ budget units at the source, shall have one and only one CO₂ authorized account
19 representative, with regard to all matters under the CO₂ Budget Trading Program
20 concerning the source or any CO₂ budget unit at the source.
21

22 (b) The CO₂ authorized account representative of the CO₂ budget source shall
23 be selected by an agreement binding on the owners and operators of the source and all
24 CO₂ budget units at the source.
25

26 (c) Upon receipt by the REGULATORY AGENCY or its agent of a complete
27 account certificate of representation under section XX-2.4, the CO₂ authorized account

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1 representative of the source shall represent and, by his or her representations, actions,
2 inactions, or submissions, legally bind each owner and operator of the CO₂ budget source
3 represented and each CO₂ budget unit at the source in all matters pertaining to the CO₂
4 Budget Trading Program, notwithstanding any agreement between the CO₂ authorized
5 account representative and such owners and operators. The owners and operators shall
6 be bound by any decision or order issued to the CO₂ authorized account representative by
7 the REGULATORY AGENCY or a court regarding the source or unit.

8
9 (d) No CO₂ budget permit shall be issued, and no CO₂ Allowance Tracking
10 System account shall be established for a CO₂ budget unit at a source, until the
11 REGULATORY AGENCY or its agent has received a complete account certificate of
12 representation under section XX-2.4 for a CO₂ authorized account representative of the
13 source and the CO₂ budget units at the source.

14
15 (e) Each submission under the CO₂ Budget Trading Program shall be submitted,
16 signed, and certified by the CO₂ authorized account representative for each CO₂ budget
17 source on behalf of which the submission is made. Each such submission shall include
18 the following certification statement by the CO₂ authorized account representative: "I am
19 authorized to make this submission on behalf of the owners and operators of the CO₂
20 budget sources or CO₂ budget units for which the submission is made. I certify under
21 penalty of law that I have personally examined, and am familiar with, the statements and
22 information submitted in this document and all its attachments. Based on my inquiry of
23 those individuals with primary responsibility for obtaining the information, I certify that the
24 statements and information are to the best of my knowledge and belief true, accurate, and
25 complete. I am aware that there are significant penalties for submitting false statements
26 and information or omitting required statements and information, including the possibility of
27 fine or imprisonment."

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1
2 (f) The REGULATORY AGENCY or its agent will accept or act on a submission
3 made on behalf of owners or operators of a CO₂ budget source or a CO₂ budget unit only if
4 the submission has been made, signed, and certified in accordance with paragraph (e)(1)
5 of this section.

6 7 **XX-2.2 Alternate CO₂ authorized account representative.**

8
9 (a) An account certificate of representation may designate one and only one
10 alternate CO₂ authorized account representative who may act on behalf of the CO₂
11 authorized account representative. The agreement by which the alternate CO₂ authorized
12 account representative is selected shall include a procedure for authorizing the alternate
13 CO₂ authorized account representative to act in lieu of the CO₂ authorized account
14 representative.

15
16 (b) Upon receipt by the REGULATORY AGENCY or its agent of a complete
17 account certificate of representation under XX-2.4, any representation, action, inaction, or
18 submission by the alternate CO₂ authorized account representative shall be deemed to be
19 a representation, action, inaction, or submission by the CO₂ authorized account
20 representative.

21
22 (c) Except in this section and subdivision XX-2.1(a), section XX-2.3, section XX-
23 2.4, and section XX-6.2, whenever the term "CO₂ authorized account representative" is
24 used in this Part, the term shall be construed to include the alternate CO₂ authorized
25 account representative.

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1 **XX-2.3 Changing the CO₂ authorized account representative and the alternate**
2 **CO₂ authorized account representative; changes in the owners and**
3 **operators.**
4

5 (a) *Changing the CO₂ authorized account representative.* The CO₂ authorized
6 account representative may be changed at any time upon receipt by the REGULATORY
7 AGENCY or its agent of a superseding complete account certificate of representation
8 under section XX-2.4. Notwithstanding any such change, all representations, actions,
9 inactions, and submissions by the previous CO₂ authorized account representative prior to
10 the time and date when the REGULATORY AGENCY or its agent receives the
11 superseding account certificate of representation shall be binding on the new CO₂
12 authorized account representative and the owners and operators of the CO₂ budget source
13 and the CO₂ budget units at the source.
14

15 (b) *Changing the alternate CO₂ authorized account representative.* The
16 alternate CO₂ authorized account representative may be changed at any time upon receipt
17 by the REGULATORY AGENCY or its agent of a superseding complete account certificate
18 of representation under section XX-2.4. Notwithstanding any such change, all
19 representations, actions, inactions, and submissions by the previous alternate CO₂
20 authorized account representative prior to the time and date when the REGULATORY
21 AGENCY or its agent receives the superseding account certificate of representation shall
22 be binding on the new alternate CO₂ authorized account representative and the owners
23 and operators of the CO₂ budget source and the CO₂ budget units at the source.
24

25 (c) *Changes in the owners and operators.*
26

27 (1) In the event a new owner or operator of a CO₂ budget source or a
28 CO₂ budget unit is not included in the list of owners and operators submitted in the account

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1 certificate of representation, such new owner or operator shall be deemed to be subject to
2 and bound by the account certificate of representation, the representations, actions,
3 inactions, and submissions of the CO₂ authorized account representative and any
4 alternate CO₂ authorized account representative of the source or unit, and the decisions,
5 orders, actions, and inactions of the REGULATORY AGENCY, as if the new owner or
6 operator were included in such list.

7
8 (2) Within 30 days following any change in the owners and operators of a
9 CO₂ budget source or a CO₂ budget unit, including the addition of a new owner or
10 operator, the CO₂ authorized account representative or alternate CO₂ authorized account
11 representative shall submit a revision to the account certificate of representation amending
12 the list of owners and operators to include the change.

13
14

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1 **XX-2.4 Account certificate of representation.**

2
3 (a) A complete account certificate of representation for a CO₂ authorized
4 account representative or an alternate CO₂ authorized account representative shall include
5 the following elements in a format prescribed by the REGULATORY AGENCY or its agent:
6

7 (1) identification of the CO₂ budget source and each CO₂ budget unit at
8 the source for which the account certificate of representation is submitted;
9

10 (2) the name, address, e-mail address, telephone number, and facsimile
11 transmission number of the CO₂ authorized account representative and any alternate CO₂
12 authorized account representative;
13

14 (3) a list of the owners and operators of the CO₂ budget source and of
15 each CO₂ budget unit at the source;
16

17 (4) the following certification statement by the CO₂ authorized account
18 representative and any alternate CO₂ authorized account representative: "I certify that I
19 was selected as the CO₂ authorized account representative or alternate CO₂ authorized
20 account representative, as applicable, by an agreement binding on the owners and
21 operators of the CO₂ budget source and each CO₂ budget unit at the source. I certify that I
22 have all the necessary authority to carry out my duties and responsibilities under the CO₂
23 Budget Trading Program on behalf of the owners and operators of the CO₂ budget source
24 and of each CO₂ budget unit at the source and that each such owner and operator shall be
25 fully bound by my representations, actions, inactions, or submissions and by any decision
26 or order issued to me by the REGULATORY AGENCY or a court regarding the source or
27 unit."; and

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1
2 (5) the signature of the CO₂ authorized account representative and any
3 alternate CO₂ authorized account representative and the dates signed.
4

5 (b) Unless otherwise required by the REGULATORY AGENCY or its agent,
6 documents of agreement referred to in the account certificate of representation shall not be
7 submitted to the REGULATORY AGENCY or its agent. Neither the REGULATORY
8 AGENCY nor its agent shall be under any obligation to review or evaluate the sufficiency
9 of such documents, if submitted.
10

11 **XX-2.5 Objections concerning the CO₂ authorized account representative.**

12

13 (a) Once a complete account certificate of representation under section XX-2.4
14 has been submitted and received, the REGULATORY AGENCY and its agent will rely on
15 the account certificate of representation unless and until the REGULATORY AGENCY or
16 its agent receives a superseding complete account certificate of representation under
17 section XX-2.4.
18

19 (b) Except as provided in subdivision XX-2.3(a) or (b), no objection or other
20 communication submitted to the REGULATORY AGENCY or its agent concerning the
21 authorization, or any representation, action, inaction, or submission of the CO₂ authorized
22 account representative shall affect any representation, action, inaction, or submission of
23 the CO₂ authorized account representative or the finality of any decision or order by the
24 REGULATORY AGENCY or its agent under the CO₂ Budget Trading Program.
25

26 (c) Neither the REGULATORY AGENCY nor its agent will adjudicate any private
27 legal dispute concerning the authorization or any representation, action, inaction, or

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1 submission of any CO₂ authorized account representative, including private legal disputes
2 concerning the proceeds of CO₂ allowance transfers.

3 4 **Subpart XX-3 Permits**

5
6 **[Each state's text for this Subpart will likely be different because states have unique**
7 **permitting requirements. The text below illustrates how this Subpart could be**
8 **drafted and does not necessarily represent what an individual RGGI state will**
9 **propose.]**

10 11 **XX-3.1 General CO₂ budget permit requirements.**

12
13 (a) Each CO₂ budget source must have a permit issued by the REGULATORY
14 AGENCY pursuant to **[Insert Reference to State's Permitting Regulation(s)]** of this
15 Title.

16
17 (b) Each CO₂ budget permit shall contain all applicable CO₂ Budget Trading
18 Program requirements and shall be a complete and distinguishable portion of the permit
19 under subdivision (a) of this section.

20 21 **XX-3.2 Submission of CO₂ budget permit applications.**

22
23 For any CO₂ budget source, the CO₂ authorized account representative shall submit
24 a complete CO₂ budget permit application under section XX-3.3 of this Subpart covering
25 such CO₂ budget source to the REGULATORY AGENCY by the later of January 1, 2009
26 or 12 months before the date on which the CO₂ budget unit commences operation.
27
28

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1 **XX-3.3 Information requirements for CO₂ budget permit applications.**

2
3 (a) A complete CO₂ budget permit application shall include the following
4 elements concerning the CO₂ budget source for which the application is submitted, in a
5 format prescribed by the REGULATORY AGENCY:

6
7 (1) identification of the CO₂ budget source, including plant name and the
8 ORIS (Office of Regulatory Information Systems) or facility code assigned to the source by
9 the Energy Information Administration of the United States Department of Energy, if
10 applicable;

11
12 (2) identification of each CO₂ budget unit at the CO₂ budget source; and

13
14 (3) the standard requirements under section XX-1.6 of this Part.

15
16 **Subpart XX-4 Compliance Certification**

17
18 **XX-4.1 Compliance certification report.**

19
20 (a) *Applicability and deadline.* For each control period in which a CO₂ budget
21 source is subject to the CO₂ budget emissions limitation, the CO₂ authorized account
22 representative of the source shall submit to the REGULATORY AGENCY by the March 1
23 following the relevant control period, a compliance certification report.

24
25 (b) *Contents of report.* The CO₂ authorized account representative shall include
26 in the compliance certification report under subdivision (a) of this section the following
27 elements, in a format prescribed by the REGULATORY AGENCY:

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(1) identification of the source and each CO₂ budget unit at the source;

(2) 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 section XX-6.5 for the control period; and

(3) the compliance certification under subdivision (c) of this section.

(c) *Compliance certification.* In the compliance certification report under subdivision (a) of this section, 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 units at the source in compliance with the CO₂ Budget Trading Program, whether the source and each CO₂ budget unit at the 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:

(1) whether the source was operated in compliance with the CO₂ budget emissions limitation;

(2) 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 Subpart XX-8;

(3) 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

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1 quarterly monitoring reports, including whether conditional data were reported in the
2 quarterly reports in accordance with Subpart XX-8. If conditional data were reported, the
3 owner or operator shall indicate whether the status of all conditional data has been
4 resolved and all necessary quarterly report resubmissions have been made;

5
6 (4) whether the facts that form the basis for certification under Subpart
7 XX-8 of each monitor at each unit at the source, or for using an excepted monitoring
8 method or alternative monitoring method approved under Subpart XX-8, if any, has
9 changed; and

10
11 (5) if a change is required to be reported under paragraph (c)(4) of this
12 section, specify the nature of the change, the reason for the change, when the change
13 occurred, and how the unit's compliance status was determined subsequent to the change,
14 including what method was used to determine emissions when a change mandated the
15 need for monitor recertification.

16 17 **XX-4.2 REGULATORY AGENCY's action on compliance certifications.**

18
19 (a) The REGULATORY AGENCY or its agent may review and conduct
20 independent audits concerning any compliance certification or any other submission under
21 the CO₂ Budget Trading Program and make appropriate adjustments of the information in
22 the compliance certifications or other submissions.

23
24 (b) The REGULATORY AGENCY or its agent may deduct CO₂ allowances from
25 or transfer CO₂ allowances to a source's compliance account based on the information in
26 the compliance certifications or other submissions, as adjusted under subdivision (a) of
27 this section.

28

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1 **Subpart XX-5 CO₂ Allowance Allocations**

2
3 **XX-5.1 NAME OF RELEVANT RGGI STATE CO₂ trading program base budget.**

4
5 (a) For the 2009 through 2014 allocation years, the NAME OF RELEVANT
6 RGGI STATE CO₂ trading program annual base budget is _____ tons.

7
8 (b) For the 2015 allocation year, the NAME OF RELEVANT RGGI STATE CO₂
9 trading program annual base budget is _____ tons.

10
11 (c) For the 2016 allocation year, the NAME OF RELEVANT RGGI STATE CO₂
12 trading program annual base budget is _____ tons.

13
14 (d) For the 2017 allocation year, the NAME OF RELEVANT RGGI STATE CO₂
15 trading program annual base budget is _____ tons.

16
17 (e) For the 2018 allocation year and each succeeding allocation year, the NAME
18 OF RELEVANT RGGI STATE CO₂ trading program annual base budget is _____
19 tons.

20
21 **XX-5.2 Timing requirements for CO₂ allowance allocations.**

22
23 (a) By January 1, 2009, the REGULATORY AGENCY will determine the CO₂
24 allowance allocations, in accordance with section XX-5.3, for the 2009, 2010, 2011, and
25 2012 allocation years.
26

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1 (b) By January 1, 2010 and January 1 of each year thereafter, the
2 REGULATORY AGENCY will allocate CO₂ allowances, in accordance with section XX-5.3,
3 for the allocation year that commences in the year that is three years after the applicable
4 deadline for allocation under this subdivision (b). If the REGULATORY AGENCY fails to
5 allocate CO₂ allowances in accordance with this subdivision (b), the REGULATORY
6 AGENCY will, for the applicable allocation year, repeat the CO₂ allowance allocations that
7 were performed for the preceding allocation year.

8 9 **XX-5.3 CO₂ allowance allocations.**

10
11 (a) *General allocations.* **[Allocation provisions will vary from state to state,**
12 **provided at least 25% of the allocations will go to a consumer benefit or strategic**
13 **energy purpose].**

14
15 (b) *Consumer benefit or strategic energy purpose allocation.* The
16 REGULATORY AGENCY will allocate twenty-five percent of the NAME OF RELEVANT
17 RGGI STATE CO₂ trading program base budget to the consumer benefit or strategic
18 energy purpose account. **[The reference to the consumer benefit or strategic energy**
19 **account illustrates how this account could be labeled and does not necessarily**
20 **represent what an individual RGGI State will propose.]**

21
22 (c) *Early reduction CO₂ allowances.* The REGULATORY AGENCY may award
23 early reduction CO₂ allowances (ERAs) to a CO₂ budget source for reductions in the CO₂
24 budget source's CO₂ emissions (inclusive of all emissions from CO₂ budget units at the
25 CO₂ budget source) that are achieved by the source during the early reduction period
26 (2006, 2007, and 2008), subject to the requirements of this subdivision. Total facility
27 shutdowns shall not be eligible for ERAs.

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1
2 (1) The CO₂ budget source must submit its application for the award of
3 ERAs by May 1, 2009.

4
5 (2) The CO₂ budget source must demonstrate that all CO₂ budget units
6 that existed at the source during the baseline period (2003, 2004, and 2005) are included
7 as CO₂ budget units for the early reduction period. New CO₂ budget units added at the
8 CO₂ Budget source must also be accounted for during the early reduction period.

9
10 (3) The REGULATORY AGENCY will calculate the number of ERAs to be
11 awarded to a particular CO₂ budget source for the early reduction period pursuant to the
12 following methodology:

13
14 (i) If total heat input to all CO₂ budget units at the CO₂ budget
15 source during the early reduction period is less than or equal to the total heat input to all
16 the CO₂ budget units at the CO₂ budget source during the baseline period:

$$17 \quad \text{ERAs} = ((\text{AER}_{\text{BASELINE}} - \text{AER}_{\text{ERP}}) \times \text{HI}_{\text{ERP}}) / 2000$$

18 where:

19
20 "AER_{BASELINE}" is the average CO₂ emission rate for all of the CO₂ budget units at the
21 CO₂ budget source during the baseline period (in pounds/MMBtu);

22 "AER_{ERP}" is the average CO₂ emission rate for all of the CO₂ budget units at the
23 CO₂ budget source during the early reduction period (in pounds/MMBtu); and

24 "HI_{ERP}" is the total heat input to all CO₂ budget units at the CO₂ budget source
25 during the early reduction period (in MMBtu).
26

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1 (ii) If total heat input to all the CO₂ budget units at the CO₂ budget
2 source during the early reduction period is greater than the total heat input to all the CO₂
3 budget units at the CO₂ budget source during the baseline period:

4
5
$$\text{ERAs} = E_{\text{BASELINE}} - E_{\text{ERP}}$$

6 where:

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

9 “E_{ERP}” are total CO₂ emissions from the all of the CO₂ budget units at the CO₂
10 budget source during early reduction period (in tons).

11
12 (4) The CO₂ budget source must demonstrate that the data submitted in
13 support of the early reduction application was recorded in compliance with the
14 requirements of Subpart XX-8 for all of the baseline years (2003, 2004 and 2005) and the
15 early reduction years (2006, 2007, and 2008) for which the CO₂ budget source was
16 required to report CO₂ data pursuant to 40 CFR part 75. A CO₂ budget that was not
17 required to submit CO₂ data pursuant to 40 CFR part 75 for any of the years contained in
18 the baseline period or early reduction period may petition the REGULATORY AGENCY as
19 part of its application under this subpart for the use of an alternative data source or
20 sources for the calculation of early reduction allowances.

21
22 (5) Once the REGULATORY AGENCY confirms a CO₂ budget source’s early
23 reductions of CO₂ emissions, it will allocate the ERAs to the CO₂ budget
24 source’s compliance account by December 31, 2009.
25
26
27

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1 **Subpart XX-6 CO₂ Allowance Tracking System**

2
3 **XX-6.1 CO₂ Allowance Tracking System accounts.**

4
5 (a) *Nature and function of compliance accounts.* Consistent with subdivision
6 XX-6.2(a), the REGULATORY AGENCY or its agent will establish one compliance account
7 for each CO₂ budget source. Allocations of CO₂ allowances pursuant to Subpart XX-5 and
8 deductions or transfers of CO₂ allowances pursuant to sections XX-4.2, XX-6.5, XX-6.7, or
9 Subpart XX-7 will be recorded in the compliance accounts in accordance with this Subpart.

10
11 (b) *Nature and function of general accounts.* Consistent with subdivision XX-
12 6.2(b), the REGULATORY AGENCY or its agent will establish, upon request, a general
13 account for any person. Transfers of CO₂ allowances pursuant to Subpart XX-7 will be
14 recorded in the general account in accordance with this Subpart.

15
16 **XX-6.2 Establishment of accounts.**

17
18 (a) *Compliance accounts.* Upon receipt of a complete account certificate of
19 representation under section XX-2.4, the REGULATORY AGENCY or its agent will
20 establish a compliance account for each CO₂ budget source for which the account
21 certificate of representation was submitted.

22
23 (b) *General accounts.*

24
25 (1) *Application for general account.* Any person may apply to open a
26 general account for the purpose of holding and transferring CO₂ allowances. An
27 application for a general account may designate one and only one CO₂ authorized account

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1 representative and one and only one alternate CO₂ authorized account representative who
2 may act on behalf of the CO₂ authorized account representative. The agreement by which
3 the alternate CO₂ authorized account representative is selected shall include a procedure
4 for authorizing the alternate CO₂ authorized account representative to act in lieu of the
5 CO₂ authorized account representative. A complete application for a general account shall
6 be submitted to the REGULATORY AGENCY or its agent and shall include the following
7 elements in a format prescribed by the REGULATORY AGENCY or its agent:

8
9 (i) name, address, e-mail address, telephone number, and
10 facsimile transmission number of the CO₂ authorized account representative and any
11 alternate CO₂ authorized account representative;

12
13 (ii) at the option of the CO₂ authorized account representative,
14 organization name and type of organization;

15
16 (iii) a list of all persons subject to a binding agreement for the CO₂
17 authorized account representative or any alternate CO₂ authorized account representative
18 to represent their ownership interest with respect to the CO₂ allowances held in the
19 general account;

20
21 (iv) the following certification statement by the CO₂ authorized
22 account representative and any alternate CO₂ authorized account representative: "I certify
23 that I was selected as the CO₂ authorized account representative or the CO₂ alternate
24 authorized account representative, as applicable, by an agreement that is binding on all
25 persons who have an ownership interest with respect to CO₂ allowances held in the
26 general account. I certify that I have all the necessary authority to carry out my duties and
27 responsibilities under the CO₂ Budget Trading Program on behalf of such persons and that

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1 each such person shall be fully bound by my representations, actions, inactions, or
2 submissions and by any order or decision issued to me by the REGULATORY AGENCY or
3 its agent or a court regarding the general account.”;

4
5 (v) the signature of the CO₂ authorized account representative and
6 any alternate CO₂ authorized account representative and the dates signed; and

7
8 (vi) unless otherwise required by the REGULATORY AGENCY or
9 its agent, documents of agreement referred to in the application for a general account shall
10 not be submitted to the REGULATORY AGENCY or its agent. Neither the REGULATORY
11 AGENCY nor its agent shall be under any obligation to review or evaluate the sufficiency
12 of such documents, if submitted.

13
14 (2) *Authorization of CO₂ authorized account representative.*

15
16 (i) Upon receipt by the REGULATORY AGENCY or its agent of a
17 complete application for a general account under paragraph (b)(1) of this section:

18
19 (a) The REGULATORY AGENCY or its agent will establish
20 a general account for the person or persons for whom the application is submitted.

21
22 (b) The CO₂ authorized account representative and any
23 alternate CO₂ authorized account representative for the general account shall represent
24 and, by his or her representations, actions, inactions, or submissions, legally bind each
25 person who has an ownership interest with respect to CO₂ allowances held in the general
26 account in all matters pertaining to the CO₂ Budget Trading Program, notwithstanding any
27 agreement between the CO₂ authorized account representative or any alternate CO₂

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1 authorized account representative and such person. Any such person shall be bound by
2 any order or decision issued to the CO₂ authorized account representative or any alternate
3 CO₂ authorized account representative by the REGULATORY AGENCY or its agent or a
4 court regarding the general account.

5
6 (c) Any representation, action, inaction, or submission by
7 any alternate CO₂ authorized account representative shall be deemed to be a
8 representation, action, inaction, or submission by the CO₂ authorized account
9 representative.

10
11 (ii) Each submission concerning the general account shall be
12 submitted, signed, and certified by the CO₂ authorized account representative or any
13 alternate CO₂ authorized account representative for the persons having an ownership
14 interest with respect to CO₂ allowances held in the general account. Each such
15 submission shall include the following certification statement by the CO₂ authorized
16 account representative or any alternate CO₂ authorized account representative: "I am
17 authorized to make this submission on behalf of the persons having an ownership interest
18 with respect to the CO₂ allowances held in the general account. I certify under penalty of
19 law that I have personally examined, and am familiar with, the statements and information
20 submitted in this document and all its attachments. Based on my inquiry of those
21 individuals with primary responsibility for obtaining the information, I certify that the
22 statements and information are to the best of my knowledge and belief true, accurate, and
23 complete. I am aware that there are significant penalties for submitting false statements
24 and information or omitting required statements and information, including the possibility of
25 fine or imprisonment."

26
27 (iii) The REGULATORY AGENCY or its agent will accept or act on

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1 a submission concerning the general account only if the submission has been made,
2 signed, and certified in accordance with subparagraph (b)(2)(ii) of this section.

3
4 (3) Changing CO₂ authorized account representative and alternate CO₂
5 authorized account representative; changes in persons with ownership interest.

6
7 (i) The CO₂ authorized account representative for a general
8 account may be changed at any time upon receipt by the REGULATORY AGENCY or its
9 agent of a superseding complete application for a general account under paragraph (b)(1)
10 of this section. Notwithstanding any such change, all representations, actions, inactions,
11 and submissions by the previous CO₂ authorized account representative prior to the time
12 and date when the REGULATORY AGENCY or its agent receives the superseding
13 application for a general account shall be binding on the new CO₂ authorized account
14 representative and the persons with an ownership interest with respect to the CO₂
15 allowances in the general account.

16
17 (ii) The alternate CO₂ authorized account representative for a
18 general account may be changed at any time upon receipt by the REGULATORY
19 AGENCY or its agent of a superseding complete application for a general account under
20 paragraph (b)(1) of this section. Notwithstanding any such change, all representations,
21 actions, inactions, and submissions by the previous alternate CO₂ authorized account
22 representative prior to the time and date when the REGULATORY AGENCY or its agent
23 receives the superseding application for a general account shall be binding on the new
24 alternate CO₂ authorized account representative and the persons with an ownership
25 interest with respect to the CO₂ allowances in the general account.

26
27 (iii) In the event a new person having an ownership interest with

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1 respect to CO₂ allowances in the general account is not included in the list of such persons
2 in the application for a general account, such new person shall be deemed to be subject to
3 and bound by the application for a general account, the representations, actions, inactions,
4 and submissions of the CO₂ authorized account representative and any alternate CO₂
5 authorized account representative of the source or unit, and the decisions, orders, actions,
6 and inactions of the REGULATORY AGENCY or its agent, as if the new person were
7 included in such list.

8
9 (iv) Within 30 days following any change in the persons having an
10 ownership interest with respect to CO₂ allowances in the general account, including the
11 addition of persons, the CO₂ authorized account representative or any alternate CO₂
12 authorized account representative shall submit a revision to the application for a general
13 account amending the list of persons having an ownership interest with respect to the CO₂
14 allowances in the general account to include the change.

15
16 (4) Objections concerning CO₂ authorized account representative.

17
18 (i) Once a complete application for a general account under
19 paragraph (b)(1) of this section has been submitted and received, the REGULATORY
20 AGENCY or its agent will rely on the application unless and until a superseding complete
21 application for a general account under paragraph (b)(1) of this section is received by the
22 REGULATORY AGENCY or its agent.

23
24 (ii) Except as provided in subparagraphs (b)(3)(i) and (ii) of this
25 section, no objection or other communication submitted to the REGULATORY AGENCY or
26 its agent concerning the authorization, or any representation, action, inaction, or
27 submission of the CO₂ authorized account representative or any alternate CO₂ authorized

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1 account representative for a general account shall affect any representation, action,
2 inaction, or submission of the CO₂ authorized account representative or any alternate CO₂
3 authorized account representative or the finality of any decision or order by the
4 REGULATORY AGENCY or its agent under the CO₂ Budget Trading Program.

5
6 (iii) Neither the REGULATORY AGENCY nor its agent will
7 adjudicate any private legal dispute concerning the authorization or any representation,
8 action, inaction, or submission of the CO₂ authorized account representative or any
9 alternate CO₂ authorized account representative for a general account, including private
10 legal disputes concerning the proceeds of CO₂ allowance transfers.

11
12 (c) *Account identification.* The REGULATORY AGENCY or its agent will assign
13 a unique identifying number to each account established under subdivisions (a) or (b) of
14 this section.

15 16 **XX-6.3 CO₂ Allowance Tracking System responsibilities of CO₂** 17 **authorized account representative.**

18
19 Following the establishment of a CO₂ Allowance Tracking System account, all
20 submissions to the REGULATORY AGENCY or its agent pertaining to the account,
21 including, but not limited to, submissions concerning the deduction or transfer of CO₂
22 allowances in the account, shall be made only by the CO₂ authorized account
23 representative for the account.

24 25 **XX-6.4 Recordation of CO₂ allowance allocations.**

26
27 (a) By January 1, 2009, the REGULATORY AGENCY or its agent will record the

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1 CO₂ allowances for the allocation years of 2009, 2010, 2011, and 2012 in each CO₂
2 budget source's compliance account the CO₂ allowances allocated for CO₂ budget units at
3 the source, and in the consumer benefit account as allocated under Subpart XX-5.

4 **[Should states wish to establish set-aside allocations (for new sources, for**
5 **example), they would be referred to (at least generically) in this subdivision.]**

6
7 (b) Each year the REGULATORY AGENCY or its agent will record CO₂
8 allowances, as allocated to the unit under Subpart XX-5, in the compliance account for the
9 year after the last year for which CO₂ allowances were previously allocated to the
10 compliance account. Each year, the REGULATORY AGENCY or its agent will also record
11 CO₂ allowances, as allocated under Subpart XX-5, in the allocation set-aside for the year
12 after the last year for which CO₂ allowances were previously allocated to an allocation set-
13 aside.

14
15 (c) *Serial numbers for allocated CO₂ allowances.* When allocating CO₂
16 allowances to and recording them in an account, the REGULATORY AGENCY or its agent
17 will assign each CO₂ allowance a unique identification number that will include digits
18 identifying the year for which the CO₂ allowance is allocated.

20 **XX-6.5 Compliance.**

21
22 (a) *Allowances available for compliance deduction.* CO₂ allowances that meet
23 the following criteria are available to be deducted for compliance with a CO₂ budget
24 source's CO₂ budget emissions limitation for a control period.

25
26 (1) The CO₂ allowances are of allocation years that fall within a prior
27 control period or the same control period for which the allowances will be deducted.

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1 (2) The CO₂ allowances are held in the CO₂ budget source's compliance
2 account as of the CO₂ allowance transfer deadline for that control period or are transferred
3 into the compliance account by a CO₂ allowance transfer correctly submitted for
4 recordation under section XX-7.1 by the CO₂ allowance transfer deadline for that control
5 period.

6
7 (3) For CO₂ offset allowances, the number of CO₂ offset allowances that
8 may be deducted can be no more than the number of tons representing the following
9 percentages of the CO₂ budget source's CO₂ emissions for that control period as
10 determined in accordance with Subpart 8:

11
12 (i) unless the provisions of subparagraphs (ii) or (iii) of this
13 paragraph apply, 3.3 percent;

14
15 (ii) if the REGULATORY AGENCY determines that there has been
16 a Stage One Trigger Event, 5 percent;

17
18 (iii) if the REGULATORY AGENCY determines that there have
19 been at least two Stage Two Trigger Events in immediate succession,

20
21 (a) 5 percent of the CO₂ budget source's CO₂ emissions for
22 the first three years of the control period, and

23
24 (b) 20 percent of the CO₂ budget source's CO₂ emissions
25 for each year after the third year of the control period.

26
27 (4) The CO₂ allowances are not necessary for deductions for excess

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1 emissions for a prior control period under subdivision (d) of this section.

2
3 (b) *Deductions for compliance.* Following the recordation, in accordance with
4 section XX-7.2, of CO₂ allowance transfers submitted for recordation in the CO₂ budget
5 source's compliance account by the CO₂ allowance transfer deadline for a control period,
6 the REGULATORY AGENCY or its agent will deduct CO₂ allowances available under
7 subdivision (a) of this section to cover the source's CO₂ emissions (as determined in
8 accordance with Subpart XX-8) for the control period, as follows:

9
10 (1) until the amount of CO₂ allowances deducted equals the number of
11 tons of total CO₂ emissions, less any CO₂ emissions attributable to the burning of biomass,
12 determined in accordance with Subpart XX-8 of this Part, from all CO₂ budget units at the
13 CO₂ budget source for the control period; or

14
15 (2) if there are insufficient CO₂ allowances to complete the deductions in
16 paragraph (b)(1) of this section, until no more CO₂ allowances available under subdivision
17 (a) of this section remain in the compliance account.

18
19 (c) *Default compliance deductions*

20
21 (1) *Identification of CO₂ allowances by serial number.* The CO₂ authorized
22 account representative for a source's compliance account may request that specific CO₂
23 allowances, identified by serial number, in the compliance account be deducted for
24 emissions or excess emissions for a control period in accordance with subdivision (b), or
25 (d) of this section. Such identification shall be made in the compliance certification report
26 submitted in accordance with section XX-4.1.

27

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1 (2) The REGULATORY AGENCY or its agent will deduct CO₂ allowances
2 for a control period from the CO₂ budget source's compliance account, in the absence of
3 an identification or in the case of a partial identification of CO₂ allowances by serial number
4 under paragraph (c)(1) of this section, in the following descending order:

5
6 (i) any CO₂ allowances that were allocated to the units at
7 the source, in the order of recordation;

8
9 (ii) any CO₂ allowances that were allocated to any CO₂
10 budget unit and transferred and recorded in the compliance account pursuant to Subpart
11 XX-7, in the order of recordation; and then

12
13 (iii) subject to the relevant compliance deduction limitations
14 under XX-6.5(a)(3), any CO₂ allowances that were awarded as CO₂ offset allowances and
15 transferred and recorded in the compliance account pursuant to Subpart XX-7, in order of
16 recordation.

17
18 (d) *Deductions for excess emissions.*

19
20 (1) After making the deductions for compliance under subdivision (b) of
21 this section, the REGULATORY AGENCY or its agent will deduct from the CO₂ budget
22 source's compliance account a number of CO₂ allowances, allocated for allocation years
23 that occur after the control period in which the source has excess emissions, equal to three
24 times the number of the source's excess emissions. No CO₂ offset allowances may be
25 deducted to account for the source's excess emissions.

26
27 (2) Any CO₂ allowance deduction required under paragraph (d)(1) of this

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1 section shall not affect the liability of the owners and operators of the CO₂ budget source
2 or the CO₂ units at the source for any fine, penalty, or assessment, or their obligation to
3 comply with any other remedy, for the same violation, as ordered under applicable State
4 law. The following guidelines will be followed in assessing fines, penalties or other
5 obligations:

6
7 (i) For purposes of determining the number of days of violation, if
8 a CO₂ budget source has excess emissions for a control period, each day in the control
9 period constitutes a day in violation unless the owners and operators of the unit
10 demonstrate that a lesser number of days should be considered.

11
12 (ii) Each ton of excess emissions is a separate violation.

13
14 (3) The propriety of the REGULATORY AGENCY's determination that a
15 CO₂ budget source had excess emissions and the concomitant deduction of CO₂
16 allowances from that CO₂ budget source's account may be later challenged in the context
17 of the initial administrative enforcement, or any civil or criminal judicial action arising from
18 or encompassing that excess emissions violation. The commencement or pendency of
19 any administrative enforcement, or civil or criminal judicial action arising from or
20 encompassing that excess emissions violation will not act to prevent the REGULATORY
21 AGENCY or its agent from initially deducting the CO₂ allowances resulting from the
22 REGULATORY AGENCY's original determination that the relevant CO₂ budget source has
23 had excess emissions. Should the REGULATORY AGENCY's determination of the
24 existence or extent of the CO₂ budget source's excess emissions be revised either by a
25 settlement or final conclusion of any administrative or judicial action, the REGULATORY
26 AGENCY will act as follows:
27

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1 (i) In any instance where the REGULATORY AGENCY's
2 determination of the extent of excess emissions was too low, the REGULATORY AGENCY
3 will take further action under paragraphs (d)(1) and (2) of this section to address the
4 expanded violation.

5
6 (ii) In any instance where the REGULATORY AGENCY's
7 determination of the extent of excess emissions was too high, the REGULATORY
8 AGENCY will distribute to the relevant CO₂ budget source a number of CO₂ allowances
9 equaling the number of CO₂ allowances deducted which are attributable to the difference
10 between the original and final quantity of excess emissions. Should such CO₂ budget
11 source's compliance account no longer exist, the CO₂ allowances will be provided to a
12 general account selected by the owner or operator of the CO₂ budget source from which
13 they were originally deducted.

14
15 (e) The REGULATORY AGENCY or its agent will record in the appropriate
16 compliance account all deductions from such an account pursuant to subdivisions (b) and
17 (d) of this section.

18
19 (f) *Action by the REGULATORY AGENCY on submissions.*

20
21 (1) The REGULATORY AGENCY may review and conduct independent
22 audits concerning any submission under the CO₂ Budget Trading Program and make
23 appropriate adjustments of the information in the submissions.

24
25 (2) The REGULATORY AGENCY may deduct CO₂ allowances from or
26 transfer CO₂ allowances to a source's compliance account based on information in the
27 submissions, as adjusted under paragraph (f)(1) of this section.

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XX-6.6 Banking.

Each CO₂ allowance that is held in a compliance account or a general account will remain in such account unless and until the CO₂ allowance is deducted or transferred under this section, section XX-4.2, section XX-6.5, section XX-6.7, or Subpart XX-7.

XX-6.7 Account error.

The REGULATORY AGENCY or its agent may, at its sole discretion and on his or her own motion, correct any error in any CO₂ Allowance Tracking System account. Within 10 business days of making such correction, the REGULATORY AGENCY or its agent will notify the CO₂ authorized account representative for the account.

XX-6.8 Closing of general accounts.

(a) A CO₂ authorized account representative of a general account may instruct the REGULATORY AGENCY or its agent 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 section XX-7.1 a CO₂ allowance transfer of all CO₂ allowances in the account to one or more other CO₂ Allowance Tracking System accounts.

(b) If a general account shows no activity for a period of six years or more and does not contain any CO₂ allowances, the REGULATORY AGENCY or its agent may notify the CO₂ authorized account representative for the account that the account will be closed and deleted from the CO₂ Allowance Tracking System following 20 business days

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1 after the notice is sent. The account will be closed after the 20-day period unless before
2 the end of the 20-day period the REGULATORY AGENCY or its agent receives a correctly
3 submitted transfer of CO₂ allowances into the account under section XX-7.1 or a statement
4 submitted by the CO₂ authorized account representative demonstrating to the satisfaction
5 of the REGULATORY AGENCY or its agent good cause as to why the account should not
6 be closed.

8 **Subpart XX-7 CO₂ Allowance Transfers**

10 **XX-7.1 Submission of CO₂ allowance transfers.**

11
12 The CO₂ authorized account representatives seeking recordation of a CO₂
13 allowance transfer shall submit the transfer to the REGULATORY AGENCY or its agent.
14 To be considered correctly submitted, the CO₂ allowance transfer shall include the
15 following elements in a format specified by the REGULATORY AGENCY or its agent:

- 16
- 17 (a) the numbers identifying both the transferor and transferee accounts;
 - 18
 - 19 (b) a specification by serial number of each CO₂ allowance to be transferred;
 - 20 and
 - 21
 - 22 (c) the printed name and signature of the CO₂ authorized account representative
23 of the transferor account and the date signed;
 - 24
 - 25 (d) the date of the completion of the last sale or purchase transaction for the
26 allowance, if any; and
 - 27

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1 (e) the purchase or sale price of the allowance that is the subject of a sale or
2 purchase transaction under subdivision (d) of this section.

3 4 **XX-7.2 Recordation.**

5
6 (a) Within 5 business days of receiving a CO₂ allowance transfer, except as
7 provided in subdivision (b) of this section, the REGULATORY AGENCY or its agent will
8 record a CO₂ allowance transfer by moving each CO₂ allowance from the transferor
9 account to the transferee account as specified by the request, provided that:

10
11 (1) the transfer is correctly submitted under section XX-7.1; and

12
13 (2) the transferor account includes each CO₂ allowance identified by
14 serial number in the transfer.

15
16 (b) A CO₂ allowance transfer that is submitted for recordation following the CO₂
17 allowance transfer deadline and that includes any CO₂ allowances that are of allocation
18 years that fall within a control period prior to or the same as the control period to which the
19 CO₂ allowance transfer deadline applies will not be recorded until after completion of the
20 process of recordation of CO₂ allowance allocations in subdivision XX-6.4(b).

21
22 (c) Where a CO₂ allowance transfer submitted for recordation fails to meet the
23 requirements of subdivision (a) of this section, the REGULATORY AGENCY or its agent
24 will not record such transfer.

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1 **XX-7.3 Notification.**

2
3 (a) *Notification of recordation.* Within 5 business days of recordation of a CO₂
4 allowance transfer under section XX-7.2, the REGULATORY AGENCY or its agent will
5 notify each party to the transfer. Notice will be given to the CO₂ authorized account
6 representatives of both the transferor and transferee accounts.
7

8 (b) *Notification of non-recordation.* Within 10 business days of receipt of a CO₂
9 allowance transfer that fails to meet the requirements of subdivision XX-7.2(a), the
10 REGULATORY AGENCY or its agent will notify the CO₂ authorized account
11 representatives of both accounts subject to the transfer of:
12

13 (1) a decision not to record the transfer, and

14
15 (2) the reasons for such non-recordation.
16

17 (c) Nothing in this section shall preclude the submission of a CO₂ allowance
18 transfer for recordation following notification of non-recordation.
19

20 **Subpart XX-8 Monitoring and Reporting**

21 22 **XX-8.1 General requirements.**

23
24 The owners and operators, and to the extent applicable, the CO₂ authorized
25 account representative of a CO₂ Budget unit, shall comply with the monitoring,
26 recordkeeping and reporting requirements as provided in this subpart and all applicable
27 sections of 40 CFR part 75. For purposes of complying with such requirements, the

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1 definitions in XX-1.2 and in 40 CFR 72.2 shall apply, and the terms “Administrator,”
2 “affected unit,” “designated representative,” and “continuous emission monitoring system”
3 (or “CEMS”) in 40 CFR part 75 shall be replaced by the terms “REGULATORY AGENCY
4 or its agent,” “CO₂ Budget unit,” “CO₂ authorized account representative,” and
5 “continuous emission monitoring system” (or “CEMS”), respectively, as defined in XX-1.2.
6

7 (a) *Requirements for installation, certification, and data accounting.* The owner
8 or operator of each CO₂ Budget unit must meet the following requirements.:

9
10 (1) Install all monitoring systems required under this subpart for
11 monitoring CO₂ mass emissions. This includes all systems required to monitor CO₂
12 concentration, stack gas flow rate, O₂ concentration, heat input, and fuel flow rate, as
13 applicable, in accordance with 40 CFR 75.13 and 75.72 and all portions of appendix G of
14 40 CFR part 75, except for equation G-1 in 40 CFR Part 75. Equation G-1 in Appendix G
15 shall not be used to determine CO₂ emissions under this Part.
16

17 (2) Successfully complete all certification tests required under section XX-
18 8.2 and meet all other requirements of this subpart and 40 CFR part 75 applicable to the
19 monitoring systems under paragraphs (a)(1) of this section.
20

21 (3) Record, report and quality-assure the data from the monitoring
22 systems under paragraphs (a)(1) of this section.
23

24 (b) *Compliance dates.* The owner or operator shall meet the monitoring system
25 certification and other requirements of paragraphs (a)(1) through (a)(3) of this section on or
26 before the following dates. The owner or operator shall record, report and quality-assure

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1 the data from the monitoring systems under paragraph (a)(1) of this section on and after
2 the following dates:

3
4 (1) The owner or operator of a CO₂ Budget unit, except for a CO₂ Budget
5 unit under paragraph (b)(1) of this section, that commences commercial operation before
6 July 1, 2008, must comply with the requirements of this subpart by January 1, 2009.

7
8 (2) The owner or operator of a CO₂ Budget unit that commences
9 commercial operation on or after July 1, 2008 must comply with the requirements of this
10 subpart by the later of the following dates:

11
12 (i) January 1, 2009; or

13
14 (ii) The earlier of:

15
16 (a) 90 operating days after the date on which the unit
17 commences commercial operation or,

18
19 (b) 180 calendar days after the date on which the unit
20 commences commercial operation.

21
22 (3) For the owner or operator of a CO₂ Budget unit for which construction
23 of a new stack or flue installation is completed after the applicable deadline under
24 paragraph (b)(1), (b)(2) or (b)(3) of this section by the earlier of:

25
26 (i) 90 unit operating days after the date on which emissions first
27 exit to the atmosphere through the new stack or flue; or

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1
2 (ii) 180 calendar days after the date on which emissions first exit to
3 the atmosphere through the new stack or flue.
4

5 (c) *Reporting data.*
6

7 (1) Except as provided in paragraph (c)(3) of this section, the owner or
8 operator of a CO₂ Budget unit that does not meet the applicable compliance date set forth
9 in paragraphs (b)(2), b(3), and (b)(4) of this section for any monitoring system under
10 paragraph (a)(1) of this section shall, for each such monitoring system, determine, record,
11 and report maximum potential (or as appropriate minimum potential) values for CO₂
12 concentration, CO₂ emission rate, stack gas moisture content, fuel flow rate and any other
13 parameter required to determine CO₂ mass emissions and heat input in accordance with
14 40 CFR 75.31(b)(2) or (c)(3), section 2.4 of appendix D of 40 CFR part 75 or section 2.5 of
15 appendix F of 40 CFR part 75 as applicable.
16

17 (2) The owner or operator of a CO₂ Budget unit that does not meet the
18 applicable compliance date set forth in paragraph (b)(4) of this section for any monitoring
19 system under paragraph (a)(1) of this section shall, for each such monitoring system,
20 determine, record, and report substitute data using the applicable missing data procedures
21 in subpart D, or appendix D or appendix E of 40 CFR part 75, in lieu of the maximum
22 potential (or as appropriate minimum potential) values for a parameter if the owner or
23 operator demonstrates that there is continuity between the data streams for that parameter
24 before and after the construction or installation under paragraph (b)(4) of this section.
25

26 (d) *Prohibitions.*
27

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1 (1) No owner or operator of a CO₂ Budget unit or a non-CO₂ Budget unit
2 monitored under 40 CFR 75.72(b)(2)(ii) shall use any alternative monitoring system,
3 alternative reference method, or any other alternative for the required continuous emission
4 monitoring system without having obtained prior written approval in accordance with
5 section XX-8.6.

6
7 (2) No owner or operator of a CO₂ Budget unit or a non-CO₂ Budget unit
8 monitored under 40 CFR 75.72(b)(2)(ii) shall operate the unit so as to discharge, or allow
9 to be discharged, CO₂ emissions to the atmosphere without accounting for all such
10 emissions in accordance with the applicable provisions of this subpart and 40 CFR part 75.

11
12 (3) No owner or operator of a CO₂ Budget unit or a non-CO₂ Budget unit
13 monitored under 40 CFR 75.72(b)(2)(ii) shall disrupt the continuous emission monitoring
14 system, any portion thereof, or any other approved emission monitoring method, and
15 thereby avoid monitoring and recording CO₂ mass emissions discharged into the
16 atmosphere, except for periods of recertification or periods when calibration, quality
17 assurance testing, or maintenance is performed in accordance with the applicable
18 provisions of this subpart and 40 CFR part 75.

19
20 (4) No owner or operator of a CO₂ Budget unit or a non-CO₂ Budget unit
21 monitored under 40 CFR 75.72(b)(2)(ii) shall retire or permanently discontinue use of the
22 continuous emission monitoring system, any component thereof, or any other approved
23 emission monitoring system under this subpart, except under any one of the following
24 circumstances:

25
26 (i) The owner or operator is monitoring emissions from the unit
27 with another certified monitoring system approved, in accordance with the applicable

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1 provisions of this subpart and 40 CFR part 75, by the permitting authority for use at that
2 unit that provides emission data for the same pollutant or parameter as the retired or
3 discontinued monitoring system; or

4
5 (ii) The CO₂ authorized account representative submits notification
6 of the date of certification testing of a replacement monitoring system in accordance with
7 paragraph XX-8.2(b)(2).

9 **XX-8.2 Initial certification and recertification procedures.**

10
11 (a) The owner or operator of a CO₂ Budget unit shall be exempt from the initial
12 certification requirements of this section for a monitoring system under paragraph XX-
13 8.1(a)(1) if the following conditions are met:

14
15 (1) The monitoring system has been previously certified in accordance
16 with 40 CFR part 75; and

17
18 (2) The applicable quality-assurance and quality-control requirements of
19 40 CFR 75.21 and appendix B, appendix D and appendix E of 40 CFR part 75 are fully
20 met for the certified monitoring system described in paragraph (a)(1) of this section.

21
22 (b) The recertification provisions of this section shall apply to a monitoring
23 system under paragraph XX-8.1(a)(1) exempt from initial certification requirements under
24 subdivision (a) of this section.

25
26 (c) If the administrator has previously approved a petition under 40 CFR
27 75.17(a) or (b) for apportioning the CO₂ emission rate measured in a common stack or a

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1 petition under 40 CFR 75.66 of this chapter for an alternative requirement in 40 CFR
2 75.12, 40 CFR 75.17 or subpart H of 40 CFR part 75, the CO₂ authorized account
3 representative shall resubmit the petition to the administrator under subdivision XX-8.6(a)
4 to determine whether the approval applies under this program.

5
6 (d) Except as provided in subdivision (a) of this section, the owner or operator of
7 a CO₂ Budget unit shall comply with the following initial certification and recertification
8 procedures for a continuous emission monitoring system and an excepted monitoring
9 system under appendices D and E of 40 CFR part 75 and under paragraph XX-8.1(a)(1).
10 The owner or operator of a unit that qualifies to use the low mass emissions excepted
11 monitoring methodology in 40 CFR 75.19 or that qualifies to use an alternative monitoring
12 system under subpart E of 40 CFR part 75 shall comply with the procedures in paragraph
13 (c) or (d) of this section.

14
15 (1) *Requirements for initial certification.* The owner or operator shall
16 ensure that each continuous emissions monitoring system required under paragraph XX-
17 8.2(a)(1) (which includes the automated data acquisition and handling system)
18 successfully completes all of the initial certification testing required under 40 CFR 75.20 by
19 the applicable deadlines specified in XX-8.1(b). In addition, whenever the owner or
20 operator installs a monitoring system in order to meet the requirements of this subpart in a
21 location where no such monitoring system was previously installed, initial certification in
22 accordance with 40 CFR 75.20 is required.

23
24 (2) *Requirements for recertification.* Whenever the owner or operator
25 makes a replacement, modification, or change in a certified continuous emission
26 monitoring system under paragraph XX-8.2(a)(1) that the Administrator or the permitting
27 authority determines significantly affects the ability of the system to accurately measure or

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1 record CO₂ mass emissions or heat input or to meet the quality-assurance and quality-
2 control requirements of 40 CFR 75.21 or appendix B to 40 CFR part 75, the owner or
3 operator shall recertify the monitoring system according to 40 CFR 75.20(b). Furthermore,
4 whenever the owner or operator makes a replacement, modification, or change to the flue
5 gas handling system or the unit's operation that the Administrator or the permitting
6 authority determines to significantly change the flow or concentration profile, the owner or
7 operator shall recertify the continuous emissions monitoring system according to 40 CFR
8 75.20(b). Examples of changes which require recertification include: replacement of the
9 analyzer, change in location or orientation of the sampling probe or site, or changing of
10 flow rate monitor polynomial coefficients.

11
12 (3) *Approval process for initial certifications and recertification.*

13
14 (i) *Notification of certification.* The CO₂ authorized account
15 representative shall submit to the REGULATORY AGENCY or its agent a written notice of
16 the dates of certification in accordance with XX-8.4.

17
18 (ii) *Certification application.* The CO₂ authorized account
19 representative shall submit to the REGULATORY AGENCY or its agent a certification
20 application for each monitoring system. A complete certification application shall include
21 the information specified in 40 CFR 75.63.

22
23 (iii) *Provisional certification data.* The provisional certification date
24 for a monitor shall be determined in accordance with 40 CFR 75.20(a)(3). A provisionally
25 certified monitor may be used under the CO₂ Budget Trading Program for a period not to
26 exceed 120 days after receipt by the permitting authority of the complete certification
27 application for the monitoring system or component thereof under paragraph (b)(3)(ii) of

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1 this section. Data measured and recorded by the provisionally certified monitoring system
2 or component thereof, in accordance with the requirements of 40 CFR part 75, will be
3 considered valid quality-assured data (retroactive to the date and time of provisional
4 certification), provided that the permitting authority does not invalidate the provisional
5 certification by issuing a notice of disapproval within 120 days of receipt of the complete
6 certification application by the permitting authority.

7
8 (iv) *Certification application approval process.* The permitting
9 authority will issue a written notice of approval or disapproval of the certification application
10 to the owner or operator within 120 days of receipt of the complete certification application
11 under paragraph (b)(3)(ii) of this section. In the event the REGULATORY AGENCY does
12 not issue such a notice within such 120-day period, each monitoring system which meets
13 the applicable performance requirements of 40 CFR part 75 and is included in the
14 certification application will be deemed certified for use under the CO₂ Budget Trading
15 Program.

16
17 (a) *Approval notice.* If the certification application is
18 complete and shows that each monitoring system meets the applicable performance
19 requirements of 40 CFR part 75, then the REGULATORY AGENCY will issue a written
20 notice of approval of the certification application within 120 days of receipt.

21
22 (b) *Incomplete application notice.* If the certification
23 application is not complete, then the REGULATORY AGENCY will issue a written notice of
24 incompleteness that sets a reasonable date by which the CO₂ authorized account
25 representative must submit the additional information required to complete the certification
26 application. If the CO₂ authorized account representative does not comply with the notice
27 of incompleteness by the specified date, then the REGULATORY AGENCY may issue a

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1 notice of disapproval under paragraph (b)(3)(iv)(c) of this section. The 120 day review
2 period shall not begin before receipt of a complete certification application

3
4 (c) *Disapproval notice.* If the certification application shows
5 that any monitoring system or component thereof does not meet the performance
6 requirements of 40 CFR part 75, or if the certification application is incomplete and the
7 requirement for disapproval under paragraph (b)(3)(iv)(b) of this section is met, then the
8 REGULATORY AGENCY will issue a written notice of disapproval of the certification
9 application. Upon issuance of such notice of disapproval, the provisional certification is
10 invalidated by the REGULATORY AGENCY and the data measured and recorded by each
11 uncertified monitoring system or component thereof shall not be considered valid quality
12 assured data beginning with the date and hour of provisional certification. The owner or
13 operator shall follow the procedures for loss of certification in paragraph (b)(3)(v) of this
14 section for each monitoring system or component thereof, which is disapproved for initial
15 certification.

16
17 (d) *Audit decertification.* The REGULATORY AGENCY may
18 issue a notice of disapproval of the certification status of a monitor in accordance with
19 subdivision XX-8.3(b).

20
21 (v) *Procedures for loss of certification.* If the REGULATORY
22 AGENCY issues a notice of disapproval of a certification application under paragraph
23 (b)(3)(iv)(c) of this section or a notice of disapproval of certification status under paragraph
24 (b)(3)(iv)(d) of this section, then:

25
26 (a) The owner or operator shall substitute the following
27 values for each disapproved monitoring system, for each hour of unit operation during the

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1 period of invalid data beginning with the date and hour of provisional certification and
2 continuing until the time, date, and hour specified under 40 CFR 75.20(a)(5)(i) or 40 CFR
3 75.20(g)(7):

4
5 (1) For units using or intending to monitor for CO₂
6 mass emissions using heat input or for units using the low mass emission excepted
7 methodology under 40 CFR 75.19, the maximum potential hourly heat input of the unit.

8
9 (2) For units intending to monitor for CO₂ mass
10 emissions using a CO₂ pollutant concentration monitor and a flow monitor, the maximum
11 potential concentration of CO₂ and the maximum potential flow rate of the unit under
12 section 2.1 of appendix A of 40 CFR part 75;

13
14 (b) The CO₂ authorized account representative shall submit
15 a notification of certification retest dates and a new certification application in accordance
16 with paragraphs (b)(3)(i) and (ii) of this section; and

17
18 (c) The owner or operator shall repeat all certification tests
19 or other requirements that were failed by the monitoring system, as indicated in the
20 permitting authority's notice of disapproval, no later than 30 unit operating days after the
21 date of issuance of the notice of disapproval.

22
23 (e) *Initial certification and recertification procedures for low mass emission units*
24 *using the excepted methodologies under 40 CFR 75.19.* The owner or operator of a unit
25 qualified to use the low mass emissions excepted methodology under 40 CFR 75.19 shall
26 meet the applicable certification and recertification requirements of 40 CFR 75.19, 40 CFR
27 75.20(h) and subpart XX-8.2. If the owner or operator of such a unit elects to certify a fuel

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1 flow meter system for heat input determinations, the owner or operator shall also meet the
2 certification and recertification requirements in 40 CFR 75.20.

3
4 (f) *Certification/recertification procedures for alternative monitoring systems.* The
5 CO₂ authorized account of each unit for which the owner or operator intends to use an
6 alternative monitoring system approved by the REGULATORY AGENCY under subpart E
7 of 40 CFR part 75 shall apply for certification to the REGULATORY AGENCY prior to use
8 of the system under the CO₂ Trading Program. The CO₂ authorized account representative
9 shall apply for recertification following a replacement, modification or change according to
10 the procedures in paragraph (b) of this section. The owner or operator of an alternative
11 monitoring system shall comply with the notification and application requirements for
12 certification according to the procedures specified in paragraph (b)(3) of this section and
13 40 CFR 75.20(f).

14 15 **XX-8.3 Out of control periods.**

16
17 (a) Whenever any monitoring system fails to meet the quality assurance and
18 quality control requirements or data validation requirements of 40 CFR part 75, data shall
19 be substituted using the applicable procedures in subpart D, appendix D, or appendix E of
20 40 CFR part 75.

21
22 (b) *Audit decertification.* Whenever both an audit of a monitoring system and a
23 review of the initial certification or recertification application reveal that any monitoring
24 system should not have been certified or recertified because it did not meet a particular
25 performance specification or other requirement under subpart XX-8.2 or the applicable
26 provisions of 40 CFR part 75 , both at the time of the initial certification or recertification
27 application submission and at the time of the audit, the REGULATORY AGENCY will issue

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1 a notice of disapproval of the certification status of such monitoring system. For the
2 purposes of this paragraph, an audit shall be either a field audit or an audit of any
3 information submitted to the REGULATORY AGENCY. By issuing the notice of
4 disapproval, the REGULATORY AGENCY revokes prospectively the certification status of
5 the monitoring system. The data measured and recorded by the monitoring system shall
6 not be considered valid quality-assured data from the date of issuance of the notification of
7 the revoked certification status until the date and time that the owner or operator
8 completes subsequently approved initial certification or recertification tests for the
9 monitoring system. The owner or operator shall follow the initial certification or
10 recertification procedures in subpart XX-8.2 for each disapproved monitoring system.

11 12 **XX-8.4 Notifications.**

13
14 The CO₂ authorized account representative for a CO₂ Budget unit shall submit
15 written notice to the REGULATORY AGENCY in accordance with 40 CFR 75.61.
16

17 **XX-8.5 Recordkeeping and reporting.**

18
19 (a) *General provisions.* The CO₂ authorized account representative shall comply
20 with all recordkeeping and reporting requirements in this section, the applicable record
21 keeping and reporting requirements under 40 CFR 75.73 and with the requirements of
22 subdivision XX-2.1(e).
23

24 (b) *Monitoring plans.* The owner or operator of a CO₂ Budget unit shall comply
25 with requirements of 40 CFR 75.62.
26

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1 (c) *Certification applications.* The CO₂ authorized account representative shall
2 submit an application to the REGULATORY AGENCY within 45 days after completing all
3 initial certification or recertification tests required under subpart XX-8.2 including the
4 information required under CFR 75.63 and 40 CFR 75.73 (c) and (e) .
5

6 (d) *Quarterly reports.* The CO₂ authorized account representative shall submit
7 quarterly reports, as follows:
8

9 (1) The CO₂ authorized account representative shall report the CO₂
10 mass emission data and heat input data for the CO₂ Budget unit, in an electronic format
11 prescribed by the REGULATORY AGENCY or its agent for each calendar quarter
12 beginning with:
13

14 (i) For a unit that commences commercial operation before July 1,
15 2008, the calendar quarter covering January 1, 2009 through March 31, 2009; or
16

17 (ii) For a unit commencing commercial operation on or after July 1,
18 2008, the calendar quarter corresponding to, the earlier of the date of provisional
19 certification or the applicable deadline for initial certification under subdivision XX-8.2(b) or,
20 unless that quarter is the third or fourth quarter of 2008, in which case reporting shall
21 commence in the quarter covering January 1, 2009 through March 31, 2009.
22

23 (2) *CO₂ Budget units that co-fire biomass.*
24

25 (i) The CO₂ authorized account representative shall report the
26 following information to the REGULATORY AGENCY its agent for each calendar quarter:
27

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- 1 (a) Chemical analysis of biomass fired, including carbon
2 content;
- 3
- 4 (b) Moisture content of biomass for each shipment received
5 for firing at the CO₂ Budget unit;
- 6
- 7 (c) Total biomass fuel input (tons) to the CO₂ Budget unit;
- 8
- 9 (d) Total biomass heat input on an as-fired basis to the CO₂
10 Budget unit;
- 11 (e) Heat input rate of biomass to the CO₂ Budget unit
12 (MMBtu/hr);
- 13
- 14 (f) Fuel feed rate of biomass to the CO₂ budget unit
15 (tons/hr);
- 16
- 17 (g) Total operating hours for which biomass was co-fired;
- 18
- 19 (h) CO₂ short tons emitted from the CO₂ Budget unit due to
20 firing of biomass;
- 21
- 22 (i) Description and documentation of fuel sampling
23 frequency and methodology; and
- 24
- 25 (j) Description and documentation of monitoring technology
26 employed.
- 27

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1 (ii) An owner or operator of a CO₂ Budget unit shall calculate and
2 submit to the REGULATORY AGENCY on a quarterly basis the as-fired biomass CO₂
3 emissions factor for the CO₂ Budget unit, represented as CO₂ lbs./MMBtu of biomass heat
4 input. The as-fired CO₂ emissions factor shall be determined as follows:

5
6
$$\text{CO}_2 \text{ lbs./MMBtu} = ((C \times F_{\text{in}})/\text{HI}) (44/12)$$

7 where:

8 C = Carbon content of biomass (percent by weight)

9 F_{IN} = Biomass fuel input (tons)

10 HI = Total heat input, as-fired (MMBtu), derived as follows:

11
$$\text{HHV}_{\text{AS-FIRED}} = \text{HHV}_{\text{DRY}} (1 - \text{MCW}_{\text{AS-FIRED}})$$

12 where:

13 HHV = Higher heating value (MMBtu/ton)

14 MCW = Moisture content wet basis (percent) for each fuel shipment

15
16 (iii) CO₂ emissions due to firing of biomass shall be determined as
17 follows:

18
19
$$\text{CO}_2 \text{ (short tons)} = B_{\text{HI}} \times B_{\text{EF}}$$

20 where:

21 CO₂ = CO₂ emissions due to firing of biomass for the reporting quarter

22 B_{HI} = Biomass heat input on an as-fired basis (MMBtu) for the reporting
23 quarter

24 B_{EF} = Biomass emissions factor for the reporting quarter (lbs. CO₂/MMBtu)

25

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1 (iv) Fuel sampling methods and fuel sampling technology shall be
2 consistent with the New York State Renewable Portfolio Standard Biomass Guidebook,
3 2005.

4
5 (3) The CO₂ authorized account representative shall submit each
6 quarterly report to the REGULATORY AGENCY or its agent within 30 days following the
7 end of the calendar quarter covered by the report. Quarterly reports shall be submitted in
8 the manner specified in subpart H of 40 CFR part 75 and 40 CFR 75.64.

9
10 (i) Quarterly reports shall include all of the data and information
11 required in subpart H of 40 CFR part 75 for each CO₂ Budget unit (or group of units using
12 a common stack) as well as information required in subpart G of 40 CFR part 75, except
13 for opacity and SO₂ provisions.

14
15 (4) *Compliance certification.* The CO₂ authorized account representative
16 shall submit to the REGULATORY AGENCY or its agent a compliance certification in
17 support of each quarterly report based on reasonable inquiry of those persons with primary
18 responsibility for ensuring that all of the unit's emissions are correctly and fully monitored.
19 The certification shall state that:

20
21 (i) The monitoring data submitted were recorded in accordance
22 with the applicable requirements of this subpart and 40 CFR part 75, including the quality
23 assurance procedures and specifications; and

24
25 (ii) For a unit with add-on CO₂ emission controls and for all hours
26 where data are substituted in accordance with 40 CFR 75.34(a)(1) , the add-on emission
27 controls were operating within the range of parameters listed in the quality

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1 assurance/quality control program under appendix B of 40 CFR part 75 and the substitute
2 values do not systematically underestimate CO₂ emissions; and

3
4 (iii) The CO₂ concentration values substituted for missing data
5 under subpart D of 40 CFR part 75 do not systematically underestimate CO₂ emissions.
6

7 **XX-8.6 Petitions.**

8
9 (a) The CO₂ authorized account representative of a CO₂ Budget unit that is
10 subject to a CO₂ Budget emissions limitation may submit a petition, in an acceptable
11 format, to the REGULATORY AGENCY or its agent requesting approval to apply an
12 alternative to any requirement of this subpart.
13

14 (1) Application of an alternative to any requirement of this subpart is in
15 accordance with this subpart only to the extent that the petition is approved in writing by
16 the REGULATORY AGENCY.
17

18 (2) Notwithstanding paragraph (a)(1) of this section, if the petition
19 requests approval to apply an alternative to a requirement concerning any additional
20 CEMS required under the common stack provisions of 40 CFR 75.72, the petition is
21 governed by paragraph (b) of this section.
22

23 (b) The CO₂ authorized account representative of a CO₂ Budget unit that is not
24 subject to a CO₂ Budget emissions limitation may submit a petition, in an acceptable
25 format, to the REGULATORY AGENCY requesting approval to apply an alternative to any
26 requirement of this Subpart.
27

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1 (1) The CO₂ authorized account representative of a CO₂ Budget unit that
2 is subject to an CO₂ Budget emissions limitation may submit a petition, in an acceptable
3 format, to the REGULATORY AGENCY requesting approval to apply an alternative to a
4 requirement concerning any additional CEMS required under the common stack provisions
5 of 40 CFR 75.72 or a CO₂ concentration CEMS used under 40 CFR 75.71(a)(2).
6

7 (2) Application of an alternative to any requirement of this Subpart is in
8 accordance with this subpart only to the extent the petition under paragraph (b) of this
9 section is approved in writing by the REGULATORY AGENCY.
10

11 **XX-8.7 Additional requirements to provide heat input data.**

12
13 (a) The owner or operator of a CO₂ Budget unit that elects to monitor and report
14 CO₂ mass emissions using a CO₂ concentration system and a flow system shall also
15 monitor and report heat input at the unit level using the procedures set forth in 40 CFR part
16 75.
17

18 (b) The owner or operator of a unit that monitor and report CO₂ mass emissions
19 using a CO₂ concentration system and a flow system shall also monitor and report heat
20 input at the unit level using the procedures set forth in 40 CFR part 75 for any source that
21 is applying for early reduction allowances under subdivision XX-5.3(c).
22

23 **XX-8.8 Additional requirements to provide net output data.**

24
25 (a) A CO₂ Budget unit in a state that requires the use of information submitted to
26 the Independent System Operator (ISO) to document megawatt-hours (MWh) the CO₂
27 Budget unit shall submit to the REGULATORY AGENCY the same MWh value submitted

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1 to the ISO and a statement certifying that the MWh of electrical output reported reflects the
2 total actual electrical output for all CO₂ Budget units at the facility used by the ISO to
3 determine settlement resources of energy market participants.
4

5 (b) A CO₂ Budget unit in a state that requires gross output to be used that also
6 reports gross hourly MW to EPA, shall submit to the REGULATORY AGENCY the same
7 electronic data report (EDR) gross output (in MW), as submitted to EPA, for the hour times
8 operating time in the hour, added for all hours in a year. A CO₂ Budget unit that does not
9 report gross hourly MW to EPA shall submit to the REGULATORY AGENCY information in
10 accordance with paragraph XX-8.8(e)(1).
11

12 (c) A CO₂ Budget unit in a state that requires net electrical output, shall submit
13 to the REGULATORY AGENCY information in accordance with paragraph XX-8.8(e)(1). A
14 CO₂ Budget source whose electrical output is not used in ISO energy market settlement
15 determinations shall propose to the REGULATORY AGENCY a method for quantification
16 of net electrical output.
17

18 (d) *CO₂ Budget sources selling steam should use billing meters to determine net*
19 *steam output.* A CO₂ Budget source whose steam output is not measured by billing
20 meters or whose steam output is combined with output from a non-CO₂ Budget unit prior to
21 measurement by the billing meter shall propose to the REGULATORY AGENCY an
22 alternative method for quantification of net steam output. If data for steam output is not
23 available, the CO₂ Budget source may report heat input providing useful steam output as a
24 surrogate for steam output.
25

26 (e) *Monitoring.* The owner or operator of each CO₂ Budget unit, in a state that
27 requires the CO₂ Budget unit's net output, must meet the following requirements. Each

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1 CO₂ Budget source must provide a description of the net output monitoring approach in an
2 output monitoring plan application required by the CO₂ Budget Trading Program under
3 section XX-8.8. The output monitoring plan application must include a description and
4 diagram as stated below.

5
6 (1) Submit a diagram of the electrical and/or steam system for which
7 output is being monitored, specifically including:

8
9 (i) If the CO₂ Budget unit monitors net electric output, the diagram
10 should contain all CO₂ Budget units and all generators served by each CO₂ Budget unit
11 and the relationship between CO₂ Budget units and generators. If a generator served by a
12 CO₂ Budget unit is also served by a non-affected unit, the non-affected unit and its
13 relationship to each generator should be indicated on the diagram as well. The diagram
14 should indicate where the net electric output is measured and should include all electrical
15 inputs and outputs to and from the plant. If net electric output is determined using a billing
16 meter, the diagram should show each billing meter used to determine net sales of
17 electricity and should show that all electricity measured at the point of sale is generated by
18 the CO₂ Budget units.

19
20 (ii) If the CO₂ Budget unit monitors net thermal output, the diagram
21 should include all steam or hot water coming into the net steam system, including steam
22 from CO₂ Budget units and non-affected units, and all exit points of steam or hot water
23 from the net steam system. In addition, each input and output stream will have an
24 estimated temperature, pressure and phase indicator, and an enthalpy in Btu/lb. The
25 diagram of the net steam system should identify all useful loads, house loads, parasitic
26 loads, any other steam loads and all boiler feedwater returns. The diagram will represent
27 all energy losses in the system as either usable or unusable losses. The diagram will also

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1 indicate all flow meters, temperature or pressure sensors or other equipment used to
2 calculate gross thermal output. If a sales agreement is used to determine net thermal
3 output, the diagram should show the monitoring equipment used to determine the sales of
4 steam.

5
6 (2) Submit a description of each output monitoring system. The
7 description of the output monitoring system should include a written description of the
8 output system and the equations used to calculate output. For net thermal output systems
9 descriptions and justifications of each useful load should be included.

10
11 (3) Submit a detailed description of all quality assurance/quality control
12 activities that will be performed to maintain the output system in accordance with
13 subdivision XX-8.8(g).

14
15 (4) Submit documentation supporting any output value(s) to be used as a
16 missing data value should there be periods of invalid output data. The missing data output
17 value must be either zero or an output value that is likely to be lower than a measured
18 value and that is approved as part of the monitoring plan required under this subdivision.

19
20 (f) *Initial Certification.* A certification statement must be submitted by the CO₂
21 authorized account representative stating that either the output monitoring system consists
22 entirely of billing meters or that the output monitoring system meets one of the accuracy
23 requirements for non-billing meters paragraph XX-8.8(f)(1). This statement may be
24 submitted with the certification application required by the CO₂ Budget Trading Program.

25
26 (1) *Billing Meters.* The billing meter must record the electric or thermal
27 output. Any electric or thermal output values that the facility reports must be the same as

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1 the values used in billing for the output. Any output measurement equipment used as a
2 billing meter in commercial transactions requires no additional certification or testing
3 requirements.

4
5 (2) *Non-Billing Meters.* For non-billing meters, the output monitoring
6 system must either meet an accuracy of 10% of the reference value, or each component
7 monitor for the output system must meet an accuracy of 3% of the full scale value,
8 whichever is less stringent.

9
10 (i) The system approach to accuracy must include a determination
11 of how the system accuracy of 10% is achieved using the individual components in the
12 system and should include data loggers and any wattmeters used to calculate the final net
13 electric output data and/or any flowmeters for steam or condensate, temperature
14 measurement devices, absolute pressure measurement devices, and differential pressure
15 devices used for measuring thermal energy.

16
17 (ii) A component approach to accuracy. If testing a piece of output
18 measurement equipment shows that the output readings are not accurate to 3.0 percent or
19 less of the full scale value, then retest or replace the measurement equipment and meet
20 that requirement. Data remain invalid until the output measurement equipment passes an
21 accuracy test or is replaced with another piece of equipment that passes the accuracy test.

22
23 (g) *Ongoing QA/QC.* Ongoing quality assurance/quality control activities must
24 be performed in order to maintain the output system.

25
26 (1) *Billing Meters.* In the case where billing meters are used to determine
27 output, no QA/QC activities beyond what are already performed are required.

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(2) *Non-Billing Meters.* Certain types of equipment such as potential transformers, current transformers and the primary element of an orifice plate only require an initial certification of calibration and do not require periodic recalibration unless the equipment is physically changed. However, the pressure and temperature transmitters accompanying an orifice plate will require periodic retesting. For other types of equipment, either recalibrate or re-verify the meter accuracy at least once every two years (i.e., every eight calendar quarters), unless a consensus standard allows for less frequent calibrations or accuracy tests.

(i) The system approach to accuracy as outlined in subparagraph XX-8.8(f)(2)(i).

(ii) A component approach to accuracy as outlined in subparagraph XX-8.8(f)(2)(i). If testing a piece of output measurement equipment shows that the output readings are not accurate to 3.0 percent or less of the full scale value, then retest or replace the measurement equipment and meet that requirement.

(3) *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 invalid until the output measurement equipment passes an accuracy test or is replaced with another piece of equipment that passes the accuracy test. Omit the invalid data and report 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 subdivision XX-8.8(e).

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1 (h) *Recordkeeping and Reporting.*

2
3 (1) *General provisions.* The CO₂ authorized account representative shall
4 comply with all recordkeeping and reporting requirements in this section and with the
5 requirements of subdivision XX-2.1(e).

6
7 (2) *Recordkeeping.* Facilities shall retain data used to monitor,
8 determine, or calculate net generation for ten years.

9
10 (3) *Annual reports.* The CO₂ authorized account representative shall
11 submit annual net output reports, as follows: The data must be sent both electronically
12 and in hardcopy by March 1 for the immediately preceding control period to the
13 REGULATORY AGENCY. The annual report shall include unit level MWh, all useful
14 steam output and the following: a certification statement from the CO₂ authorized account
15 representative stating, "I am authorized to make this submission on behalf of the owners
16 and operators of the CO₂ budget sources or CO₂ budget units for which the submission is
17 made. I certify under penalty of law that I have personally examined, and am familiar with,
18 the statements and information submitted in this document and all its attachments. Based
19 on my inquiry of those individuals with primary responsibility for obtaining the information, I
20 certify that the statements and information are to the best of my knowledge and belief true,
21 accurate, and complete. I am aware that there are significant penalties for submitting false
22 statements and information or omitting required statements and information, including the
23 possibility of fine or imprisonment."

24
25 **Subpart XX-9**

RESERVED

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1 **Subpart XX-10 CO₂ Emissions Offset Projects**

2 3 **XX-10.1 Purpose**

4
5 The REGULATORY AGENCY will provide for the award of CO₂ offset allowances to
6 sponsors of CO₂ emissions offset projects or CO₂ emissions credit retirements that have
7 reduced or avoided atmospheric loading of CO₂ or CO₂ equivalent or sequestered carbon
8 as demonstrated in accordance with the applicable provisions of this Subpart. Subject to
9 the relevant compliance deduction limitations of paragraph XX-6.5(a)(3), CO₂ offset
10 allowances may be used by any CO₂ budget source for compliance purposes.
11

12 **XX-10.2 Definitions**

13
14 (a) *Anaerobic digester.* A device that promotes the decomposition of organic
15 material to simple organics and gaseous biogas products, usually accomplished by means
16 of controlling temperature and volume, and including a methane recovery system.
17

18 (b) *Anaerobic digestion.* The degradation of organic material including manure
19 brought about through the action of microorganisms in the absence of elemental oxygen.
20

21 (c) *Anaerobic storage.* Storage of organic material in an oxygen-free
22 environment, or under oxygen-free conditions, including but not limited to, holding tanks,
23 ponds, and lagoons.
24

25 (d) *ANSI.* American National Standards Institute.
26

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1 (e) *ASHRAE*. American Society of Heating, Refrigerating and Air-Conditioner
2 Engineers.

3
4 (f) *Biogas*. Gas resulting from the decomposition of organic matter under
5 anaerobic conditions. The principle constituents are methane and carbon dioxide.

6
7 (g) *Boiler (commercial)*. A self contained, low-pressure appliance for supplying
8 steam or hot water to a commercial building.

9
10 (h) *Boiler (residential)*. A self contained, low-pressure appliance for supplying
11 steam or hot water to a residential building.

12
13 (i) *Building envelope*. The elements of a building that separate conditioned
14 space from unconditioned space, or that enclose semi-heated space, through which
15 thermal energy may be transferred to or from the exterior, unconditioned space, or
16 conditioned space. Includes all elements that separate the interior of a building from the
17 outdoor environment, including walls, windows, foundation, basement slab, ceiling, roof,
18 and insulation.

19
20 (j) *Certification*. The third-party verification by an independent certifier that
21 certain parts of a CO₂ emissions offset project application and/or measurement, monitoring
22 or verification report conforms to the requirements of this subpart.

23
24 (k) *Commercial building*. A building to which the provisions of
25 ANSI/ASHRAE/IESNA Standard 90.1 apply, which includes buildings except low-rise
26 residential buildings. Low-rise residential buildings include single family homes,

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1 multifamily structures of three stories or fewer above grade, and manufactured homes
2 (modular and mobile).

3
4 (l) *Conflict of Interest.* A situation that may arise with respect to an individual in
5 relation to any specific project sponsor, CO₂ emissions offset project or category of offset
6 projects, such that the individual's other activities or relationships with other persons or
7 organizations render or may render the individual incapable of providing an impartial
8 certification opinion, or otherwise compromise the individual's objectivity in performing
9 certification functions.

10
11 (m) *Condensing mode.* The design and operation of furnaces or boilers in a
12 mode that leads to the production of condensate in flue gases.

13
14 (n) *Energy conservation measure (ECM) or energy efficiency measure (EEM).*
15 A set of activities designed to increase the energy efficiency of a building or improve the
16 management of energy demand. An ECM/EEM may involve one or more of the following:
17 physical changes to facility equipment, modifications to a building, revisions to operating
18 and maintenance procedures, software changes, or new means of training or managing
19 users of the building or operations and maintenance staff.

20
21 (o) *Energy performance.* A measure of the relative energy efficiency of a
22 building, building equipment, or building components, as measured by the amount of
23 energy required to provide building services. For building equipment and components, a
24 relative measure of the impact of equipment or components on building energy usage.
25

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1 (p) *Energy services.* Provision of useful services to building occupants, such as
2 heating and hot water, cooling, and lighting.

3
4 (q) *Forested condition.* Land shall be deemed to be in a forested condition if it
5 is:

6
7 (1) at least 1.0 acre in size and 120.0 feet wide measured stem-to-stem
8 from the outer-most edge. Forested strips must be 120.0 feet wide for a continuous length
9 of at least 363.0 feet in order to meet the acre threshold; and

10
11 (2) meets at least one of the two following stocking criteria:

12
13 (i) the condition is at least 10-percent stocked by trees of any size or
14 has been at least 10-percent stocked in the past, and the condition is not subject to non-
15 forest use(s) that prevent normal tree regeneration and succession such as regular
16 mowing, intensive grazing, or recreation activities; or

17
18 (ii) in several western woodland species where stocking cannot be
19 determined, the condition has at least 5 percent crown cover by trees of any size, or has
20 had at least 5 percent cover in the past, and the condition is not subject to non-forest use
21 that prevents normal regeneration and succession such as regular mowing, chaining, or
22 recreation activities.

23
24 (r) *Furnace (commercial).* A self-contained, indirect-fired appliance that
25 supplies heated air to a commercial building through ducts to conditioned spaces.
26

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1 (s) *Furnace (residential)*. A self-contained, indirect-fired appliance that supplies
2 heated air to a residential building through ducts to conditioned spaces.

3
4 (t) *HVAC system*. The system or systems that provide, either collectively or
5 individually, heating, ventilation, or air conditioning to a building, including the equipment,
6 distribution network, and terminals.

7
8 (u) *IESNA*. Illuminating Engineering Society of North America.

9
10 (v) *Independent certifier*. An individual that has been approved by the
11 REGULATORY AGENCY or its agent to conduct certification activities.

12
13 (w) *Market penetration rate*. A measure of the diffusion of a technology, product,
14 or practice in a defined market, as represented by the percentage of annual sales for a
15 product or practice, or as a percentage of the existing installed stock for a product or
16 category of products, or as the percentage of existing installed stock that utilizes a
17 practice.

18
19 (x) *Non-forested condition*. Land shall be deemed in a non-forested condition if
20 the land does not support, or has never supported, forests, and lands formerly forested
21 where use for timber management has been precluded by development for other uses.
22 Non-forested land includes areas used for crops, improved pasture, residential areas, city
23 parks, improved roads of any width and adjoining rights-of-way, power line clearings of any
24 width, and non-census water. If intermingled in forest areas, unimproved roads and non-
25 forest strips must be more than 120.0 feet wide, and clearings more than one acre in size,
26 to qualify as non-forest land.

27

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1 (y) *On-site combustion.* The combustion of fossil fuel at a building to provide
2 building services, such as heating, hot water, or electricity.

3
4 (z) *Passive solar.* A combination of building design features and building
5 components that utilize solar energy to reduce or eliminate the need for mechanical
6 heating and cooling and daytime artificial lighting.

7
8 (aa) *Project commencement.* For an offset project involving physical
9 construction, other work at a project site, or installation of equipment or materials, the date
10 of the beginning of such activity. For an offset project that involves the implementation of a
11 management activity or protocol, the date on which such activity is first implemented or
12 such protocol first utilized.

13
14 (ab) *Regional-type anaerobic digester.* An anaerobic digester using feedstock
15 from more than one agricultural operation, or importing feedstock from more than one
16 agricultural operation. Also referred to as a “community digester” or “centralized digester”.

17
18 (ac) *Renewable portfolio standard.* A statutory or regulatory requirement that a
19 load-serving entity provide a certain portion of the electricity it supplies to its customers
20 from renewable energy sources, or any other statutory or regulatory requirement that a
21 certain portion of electricity supplied to the electricity grid be generated from renewable
22 energy sources.

23
24 (ad) *Residential building.* A low-rise residential building to which the provisions of
25 ANSI/ASHRAE/IESNA Standard 90.1 do not apply. Includes, *inter alia*, single family
26 homes, multifamily structures of three stories or fewer above grade, and manufactured
27 homes (modular and mobile).

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(ae) *RESNET*. Residential Energy Services Network.

(af) *SF₆-containing operating equipment*. Any equipment used for the transmission and distribution of electricity that contains SF₆.

(ag) *System benefit fund*. Any fund collected directly from retail electricity or natural gas ratepayers.

(ah) *Total solids*. Total solids are the total of all solids in a sample. They include the total suspended solids, total dissolved solids, and volatile suspended solids.

(ai) *Transmission and/or distribution entity*. The assets and equipment used to transmit and distribute electricity from an electric generator to the electrical load of a customer. Includes 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 applicable state regulatory agency.

(aj) *Volatile solids*. The fraction of total solids that is comprised primarily of organic matter.

(ak) *Whole-building energy performance*. The overall energy performance of a building, taking into account the integrated impact on energy usage of all building components and systems.

(al) *Whole-building retrofit*. Any building project that involves the replacement of more than one building system, or set of building components, and also

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1 requires a building permit.

2
3 (am) *Zero net energy building.* A building designed to produce as much energy as
4 the building is projected to use, as measured on an annual basis.

5 6 **XX-10.3 General requirements**

7
8 (a) *Eligible CO₂ emissions offset projects.* The REGULATORY AGENCY may
9 award CO₂ emissions offset allowances to the sponsor of any of the following types of CO₂
10 emissions offset projects that have satisfied all the applicable requirements of this Subpart:

11
12 (1) Landfill methane capture and destruction;

13
14 (2) Reduction in emissions of sulfur hexafluoride (SF₆);

15
16 (3) Sequestration of carbon due to afforestation;

17
18 (4) Reduction or avoidance of CO₂ emissions from natural gas, oil, or
19 propane end-use combustion due to end-use energy efficiency;

20
21 (5) Avoided methane emissions from agricultural manure management
22 operations; and

23
24 (6) Reduction in emissions of methane from natural gas transmission and
25 distribution equipment.
26

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1 (b) *Eligible CO₂ emissions credit retirements.* The REGULATORY AGENCY
2 may award CO₂ offset allowances to the sponsor of a CO₂ emissions credit retirement that
3 has satisfied all the applicable requirements of this Subpart. CO₂ emissions credit
4 retirements include the permanent retirement of greenhouse gas allowances or credits
5 issued pursuant to any governmental mandatory carbon constraining program outside the
6 United States that places a specific tonnage limit on greenhouse gas emissions, or
7 certified greenhouse gas emissions reduction credits issued pursuant to the United
8 Nations Framework Convention on Climate Change (UNFCCC) or protocols adopted
9 through the UNFCCC process.

10
11 (c) *Project sponsor.* Any person may act as the sponsor of an eligible CO₂
12 emissions offset project or CO₂ emissions credit retirement.

13
14 (d) *General Additionality Requirements.*

15
16 (1) CO₂ emissions offset allowances shall not be awarded to a project or
17 CO₂ emissions credit retirement that is required pursuant to any local, state or federal law,
18 regulation, or administrative or judicial order. If a project receives a consistency
19 determination under section XX-10.4, and subsequently the project is required by local,
20 state or federal law, regulation, or administrative or judicial order, then the project shall not
21 be eligible for the award of CO₂ emissions offset allowances after the effective date of the
22 local, state or federal law, regulation, or administrative or judicial order.

23
24 (2) Eligible CO₂ emissions offset projects must also meet the
25 requirements set forth in this paragraph, provided the receipt of funding or incentives other
26 than those specified in subparagraphs (i) through (iii) below shall not affect a project's

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1 eligibility for the award of offset allowances.

2
3 (i) Projects may not receive funding or other incentives from any
4 systems benefit fund, or funds provided through the consumer benefit or strategic energy
5 purpose allocation required pursuant to subdivision XX-5.3(b).

6
7 (ii) If a project includes an electric generation component, the
8 project sponsor shall transfer legal rights to any and all attribute credits generated from the
9 operation of the project, other than CO₂ emissions offset allowances issued under section
10 XX-10.7, that may be used for compliance with a renewable portfolio standard or other
11 regulatory requirement, to the REGULATORY AGENCY or its agent.

12
13 (iii) Projects may not be awarded credits or allowances under any
14 other mandatory or voluntary greenhouse gas program or market.

15
16 (e) *Maximum crediting period for CO₂ emissions offset projects.* The
17 REGULATORY AGENCY may award CO₂ offset allowances under section XX-10.7 for any
18 CO₂ emissions offset project for no more than ten allocation years, provided the
19 REGULATORY AGENCY may award CO₂ offset allowances for an additional ten
20 allocation years upon a demonstration by the project sponsor that the CO₂ emissions
21 offset project meets all the applicable requirements of this Subpart for such projects at the
22 end of the first ten-year period. Prior to the extension of the crediting period, the project
23 sponsor must submit a consistency application pursuant to section XX-10.4 and receive a
24 consistency determination from the REGULATORY AGENCY pursuant to paragraph XX-
25 10.4(e)(2).

26

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1 (f) *Timing of Projects.* The REGULATORY AGENCY may award CO₂ offset
2 allowances under section XX-10.7 only for CO₂ emissions offset projects that are initially
3 commenced on or after December 20, 2005.

4
5 (g) *Project Audit.* Project sponsors shall provide the REGULATORY AGENCY
6 or its agent access to the physical location of the project to inspect for compliance with this
7 Subpart.

8
9 (h) *Ineligibility due to noncompliance.* If at any time the REGULATORY
10 AGENCY determines that a project sponsor has not complied with the requirements of this
11 Subpart, then the REGULATORY AGENCY may revoke any and all offset allowances in
12 the project sponsor's account. If at any time the REGULATORY AGENCY determines
13 that a project does not comply with the requirements of this Subpart, then the
14 REGULATORY AGENCY may revoke any approvals it has issued relative to a project.

15 16 **XX-10.4 Application process.**

17
18 (a) *Establishment of general account.* The sponsor of a CO₂ emissions offset
19 project or CO₂ emissions credit retirement must establish a general account under
20 subdivision XX-6.2(b). All submissions to the REGULATORY AGENCY required for the
21 award of CO₂ offset allowances under this Subpart must be from the CO₂ authorized
22 account representative for the general account of the sponsor of the relevant CO₂
23 emissions offset project or CO₂ emissions credit retirement.

24
25 (b) *Application deadlines.*
26

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1 (1) For CO₂ emissions offset projects commenced prior to January 1,
2 2009, the project sponsor must submit the project application covering the pre-2009 period
3 by June 30, 2009.

4
5 (2) For CO₂ emissions offset projects commenced on or after January 1,
6 2009, the application must be submitted by the date that is 6 months after the project is
7 commenced.

8
9 (3) Any application that fails to meet the deadlines of this subdivision (b)
10 will result in the denial of the application and the continued ineligibility of the subject CO₂
11 emissions offset project.

12
13 (c) *Application contents.*

14
15 (1) For a CO₂ emissions offset project, the application must include the
16 following information:

17
18 (i) The project's sponsor's name, address, e-mail address,
19 telephone number, and facsimile transmission number to the extent they are different from
20 those of the project sponsor's CO₂ authorized account representative.

21
22 (ii) The project description as required by the relevant provisions of
23 section XX-10.5.

24
25 (iii) The emissions baseline determination as required by the
26 relevant provisions of section XX-10.5.

27

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1 (iv) An explanation of how the projected reduction or avoidance of
2 atmospheric loading of CO₂ or CO₂ equivalent or the sequestration of carbon is to be
3 quantified, monitored, and verified as required by the relevant provisions of section XX-
4 10.5.

5
6 (v) A completed application agreement that reads as follows: “The
7 undersigned project sponsor recognizes and accepts that the application for, and the
8 receipt of, CO₂ emissions offset allowances under the CO₂ Budget Trading Program is
9 predicated on the project sponsor following all the requirements of Subpart XX-10. These
10 requirements include, but are not limited to:

- 11
- 12 - Following program procedures.
- 13 - Meeting all submittal timelines.
- 14 - Meeting all submittal requests.
- 15 - All information submitted is complete and accurate.
- 16

17 I understand that eligibility for the award of CO₂ emissions offset allowances under Subpart
18 XX-10 is contingent on meeting the requirements of Subpart XX-10. I authorize the
19 REGULATORY AGENCY or its agent to audit this CO₂ emissions offset project for
20 purposes of verifying that the project, including the monitoring and verification plan, has
21 been implemented as described in this application. I understand that this right to audit shall
22 include the right to enter the physical location of the project. I submit to the legal
23 jurisdiction of [RGGI PARTICIPATING STATE].”

24
25 (vi) A statement and certification report signed by the project
26 sponsor certifying that all projects for which the sponsor has received offset allowances
27 under this Subpart (or similar provisions in the rules of other participating states), under the

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1 sponsor's ownership or control (or under the ownership or control of any entity which
2 controls, is controlled by, or has common control with the sponsor) are in compliance with
3 all applicable requirements of the CO₂ Budget Trading Program in all participating states.
4

5 (vii) A statement and certification report drafted and signed by an
6 independent certifier accredited pursuant to section XX-10.6 that expresses that the
7 independent certifier has reviewed the entire application and evaluated the following in
8 relation to the applicable requirements at section XX-10.5, and any applicable guidance
9 issued by the REGULATORY AGENCY:

10
11 (a) The adequacy and validity of information supplied by the
12 project sponsor to demonstrate that the project meets the applicable eligibility
13 requirements of section XX-10.5.
14

15 (b) The adequacy and validity of information supplied by the
16 project sponsor to demonstrate baseline emissions pursuant to the applicable
17 requirements at section XX-10.5.
18

19 (c) The adequacy of the monitoring and verification plan
20 submitted pursuant to the applicable requirements at section XX-10.5.
21

22 (d) Such other statements as may be required pursuant to
23 applicable guidance issued by the REGULATORY AGENCY.
24

25 (viii) Disclosure of any voluntary or mandatory programs, other than
26 the CO₂ Budget Trading Program, to which greenhouse gas emissions data related to the
27 project has been, or will be reported.

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(2) For a CO₂ emissions credit retirement, the application must include sufficient information to demonstrate that the CO₂ emissions credit is equivalent to an allowance under the CO₂ Budget Trading Program and has been permanently and irrevocably retired.

(d) *Place for filing.*

(1) For a CO₂ emissions offset project located in one Participating State (in whole or in part), the application must be filed with the appropriate regulatory agency in that State.

(2) For a CO₂ emissions offset project located wholly outside all Participating States, the application may be filed with the appropriate regulatory agency in any one Participating State.

(3) For a CO₂ emissions offset project located in more than one Participating State, the application must be filed in the Participating State where the larger part of the project activity is located.

(4) For CO₂ emissions credit retirements, the application may be filed with the appropriate regulatory agency in any Participating State.

(e) *REGULATORY AGENCY action on applications.*

(1) *Completeness determination.* Within 30 days following receipt of the application filed pursuant to subdivision (b) of this section, the REGULATORY AGENCY

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1 will notify the project sponsor whether the application is complete. A complete application
2 is one that is in an approved form and is determined by the REGULATORY AGENCY to be
3 complete for the purpose of commencing review of the application but which may need to
4 be supplemented during the course of review in order to enable the REGULATORY
5 AGENCY to make a consistency determination under paragraph (2) of this subdivision.
6

7 (2) *Consistency determination.* Within 90 days of making the
8 completeness determination under paragraph (1) of this subdivision, the REGULATORY
9 AGENCY will issue a determination as to whether the project sponsor's application is
10 consistent with the requirements of sections XX-10.3 and XX-10.4 and the requirements of
11 the applicable CO₂ emissions offset project standard of section XX-10.5. For any
12 application found to lack consistency with these requirements, the REGULATORY
13 AGENCY will inform the project sponsor of the application's deficiencies. The project
14 sponsor may revise and resubmit the application within 30 days of a finding of
15 inconsistency.
16

17 **XX-10.5 CO₂ emissions offset project standards.**

18
19 (a) *Landfill methane capture and destruction.* Projects that capture and destroy
20 methane from landfills may qualify for the award of CO₂ emissions offset allowances under
21 this Subpart, provided they meet the requirements of this subdivision.
22

23 (1) *Eligibility.* Eligible landfill methane capture and destruction projects shall
24 occur at landfills that are not subject to the New Source Performance Standards (NSPS)
25 for municipal solid waste landfills, 40 CFR Part 60, Subpart Cc and Subpart WWW.
26

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1 (2) *Project description.* The project sponsor shall provide a detailed narrative
2 of the project action(s) to be taken, including supporting materials as appropriate. The
3 project narrative shall include the following:

4
5 (i) Owner and operator of the project;

6
7 (ii) Location and specifications of the landfill where the project will
8 occur, including waste in place;

9
10 (iii) Owner and operator of the landfill where the project will occur;
11 and

12
13 (iv) Specifications of the equipment to be installed and a technical
14 schematic of the project.
15

16 (3) *Emissions baseline determination.* The emissions baseline shall
17 represent the potential fugitive landfill emissions of CH₄ (in short tons of CO₂e), as
18 represented by the CH₄ collected and metered for thermal destruction as part of the
19 project. Baseline emissions of CH₄ shall be calculated as follows:

20
21 Emissions (short tons CO₂e) = (V x M x (1-OX) x GWP)/2000

22 where:

23 V = Volume of CH₄ collected (ft³)

24 M = Mass of CH₄ per cubic foot (0.0416 lbs/ft³ default value at 1 atmosphere
25 and 20° C)

26 OX = Oxidation factor (0.10), representing estimated portion of collected
27 CH₄ that would have eventually oxidized to CO₂ if not collected

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1 GWP = CO₂e global warming potential of CH₄ (23)

2
3 (4) *Calculating emissions reductions.* Emissions reductions shall be
4 determined based on potential fugitive CH₄ emissions that would have occurred at the
5 landfill if metered CH₄ collected from the landfill for thermal destruction as part of the
6 project was not collected and destroyed, as represented by the CH₄ collected and
7 destroyed due to the project. CO₂e emissions reductions shall be calculated as follows:

8
9 Emissions Reductions (short tons CO₂e) = (V x M x (1 - OX) x C_{ef} x
10 GWP)/2000

11 where:

12 V = Volume of CH₄ collected (ft₃)

13 M = Mass of CH₄ per cubic foot (0.0416 lbs/ft³ default value at 1 atmosphere
14 and 20° C)

15 OX = Oxidation factor (0.10), representing estimated portion of collected CH₄
16 that would have eventually oxidized to CO₂ if not collected

17 C_{ef} = Combustion efficiency of methane control technology (0.98)

18 GWP = CO₂e global warming potential of CH₄ (23)

19
20 (5) *Monitoring and verification requirements.* Projects shall employ a landfill
21 gas collection system that provides continuous metering and data computation of landfill
22 gas volumetric flow rate and CH₄ concentration. Monitoring and verification reports shall
23 include monthly volumetric flow rate and CH₄ concentration data, including documentation
24 that the CH₄ was actually supplied to the combustion source. Monitoring and verification is
25 also subject to the following requirements:
26

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1 (i) The project sponsor shall submit a monitoring and verification plan
2 as part of the consistency application that includes a quality assurance and quality control
3 program associated with equipment used to determine landfill gas volumetric flow rate and
4 CH₄ composition. The monitoring and verification plan shall also include provisions for
5 ensuring that measuring and monitoring equipment is maintained, operated, and calibrated
6 based on manufacturer recommendations, as well as provisions for the retention of
7 maintenance records for audit purposes. The monitoring and verification plan shall be
8 certified by an independent certifier accredited pursuant to section XX-10.6.

9
10 (ii) The project sponsor shall annually verify landfill gas CH₄
11 composition through landfill gas sampling and independent laboratory analysis using
12 applicable U.S. Environmental Protection Agency laboratory test methods.

13
14 **(b) *Reduction in emissions of sulfur hexafluoride (SF₆)*.** Projects that prevent
15 fugitive emissions of sulfur hexafluoride to the atmosphere, through capture and storage,
16 recycling, or destruction may qualify for the award of CO₂ emissions offset allowances
17 under this Subpart, provided they meet the requirements of this subdivision.

18
19 (1) *Eligibility.*

20
21 (i) The project sponsor shall detail the incremental actions to be taken,
22 beyond actions taken during the baseline year, to achieve a reduction in emissions of SF₆
23 relative to the transmission and/or distribution entity's emissions in the baseline year.
24 These actions may include an expansion of existing actions, provided the applicant details
25 the scope of proposed expanded activities. The identified actions to be taken shall be
26 consistent with the guidance provided in International Electrotechnical Commission (IEC)
27 1634, "High-voltage switchgear and control gear – Use and handling of sulfur hexafluoride

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(SF₆) in high-voltage switchgear and control gear,” (CEI/IEC 1634, 1995-04), and Electric Power Research Institute (EPRI), “Practical Guide to SF₆ Handling Practices,” (TR-113933, 2002).

(ii) The project sponsor shall demonstrate that the entity-wide emissions rate of SF₆ for the baseline year is less than the applicable emission rate in Table 1, unless the project sponsor can demonstrate that the entity meets the specifications at subparagraph (1)(iii) of this subdivision. The entity-wide SF₆ emissions rate shall be calculated as follows:

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

where:

SF₆ Nameplate Capacity refers to all SF₆-containing equipment owned and/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 1

SF₆ Emission Rate Performance Standards

A. Emission Regions

| <u>Region A</u> | <u>Region B</u> | <u>Region C</u> | <u>Region D</u> | <u>Region E</u> |
|-----------------|----------------------|-----------------|-----------------|-----------------|
| 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 |

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| | | | | |
|---------------|----------------|--------------|------------|------------|
| 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 | | |

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B. Emission Rate Performance Standards

| <u>Region</u> | <u>Emission Rate^a</u> |
|-----------------|----------------------------------|
| Region A | 9.68% |
| Region B | 5.22% |
| Region C | 9.68% |
| Region D | 5.77% |
| Region E | 3.65% |
| U.S. (National) | 9.68% |

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^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.

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(iii) **[Reserved]** [Language TBD. Reserved to address any T&D infrastructure issues that would functionally preclude a utility from meeting the above emission rate requirements at subparagraph (1)(ii), Table 1. Provisions, if deemed necessary, would allow an entity to qualify under certain demonstrated circumstances even if it does not meet the applicable emissions rate requirement at Table 1. This could entail a different emission rate for types of T&D entities with demonstrated limiting characteristics, or qualitative criteria that could exempt an entity from the emission rate requirement. Identified factors that could impact the ability of some anomalous entities serving predominantly urban service territories to meet a regional emission rate

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1 requirement include the following: older than average installed equipment, poor
2 accessibility of equipment (underground), the inability to take equipment out of service
3 (service would involve disruption of electricity service or other critical infrastructure, such
4 as water or transportation), and equipment purpose or design (required equipment design
5 that is inherently leak-prone).]

6
7 (2) *Project description.* The project sponsor shall provide a detailed narrative
8 of the project actions to be taken, including supporting materials as appropriate. The
9 project narrative shall include the following:

10
11 (i) Detailed description of the transmission and/or distribution entity,
12 including specification of the service territory served by the entity.

13
14 (ii) Owner and operator of the transmission and/or distribution entity.
15

16 (3) *Emissions baseline determination.* Baseline SF₆ emissions shall be
17 determined based on annual entity-wide reporting of SF₆ emissions for the calendar year
18 immediately preceding the calendar year in which the consistency application is filed
19 (designated the baseline year). If the consistency application is filed prior to 2009, the
20 baseline year may be 2005, but no earlier. The reporting entity shall systematically track
21 and account for all entity-wide uses of SF₆ in order to determine entity-wide emissions of
22 SF₆. The scope of such tracking and accounting shall include all electric transmission and
23 distribution assets and all SF₆-containing and SF₆-handling equipment owned and/or
24 operated by the reporting entity.
25

26 (i) Emissions (lbs.) shall be determined based on the following mass
27 balance method:

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1
2 SF₆ Emissions = (SF₆ Change in Inventory) + (SF₆ Purchases and
3 Acquisitions) – (SF₆ Sales and Disbursements) – (Change in Total SF₆ Nameplate
4 Capacity of Equipment)

5 where:

6 *Change in Inventory* is the difference between the quantity of SF₆ gas in
7 storage at the beginning of the reporting year and the quantity in storage at the end of the
8 reporting year. The term “quantity in storage” includes all SF₆ gas contained in cylinders
9 (such as 115-pound storage cylinders), gas carts, and other storage containers. It does
10 not refer to SF₆ gas held in SF₆-using operating equipment. The change in inventory will
11 be negative if the quantity of SF₆ gas in storage increases over the course of the year.

12 *Purchases and Acquisitions of SF₆* is the sum of all the SF₆ gas acquired
13 from other parties during the reporting year, as contained in storage containers or SF₆-
14 using operating equipment.

15 *Sales and disbursements of SF₆* is the sum of all the SF₆ gas sold or
16 otherwise disbursed to other parties during the reporting year, as contained in storage
17 containers and SF₆-using operating equipment.

18 *Change in Total SF₆ Nameplate Capacity of Equipment* is the net change in
19 the total volume of SF₆-containing operating equipment during the reporting year. The net
20 change in nameplate capacity is equal to new equipment nameplate capacity, minus
21 retired nameplate capacity. This quantity will be negative if the retired equipment has a
22 total nameplate capacity larger than the total nameplate capacity of the new equipment.
23 “Total nameplate capacity” refers to the full and proper SF₆ charge of the equipment rather
24 than to the actual charge, which may reflect leakage.

25
26 (ii) Emissions shall be calculated as follows:
27

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1 Emissions (short tons CO₂e) = [(V_{iby} - V_{iey}) + (PA_{psd} + PA_e + PA_{rre}) - (SD_{op} +
2 SD_{rs} + SD_{df} + SD_{sor}) - (CNP_{ne} - CNP_{rse})] x GWP/2000

3 Where (all SF₆ values in lbs.):

4 V_{iby} = SF₆ inventory in cylinders, gas carts, and other storage containers (not
5 SF₆-containing operating equipment) at the beginning of the reporting year

6 V_{iey} = SF₆ inventory in cylinders, gas carts, and other storage containers (not
7 SF₆-containing operating equipment) at the end of the reporting year

8 PA_{psd} = SF₆ purchased from suppliers or distributors in cylinders

9 PA_e = SF₆ provided by equipment manufacturers with or inside SF₆-
10 containing operating equipment

11 PA_{rre} = SF₆ returned to the reporting entity after off-site recycling

12 SD_{op} = Sales of SF₆ to other parties, including gas left in SF₆-containing
13 operating equipment that is sold

14 SD_{rs} = Returns of SF₆ to supplier (producer or distributor)

15 SD_{df} = SF₆ sent to destruction facilities

16 SD_{sor} = SF₆ sent off-site for recycling

17 CNP_{ne} = Total SF₆ nameplate capacity of new SF₆-containing operating
18 equipment at proper full charge

19 CNP_{rse} = Total SF₆ nameplate capacity of retired or sold SF₆-containing
20 operating equipment at proper full charge

21 GWP = CO₂e global warming potential of SF₆ (22,200)

22
23 (iii) As part of the consistency application required pursuant to
24 subdivision XX-10.4(b) and in annual monitoring and verification reports required pursuant
25 to subdivision XX-10.7(b-c), the project sponsor shall provide the documentation required
26 at subparagraph (5)(i-iii) of this subdivision to support emissions calculations.
27

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1 (4) *Calculating emissions reductions.* Emissions reductions shall represent
2 the annual entity-wide emissions reductions of SF₆ for the reporting entity, relative to
3 emissions in the baseline year. Emissions reductions shall be determined as follows,
4 using the quantification method outlined in subparagraph (3)(ii) of this subdivision to
5 determine emissions in both the baseline year and reporting year(s):
6

7 Emissions Reduction (short tons CO₂e) = (Total Pounds of SF₆ Emissions in
8 Baseline Reporting Year) – (Total Pounds of SF₆ Emissions in Reporting Year) x
9 GWP/2000

10 where:

11 GWP = CO₂e global warming potential of SF₆ (22,200)
12

13 (5) *Monitoring and verification requirements.* The annual monitoring and
14 verification report shall include supporting material detailing the calculations and data used
15 to determine SF₆ emissions reductions, and shall also provide the following documentation:
16

17 (i) The project sponsor shall identify a facility(ies) managed by the
18 entity from which all SF₆ gas is procured and disbursed and maintain an entity-wide log of
19 all SF₆ gas procurements and disbursals. The entity-wide log shall include the weight of
20 each cylinder transported before shipment from the facility(ies) and the weight of each
21 cylinder after return to the facility(ies). A specific cylinder log shall also be maintained for
22 each cylinder that is used to fill equipment with SF₆ or reclaim SF₆ from equipment. The
23 cylinder log shall be retained with the cylinder and indicate the location and specific
24 identifying information of the equipment being filled, or from which SF₆ is reclaimed, and
25 the weight of the cylinder before and after this activity. The cylinder log shall be returned
26 with the cylinder to the facility when the activity is complete or the cylinder is empty.
27

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1 (ii) A current entity-wide inventory of all SF₆-containing operating
2 equipment and all other SF₆-related items, including cylinders, gas carts, and other storage
3 containers used by the entity. The inventory shall be reviewed by an independent certifier
4 accredited pursuant to subsection XX-10.6 of this subpart.

5
6 (iii) The project sponsor shall provide a monitoring and verification
7 plan as part of the consistency application, which shall include an SF₆ inventory
8 management and auditing protocol and a process for quality assurance and quality control
9 of inventory data. The monitoring and verification plan shall be certified by an independent
10 certifier accredited pursuant to section XX-10.6.

11
12 (c) **Sequestration of carbon due to afforestation.** Projects that sequester
13 carbon through the conversion of land from a non-forested to forested condition may
14 qualify for the award of CO₂ emissions offset allowances under this Subpart, provided they
15 meet the requirements of this subdivision.

16
17 (1) *Eligibility.*

18
19 (i) Project specifications, including the boundaries of the project,
20 required pursuant to subparagraph (6)(i) of this subdivision, shall be specified in the
21 consistency application pursuant to subdivision XX-10.4(b), prior to commencement of the
22 project.

23
24 (ii) The project sponsor shall document in the consistency
25 application that the land within the project boundary has been in a non-forested state for at
26 least the 10 years preceding the commencement of the project.

27

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1 (iii) The project sponsor shall document that the project will be
2 managed in accordance with environmentally sustainable forestry practices.

3
4 (2) *Project description.* The project sponsor shall provide a detailed
5 narrative of the project actions to be taken, including supporting materials as appropriate.
6 The project narrative shall include the following:

7
8 (i) Owner of the land within the project boundary;

9
10 (ii) Detailed map of the land within the project boundary and areas
11 adjacent to the project boundary;

12
13 (iii) A copy of the permanent conservation easement required
14 pursuant to paragraph (6) of this subdivision; and

15
16 (iv) Plant species to be planted and a forest management plan.

17
18 (3) *Carbon sequestration baseline determination.* The existing sequestered
19 carbon within the project boundary shall be calculated prior to commencement of the
20 project. The carbon sequestration baseline shall be determined based on a sum of
21 measurements, made no more than 12 months prior to project commencement, of the
22 carbon content of the following carbon pools:

23
24 (i) Carbon content shall be calculated for the following required
25 carbon pools:

26
27 (a) Live above-ground tree biomass;

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(b) Live below-ground tree biomass; and

(c) Soil carbon.

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

(a) Live above-ground non-tree biomass;

(b) Dead organic matter, forest floor; and

(c) Dead organic matter, coarse woody debris.

(iii) Carbon content shall be calculated individually for each carbon pool within the project boundary.

(iv) To increase the accuracy of measurement and verification, the area within the 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 project activity) and site factors (soil type, elevation, slope, age class, and other factors as warranted).

(v) Calculation of sequestered carbon for each carbon pool in each reporting sub-population shall be based on the following:

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1 $C = A \times C/ha$

2 where:

3 C = Carbon content (for each carbon pool)

4 A = Area in hectares within each reporting sub-population

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

6

7 (vi) Total carbon contained within the project boundary (represented
8 in short tons of carbon) shall be calculated as follows:

9

10 $TC_{pb} = TC_{latb} + TC_{lbtb} + TC_s [+ TC_{lantb} + TC_{doff} + TC_{docwd}]$

11 where:

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

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

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

18 TC_s = Sum of carbon content of soil carbon in all reporting sub-populations

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

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

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

25

26 (vii) Each individual carbon pool to be measured must be directly
27 measured using a measurement protocol and sample size that achieves a demonstrated

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1 quantified accuracy such that there is 95% confidence that the resulting reported value is
2 within 10% of the true value. Measurement and sampling practices shall meet the
3 following requirements:

4
5 (a) An adequate sample size that meets the requirements of
6 subparagraph (3)(vii) of this subdivision shall be determined for each sub-population.

7
8 (b) The minimum number of required sampling plots for each
9 sub-population shall be determined based on the following:

10
11
$$n = (s \times 1.960) / (\text{mean} \times re)^2$$

12 where:

13 n = required number of sample plots for each reporting sub-population

14 s = standard deviation

15 mean = mean reported carbon content for the sample population

16 re = level of sampling error (0.08) to assure a total maximum error of 10% for
17 the 95% confidence interval, which assumes total error due to measurement error of 0.02

18
19 (viii) Direct measurement procedures shall be consistent with current
20 forestry good practice and the guidance contained in Winrock International, *A Guide to*
21 *Monitoring Carbon Storage in Forestry and Agroforestry Projects* (Winrock International
22 Institute for Agricultural Development, 1997).

23
24 (4) *Calculating carbon sequestered.* Carbon sequestration (represented in
25 short tons of carbon) shall be the amount of net additional carbon sequestered during each
26 calculation period, based upon aggregate carbon uptake and carbon emissions for the
27 sum of carbon pools, relative to the baseline carbon content or the carbon content as of

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1 the previous calculation period, as applicable. CO₂ emissions offsets shall be issued
2 based on the amount of net additional carbon sequestered within the project boundary
3 during each reporting period, and represented in short tons of CO₂ equivalent.

4 Sequestered carbon shall be calculated using a stock-change approach as follows:

5
6
$$\text{NCS}_t = I_t - I_{t-1}$$

7 where:

8 NCS_t = Net carbon sequestered in reporting period t

9 I_t = Inventory of carbon stock for all carbon pools in all reporting sub-
10 populations within the project boundary in reporting period t

11 I_{t-1} = Inventory of carbon stock for all carbon pools in all reporting sub-
12 populations within the project boundary in the reporting period immediately preceding
13 reporting period t

14
15 (i) Each of the carbon pools that were measured as part of the
16 baseline determination must be re-measured using the same methodology, and to the
17 same or better quantified accuracy consistent with the requirements of subparagraph
18 (3)(vii-viii) of this subdivision, as that used for the baseline determination.

19
20 (ii) The net change in each pool's carbon stock in each reporting sub-
21 population is calculated by subtracting the baseline carbon stock (or stock at the previous
22 monitoring) from the carbon stock at the time of the current monitoring. Determination of
23 carbon stock shall be in accordance with the formulas and procedures in paragraph (3) of
24 this subdivision.

25
26 (iii) Net carbon stock change for the project is the sum of the net
27 changes in the carbon stock of all applicable pools in all reporting sub-populations within

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1 the project boundary, less twenty percent (20%) to account for potential losses of
2 sequestered carbon.

3
4 (5) *Monitoring and verification requirements.* Total carbon stock within the
5 project boundary shall be calculated not less than every five years. Monitoring and
6 verification is subject to the following requirements:

7
8 (i) Monitoring and verification reports shall include data from direct
9 measurement of carbon content for all plots used to determine baseline and reporting
10 period carbon content.

11
12 (ii) The consistency application shall include a monitoring and
13 verification plan certified by the REGULATORY AGENCY or an independent certifier
14 accredited pursuant to section XX-10.6 of this subpart. The monitoring and verification
15 plan shall include the following:

16
17 (a) Direct carbon measurement procedures consistent with the
18 requirements at subparagraph (3)(viii) of this of this subdivision.

19
20 (b) The designation of sub-populations pursuant to
21 subparagraph (3)(iv) of this subdivision. The determination of the minimum number of
22 sampling plots pursuant to subparagraph (3)(vii) of this subdivision.

23
24 (c) Assessment of management practices to ensure that the
25 project has been managed in accordance with environmentally sustainable forestry
26 practices consistent with the Forest Stewardship Council (FSC) and/or Sustainable

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1 Forestry Institute (SFI), or such other similar organizations as may be approved by the
2 REGULATORY AGENCY.

3
4 (iii) The applicant shall allow access to the project site to the
5 accredited independent certifier, or as requested by the REGULATORY AGENCY.

6
7 (6) *Carbon Sequestration Permanence.* The project shall meet the following
8 requirements to address permanence of sequestered carbon. The project sponsor shall
9 place the land within the project boundary under a legally binding permanent conservation
10 easement, approved by the REGULATORY AGENCY, that requires the land to be
11 maintained in a forested state in perpetuity.

12
13 (d) ***Reduction or avoidance of CO₂ emissions from natural gas, oil, or***
14 ***propane end-use combustion due to end-use energy efficiency.*** A project that
15 reduces CO₂ emissions by reducing on-site combustion of natural gas, oil, or propane for
16 end-use in an existing or new commercial or residential building by improving the energy
17 efficiency of fuel usage and the energy-efficient delivery of energy services may qualify for
18 the award of CO₂ emissions offset allowances under this Subpart, provided it meets the
19 requirements of this subdivision. Eligible new buildings are limited to new buildings that
20 are designed to replace an existing building on the project site, or new buildings designed
21 to be zero net energy buildings.

22
23 (1) *Eligibility.* Eligible projects or actions may include the following energy
24 conservation measures (ECMs):
25

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1 (i) improvements in the energy efficiency of combustion
2 equipment that provide space heating and hot water, including a reduction in fossil fuel
3 consumption through the use of renewable energy;

4
5 (ii) improvements in the efficiency of heating distribution systems,
6 including proper sizing and commissioning of heating systems;

7
8 (iii) installation or improvement of energy management systems;

9
10 (iv) improvement in the efficiency of hot water distribution systems
11 and reduction in demand for hot water;

12
13 (vi) measures that improve the thermal performance of the building
14 envelope and/or reduce building envelope air leakage;

15
16 (vii) measures that improve the passive solar performance of
17 buildings and utilization of active heating systems using renewable energy; and

18
19 (viii) fuel switching to a less carbon-intensive fuel for use in
20 combustion systems, including the use of liquid or gaseous renewable fuels, provided that
21 conversions to electricity are not eligible.

22
23 (2) *Project description.* The project sponsor shall provide a detailed
24 narrative of the project actions to be taken, including supporting materials as appropriate.
25 The project narrative shall include the following:
26

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1 (i) Location and specifications of the building(s) where the project
2 actions will occur;

3
4 (ii) Owner and operator of the building(s);

5
6 (iii) The parties implementing the project, including lead
7 contractor(s), subcontractors, and consulting firms;

8
9 (iii) Specifications of equipment and materials to be installed as
10 part of the project; and

11
12 (iv) Building plans and project technical schematics, as applicable.

13
14 (3) *Performance standards.* For projects initiated on or after January 1,
15 2009, the project sponsor shall demonstrate, to the satisfaction of the REGULATORY
16 AGENCY, that energy conservation measures implemented as part of eligible projects at
17 paragraph (1) of this subdivision have a market penetration rate of less than 5%. Projects
18 initiated on or after January 1, 2009 shall also meet the requirements at clause (3)(i)(c)
19 and subparagraph (3)(iii) of this subdivision, as applicable. For projects initiated prior to
20 2009, energy conservation measures implemented as part of eligible projects at paragraph
21 (1) of this subdivision shall meet the following performance or prescriptive criteria, as
22 applicable:

23
24 (i) *Combustion equipment.* Combustion equipment shall meet the
25 following energy efficiency performance and other requirements, as applicable:
26

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1 (a) *Commercial boilers.* Commercial boilers shall meet or
2 exceed the following energy efficiency criteria in Table 1:
3
4
5
6

7 Table 1
8 Minimum Commercial Boiler Energy Efficiency
9

| <u>Technology</u> | <u>Size (Btu/hr)</u> | <u>Rating Method</u> | <u>Minimum Efficiency</u> |
|-------------------|----------------------|---------------------------------|---------------------------|
| Gas-fired | 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% |

10
11
12
13
14
15
16 ^a Thermal Efficiency is defined as useful energy output (Btu) divided by energy input
17 (Btu), and presented as a percentage. This shall be measured under steady state
18 conditions, at full rated useful thermal output, 140°F supply from, and 120°F return
19 water temperature to, the boiler.
20

21 (1) Gas-fired boilers shall be installed with controls that
22 allow the boiler to operate in condensing mode and installed with vents designed for
23 positive vent static pressure and vent gas temperature that leads to condensate production
24 in the vent.
25

26 (b) *Residential combustion equipment.* Residential
27 combustion equipment (furnaces, boilers, and water heaters) shall meet or exceed the

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1 following energy efficiency criteria in Table 2:

2
3 Table 2

4 Minimum Residential Combustion Equipment Energy Efficiency

5

| 6 <u>Technology</u> | 7 <u>Rating Method</u> | 8 <u>Minimum Efficiency</u> |
|-------------------------------|----------------------------|-----------------------------|
| 9 Gas-fired furnace | AFUE | $\geq 94\%$ |
| 10 Oil-fired furnace | AFUE | $\geq 92\%$ |
| 11 Gas/oil-fired boiler | AFUE | $\geq 90\%$ |
| 12 Gas/oil-fired water heater | Energy Factor ^a | ≥ 0.62 |

13 ^b Energy Factor is an efficiency ratio of the energy supplied in heated water divided
14 by the energy input to the water heater, based on U.S. Department of Energy test
15 procedure (see 10 CFR 430, Sub-Part B, Appendix E).

16
17 (c) *Installation best practice.* Combustion equipment and
18 related air handling equipment (HVAC systems) shall be sized and installed in accordance
19 with the applicable requirements and specifications outlined in the following:

20
21 (1) Commercial HVAC systems shall meet the
22 applicable sizing and installation requirements of ANSI/ASHRAE/IESNA Standard 90.1-
23 2004: Energy Standard for Buildings Except Low-Rise Residential Buildings and
24 ANSI/ASHRAE Standard 62.1-2004: Ventilation for Acceptable Indoor Air Quality.

25
26 (2) Residential HVAC systems shall meet the applicable
27 sizing specifications of Air Conditioner Contractors of America (ACCA) Manual J:

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1 Residential Load Calculation (Eight Edition), and the applicable installation specifications
2 of “Specification of Energy-Efficient Installation and Maintenance Practices for Residential
3 HVAC Systems,” Consortium for Energy Efficiency, 2000.

4
5 (ii) *Non-combustion energy conservation measures.* Energy
6 conservation measures implemented as part of projects or actions pursuant to
7 subparagraph (1)(ii – vii) of this subdivision shall meet the prescriptive requirements, as
8 applicable, in *Energy Benchmark for High Performance Buildings, Version 1.1*, New
9 Buildings Institute, 2005 (herein referred to as EBHPB), or state building energy codes,
10 whichever are more stringent. Energy conservation measures without specified
11 performance criteria in the referenced EBHPB shall meet the requirements of Federal
12 Energy Management Program (FEMP) Product Energy Efficiency Recommendations,
13 issued pursuant to Executive Orders 13123 and 13221, or Energy Star criteria issued
14 jointly by the U.S. Environmental Protection Agency and U.S. Department of Energy,
15 whichever result in better energy performance.

16
17 (iii) *Whole-building energy performance.* New buildings or whole-
18 building retrofits that incorporate offsets projects or actions shall also meet the following
19 requirements:

20
21 (a) *Commercial buildings.* Commercial buildings shall
22 exceed the energy performance requirements of ANSI/ASHRAE/IESNA Standard 90.1-
23 2004: Energy Standard for Buildings Except Low-Rise Residential Buildings by 30%, with
24 the exception of multi-family residential buildings classified as commercial by
25 ANSI/ASHRAE/IESNA Standard 90.1-2004, which shall exceed these energy performance
26 requirements by 20%.

27

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1 (b) *Residential buildings.* Residential buildings shall exceed
2 the energy performance requirements of the 2004 International Energy Conservation Code
3 by 30%.

4
5 (4) *Emissions baseline determination.* Emissions baseline shall be
6 determined based on energy usage (MMBtu) by fuel type for each energy conservation
7 measure, derived using historic fuel use data from the most recent calendar year for which
8 data is available, multiplied by an emission factor and oxidation factor for each respective
9 fuel in Table 3.

10
11 Table 3
12 Emission and Oxidation Factors

13

| <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 |

19

20 (i) *Isolation of applicable energy conservation measure baseline.*
21 The applicant shall isolate the baseline energy usage of the application to be targeted by
22 the energy conservation measure, in a manner consistent with the guidance at paragraph
23 (6) of this subdivision.

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

25
26
$$\text{Energy Usage (MMBtu)} = \text{BEU}_{\text{AECM}} \times A$$

27 where:

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1 BEU_{AECM} = Annual pre-installation baseline energy use by fuel type (MMBtu)
2 attributable to the application(s) to be targeted by the energy conservation measure(s). If
3 applicable building codes or equipment standards require that equipment or materials
4 installed as part of the project meet certain minimum energy performance requirements,
5 baseline energy usage for the application shall assume that equipment or materials are
6 installed that meet such minimum requirements. Baseline energy usage shall be
7 determined in accordance with the applicable requirements at paragraph (6) of this
8 subdivision.

9 A = Adjustments to account for differing conditions during the two time
10 periods (pre-installation and post-installation), such as weather, building occupancy, and
11 changes in building use or function. Adjustments shall be determined in accordance with
12 the applicable requirements at paragraph (6) of this subdivision.

13
14 (iii) Annual baseline emissions shall be determined as follows:

$$15 \quad \text{Emissions (lbs. CO}_2\text{)} = \sum_{i=1}^n \text{BEU}_i \times \text{EF}_i \times \text{OF}_i$$

16 where:

17 BEU_i = Annual baseline energy usage for fuel type i (MMBtu) demonstrated
18 pursuant to the requirements at subparagraph (4)ii of this subdivision.

19 EF_i = Emissions factor (lbs. CO₂/MMBtu) for fuel type i listed at paragraph
20 (4), Table 3 of this subdivision.

21 OF_i = Oxidation factor for fuel type i listed at paragraph (4), Table 3 of this
22 subdivision.

23 (5) *Calculating emissions reductions.* Emissions reductions shall be
24 determined based upon annual energy savings by fuel type (MMBtu) for each energy
25
26
27

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1 conservation measure, multiplied by the emission factor and oxidation factor for the
2 respective fuel type at paragraph (4), Table 3 of this subdivision.

3
4 (i) Annual energy savings shall be determined as follows:

5
6
$$\text{Energy Savings (MMBtu)} = (\text{BEU}_{\text{AECM}} \times A) - (\text{PIEU}_{\text{ECM}} \times A)$$

7 where:

8 BEU_{AECM} = Annual pre-installation baseline energy use by fuel type (MMBtu)
9 calculated pursuant to subparagraph (4)ii of this subdivision.

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

14 A = Adjustments to account for any differing conditions during the two time
15 periods (pre-installation and post-installation), such as weather, building occupancy, and
16 changes in building use or function. Adjustments shall be determined in accordance with
17 the applicable requirements at paragraph (6) of this subdivision.

18
19 (ii) Annual emissions reductions shall be determined as follows:

20
21
$$\text{Emissions Reduction (lbs. CO}_2\text{)} = \sum_{i=1}^n \text{ES}_i \times \text{EF}_i \times \text{OF}_i$$

22 where:

23 ES_i = Energy savings for fuel type i (MMBtu) demonstrated pursuant to the
24 requirements at paragraph (6) of this subdivision.

25 EF_i = Emissions factor (lbs. CO_2 /MMBtu) for fuel type i listed at paragraph
26 (4), Table 3 of this subdivision.
27
28

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1 OF_i = Oxidation factor for fuel type i listed at paragraph (4), Table 3 of this
2 subdivision.

3
4 (6) *Monitoring and verification requirements.* As part of the consistency
5 application, the project sponsor shall provide a monitoring and verification plan certified by
6 an independent certifier accredited pursuant to section XX-10.6. Monitoring and
7 verification reports shall be certified by an independent certifier accredited pursuant to
8 section XX-10.6. Independent verifiers must conduct a site audit when reviewing the first
9 monitoring and verification report submitted by the project sponsor, except for projects that
10 save less than 1,500 MMBtu per year. For projects that save less than 1,500 MMBtu per
11 year, the project sponsor must provide the independent certifier with equipment
12 specifications and copies of equipment invoices and other relevant project-related
13 invoices. All project documentation, including the consistency application and monitoring
14 and verification reports, shall be signed by a Professional Engineer, identified by license
15 number. Monitoring and verification shall also meet the following requirements:

16
17 (i) *General energy measurement and verification requirements.*
18 Monitoring and verification of energy usage shall be demonstrated through a documented
19 process consistent with the following protocols and procedures, as applicable:

20
21 (a) For existing commercial buildings, determination of
22 baseline energy usage shall be consistent with the International Performance
23 Measurement & Verification Protocol, Volume I: Concepts and Options for Determining
24 Energy and Water Savings (IPMVP), “Option B. Retrofit Isolation” and “Option D.
25 Calibrated Simulation.” If a project involves only energy conservation measures
26 implemented as part of a CO₂ emissions offset project, a process consistent with IPMVP
27 “Option C. Whole Facility” may be used, as applicable. Application of the IPMVP general

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1 guidance shall be consistent with the applicable detailed specifications in ASHRAE
2 Guideline 14-2002, Measurement of Energy and Demand Savings.

3
4 (b) For new commercial buildings, determination of baseline
5 energy usage shall be consistent with the International Performance Measurement &
6 Verification Protocol, Volume III: Concepts and Options for Determining Energy Savings in
7 New Construction (IPMVP), "Option D. Calibrated Simulation." Application of the IPMVP
8 general guidance shall be consistent with the applicable detailed specifications in ASHRAE
9 Guideline 14-2002, Measurement of Energy and Demand Savings.

10
11 (c) For existing and new residential buildings, determination of
12 baseline energy usage shall be consistent with the requirements of the RESNET National
13 Home Energy Rating Technical Guidelines, 2006 (Chapter 3 and Appendix A of 2006
14 Mortgage Industry National Home Energy Rating System Standards).

15
16 (ii) *Isolation of applicable energy conservation measure.* In calculating
17 both baseline energy usage and energy savings, the applicant shall isolate the impact of
18 each eligible energy conservation measure (ECM), either through direct metering or
19 energy simulation modeling. For projects with multiple ECMs, and where individual ECMs
20 can affect the performance of others, the sum of energy savings due to individual ECMs
21 shall be adjusted to account for the interaction of ECMs. For commercial buildings, this
22 process shall be consistent with the requirements of ASHRAE Guideline 14-2002,
23 Measurement of Energy and Demand Savings, and ANSI/ASHRAE/IESNA Standard 90.1-
24 2004: Energy Standard for Buildings Except Low-Rise Residential Buildings. For
25 residential buildings, this process shall be consistent with the requirements of RESNET
26 National Home Energy Rating Technical Guidelines, 2006 (Chapter 3 and Appendix A of
27 2006 Mortgage Industry National Home Energy Rating System Standards).

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1
2 (a) Reductions in energy usage due to the energy conservation
3 measure shall be based upon actual energy usage data. Energy simulation modeling shall
4 only be used to determine the relative percentage contribution to total fuel usage (for each
5 respective fuel type) of the application targeted by the energy conservation measure.
6

7 (iii) *Calculation of energy savings.* Annual energy savings are to be
8 determined based on the following:
9

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

11 where:

12 BEU_{AECM} = Annual pre-installation baseline energy use by fuel type (MMBtu)
13 attributable to the application(s) to be targeted by the energy conservation measure(s),
14 based upon annual fuel usage data for the most recent calendar year for which data is
15 available. For new buildings, baseline energy use for a reference building equivalent in
16 basic configuration, orientation, and location to the building in which the eligible energy
17 conservation measure(s) is implemented shall be determined according to ASHRAE
18 Guideline 14-2002, Measurement of Energy and Demand Savings and
19 ANSI/ASHRAE/IESNA Standard 90.1-2004, Section 11 and Appendix G. Where energy
20 simulation modeling is used to evaluate an existing building, modeling shall be conducted
21 in accordance with ASHRAE Guideline 14-2002, Measurement of Energy and Demand
22 Savings, and ANSI/ASHRAE/IESNA Standard 90.1-2004, Section 11 and Appendix G.
23 For existing and new residential buildings, energy simulation modeling shall be conducted
24 in accordance with the requirements of RESNET National Home Energy Rating Technical
25 Guidelines, 2006 (Chapter 3 and Appendix A of 2006 Mortgage Industry National Home
26 Energy Rating System Standards).

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1 PIEU_{ECM} = Annual post-installation energy use by fuel type (MMBtu)
2 attributable to the energy conservation measure, to be verified based on annual energy
3 use after installation of the energy conservation measure(s), consistent with the
4 requirements of ASHRAE Guideline 14-2002, Measurement of Energy and Demand
5 Savings. Where energy simulation modeling is used to evaluate a new or existing building,
6 modeling shall be conducted in accordance with ASHRAE Guideline 14-2002,
7 Measurement of Energy and Demand Savings, and ANSI/ASHRAE/IESNA Standard 90.1-
8 2004, Section 11 and Appendix G. For existing and new residential buildings, energy
9 simulation modeling shall be consistent with the requirements of RESNET National Home
10 Energy Rating Technical Guidelines, 2006 (Chapter 3 and Appendix A of 2006 Mortgage
11 Industry National Home Energy Rating System Standards).

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

22
23 (iv) *Provision for sampling of multiple like projects or actions in residential*
24 *buildings.* Offsets projects or actions that implement similar measures in multiple
25 residential buildings may employ representative sampling of buildings to determine
26 aggregate baseline energy usage and energy savings. Sampling protocols shall employ

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1 sound statistical methods in accordance with the guidance at [TBD]. Any sampling plan
2 shall be certified by an independent certifier, accredited pursuant to section XX-10.6.
3

4 **(e) *Avoided methane emissions from agricultural manure management***
5 ***operations.*** Projects that capture and destroy methane from animal manure using
6 anaerobic digesters may qualify for the award of CO₂ emissions offset allowances under
7 this Subpart, provided they meet the requirements of this subdivision.
8

9 **(1) *Eligibility.***

10
11 (i) Agricultural methane capture and thermal destruction shall be
12 accomplished by means of anaerobic digestion. Only that portion of methane generated by
13 the anaerobic digester which would have been generated in the absence of the project
14 through the anaerobic storage of manure, or organic food wastes eligible pursuant to
15 subparagraph (1)(iv) of this subdivision, is eligible for award of CO₂ emissions offset
16 allowances.
17

18 (ii) Only manure-based anaerobic digester systems using livestock
19 manure as the majority of digester feedstock, defined as 50% or more of the mass input
20 into the digester on an annual basis, are eligible.
21

22 (iii) The project sponsor shall demonstrate that such organic food
23 waste would have been stored under anaerobic conditions in the absence of the offset
24 project.
25

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

- 4
- 5 (i) Owner and operator of the project;
- 6
- 7 (ii) Location and specifications of the facility where the project will
8 occur;
- 9
- 10 (iii) Owner and operator of the facility where the project will occur;
- 11
- 12 (iv) Specifications of the equipment to be installed and a technical
13 schematic of the project; and
- 14
- 15 (v) Location and specifications of the facilities from which
16 anaerobic digester influent will be received, if different from the facility where the
17 project will occur.

18

19 (3) *Emission baseline determination.* The emission baseline shall
20 represent the potential emissions of the CH₄ that would have been produced in a baseline
21 scenario under uncontrolled anaerobic storage conditions and released directly to the
22 atmosphere in the absence of the offset project.

- 23
- 24 (i) Baseline CH₄ emissions shall be calculated as follows:

25

26 CO₂e (short tons) = (V_m x M)/2000 x GWP

27 where:

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1 CO_{2e} = Potential CO_{2e} emissions due to calculated CH₄ production under
2 site-specific anaerobic storage and weather conditions

3 V_m = Volume of CH₄ produced each month from degradation of volatile solids
4 in a baseline uncontrolled anaerobic storage scenario under site-specific storage and
5 weather conditions for the facility at which the manure is generated (ft³)

6 M = Mass of CH₄ per cubic foot (0.04246 lb/ft³ default value) at X
7 temperature and pressure

8 GWP = Global warming potential of CH₄ (23)

9
10 (ii) The estimated amount of volatile solids degraded each month
11 under the uncontrolled anaerobic storage baseline scenario (kg) shall be calculated as
12 follows:

13
14 $VS_{deg} = VS_{avail} * f$

15 where:

16 VS = volatile solids as determined from the equation:

17 $VS = M_m \times TS\% \times VS\%$

18 where:

19 M_m = mass of manure produced per month (kg)

20 TS% = concentration (percent) of total solids in manure as determined
21 through EPA 160.3 testing method

22 VS% = concentration (percent) of volatile solids in total solids as
23 determined through EPA 160.4 testing method (USEPA Method Number 160.4, Methods
24 for the Chemical Analysis of Water and Wastes (MCAWW) (EPA/600/4-79/020))

25 VS_{avail} = volatile solids available for degradation in manure storage each
26 month as determined from equation:

27 $VS_{avail} = VS_p + \frac{1}{2} VS_{in} - VS_{out}$

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1 where:

2 VS_p = volatile solids present in manure storage at beginning of month
3 (left over from previous month) (kg)

4 VS_{in} = volatile solids added to manure storage during the course of the
5 month (kg). The factor of $\frac{1}{2}$ is multiplied by this number to represent the average mass of
6 volatile solids available for degradation for the entire duration of the month.

7 VS_{out} = volatile solids removed from the manure storage for land
8 application or export (assumed value based on standard farm practice)

9 f = van't Hoff-Arrhenius factor for the specific month as determined using the
10 equation below. Using a base temperature of 30°C , the equation is as follows:

11
$$f = \exp[E * (T_2 - T_1)] / [(GC * T_1 * T_2)]$$

12 where:

13 f = conversion efficiency of VS to CH_4 per month

14 E = activation energy constant (15,175 cal/mol)

15 T_2 = average monthly ambient temperature for farm (converted from
16 $^\circ\text{Celsius}$ to $^\circ\text{Kelvin}$) as determined from the nearest National Weather Service certified
17 weather station (if reported temperature $^\circ\text{C} > 5^\circ\text{C}$; if reported temperature $^\circ\text{C} < 5^\circ\text{C}$, then
18 $F = 0.104$)

19 $T_1 = 303.16$ (30°C converted to $^\circ\text{K}$)

20 GC = ideal gas constant (1.987 cal/K mol)

21

22 (iii) The volume of CH_4 produced (ft^3) from degradation of volatile
23 solids shall be calculated as follows:

24

25
$$V_m = (VS_{deg} \times B_o) \times 35.3147$$

26 where:

27 V_m = volume of CH_4 (ft^3)

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1 VS_{deg} = volatile solids degraded (kg)

2 B_o = manure type-specific maximum methane generation constant (m³
3 CH₄/kg VS degraded). For dairy cow manure, B_o = 0.24 m³ CH₄/kg VS degraded. The
4 methane generation constant for other types of manure shall be those cited at U.S. EPA,
5 *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2001*, Annex M, Table M-2
6 (U.S. EPA, 2002), unless the project sponsor proposes an alternate methane generation
7 constant. If the project sponsor proposes to use a methane generation constant other than
8 the one found in the above-cited reference, the project sponsor must provide justification
9 and documentation to the REGULATORY AGENCY.

10
11 (4) *Calculating emissions reductions.* Emission reductions shall be
12 determined based on the the potential emissions (in short tons of CO₂e) of the CH₄ that
13 would have been produced in the absence of the offset project under a baseline scenario
14 that represents uncontrolled anaerobic storage conditions, as calculated pursuant to
15 subparagraph (3)(i)-(iii) of this subdivision, and released directly to the atmosphere.
16 Emissions reductions may not exceed the potential emissions of the digester, as
17 represented by the annual volume of CH₄ produced by the anaerobic digester, as
18 monitored pursuant to paragraph (5) of this subdivision.

19
20 (5) *Monitoring and verification requirements.* Projects shall employ a
21 system that provides metering of biogas volumetric flow rate and determination of CH₄
22 concentration. Monitoring and verification reports shall include monthly biogas volumetric
23 flow rate and CH₄ concentration determination. Monitoring and verification shall also meet
24 the following requirements:

25
26 (i) If the project is a regional-type digester, manure from each
27 distinct manure source supplying manure to the anaerobic digester shall be sampled

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1 monthly to determine the amount of volatile solids present. Any emission reduction will be
2 calculated according to mass of manure (kg) being digested and percentage of volatile
3 solids present before digestion, consistent with the requirements at paragraph (3) and
4 subparagraph (5)(iii) of this subdivision, and apportioned accordingly. The project sponsor
5 shall provide supporting material and receipts tracking the monthly receipt of manure (kg)
6 used to supply the anaerobic digester from each manure supplier.
7

8 (ii) If the project includes the digestion of organic food wastes
9 eligible pursuant to subparagraph (1)(iv) of this subdivision, organic food wastes shall be
10 sampled monthly to determine the amount of volatile solids (VS) present before digestion,
11 consistent with the requirements at paragraph (3) of this subdivision, and apportioned
12 accordingly. If the project is a community type digester, the project sponsor shall provide
13 supporting material and receipts tracking the monthly receipt of organic food waste used to
14 supply the anaerobic digester from each organic food waste supplier.
15

16 (iii) The project sponsor shall submit a monitoring and verification
17 plan as part of the consistency application that includes a quality assurance and quality
18 control program associated with equipment used to determine biogas volumetric flow rate
19 and CH₄ composition. The monitoring and verification plan shall be specified in
20 accordance with the monitoring requirements listed in Table 1, Input Monitoring
21 Requirements, as applicable. The monitoring and verification plan shall also include
22 provisions for ensuring that measuring and monitoring equipment is maintained, operated,
23 and calibrated based on manufacturer's recommendations, as well as provisions for the
24 retention of maintenance records for audit purposes. The monitoring and verification plan
25 shall be certified by an independent certifier accredited pursuant to section XX-10.6.
26

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(iv) The project sponsor shall quarterly verify biogas CH₄ composition through gas sampling and third party laboratory analysis using applicable U.S. EPA test methods.

Table 1
Input Monitoring Requirements

| Input Parameter | Measurement Unit | Frequency of Sampling | Sampling Method(s) |
|-------------------------------------------------|---------------------------------------|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Influent flow (mass) into the digester | Kilograms (kg) per month (wet weight) | Monthly total into the digester | a) Average herd population and American Society of Agricultural and Biological Engineers (ASABE) standard (ASAE D384.2, March 2005) b) Digester influent pump flow c) Recorded weight |
| Influent total solids concentration (TS) | Percent (of sample) | Monthly, depending upon recorded variations | U.S. EPA Method Number 160.3 |
| Influent volatile solids (VS) content of manure | 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 |

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1 (f) [RESERVED] *Reduction in emissions from natural gas transmission and*
2 *distribution equipment.* Projects that reduce emissions of methane from natural gas
3 transmission and distribution equipment may qualify for the award of CO₂ emissions offset
4 allowances under this Subpart, provided they meet the requirements of this subdivision.

5
6 (1) [RESERVED] *Eligibility.*

7
8 (2) [RESERVED] *Project description.*

9
10 (3) [RESERVED] *Emissions baseline determination.*

11
12 (4) [RESERVED] *Calculating emissions reductions.*

13
14 (5) [RESERVED] *Monitoring and verification requirements.*

15 16 **XX-10.6 Accreditation of Independent Certifiers**

17
18 (a) *Standards for Accreditation.* Independent Certifiers may be accredited by
19 the REGULATORY AGENCY or its agent in accordance with the requirements of this
20 section.

21
22 (1) *Application and Standards.* To be considered for accreditation, a
23 person must submit an application to the REGULATORY AGENCY or its agent. The
24 application contents shall include sufficient information to demonstrate that the person
25 meets the following accreditation standards:
26

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1 (i) Persons shall demonstrate required knowledge in the following
2 areas:

3
4 (a) At least two years experience in estimating and
5 evaluating greenhouse gas emissions;

6
7 (b) Knowledge of engineering and accounting principles
8 sufficient to carry out the applicable provisions of this subpart; and

9
10 (c) Knowledge of auditing and accounting principles and
11 information systems sufficient to carry out this subpart.

12
13 (ii) Persons shall possess such other qualifications necessary to
14 provide competent certification services as required for specific CO₂ emissions offset
15 project types.

16
17 (2) *Training workshop.* The REGULATORY AGENCY may require
18 prospective independent certifiers to successfully complete a training workshop or
19 workshops developed by the REGULATORY AGENCY or its agent.

20
21 (3) *Conflict of interest requirements.*

22
23 (i) *Prospective independent certifiers.* Prior to accreditation, a
24 person shall disclose all relevant information to the REGULATORY AGENCY or its agent
25 to allow for a comprehensive conflict of interest assessment. The applicant shall disclose
26 information concerning its ownership, past and current clients, related entities, as well as

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1 any other facts or circumstances that have the potential to create a conflict of interest
2 situation.

3
4 (ii) *Accredited independent certifiers.*

5
6 (a) Prior to the commencement of any work related to
7 certification of a specific project or projects, an independent certifier shall submit additional
8 information to the REGULATORY AGENCY or its agent to permit a conflict of interest
9 assessment relative to the specific project or projects.

10
11 (b) Independent certifiers shall have an ongoing obligation to
12 disclose any facts or circumstances that may give rise to a conflict of interest with respect
13 to an ongoing project or current project sponsor.

14
15 (iii) [Reserved] [Consideration to be given to requirements that
16 independent certifiers be subject to a maximum length of certification services for a
17 particular project; consequences of COI violation; revoking certification in the event of
18 malfeasance; reviewing the capabilities of already approved verifiers; and scope of items
19 to be included in guidance document].

20
21 (b) *Independent certifiers accredited in participating states.* Independent certifiers
22 that have been accredited in other participating states shall be deemed accredited in
23 **[INSERT NAME OF RGGI STATE]**.

24 25 **XX-10.7 Award of CO₂ offset allowances.**

26
27 (a) *Quantities of CO₂ offset allowances awarded.*

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(1) *CO₂ emissions offset projects.* Following the issuance of a consistency determination under paragraph XX-10.3(e)(2) and the approval of a monitoring and verification report under the provisions of subdivision (d) of this section, the REGULATORY AGENCY will award quantities of CO₂ offset allowances to a project sponsor as follows:

(i) If the project sponsor timely filed the monitoring and verification report prior to the declaration of either a Stage One Trigger Event or Stage Two Trigger Event during the current control period,

(a) one CO₂ offset allowance will be awarded for each ton of demonstrated reduction in CO₂ emissions or CO₂ equivalent or sequestration of CO₂ from a CO₂ emissions offset project that was undertaken within a Participating State, and

(b) one CO₂ offset allowance will be awarded for two tons of demonstrated reductions in CO₂ emissions or CO₂ equivalent or sequestration of CO₂ from a CO₂ emissions offset project that was undertaken within any State that is not a Participating State.

(ii) If the project sponsor timely filed the monitoring and verification report on or after the declaration of a Stage One Trigger Event but before the declaration of Stage Two Trigger Event during the current control period, one CO₂ offset allowance will be awarded for each ton of demonstrated reduction in CO₂ emissions or CO₂ equivalent or sequestration of CO₂ from a CO₂ emissions offset project that was undertaken within any State, Mexico, or Canada.

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1 (iii) If the project sponsor timely filed the monitoring and verification
2 report on or after the declaration of a Stage Two Trigger Event during the current control
3 period, one CO₂ offset allowance will be awarded for each ton of demonstrated reductions
4 in CO₂ emissions or CO₂ equivalent or sequestration of CO₂ from CO₂ emissions offset
5 projects within any State, Mexico, or Canada.
6

7 (2) *CO₂ emissions credit retirement.* If the project sponsor timely filed the
8 application required under paragraph XX-10.3(c)(2) on or after the declaration of a Stage
9 Two Trigger Event during the current control period, one CO₂ offset allowance will be
10 awarded for each ton of reduction in CO₂ or CO₂ equivalent or sequestration of CO₂
11 represented by the relevant credits or allowances derived from the CO₂ emissions credit
12 retirement.
13

14 (b) *Place for filing.* The monitoring and verification report must be filed with the
15 same REGULATORY AGENCY that issued the consistency determination for the project
16 pursuant to section XX-10.4(e)(2).
17
18

19 (c) *Deadlines for submittal of monitoring and verification reports.*
20

21 (1) For CO₂ emissions offset projects undertaken prior to January 1, 2009,
22 the project sponsor must submit the monitoring and verification report covering the pre-
23 2009 period by June 30, 2009.
24

25 (2) For CO₂ emissions offset projects undertaken on or after January 1,
26 2009, the monitoring and verification report must be submitted within 6 months following
27 the completion of the last calendar year during which the project achieved CO₂ equivalent

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1 reductions or sequestration of CO₂ for which the project sponsor seeks the award of CO₂
2 emissions offset allowances.

3

4 (d) *REGULATORY AGENCY action on monitoring and verification reports.* The
5 REGULATORY AGENCY will approve or deny a complete monitoring and verification
6 report within 45 days following receipt of a complete report.

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[End of Draft Model Rule]