ENVIRONMENTAL PROTECTION
ENVIRONMENTAL REGULATION
Air Quality Management
CO_2 Budget Trading Program

Adopted Amendments:	**N.J.A.C. 7:27-22.16 and 7:27A-3.2, 3.5 and 3.10**
Adopted New Rules:	**N.J.A.C. 7:27-22.28 and N.J.A.C. 7:27C**
Proposed:	July 7, 2008 as 40 N.J.R. 3792(a).
Adopted:	October 10, 2008 by Lisa P. Jackson, Commissioner, Department of Environmental Protection.
Filed:	October 10, 2008, as R. 2008 d. 338, **with substantive and technical changes** not requiring additional public notice and comment (See N.J.A.C. 1:30-6.3).
Authority:	N.J.S.A. 13:1B-3(e), 13:1D-9 and 26:2C-1 et seq., particularly 26:2C-45 et seq.
DEP Docket Number:	07-08-06/662.
Effective Date:	November 17, 2008.
Operative Date:	December 9, 2008.
Expiration Date:	Exempt, N.J.A.C. 7:27; April 21, 2010, N.J.A.C. 7:27A; November 17, 2013, N.J.A.C. 7:27C.

The Department of Environmental Protection (Department) is adopting new rules and rule amendments to establish the New Jersey component of a regional CO_2 Budget Trading Program, a cap-and-trade program to reduce carbon dioxide (CO_2) emissions from large fossil fuel-fired electric generating units in the region. This regional effort is comprised of these rules and consistent companion rules in nine other states, all of which are based on a Model Rule.

The Model Rule was developed through the Regional Greenhouse Gas Initiative (RGGI), which is an ongoing effort among Northeast and Mid-Atlantic States to develop and implement a regional CO_2 cap-and-trade program. These 10 states, including New Jersey, signed the 2005 RGGI Memorandum of Understanding (MOU). By the terms of the MOU, the signatory states committed to pursue the promulgation of a CO_2 cap-and-trade program, substantially as reflected in the RGGI Model Rule. The MOU signatory states are Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont.

The adopted rules are based on the RGGI Model Rule and supported by an extensive regional stakeholder process. The Model Rule provides states flexibility in adopting provisions regarding applicability and source exemptions, allowance allocations and set-asides, and permitting. The adopted rules are materially consistent with the Model Rule, in order to ensure CO_2 allowance reciprocity across the participating states. For the areas of state flexibility, the Department has adopted rules that provide for:

1. The percentage of CO_2 allowances to be auctioned or sold, including procedures for the fixed-price sale of CO_2 allowances to certain facilities that have long-term power purchase agreements;

2. The direct allocation of CO_2 allowances to affected cogeneration facilities that meet certain thermal efficiency criteria;

3. A CO_2 allowance set-aside to support the voluntary renewable energy market;

4. The exemption of certain facilities that take a permit restriction limiting the amount of electricity that may be supplied to the electric grid, consistent with optional provisions in the Model Rule; and

5. Permitting requirements specific to the Department's permitting process.

These new rules and amendments will, in addition to addressing greenhouse gas emissions in New Jersey, serve to help attain and maintain the 8-hour ozone and fine particle health standard throughout the State. Since the CO_2 Budget Trading Program serves to cap and reduce carbon dioxide emissions from power plants in the State and cause other actions that result in reduced demand for the generation of electricity, there will also be a reduction in other air pollutants. This will reduce ozone and particulates in the ambient air. Accordingly, this adoption constitutes a revision to the State Implementation Plan for attaining the ozone and fine particulates NAAQS.

Summary of Hearing Officer's Recommendations and Agency Responses:

William O'Sullivan, Director of the Department's Division of Air Quality, served as the Hearing Officer at the August 14, 2008 public hearing held at the Department Headquarters Building, 401 E. State Street, Trenton, New Jersey. The Department held this public hearing to provide interested parties the opportunity to present comments on the Department's proposed rulemaking, as well as the proposed SIP revisions that this rulemaking represents. The comment period for the proposal and the proposed SIP revision closed on September 5, 2008. The Department has summarized and responded to the comments it received on the proposal and the proposed SIP revision below. Four individuals presented comments at the public hearing. The Hearing Officer recommended that the Department adopt the amendments and new rules as proposed, with the changes described in the response to comments, below. The Department has accepted the Hearing Officer's recommendations. A record of the public hearing is available for inspection in accordance with applicable law by contacting:

Department of Environmental Protection
Office of Legal Affairs
ATTN: Docket No. 07-08-06/662
401 East State Street
PO Box 402
Trenton, New Jersey 08625-0402

This adoption document can also be viewed or downloaded from the Department's website at www.nj.gov/dep/aqm, where the Department has posted Air Quality Management rules, proposals, adoptions and SIP revisions.

Summary of Public Comments and Agency Responses:

The following people timely submitted written or oral comments on the proposal:

1. David B. Applebaum, FPL Energy
2. Jay Corbalis, New Jersey Future
3. Daniel Cunningham, PSEG
4. Eric DeGesero, Fuel Merchants Association of New Jersey
5. Emile DeVito, New Jersey Conservation Foundation
6. Mark Driscoll, Morris Energy Group, LLC (MEG)
7. Matt Elliott, Environment New Jersey
8. Gary Helm, Conectiv Energy
9. Peter Kasabach, New Jersey Future
10. Adam Kaufman, Independent Energy Producers of New Jersey
11. Luis Martinez Marti, Natural Resources Defense Council
12. Alison Mitchell, New Jersey Conservation Foundation
13. New Jersey Department of the Public Advocate, Division of Rate Counsel
14. Northeast Regional Greenhouse Gas Coalition (Calpine Corporation; Conectiv Energy; Consolidated Edison, Inc.; Constellation Energy; Dominion Energy New England; Public Service Enterprise Group, Inc.; and Waste Management, Inc.)
15. Ned Raynolds, Union of Concerned Scientists
16. Nicky Sheats, New Jersey Environmental Justice Alliance
17. Michael E. Van Brunt, Covanta Energy
18. Thomas Wells, The Nature Conservancy in New Jersey

The written comments and agency responses are summarized below. The number(s) in parentheses after each comment correspond to the number identifying the commenter(s) above.

General Comments

1. COMMENT: The commenter has historically supported the Regional Greenhouse Gas Initiative ("RGGI") and commends Governor Corzine, Commissioner Jackson and the Administration for the continued effort to reduce the harmful impacts on public health and the environmental from greenhouse gas emissions. (1)

2. COMMENT: The Department is commended for its leadership and hard work in bringing this CO_2 trading program to New Jersey. The program represents a major step forward

for New Jersey as it seeks to confront the challenge of global warming and achieve the Governor's ambitious greenhouse gas reduction targets. (2, 9)

3. COMMENT: The commenter supports New Jersey's participation in the RGGI, and commends Department Commissioner Lisa Jackson and Board of Public Utilities President Jeanne Fox for their leadership in the regional program. (7)

4. COMMENT: The commenter supports the Department's proactive effort to reduce greenhouse gas emissions in the State by participating in RGGI. (17)

5. COMMENT: The commenter commends Governor Corzine, Commission Jackson and President Fox and their staff for their efforts to address the threat of climate change. Through participation in the Regional Greenhouse Gas Initiative (RGGI), Governor Corzine and New Jersey continue to fulfill a commitment to leadership in one of our era's most important challenges. The program will be an important first step in protecting precious places and natural resources. (18)

RESPONSE TO COMMENTS 1 THROUGH 5: The Department acknowledges the commenters' support for the Department's participation in RGGI.

6. COMMENT: The commenter strongly supports the development of a national, upstream, economy-wide program as the preferred method of addressing the global issue of climate change and reducing CO_2 emissions. In the absence of such a national approach, the commenter supports a well-designed cap-and-trade program implemented on a uniform, region-wide basis to stabilize and ultimately reduce CO_2 emissions while minimizing the disproportionate impacts inherent in a single-state design. (1)

RESPONSE: The Department acknowledges the commenter's support for a national program for reducing greenhouse gas emissions or, where no national program exists, a well designed regional cap-and-trade program.

7. COMMENT: According to the Department's Greenhouse Gas Emissions Inventory, generation of electricity from fossil fuel-fired power plants accounts for roughly 21 percent of New Jersey's carbon dioxide emissions. Given the threat of global warming, swift action is required to reduce and eventually eliminate reliance on fossil fuels in every sector of the economy, including power plants. The commenter supports RGGI as one such strategy to achieve this goal. (7)

RESPONSE: The Department acknowledges the commenter's support for the RGGI program.

8. COMMENT: While RGGI is not perfect, and will require frequent review and strengthening, New Jersey is right to participate in RGGI because it provides a number of benefits to the State and the region. These include establishment of a polluter pays requirement for CO_2 emissions, establishment of a cap on CO_2 emissions from power plants, achievement of a gradual reduction in CO_2 emissions from power plants over the coming decade, generation of revenue from the auction of CO_2 allowances to support clean energy technologies that will further reduce reliance on dirty and dangerous energy sources, a reduction in energy bills for ratepayers by curbing energy demand through the use of revenue generated by the program to promote energy-efficient technologies, and establishment of a national precedent for a CO_2 cap-and-trade program. (7)

RESPONSE: The Department acknowledges the commenter's support for the rules and the RGGI program.

9. COMMENT: While RGGI presents a number of benefits to the State and to the Northeast, the cap is modest and will likely only result in modest CO_2 reductions within the next decade. New Jersey and the nine other RGGI participants should frequently review the program's progress, significantly strengthen the cap over time, and advocate for a strong and comprehensive CO_2 cap-and-trade program at the national level. (7)

RESPONSE: The Department has committed to a full program review in 2012, as outlined in the RGGI Memorandum of Understanding (MOU) (available at http://www.rggi.org). N.J.A.C. 7:27C-5.8(c) provides that if at the end of a control period there are unsold CO_2 allowances issued during that control period, the Department may retire such allowances. Such a provision provides the Department with flexibility to functionally reduce the New Jersey CO_2 emissions budget, if it is clear that there is a surplus of CO_2 allowances. The Department has been actively engaged in advocating for a strong national cap-and-trade program for greenhouse gas emissions.

10. COMMENT: Climate change is recognized as a growing concern and the New Jersey Legislature is right to attempt to address this global issue. However, a regional approach will have little measurable impact on regional greenhouse gas emissions and virtually no impact on global greenhouse gas emissions, while having significant financial impacts on in-state electric generators and their customers and increasing the cost of living and doing business in New Jersey. (8)

RESPONSE: The Department acknowledges the commenter's concerns regarding the limitations inherent in the regional nature of the RGGI program. As noted in the proposal's Environmental and Economic Impacts (40 N.J.R. 3816 through 3827), the CO_2 Budget Trading Program is projected to result in significant CO_2 emissions reductions and to have a modest net economic impact.

11. COMMENT: At the present time there are no technically feasible control technologies for electric power generators to reduce CO_2 emissions. As a result, the program is simply a tax on in-State electric generation. (8)

RESPONSE: There are emerging end-of-stack options for the control of CO_2 emissions in the early commercialization and deployment phase. Absent end-of-stack controls, a number of compliance options are available to electric generators subject to the CO_2 Budget Trading Program rules, including heat rate improvements, fuel switching, co-firing of eligible biofuels, environmental dispatch of a company portfolio of units that considers the CO_2 emissions rate of individual units, and the use of emissions offsets. In addition, the allowance allocation approach in the CO_2 Budget Trading Program rules would avoid CO_2 emissions by funding programs that reduce electricity demand, thereby reducing the need for CO_2 allowances by electric generators and putting less pressure on the regional CO_2 emissions cap. The Department anticipates that this approach will moderate CO_2 allowance prices over time and reduce compliance costs for companies with electric generation facilities affected by the CO_2 Budget Trading Program rules.

12. COMMENT: The commenter supports the creation of a program that will be effective in achieving its intended goal of reducing greenhouse gas emissions and applauds New Jersey's effort to reduce the carbon footprint of the region. (10)

RESPONSE: The Department acknowledges the commenter's support for the Department's efforts to reduce greenhouse gas emissions in the region.

13. COMMENT: The commenter commends the Department for proposing a strong rule that will establish a national precedent for global warming emissions reductions. (11)

RESPONSE: The Department acknowledges the commenter's support for the rules.

14. COMMENT: The commenter greatly appreciates the Department's and the Board of Public Utilities' process of stakeholder involvement throughout the process of developing and implementing RGGI and the Department's proposal of strong rules that will maximize the effectiveness of the regional RGGI program and its value as a model for Federal policy. (15)

RESPONSE: The Department acknowledges the commenter's support for the rules and the Department's participation in the RGGI process.

15. COMMENT: The commenter appreciates the Department's extensive citation of the findings of the Northeast Climate Impacts Assessment (NECIA), a collaboration between the Union of Concerned Scientists and more than 50 independent experts from across the country, as a basis for the State's involvement in RGGI. (15)

RESPONSE: The Department acknowledges the commenter's support for the use of the Northeast Climate Impacts Assessment in the Environmental Impact, 40 N.J.R. 3826 through 3828.

16. COMMENT: While RGGI's emissions reduction targets are modest, the program has enormous potential value in demonstrating for national and international audiences the practical ability of governments to implement an effective cap-and-trade program. (15)

RESPONSE: The Department acknowledges the commenter's support for the RGGI program as a demonstration of the viability of national and international program cap-and-trade programs addressing greenhouse gas emissions.

17. COMMENT: New Jersey should continue to play a leadership role in regional efforts to closely monitor emissions trends and consider revisiting the regional cap. The commenter and others have expressed the concern that RGGI's emissions cap for the now-ten participating states is relatively "soft," reflecting the cautious economic and political calculus governing its establishment, and the need to project several years into the future. A recent analysis of regional emissions data indicates that the anticipated growth in emissions when the RGGI cap was established has not materialized and that CO_2 emissions in 2009 are estimated to be nine percent below the cap. If this situation remains unaddressed, it could severely undermine the integrity and credibility of RGGI, which is being closely watched as debate over a national cap-and-trade program progresses. (15)

RESPONSE: There is uncertainty about the anticipated level of CO_2 emissions relative to the regional CO_2 emissions cap in 2009. Annual CO_2 emissions in the 10-state RGGI region are sensitive to electricity demand (a function of weather and economic activity) and relative fuel prices, especially the relationship between fuel oil and natural gas prices. Other factors, such as unit outages at nuclear plants could also significantly impact future CO_2 emissions from affected sources in the region.

The Department retains the flexibility to retire CO_2 allowances that remain unsold after a control period, as provided at N.J.A.C. 7:27C-5.8(c)2ii. The intent in setting the state CO_2 emissions budgets agreed to in the 2005 RGGI MOU was to initially cap CO_2 emissions at projected 2009 levels. Since the execution of the RGGI MOU, regional CO_2 emissions from affected facilities have dropped significantly in the past couple of years due to mild weather and significant shifts in the relative price of fuel oil and natural gas. It now appears that CO_2 emissions at the outset of the regional program may be significantly below the initial regional CO_2 emissions cap. Given such developments, it is appropriate to retain the flexibility to adjust the CO_2 emissions cap going forward as necessary.

18. COMMENT: The proposed rules set an exemplary precedent for establishing a market-based system to cap CO_2 emissions from the energy sector at little or no cost to the consumer. The RGGI program will act as a model and catalyst for further regional and national action, which will be critical to reducing heat-trapping emissions and minimizing climate change impacts to people and nature. (18)

RESPONSE: The Department acknowledges the commenter's support for the rules.

Operating Permits

19. COMMENT: N.J.A.C. 7:27-22.28 does not include the option to incorporate the CO_2 Budget Trading Program through significant modification of the operating permit. CO_2 Budget Trading Program provisions incorporated under an initial permit, renewal of a permit, or significant modification of a permit would be covered by a permit shield, pursuant to N.J.A.C. 7:27-22.17(c)1, but not in the case of a minor modification to a permit, pursuant to N.J.A.C. 7:27-22.17(c)2. This option should be added to the rules.
(10)

RESPONSE: In response to comment, the Department is modifying N.J.A.C. 7:27-22.8(a) through (e) on adoption. The intent of the rule proposal was to allow the CO_2 Budget Trading Program requirements to be incorporated as a minor modification to an operating permit in order to streamline the process for permit applicants. It was not the Department's intent to preclude the incorporation of the CO_2 Budget Trading Program requirements into an operating permit through a significant modification to an operating permit. The Department allows modifications that meet the provisions of N.J.A.C. 7:27-22.23 for minor modifications to be submitted as significant modifications under N.J.A.C. 7:27-22.24. The Department had drafted the proposal to indicate that a facility need not submit the application as a significant modification, as this is a considerably more complex method of modifying a permit than a minor modification. The adopted rules explicitly recognize the applicant's option to incorporate the N.J.A.C. 7:27C requirements through a significant modification to an operating permit.

Definitions

20. COMMENT: The definition of owner under the CO_2 Budget Trading Program as it relates to facilities subject to contractual arrangements that control dispatch should not be limited to agreements that last for the life of the unit. The intent of the rules is to impose the financial burden of purchasing CO_2 allowances on the party that is able to control when a unit runs and thereby how much CO_2 it emits. However, "owner" should not be defined as "any purchaser of power from a CO_2 budget unit under a life-of-the-unit contractual arrangement in which the purchaser controls the dispatch of the unit…." Achieving this objective does not require that the agreement through which the purchaser controls the dispatch of the facility have a duration equal

to the life of the unit. The purchaser under a dispatch agreement acts as if it is the owner of the facility, and the duration of that ownership is immaterial. The phrase "life-of-the-unit" in the definition of "owner" and the associated definition of "life-of-the-unit contractual arrangement" are not required by any statutory authority, given the recent vacatur of the Federal Clean Air Interstate Rule. The Department should not feel restricted by the RGGI Memorandum of Understanding from making this change, because that arrangement with the other states is voluntary or, if not voluntary, potentially contrary to prohibitions in the United States Constitution regarding certain agreements among the States and impacts on interstate commerce. (6)

RESPONSE: The definition of "owner" at N.J.A.C. 7:27C-1.2 is consistent with other emissions trading programs that apply to electric generating units that would be regulated under the CO_2 Budget Trading Program. The definition of "life-of-the-unit contractual arrangement" is generally consistent with the definition for that term at Section 402 of the Clean Air Act and 40 CFR 72.2. Electric generation facilities are often subject to a number of different emissions trading programs. It is appropriate to keep the definitions of key terms used in these programs consistent and this would also simplify the task by facility managers of integrating multiple program requirements for facility management**.**

As the commenter noted, the RGGI Memorandum of Understanding is a voluntary, non-binding agreement among participating RGGI states and therefore does not violate the Compacts Clause of the United States Constitution. Because the CO_2 Budget Trading Program rules do not purport to regulate emissions outside of New Jersey, they do not violate the Commerce Clause of the United States Constitution.

21. COMMENT: The definition of eligible biomass should be expanded to include all facilities that convert biomass into electrical power. The Department should replace the definition of eligible biomass with the following:

> "Biomass" means biodegradable organic material originating from plants, animals, and micro-organisms, including products, byproducts, residues and waste from agriculture, forestry, and related industries as well as the non-hazardous non-fossilized and biodegradable organic fractions of industrial and municipal wastes, including gases and liquids recovered from the decomposition of non-fossilized and biodegradable organic material.

Power generation from any type of biomass will result in reductions of anthropogenic CO_2, thereby supporting the overall intent of the proposed rules. There may be concerns regarding the potential pressures that may be placed on biomass harvesting due to implementation of the proposed rules. The biomass portion of municipal solid waste is not grown specifically for energy production purposes; instead, the biomass portion is designed to meet the requirements of products in the marketplace, prior to their disposal. Therefore, it is highly unlikely that the

consideration of the biogenic portion of municipal solid waste as eligible biomass would affect biomass harvesting. (17)

RESPONSE: The Department developed the definition of "eligible biomass" at N.J.A.C. 7:27C-1.2 in consultation with the other participating RGGI states; it is generally consistent with the definition of "biomass" for the New Jersey Renewable Portfolio Standard rules at N.J.A.C. 14:8-2.2 and the requirements for Class-I renewable energy at N.J.A.C. 14:8-2.5(d) through (f) that apply to biomass. The application of the definition would determine the portion of CO_2 emissions from an affected source under the CO_2 Budget Trading Program that could be deducted from a source's compliance obligation. Regional consistency across the state CO_2 Budget Trading Programs is critical to allow for the proper functioning of a regional CO_2 allowance market that maintains comparable environmental integrity across the participating states.

22. COMMENT: Energy-from-waste facilities are not subject to the CO_2 Budget Trading Program. To clarify this exclusion, the following text should be added to the definition for "fossil fuel": "Municipal Solid Waste is excluded from the definition of fossil fuel for the purposes of the CO_2 Budget Trading Program." (17)

RESPONSE: The definition of "fossil fuel" at N.J.A.C. 7:27C-1.2 is identical to the definition of this term in the United States Environmental Protection Agency's (EPA's) regulations for the NO_X Budget Trading Program at 40 CFR 96.2. While municipal solid waste contains a certain percentage of carbon-based materials from discarded products and materials present in the waste stream, municipal solid waste does not constitute fuel derived from natural gas, petroleum, or coal, and therefore does not meet the definition of "fossil fuel."

23. COMMENT: The commenter strongly supports the allocation of 10 percent of the auction proceeds "to support programs that enhance the stewardship and restoration of the State's forests and tidal marshes that provide important opportunities to sequester or reduce greenhouse gases," as specified in P.L. 2007, c. 340. However, there is no specific reference to this allocation in the definition of "consumer benefit account" at N.J.A.C. 7:27C-1.2. The Department should add such a reference in order to accurately reflect the statutory language. (18)

RESPONSE: The Department's definition of "consumer benefit account" is consistent with the definition of "consumer benefit" at N.J.S.A. 26:2C-45.2, and with the Legislature's determination that it is in the public interest to "establish a program that authorizes the State to dedicate to consumer benefit purposes up to 100 percent of the revenues derived from the auction or other sale of allowances pursuant to an emissions allowance trading program…" (N.J.S.A. 26:2C-45.1.).

While the proposed definition of "consumer benefit account" at N.J.A.C. 7:27C-1.2 stated that funds in the consumer benefit account will be deposited in the Global Warming Solutions Fund established pursuant to N.J.S.A. 26:2C-50 and administered in accordance with N.J.S.A. 26:2C-52, the Department has modified on adoption the definition of "consumer benefit account" to clarify, consistent with the statute, that CO_2 allowances sold from the account will also be used to provide monies to support programs that enhance the stewardship and restoration of the State's forests and tidal marshes that provide important opportunities to sequester greenhouse gases, as addressed by N.J.S.A. 26:2C-51.

Stage-one and Stage-two Price Triggers

24. COMMENT: The Department indicated in its proposal preamble that it will perform calculations of the minimum reserve price, current market price and the reserve price in consultation with the regulatory agencies in other participating states. The Department should clarify when this information will be provided and where it will be posted. (3)

RESPONSE: Information related to the reserve price and any methodology supporting the determination of the reserve price will be provided on the auction website prior to each auction. The date for the posting of such information on the auction website will be established in the auction notice, or such information will be included in the notice, as appropriate, which will be posted at least 45 days prior to each auction.

25. COMMENT: The Department indicates in its proposal preamble that it will perform calculations of trigger prices, and determine whether or not a stage-one ($7.00 per ton in 2005 dollars) or stage two-trigger ($10.00 per ton in 2005 dollars) event has occurred, in consultation with the regulatory agencies in other participating states. The Department should update the values of the stage-one and stage-two threshold prices (to account for the inflation and other adjustments provided at N.J.A.C. 7:27C-1.2) to 2009 dollars as soon as possible and indicate when this information will be provided and where it will be posted. (14)

RESPONSE: The Department will begin calculating 12-month rolling average CO_2 allowance prices, in consultation with the other participating RGGI states, once the 14-month market settling period for the first control period has ended. The Department is currently consulting with the other participating RGGI states as to the most appropriate and convenient method for providing this information to the public. In particular, the CO_2 Allowance Tracking System will provide public information about CO_2 allowance transaction prices. This tracking system public report functionality is currently under development.

The formulas for calculating the stage-one and stage-two threshold prices are specified at N.J.A.C. 7:27C-1.2, allowing interested parties to determine the current value of these prices.

The Department will consult with the other participating RGGI states as to the most convenient location for publicly posting the current value for both trigger prices.

Applicability

26. COMMENT: The provisions at N.J.A.C. 7:27C-1.3(b) would carve out an exception from purchasing allowances for a unit with a permit condition restricting the unit's annual electrical output to the electric grid to 10 percent or less of its annual gross generation. Set-asides, exemptions or direct allocations for emitting units contribute to the challenges and impacts of greenhouse gas emissions and, therefore, units should be required to purchase allowances, even if their support for the grid is limited to no more than 10 percent of their annual gross electrical output. If anything, those entities should be required to purchase allowances for that percentage of their output that is supporting the grid. (1)

RESPONSE: The exemption at N.J.A.C. 7:27C-1.3(b) through (i) implements statutory requirements at N.J.S.A. 26:2C-46 that exempt from a carbon dioxide emissions trading program any facility that primarily provides electricity for on-site use and sells less than 10 percent of its annual gross electrical generation to the grid.

27. COMMENT: The Department should clarify that the exemption from compliance at N.J.A.C. 7:27C-1.3(b) for facilities with limitations on their output to the electric grid applies as well to those facilities that are prevented by contract from selling more than 10 percent of their generation to the electric grid. It should not matter whether the restriction is in a facility's permit or in a contract, because both are legal obligations that control the operations of the facility. (6)

RESPONSE: The exemption provisions at N.J.A.C. 7:27C-1.3(b) are appropriate, as an operating permit condition is enforceable by the Department, whereas a private contractual arrangement among two parties is not.

28. COMMENT: The threshold of fossil fuel heat input for units that commence operation on or after January 1, 2005 should be raised from five percent to 10 percent. As a result of using municipal solid waste as a fuel source and to meet certain Title V air permit requirements, it is occasionally necessary to combust natural gas or other fossil fuels for boiler start-up and shut-down and to support combustion temperatures as needed. The heat input from these fuels may exceed five percent on an annual basis. Recognizing that energy-from-waste facilities were not the intended subject of these rules, the Department should change this threshold so that future energy-from-waste facilities are not discouraged as a long range waste management, energy production, and greenhouse gas mitigation strategy. (17)

RESPONSE: The definition of "fossil fuel-fired" at N.J.A.C. 7:27C-1.2 is appropriate. The Department developed this definition in consultation with the other participating RGGI states.

Maintaining consistent criteria that apply to key aspects of the state CO_2 Budget Trading Programs, such as source applicability, is critical in order to maintain reciprocity across states, which is required for a functioning regional CO_2 allowance market. The Department notes that the facilities owned by the commenter would not be subject to the CO_2 Budget Trading Program under this definition, as these facilities commenced operation prior to January 1, 2005. The definition of fossil fuel-fired that applies to units that commenced operation prior to January 1, 2005, uses 50 percent of annual heat input comprised of fossil fuel as the threshold for determining whether a unit is fossil fuel-fired. The Department believes it is unlikely that a new unit would exceed the five-percent threshold on an annual basis due to the firing of fossil fuels for startup. The Department also notes that there are options, such as the firing of liquid biomass fuel, that could substitute for the firing of fossil fuel for startup if it is apparent that the five-percent threshold might be exceeded.

CO_2 Allowance Allocations

29. COMMENT: N.J.A.C. 7:27C-5.2(c) allocates CO_2 allowances equivalent to one percent of the New Jersey CO_2 emissions budget to a set-aside account to support the functioning of a voluntary renewable energy market. Set-asides that benefit emitting sources are not appropriate, although set-asides for beneficial purposes such as the promotion of a voluntary renewable energy market should be encouraged. Providing for one percent of allowances for voluntary renewable energy purchases is commendable, but is a very modest start. The Department should eliminate the cap on the number of allowances in this set-aside, keeping in mind that renewable energy incorporated under the voluntary renewable energy market set-aside cannot be included in, or credited against, any other renewable incentive programs, such as the State's Renewable Portfolio Standard. As non-emitting sources, renewable energy resources are among the only readily available electric generating technologies capable of supplanting CO_2-emitting generation. The growth of renewable energy should be readily encouraged whenever possible. Assuming the renewable attributes from renewable resources are generated from verified reputable sources, then those attributes should be convertible under the designated formula to carbon allowances and eligible for retirement under the State's cap. (1)

RESPONSE: Any consideration of an expansion of the account is best addressed through potential future rulemaking. Should the account be oversubscribed with requests for retirement of CO_2 allowances, the Department will consider the appropriate size of the account going forward, while taking into account other market factors and the potential impact of an expansion of the set-aside on the functioning of the CO_2 Budget Trading Program and potential impacts to electricity ratepayers.

30. COMMENT: The Department uses the term "retail provider of renewable energy or renewable energy attribute credits" issued at N.J.A.C. 7:27C-5.2(c) without clearly defining "retail provider." The Department should provide greater clarity in this area. Voluntary

renewable energy-eligible credits should be sourced from any eligible resource, providing that the appropriate stringent certification processes are in place. Accepting certified renewable energy credits from any jurisdiction is appropriate, as it would recognize the global nature of the challenging issue of reducing greenhouse gas emissions. (1)

RESPONSE: In response to comment, the Department is modifying the rules on adoption to add a definition for the term "retail provider" at N.J.A.C 7:27C-1.2 to clarify its meaning. "Retail provider" does not pertain to the electric generation source that generated renewable energy or renewable energy attribute credits sold to a voluntary purchaser, but instead refers to the party that executed such a sale with a purchaser.

Voluntary purchases of renewable energy credits generated in any jurisdiction should not result in the retirement of CO_2 allowances from the voluntary renewable energy market account. For example, the seller of renewable energy generated outside one of the 10 participating RGGI states would not need to retire CO_2 allowances in order to make a valid marketing claim that the renewable energy generated avoided CO_2 emissions, as this generation occurred in a region not subject to a carbon cap. Such a claim could not be made for renewable energy generated within one of the 10 participating RGGI states, as affected sources under the CO_2 Budget Trading Program could still emit CO_2 up to the level of the regional cap, regardless of the avoided CO_2 emissions from renewable energy generation. Avoided CO_2 emissions within the capped region achieved due to renewable energy generation would free up CO_2 allowances, which could allow affected sources to emit more CO_2 up to the level of the regional cap in that year or a future year if CO_2 allowances are banked. As a result, a valid claim of avoided CO_2 emissions resulting from the renewable energy generation in the capped region is dependent on the retirement of CO_2 allowances in an amount equivalent to the avoided CO_2 emissions achieved, which would effectively lower the regional CO_2 emissions cap. This concept is discussed in greater detail in the Summary of the proposal, 40 N.J.R. 3801.

31. COMMENT: The provisions at N.J.A.C. 7:27C-5.2(c) that address the voluntary renewable energy (VRE) market account provide that if retirement requests exceed the number of CO_2 allowances for an allocation year in the VRE account, the Department will process the requests in the order received; with requests in excess of the number of CO_2 allowances in the VRE account for an allocation year received in the same month retired on a proportional basis. This may create a circumstance in which a purchaser of renewable energy from a retail provider is doing so based on an understanding that the purchase effectively retires CO_2 allowances, but, in fact, that purchaser may not actually be doing so due to the cap on the number of CO_2 allowances in the account for each allocation year and proration of CO_2 allowance retirement requests. Any retirement requests for VRE purchased beyond the cap should be rolled into the following year's allocation and added to the equivalent of one percent of CO_2 allowances set-aside for that following year. This may effectively reduce, albeit slightly, the pool of allowances

available for emitting sources, but promotion of a VRE market is particularly worthy of additional support. (1)

RESPONSE: Any consideration of an expansion of the account is best addressed through potential future rulemaking. Should the account be oversubscribed with requests for retirement of CO_2 allowances, the Department will consider the appropriate size of the account going forward, while taking into account other market factors and the potential impact of an expansion of the set-aside on the functioning of the CO_2 Budget Trading Program and potential impacts to electricity ratepayers.

32. COMMENT: The Department is right to encourage the development and operation of clean energy generation, including fossil-based generation; however, the allocation of allowances to emitting sources, including cogeneration, is a concern. To incorporate the true life-cycle costs of fossil-based generation, all fossil-based generating sources should be responsible for purchasing allowances for all of their emissions at the auction clearing price. (1)

RESPONSE: The allocation provisions for certain cogeneration facilities at N.J.A.C. 7:27C-5.2(d) through (k) are appropriate to provide incentives to encourage greater utilization of existing clean cogeneration facilities in New Jersey and encourage the development of new clean cogeneration facilities. Such facilities provide significant air quality benefits, especially on high energy demand days, and also provide electricity reliability benefits during times of peak electricity demand.

33. COMMENT: The stringent requirements imposed on certified dispatch agreement facilities in order to obtain and maintain eligibility for the set-aside of CO_2 allowances under N.J.A.C. 7:27C-5.4(b) are appropriate; however set-asides or subsidies for emitting generating units are contrary to the goals of incorporating the true costs to public health and the environment of emitting greenhouse gases within the cost of electricity and actually encouraging the reduction of greenhouse gas emissions.

There is no sustainable benefit from these provisions to consumers, financially and in terms of health and environmental impacts, if emitting resources are either subsidized or given a free pass. Offering a significant segment of New Jersey-based units a subsidized rate for the purchase of allowances artificially skews the ability of the RGGI regional auction to reflect a true market-based price for carbon. Establishing the correct price signals through the auction process is critical for developers seeking to invest in new generating resources in the region, for existing resource owners, for potential non-regulated participants in the RGGI process, and for the credibility of the auction process and its results.

Additionally, the Department should deny any request by entities that have not strictly met the eligibility requirements noted above to be included under the dispatch agreement set-aside.

Expanding eligibility for any emitter set-asides additionally skews the ability of the RGGI regional auction to reflect a true market-based price for carbon. (1)

RESPONSE: The Department had no discretion in promulgating the provisions at N.J.A.C. 7:27C-5.4(b) as they implement the requirements established at N.J.S.A. 26:2C-48. These provisions, however, should not significantly impact the market clearing price in regional auctions, in the same manner that direct free allocations of CO_2 allowances are not expected to impact CO_2 allowance prices, as evidenced by the experience of cap-and-trade programs for SO_2 and NO_X. If certain facilities exercise the option to purchase CO_2 allowances at a fixed price through N.J.A.C. 7:27C-5.4(b), this will not impact the value of a CO_2 allowance to auction participants and will not influence the relationship of CO_2 allowance supply in relation to expected CO_2 emissions and the anticipated marginal cost of abating CO_2 emissions, which are the key factors that will drive CO_2 allowance market price.

34. COMMENT: Several units that burn coal will be permitted to purchase CO_2 allowances at $2.00 per ton, which will limit the compliance costs for these plants and result in increased operating hours and increased CO_2 emissions (as well as criteria pollutants), contrary to the goals of the RGGI program. (6)

RESPONSE: Fixed-price sale offers by the Department of CO_2 allowances to facilities that burn coal are not anticipated to result in increased CO_2 emissions. The CO_2 emissions limit will not be impacted by the method of allocating CO_2 allowances to affected facilities under the CO_2 Budget Trading Program. Regional CO_2 emissions for affected facilities are limited to the number of CO_2 allowances established in the emissions budgets of the 10 participating RGGI states. As a result, aggregate regional CO_2 emissions from affected facilities subject to the CO_2 Budget Trading Programs in each of the 10 participating states are not allowed to exceed this regional level.

35. COMMENT: The RGGI program fails to place the burden of reducing CO_2 emissions on those parties able to reduce emissions of CO_2 in the case of units subject to dispatch agreements, such as the Pedricktown and Camden facilities. The Department's CO_2 Budget Trading Program rules address this issue as it impacts four facilities in the State by allowing those four facilities to purchase CO_2 allowances at a set price of $2.00 per ton. The Department should apply these protections equally to similarly situated facilities that are subject to dispatch agreements and unable to pass through the costs of CO_2 allowances or control the dispatch of the units by extending them the same opportunity to purchase CO_2 allowances at a set price of $2.00 per ton. (6)

RESPONSE: N.J.A.C. 7:27C-5.4(b) through (h) implement statutory requirements at N.J.S.A. 26:2C-46, 48, and 49. Accordingly, the Department has promulgated rules that limit fixed-price CO_2 allowance purchase offers to facilities that meet the specific operational and contract criteria

specified at N.J.S.A. 26:2C-46. The Department had no discretion in promulgating the provisions at N.J.A.C. 7:27C-5.4(c). The Legislature established these specific criteria through the statutory definition of "dispatch agreement facility" at N.J.S.A. 26:2C-46, and the specific statutory requirements at N.J.S.A. 26:2C-48 and 49 that address the Department's administration of an emissions allowance trading program for greenhouse gas emissions as it applies to such dispatch agreement facilities.

The Department's rules do not specifically identify four facilities. The rules implement statutory requirements related to dispatch agreement facilities. As it discussed in the proposal's Economic Impact, 40 N.J.R. 3821, the Department believes, based on discussions with the regulated community, that the provisions at N.J.A.C. 7:27C-5.4(b) through (h) would apply to four facilities.

36. COMMENT: The Department should use its authority under the Global Warming Response Act to expand the scope of facilities that may buy CO_2 allowances at the fixed price of $2.00 per ton to facilities subject to dispatch agreements that do not allow the operators of the facilities to pass through the costs of the allowances to the purchasers of the electricity. In particular, the scope should be expanded to include dispatch agreements that have a term less than 15 years and have an effective date after January 1, 2002 but before the proposal of these regulations. (6)

37. COMMENT: The Department should apply the protections at N.J.A.C. 7:27C-5.4(c) to other similarly situated facilities that are subject to dispatch agreements and unable to pass through the costs of CO_2 allowances or control the dispatch of the units by making the following changes to the rules:

1. The Department should allow such dispatch facilities to calculate their maximum heat rate by using the lower heating value of fuel;
2. The Department should change the required date of the dispatch agreements to be no later than July 7, 2008 (the date the proposed regulations were published); and
3. The Department should reduce the required duration of the agreements to six years. (6)

38. COMMENT: The Department should add a provision to the proposed rules applicable to natural gas-fired dispatch agreement facilities that allows such CO_2 budget sources that do not meet all of the requirements set forth in N.J.A.C. 7:27C-5.4(c)1 through 2 to demonstrate to the Department that such sources should be offered the opportunity to purchase CO_2 allowances at $2.00 per ton, provided such sources can demonstrate that purchasing CO_2 allowances at market prices would result in financial hardship to the facilities which could cause them to shut down and therefore adversely affect electric reliability. The Department should add the following new language to N.J.A.C. 7:27C-5.4(c):

Alternatively, the sworn affidavit submitted by the CO_2 budget source shall certify to the provisions of (c)1 and (c)2(i) through (v) that it meets and shall submit additional supporting documentation and sworn statements establishing that the CO_2 budget source should be allowed to purchase CO_2 allowances at a fixed price of $2.00 per CO_2 allowance because purchasing CO_2 allowances through the auction will present a financial hardship that is not subject to mitigation or pass through and that may result in the shutdown of the source, and that the shutdown of the source may impact electric reliability. The Department shall treat a CO_2 budget source making the showing described in this section N.J.A.C. 7:27C-5.4(c)3 as a certified dispatch agreement facility pursuant to N.J.A.C. 7:27C-5.4(b) through N.J.A.C. 7:27C-5.4(h). (6)

RESPONSE TO COMMENTS 36 THROUGH 38: N.J.A.C. 7:27C-5.4(b) through (h) implement requirements specified by the Legislature at N.J.S.A. 26:2C-46, 48, and 49. While N.J.S.A. 26:2C-45 et seq. provides the Department with broad authority to auction, sell, or allocate allowances under an emissions trading program addressing greenhouse gas emissions, the Department's rules implement the Legislature's express language limiting fixed-price CO_2 allowance purchase offers to facilities that meet specific operational and contract criteria as specified at N.J.S.A. 26:2C-46. The Legislature established these specific criteria through the statutory definition of "dispatch agreement facility" at N.J.S.A. 26:2C-46, and the specific statutory requirements at N.J.S.A. 26:2C-48 and 49 that address the Department's administration of an emissions allowance trading program for greenhouse gas emissions as it applies to such facilities.

39. COMMENT: The rules should provide for the auction of 100 percent of CO_2 allowances. Cogeneration power plants with long-term contracts should not receive special treatment under RGGI, and should not be exempt from having to compete in the market and bid for allowances. These plants, which account for 29 percent of all CO_2 regulated by RGGI, should not be permitted to avoid market forces and buy allowances at a fixed price. In addition, no plant should receive free allowances through direct allocation, as this could undermine the integrity and efficacy of a market-based cap-and-trade program. (7)

RESPONSE: N.J.A.C. 7:27C-5.4(b) through (h) implement requirements specified by the Legislature at N.J.S.A. 26:2C-46, 48, and 49. While N.J.S.A. 26:2C-45 et seq. provides the Department with broad authority to auction, sell, or allocate allowances under an emissions trading program addressing greenhouse gas emissions, the Department's rules implement the Legislature's express language limiting fixed-price CO_2 allowance purchase offers to facilities that meet specific operational and contract criteria as specified at N.J.S.A. 26:2C-46. The Legislature established these specific criteria through the statutory definition of "dispatch agreement facility" at N.J.S.A. 26:2C-46, and the specific statutory requirements at N.J.S.A. 26:2C-48 and 49 that address the Department's administration of an emissions allowance trading program for greenhouse gas emissions as it applies to such facilities.

40. COMMENT: The set aside for renewable energy technologies is supported. Investment in renewable energy technologies will bring more electricity to the grid, and could help to reduce dependence upon fossil fuel-fired power plants. This will help to ensure that renewable energy replaces fossil fuel generation, as opposed to allowing more of it by freeing up additional allowances that could be purchased by fossil fuel generators. (7)

RESPONSE: The Department acknowledges the commenter's support for the voluntary renewable energy market account.

41. COMMENT: The 99 percent auction, the direct allocation of CO_2 allowances to cogeneration units, and the fixed-price allowance sales to dispatch agreement facilities are objectionable. The auction or sale of 99 percent of CO_2 allowances, especially if non CO_2 budget sources are allowed to participate in auctions, will lead to profit loss from increased operating costs and the potential manipulation of the CO_2 allowance market, relative to an approach that auctions or sells a smaller percentage of CO_2 allowances. Research conducted by the University of Maryland indicates that profits of existing electric generators will fall by 12 to 13 percent, assuming 25 percent of CO_2 allowances are auctioned. (Center for Integrative Environmental Research, "Economic and Energy Impacts from Maryland's Potential Participation in the Regional Greenhouse Gas Initiative, University of Maryland, January 2007.) The auction or sale of 99 percent of the State's CO_2 allowance budget will result in decreased electric reliability, as fewer new generation facilities will be built, and an increased cost of electricity for New Jersey consumers. (8)

RESPONSE: As discussed at length in the proposal's Economic Impact, 40 N.J.R. 3816 through 3825, the allocation approach outlined in the proposal is appropriate, and should have only a modest economic impact on affected electric generation units and electricity ratepayers. The CO_2 Budget Trading Program rules should not negatively impact electricity reliability. As discussed in the overview of electricity simulation modeling provided in the proposal's Economic Impact, modeling did not project the shutdown of any electric generating facilities in New Jersey as a result of the implementation of the program. The Department also anticipates that any new electric generating facilities constructed in the United States are already subject to significant regulatory risk with regard to CO_2 emissions, so the implementation of the CO_2 Budget Trading Program should not have a significant impact on the siting of new power plants relative to other factors that impact plant siting decisions.

The adopted approach should not lead to potential manipulation of the CO_2 allowance market relative to a direct allocation of CO_2 allowances to affected sources. Rather, the auction and sale of CO_2 allowances should provide market benefits by increasing market liquidity, which should, in turn, reduce the potential for market manipulation. In addition, to guard against potential market manipulation Regional Greenhouse Gas Initiative, Inc., which provides technical support

to the Department and the other participating RGGI states, has retained an independent market monitor to provide oversight of regional CO_2 allowance auctions and the secondary CO_2 allowance market.

42. COMMENT: The RGGI program creates a competitive disadvantage for CO_2 budget sources covered by the RGGI program due to a competitive wholesale electricity market in which not all generators are subject to the RGGI program. In addition, New Jersey has introduced an unfair market advantage for those units that qualify as dispatch agreement facilities. The Department has arbitrarily set a CO_2 allowance price that is not based on the actual compensation or timeframe of the contractual agreements of the dispatch agreement facilities. (8)

RESPONSE: The Department provided a discussion of the potential for the creation of a competitive disadvantage for electric generation facilities subject to the CO_2 Budget Trading Program rules and related issues in the proposal's Economic Impact, 40 N.J.R. 3816 through 3825. In part to address such issues, the Department has promulgated an initially modest program that incorporates significant compliance flexibility. Units that qualify as dispatch agreement facilities do not enjoy an unfair advantage through provisions in the CO_2 Budget Trading Program. Dispatch agreement facilities typically do not receive market-derived prices for the electricity they sell, as the price received is established up-front by contract. Unlike other affected facilities, dispatch agreement facilities would not realize an increase in revenue through the carbon compliance cost adder incorporated into wholesale electricity prices, as such units would not be able to pass through the opportunity cost of CO_2 allowances into wholesale market bids, since the other party controlling the dispatch of the facility pursuant to the dispatch agreement contract would be submitting such bids into the wholesale market and receiving wholesale electricity sales revenue. Other facilities would receive an increase in revenues due to an increase in locational marginal prices resulting from the wholesale electricity market's incorporation of CO_2 compliance costs into the price of wholesale electricity. As a result, the CO_2 Budget Trading Program provisions, which implement statutory requirements, address a market failure and market inequity.

43. COMMENT: The commenter supports the Department's efforts to encourage voluntary renewable energy investment through the set-aside of one percent of available CO_2 allowances. (8)

RESPONSE: The Department acknowledges the commenter's support for the voluntary renewable energy market account at N.J.A.C. 7:27C-5.2(c).

44. COMMENT: Instead of the 99 percent auction or sale, the Department should follow the original RGGI MOU recommendation of a 25 percent auction. In the alternative, the Department should adopt a phased-in auction approach in which the auction could begin at a

percentage below 100 percent in the first compliance period (2009 through 2011) and then increase by a specified percentage each compliance period. Delaware proposed a similar transitional approach, including a 60 percent allowance auction and a 40 percent direct allowance to CO_2 budget sources for 2009. In the Delaware proposal, the auction quantity would increase by eight percent annually, resulting in 100 percent auction of CO_2 allowances beginning in 2014.

A phased-in approach increases the probability that CO_2 allowance prices will be moderate, provides a transitional path to implement allowance auctions into this newly formed cap-and-trade program, provides greater business certainty and reduced financial impact to CO_2 budget sources, and reduces the potential increase in electricity imports into the RGGI region. An advantage of a phased-in auction approach is that it would resolve the need for the Department to provide a fixed-price CO_2 allowance sale for dispatch agreement facilities as the fixed contracts would expire or be open for renegotiation prior to the commencement of a 100 percent auction. (8)

RESPONSE: The allocation approach outlined in the proposal is appropriate, as discussed at length in the proposal's Economic Impact (40 N.J.R. 3816 through 3825). A phased-in percentage of CO_2 allowances auctioned or sold would not reduce CO_2 allowance prices and the potential for emissions leakage. As discussed in the Economic Impact (40 N.J.R. 3816 through 3825), the functioning of the wholesale electricity markets in the region and evidence from the European Union Emissions Trading Scheme for carbon indicate that the market price of CO_2 allowances would be incorporated by electric generators into the wholesale market price of electricity whether the generator received the CO_2 allowances for free or were required to purchase them. The implication that if an electric generator received a CO_2 allowance for free that it would not incorporate the opportunity cost of using the CO_2 allowance (based on the current market price of an allowance) into its bid into the wholesale electricity market is counter to the academic literature and evidence of the functioning of wholesale electricity markets.

45. COMMENT: The Department is offering incentives for facilities to reduce carbon dioxide emissions prior to the first control period by offering early reduction allowances. Early reduction allowances should be offered for facility shutdowns to encourage new power generation construction, more efficient units, and the retirement of older, less efficient power generation assets. (8)

RESPONSE: The Department's intent in providing for the award of early reduction allowances is to prevent a disincentive that could delay actions at affected sources to reduce CO_2 emissions prior to implementation of the CO_2 Budget Trading Program. It is not likely that facility shutdown decisions, which involve major decisions related to large capital assets, would be made on the basis of the relatively modest revenue that might be received through the award and subsequent sale of early reduction allowances. Accordingly, the exemption of facility shutdowns from eligibility for early reduction allowance awards under N.J.A.C. 7:27C-5.2(*l*) is appropriate.

46. COMMENT: The formula at N.J.A.C. 7:27C-5.2(j) for allocating CO_2 allowances to a CO_2 budget unit is confusing and could be simplified, since it is only applicable to cogeneration units (combustion turbine with or without fired heat recovery steam generator). This formula essentially converts the useful thermal energy (UTE) from millions of British thermal units per year (MMBtu/yr) to millions of standard cubic feet per year (MMscf/yr). The AP-42 emission factor would then need to be converted from pounds per MMBtu (lbs/MMBtu) to pounds per MMscf (lb/MMscf). This appears to be an unnecessary step and may cause confusion. Since the AP-42 emission factors for the combustion turbine (oil and natural gas firing) are in lb/MMBtu, and the useful thermal energy is in MMBtu/yr, the formula could be simplified to:

$$CO_2 \text{ Allowances} = UTE \times EF_{CO2}/2000$$

The simpler formula is appropriate for combustion turbines firing natural gas and oil, as well as fired heat recovery steam generators (duct burners) firing natural gas. The units for the AP-42 emission factor for boilers firing natural gas are lb/MMscf. This formula is easily converted to lb/MMBtu as outlined in the footnote "a" to Table 1.4-2 of AP-42, Volume 1, Chapter 1: External Combustion Sources, 1.4 Natural Gas Combustion. (10)

RESPONSE: The formula at N.J.A.C. 7:27C-5.2(j) is appropriate. Heating value is not constant for an individual fuel and is subject to greater variability when comparing different types of fuel. Including lower heating value (LHV) in the CO_2 allocation calculation is necessary due to the fact that affected units that qualify for CO_2 allowances under N.J.A.C. 7:27C-5.2(j) could potentially be fired with different fuel types.

47. COMMENT: The commenter supports the auctioning of 100 percent of allowances and the use of the revenue to reduce consumer energy bills by investing in cost-effective energy efficiency. Electric generators will pass the cost of an allowance to consumers whether they are given free allowances or have to pay for them at auction, as demonstrated by the experience of the European Union's Emissions Trading Scheme. The commenter commends the Department for proposing a rule that would auction a significant share of allowances. (11)

RESPONSE: The Department acknowledges the commenter's support for a 100 percent auction and the commenter's general support for the allowance allocation approach outlined in the proposal.

48. COMMENT: The rules should not give special treatment for electric generators that have established long-term contracts. It is reasonable to assume that such contracts should have negotiated re-opener provisions for changes in law, or a risk premium to cover the eventuality. Such contracts probably incorporated risk premiums to cover possible environmental regulations and the Department should be reluctant to inject itself in private contract negotiations. (11)

RESPONSE: N.J.A.C. 7:27C-5.4(b) through (h) implement requirements specified by the Legislature at N.J.S.A. 26:2C-46, 48, and 49. While N.J.S.A. 26:2C-45 et seq. provides the Department with broad authority to auction, sell, or allocate allowances under an emissions trading program addressing greenhouse gas emissions, the Department's rules implement the Legislature's statutory requirement to limit fixed-price CO_2 allowance purchase offers to facilities that meet specific operational and contract criteria as specified at N.J.S.A. 26:2C-46. The Legislature established these specific criteria through the statutory definition of "dispatch agreement facility" at N.J.S.A. 26:2C-46, and the specific statutory requirements at N.J.S.A. 26:2C-48 and 49 that address the Department's administration of an emissions allowance trading program for greenhouse gas emissions as it applies to such facilities.

49. COMMENT: The Department proposes to auction or sell nearly 99 percent of its CO_2 allowance budget. The commenter is concerned with the adoption of a 100 percent auction that would be open to both compliance and non-compliance entities at the start of the RGGI program. A reasonable alternative is the approach being adopted in Delaware. Delaware's proposed rules provide for a 60 percent allowance auction and 40 percent direct allowance allocation to CO_2 budget sources. The auction quantity would increase by eight percent annually, resulting in 100 percent auction of allowances beginning in 2014. Such a phased-in allocation would have the additional benefit of decreasing the potential leakage of emissions due to an increase in electricity imported from non-RGGI states. (14)

RESPONSE: The allocation approach outlined in the rules is appropriate, and the justifications for such an approach are discussed at length in the Economic Impact, 40 N.J.R. 3816 through 3825. A phased-in percentage of CO_2 allowances auctioned or sold would not reduce the potential for emissions leakage. The functioning of the wholesale electricity markets in the region and evidence from the European Union Emissions Trading Scheme for carbon indicate that the market price of CO_2 allowances would be incorporated by electric generators into the wholesale market price of electricity, whether the generator received the CO_2 allowances for free or were required to purchase them. The implication that if an electric generator received a CO_2 allowance for free that it would not incorporate the opportunity cost of using the CO_2 allowance (based on the current market price of an allowance) into its bid into the wholesale electricity market is counter to the academic literature and evidence of the functioning of wholesale electricity markets.

50. COMMENT: The commenter supports the Department's intent to auction or sell nearly 100 percent of RGGI emissions allowances, and the Department's clear explanation for the rationale for such an approach, subject to the following reservations outlined below. While acknowledging that it is currently a matter of Legislative mandate at N.J.S.A. 26:2C-48, and thus not subject to the Department's discretion, the commenter strongly opposes the provision allowing "dispatch agreement facilities" to buy allowances for the fixed price of $2.00 per ton

and appreciates the Department's explanation of why such arrangements are not warranted. Competitive electric generators expect to bear a variety of risks associated with their business, including risks related to changing environmental standards. One of the fundamental premises of restructuring of the wholesale electricity markets in the Northeast was that regulators would no longer be responsible for lost revenues or changes in the cost of doing business for entities operating in a competitive market. Fuel price risk and regulatory risk are prominent aspects of the competitive market landscape and generators should be expected to manage those risks on their own.

While the provisions for dispatch agreement facilities are limited to facilities with long-term power purchase agreements that were signed after 2001, the commenter disagrees with the ability of these facilities to factor in CO_2 compliance costs or to modify the dispatch of these facilities in response to CO_2 price signals. These inabilities are simply matters of the contract under which these facilities operate, and if there are additional operational costs due to compliance with CO_2 emissions limits, these additional costs should have been, and likely were, factored in to the sale price of these facilities. (15)

RESPONSE: The provisions at N.J.A.C. 7:27C-5.4(b) through (h) implement requirements specified by the Legislature at N.J.S.A. 26:2C-46, 48, and 49. While N.J.S.A. 26:2C-45 et seq. provides the Department with broad authority to auction, sell, or allocate allowances under an emissions trading program addressing greenhouse gas emissions, the Department's rules implement the Legislature's intent to limit fixed-price CO_2 allowance purchase offers to facilities that meet specific operational and contract criteria as specified at N.J.S.A. 26:2C-46. The Legislature established these specific criteria through the statutory definition of "dispatch agreement facility" at N.J.S.A. 26:2C-46, and the specific statutory requirements at N.J.S.A. 26:2C-48 and 49 that address the Department's administration of an emissions allowance trading program for greenhouse gas emissions as it applies to such facilities.

51. COMMENT: The commenter supports the set-aside of allowances for voluntary renewable energy purchases and the eligibility criteria for the retirement of allowances from the set-aside account. The commenter encourages the Department to monitor the voluntary renewable energy market and to be prepared to increase the size of the allowance set-aside so it does not become "binding" in actuality or perception. Given the need to use all appropriate policy and market tools to reduce climate impacts, any limitation of the carbon benefits of the voluntary renewable energy purchases of New Jersey citizens and institutions does not make sense. (15)

RESPONSE: The Department acknowledges the commenter's support of the voluntary renewable energy account. Any consideration of an expansion of the account is best addressed through potential future rulemaking to amend the proposed rules. Should the account be oversubscribed with requests for retirement of CO_2 allowances, the Department will consider the

appropriate size of the account going forward at that time, while taking into account other market factors and the potential impact of an expansion of the set-aside on the functioning of the CO_2 Budget Trading Program and potential impacts to electricity ratepayers.

52. COMMENT: The Department should delete the proposed rule provisions for early reduction CO_2 allowances, as these provisions are inconsistent with and potentially counterproductive to the principle of 100 percent auctioning of allowances. This mechanism was originally conceived to encourage "early action" in emissions reductions during the early development of the RGGI program when the method of allowance allocation was still unclear. However, in light of the conclusion that auctioning allowances is the right policy, such early reductions provide their own reward by reducing a generator's need to purchase allowances, and early reduction CO_2 allowances would provide unnecessary compensation. Granting such unneeded allowances, particularly in light of indications that the regional cap may have been set too high, runs counter to the policy goals of the RGGI program. (15)

RESPONSE: The Department's intent in providing for the award of early reduction allowances is to prevent a disincentive that could delay actions at affected sources to reduce CO_2 emissions prior to implementation of the CO_2 Budget Trading Program. While the commenter is correct that in a scenario with 100 percent auctioning of CO_2 allowances early actions taken before the implementation of the program would provide economic benefits once the program is implemented, this would not remove the incentive to delay such actions until the start of the program.

53. COMMENT: The statutory provisions at N.J.S.A. 26:2C-48 allowing certain facilities to buy allowances at a fixed price set a poor precedent for the Federal climate policy debate. The Department should recommend a "sunset" of this provision in future State legislation and recommend against the inclusion of any such provisions in a Federal climate policy bill. (15)

RESPONSE: The Department acknowledges the comments, but notes that they are outside the scope of the proposed rules.

54. COMMENT: One hundred percent of CO_2 allowances should be auctioned. The current proposed rules will probably require about 70 percent of carbon allowances to be auctioned and allow approximately 29 percent to be sold to co-generation facilities at a fixed, relatively low, price. The environmental justice community urges the State to auction 100 percent of the allowances. (16)

RESPONSE: The fixed-price provisions at N.J.A.C. 7:27C-5.4(b) through (h) referenced by the commenter implement statutory requirements, pursuant to N.J.S.A. 26:2C-45, 48 and 49. With the exception of the one-percent set aside of CO_2 allowances pursuant to N.J.A.C. 7:27C-5.2(c)

and the fixed-price sale provisions at N.J.A.C. 7:27C-5.4(b) through (h), the Department will auction the remainder of CO_2 allowances in the New Jersey CO_2 emissions budget.

55. COMMENT: The commenter supports the allocation of 100 percent (99 percent) of New Jersey's CO_2 emissions budget to be auctioned. (18)

RESPONSE: The Department acknowledges the commenter's support for these provisions, but notes that while 99 percent of the New Jersey CO_2 emissions budget will be auctioned or sold, this may, in fact, mean that less than 99 percent will be auctioned, since certain facilities will be allowed to purchase CO_2 allowances at a fixed price, pursuant to N.J.A.C. 7:27C-5.4(b) through (h).

56. COMMENT: The commenter supports the proposed set-aside of one percent of the allowances to support the voluntary renewable energy market. This set-aside is essential for the voluntary renewable energy market to continue to grow in a manner consistent with the program's objectives. (18)

RESPONSE: The Department acknowledges the commenter's support for the voluntary renewable energy market account.

CO_2 Allowance Auctions

57. COMMENT: The Department should collaborate as closely as possible with the other RGGI states in developing and implementing a market-based program supported by auction rules that are regionally consistent so that CO_2 reductions can be achieved while maintaining the reliability of the region's electric system. Consistency of the program and auction rules by RGGI member states is critical; deviations by any member state in the use of set-aside accounts or auction mechanisms will create uncertainty and market disruptions resulting in efficiencies and price volatility. Additionally, price volatility within the RGGI market will only lead to higher energy prices than what they otherwise would have been under a uniform program. (1)

RESPONSE: The Department has made every effort to promulgate rules materially consistent with the RGGI Model Rule and the auction rules being developed by the other participating RGGI states. Promulgation of rules by all 10 participating states is still in process, but to date the participating states have achieved regional consistency where required for the proper functioning of a regional cap-and-trade program. However, there are some areas where consistency is not necessary, and such areas were noted in the RGGI Model Rule. One area where provisions that differ significantly among states would not impact the functioning of a regional carbon market is the method of allocating CO_2 allowances used by an individual state.

The participating RGGI states recognized that differences in how they allocate CO_2 allowances should not create the uncertainty and market disruptions raised by the commenter, which is why they agreed that consistency in this aspect of the program design was not necessary. Allowance allocation is primarily an asset distribution exercise and does not impact the market price of allowances, as evidenced through cap-and-trade programs for SO_2 and NO_X in the U.S. and academic literature on cap-and-trade design.

58. COMMENT: The anticipated delayed participation of some RGGI states in the initial 2008 CO_2 allowance auctions is troubling. All participating RGGI states should commence their participation in the regional auction process by no later than the December 17, 2008 auction. The inability of the states to move together in implementing RGGI and conducting regional auctions can contribute to market inefficiency and price volatility concerns. Transparency and regulatory certainty are critical in ensuring efficient, fair application of this new policy and process with a minimum of impact to ratepayers. (1)

RESPONSE: The Department is on schedule to meet its commitment made through the RGGI MOU to promulgate regulations implementing RGGI in New Jersey prior to January 1, 2009. Rulemaking requirements differ substantially among the participating states and the legislative process in the participating states has proceeded along different timelines. The Department notes that the participating RGGI states did not agree on the design criteria for the RGGI auctions until March 17, 2008; the Department filed its proposal shortly thereafter, on June 5, 2008. The Department intends to participate in the first regional auction subsequent to the date its rules are adopted, that is, the second auction, scheduled for December 17, 2008.

There should be no negative impacts on the development of the regional RGGI carbon market if all 10 participating states do not offer CO_2 allowances for sale in the initial regional auctions. To the contrary, the pre-compliance auctions being held in 2008 are intended to facilitate price discovery prior to the start of the first control period in January 2009. These auctions will facilitate development of the regional RGGI carbon market prior to the formal beginning of the program, which will assist regulated entities in planning for compliance. CO_2 allowances purchased during the first auction will ultimately be usable for compliance in each of the 10 participating RGGI states. As a result, there will be a single market price for CO_2 allowances, regardless of which state issued the allowances. All participating states have also clearly signaled that they will be participating in future auctions as their regulations are promulgated, so there is a market expectation that future CO_2 allowance supply will become available in subsequent auctions. Due to both these factors, the number of individual states participating in the first auction and the volume of CO_2 allowances offered for sale should not have an impact on the auction market clearing price. Furthermore, to ensure regional consistency, all 10 participating states, including New Jersey, were active in the design of the regional auction and have been active in the implementation of the first auction.

The first regional CO_2 allowance auction held on September 25, 2008, which offered CO_2 allowances from only six of the 10 participating RGGI states, was conducted successfully. The independent market monitor retained by Regional Greenhouse Gas Initiative, Inc., determined that there were no material concerns regarding the auction process or its results, and that the auction generated a clearing price that is consistent with the underlying supply and demand fundamentals governing the CO_2 allowance market.

59. COMMENT: The commenter supports the methodology utilized to identify the minimum reserve price for the first regional allowance auction on September 25, 2008. (3)

RESPONSE: The Department acknowledges the commenter's support for the methodology used to determine the minimum reserve price for the auctioning of CO_2 allowances by the Department.

60. COMMENT: The Department should explain further how it will make the determination that there are not enough data available to justify the calculation of a current market reserve price, as provided at N.J.A.C. 7:27C-5.8(b), including an explanation of the methodology or criteria that will be used. This should be explained further and provided to market participants on the RGGI auction website well in advance of the December 2008 auction. (3, 14)

RESPONSE: The Department will evaluate, in consultation with the other participating RGGI states, whether there is enough market data available to calculate a valid current market reserve price. In particular, the Department will evaluate trading volume and market liquidity to determine whether existing market data is sufficient to provide a valid estimate of the current market price of CO_2 allowances. If a current market price is not calculated due to a lack of market data, the Department intends to disclose the basis for such a decision on the auction website prior to an auction.

61. COMMENT: Basing the reserve price for subsequent auctions on the current market price is problematic, especially at the outset of the program. As demonstrated from previous cap-and-trade programs and early RGGI trading (announced trades are in the $5.00 to $8.00 per ton range), allowance prices at the outset of the program are often higher than expected as the market assimilates fundamentals into the price discovery process. Therefore, basing the reserve price on the higher allowance prices that may materialize at the outset could artificially escalate the price of RGGI allowances in auctions held in December 2008 and later. Furthermore, it is very likely that CO_2 budget sources will try to obtain as many allowances as possible in the early auctions in order to build an allowance account that will put them within reach of their compliance obligations. This may result in limited trading activity in the first few years of the program. As a result, the market price will likely be set by the auction clearing price and a few transactions that may not be representative of the market. (3, 14)

RESPONSE: The process for setting the reserve price at N.J.A.C. 7:27C-5.8(b) is appropriate and would not artificially raise the price of CO_2 allowances. The current market reserve price, if used, would be 80 percent of the market price for CO_2 allowances shortly before the auction is held, allowing for significant variation in market price in the short period between setting the reserve price and the conduct of the auction. If limited market transactions occurred from one auction to the next, as the commenter surmises, the Department would retain the discretion, as provided at N.J.A.C. 7:27C-5.8(b), to not use the current market reserve price if there are not enough market data available to justify the use of the current market reserve price. This flexibility would address the commenter's concerns.

The experience of the SO_2 and NO_X cap-and-trade programs indicates that the prices established by auctions tend to closely converge with the secondary market price of allowances, as evidenced by a review of these markets in the auction design study commissioned by the participating RGGI states. (Holt, C. et al., Auction Design for Selling CO_2 Emission Allowances under the Regional Greenhouse Gas Initiative -- Final Report, October 26, 2007) A reserve price set at 80 percent of the current market price of CO_2 allowances shortly before the auction is held is unlikely to artificially raise allowance prices if market prices dropped immediately prior to the auction, because the current market reserve price allows for such near-term market variations. If such an outcome occurred, auction participants would have the option to not purchase CO_2 allowances in that auction, allowing them to wait until the next auction. The current market reserve price, if used, for the subsequent auction would then reflect the significant downward shift in CO_2 allowance prices.

The concern that there will be limited liquidity in the RGGI market during the first few years of the program, due to a desire by CO_2 budget sources to build up a significant CO_2 allowance bank, is speculative. There has also been speculation that many parties may sit out the first few auctions as they wait for discovery of the market price. The flexibility provided to the Department at N.J.A.C. 7:27C-5.4(b) to not use a current market reserve price would address the concerns raised by the commenter, and were intended to address such potential market uncertainty as the program develops. In addition, allowing non-compliance entities to participate in CO_2 allowance auctions, as provided for in the CO_2 Budget Trading Program rules, will likely increase market liquidity and market transactions.

62. COMMENT: The proposed rules note that those allowances that are not sold at auction due to the reserve price not being met may be offered for sale at the next auction. New Jersey also holds the option to retire the allowances.

The Department should consider allowing the complete rollover of unsold allowances into the next auction at either the reserve price of its auction, or at the reserve price of the next auction, whichever is lower. The unsold allowances may also be offered in special lots in the limited

number that were unsold. Companies seeking to comply with the new rules should purchase allowances accordingly, without concern that the reserve price will suddenly increase between auctions. Should the reserve price decrease, the lot cost will reflect this decrease so as to maintain market structure. However, if a rollover lot is not sold in the second auction, when it rolls over again to the following auction, it will be incorporated into the general pool of allowances. In this manner, the Department will help to keep speculators from purchasing large quantities of allowances in early auctions with the aim of selling to compliance entities later, should future auctions prove to be more expensive. With allowance rollover, the compliance entities will be able to adjust to market forces between auctions, and rollovers will not artificially drive up prices, should the reserve price increase significantly. A lower-priced lot of allowances rolled-over from a previous auction will additionally help to moderate the overall price of allowances. The Department should not retire these allowances but should keep them in circulation. (3)

RESPONSE: The approach to addressing any unsold CO_2 allowances, as outlined at N.J.A.C. 7:27C-5.8(c), is appropriate and will provide benefits that reduce market volatility. The recommendation to create distinct conditions for the auction of "rolled-over" CO_2 allowances not sold at a previous auction would create the potential for market distortions and inefficiencies.

The approach of the rules is based on the results of the auction design study commissioned by the participating RGGI states (Holt, C. et al., Auction Design for Selling CO_2 Emission Allowances under the Regional Greenhouse Gas Initiative -- Final Report, October 26, 2007). The study concluded that simply rolling forward any unsold CO_2 allowances to the next auction could create an awkward start for the RGGI market in a situation where available CO_2 allowances significantly exceeded recent CO_2 emissions at the start of the program. This could result in a series of auctions with unsold CO_2 allowances, which could lead to an impression that the auctions were failing. Instead, the study recognized that creating a contingency bank of CO_2 allowances that would be released to the market at a set price would provide a mechanism for reducing the potential for price volatility by blunting rapid spikes in prices. The study concluded that a contingency bank would also tend to moderate bid prices since bidders would know that additional CO_2 allowance supply could be come available. New markets are susceptible to initial price volatility. The approach of the rules will reduce the potential for price volatility as the RGGI market develops.

It is also appropriate to reserve the flexibility to retire CO_2 allowances that remain unsold after a control period, as provided at N.J.A.C. 7:27C-5.8(c)2ii. The intent in setting the state CO_2 emissions budgets agreed to in the 2005 RGGI MOU was to initially cap CO_2 emissions at projected 2009 levels. Since the execution of the RGGI MOU, regional CO_2 emissions from affected facilities have dropped significantly in the past couple of years due to mild weather and significant shifts in the relative price of fuel oil and natural gas. It now appears that CO_2 emissions at the outset of the regional program may be significantly below the initial regional

CO_2 emissions cap. Given such changes in CO_2 emissions prior to 2009, it is appropriate to retain the flexibility to adjust the CO_2 emissions cap going forward as appropriate.

63. COMMENT: CO_2 allowance auctions should be limited to entities with a compliance obligation under the program, similar to the operation of the existing Title IV Acid Rain program. This will reduce the chance that non-regulated entities will bid up CO_2 allowance prices during the initial auction. (8)

RESPONSE: The Department has the discretion to limit participation in CO_2 allowance auctions to compliance entities if market conditions warrant under the promulgated auction provisions. SO_2 allowance auctions under the Title IV Acid Rain program are open to both compliance and non-compliance entities. The Department will evaluate auction eligibility going forward as the CO_2 allowance market develops, in consultation with the other participating RGGI states and the independent market monitor retained by Regional Greenhouse Gas Initiative, Inc.

64. COMMENT: N.J.A.C. 7:27C-5.8(c)1 specifies the auction approach if there are unsold allowances during a three-year compliance period. For such sale of unsold allowances to occur, the reserve price must be "greater than the minimum reserve price…in effect for such CO_2 allowance auction." This limitation is unnecessary and contrary to effective price-setting policy and economic theory. Instead of requiring that the reserve price be greater than that of the previous auction, the Department should follow the reserve price-setting standard at N.J.A.C. 7:27C-5.8(b): the price should be the higher of the minimum reserve price or the current market reserve price. (10)

RESPONSE: The process for determining the reserve price at N.J.A.C. 7:27C-5.8(b) is not directly related to the process for determining whether unsold CO_2 allowances from a previous auction will be offered for sale in a subsequent auction. Insofar as the commenter may be suggesting that unsold CO_2 allowances from a previous auction should be offered in a subsequent auction regardless of the reserve price used in that auction, the Department is responding to that comment.

The approach to addressing any unsold CO_2 allowances, as outlined at N.J.A.C. 7:27C-5.8(c), is appropriate and will provide benefits that reduce market volatility. The approach in the rules is based on the results of the auction design study commissioned by the participating RGGI states (Holt, C. et al., Auction Design for Selling CO_2 Emission Allowances under the Regional Greenhouse Gas Initiative -- Final Report, October 26, 2007). The auction design study concluded that simply rolling forward any unsold CO_2 allowances to the next auction could create an awkward start for the RGGI market in a situation where available CO_2 allowances significantly exceeded recent CO_2 emissions at the start of the program. This could result in a series of auctions with unsold CO_2 allowances, which could lead to an impression that the auctions were failing. Instead, the auction design study recognized that creating a contingency

bank of CO_2 allowances that would be released to the market at a set price would provide a mechanism for reducing the potential for price volatility by blunting rapid spikes in prices. The auction design study concluded that a contingency bank would also tend to moderate bid prices since bidders would know that additional CO_2 allowance supply could be come available. New markets are susceptible to initial price volatility; the Department's approach would reduce the potential for price volatility as the CO_2 allowance market develops.

65. COMMENT: Contrary to the enabling statute granting the Department authority to participate in RGGI, the Department does not specify that it will hold a hearing if auction prices exceed $7.00 per allowance for two consecutive auctions. (10)

RESPONSE: The Department will comply with N.J.S.A. 26:2C-56, which requires the Department and the Board of Public Utilities (Board) to hold a joint public hearing or hearings within 90 days after the second auction to develop a plan for immediate ratepayer relief if the price of CO_2 allowances at two consecutive regional auctions in which the State is offering CO_2 allowances clears at a price that exceeds $7.00 per allowance. The Department and the Board shall then issue a joint report to the Legislature within 90 days of the final hearing with findings and recommendations. The recommendations in this report could involve action by the Department that may or may not involve actions provided for in the proposed rules and/or regulatory or statutory proposals involving the Department and/or the Board. The statute on its face is sufficiently clear as to the nature of the requirements imposed on the Department and the Board of Public Utilities that the Department deemed further expansion ofthese requirements by means of interpretive rules to be unnecessary.

66. COMMENT: Contrary to the enabling statute, the Department does not specifically address its adherence to the legally mandated requirement that any auction shall include auction design standards that minimize allowance price volatility. (10)

RESPONSE: Consistent with the clear legislative intent of the statute, the Department has incorporated into N.J.A.C. 7:27C-5.5 through 5.18 the statutory requirement at N.J.S.A. 26:2C-47b(3) to incorporate auction design elements that "minimize allowance price volatility, guard against bidder collusion, and mitigate the potential for market manipulation." These elements include:

1. Provisions to hold auctions not less than annually (the Department intends to participate in quarterly regional auctions, to reduce market volatility);
2. Inclusion of a credible reserve price (to minimize the potential for bidder collusion);
3. Application of a 25-percent limit on bidding activity by associated auction participants in any one auction (to reduce the potential ability for auction participants to accumulate CO_2 allowance positions that would allow them to exercise market power);

4. The ability to limit auction eligibility to compliance entities if market conditions warrant (to guard against the potential for market manipulation by non-compliance entities); and
5. The flexibility to adjust auction formats if necessary (to minimize the potential for market manipulation).

67. COMMENT: Contrary to the enabling statute, the Department does not provide for an annual review of the regional auction, including reviewing the amount of allowances that should be included in a regional auction. (10)

RESPONSE: The Department will provide an annual report reviewing its position with any regional auction, as required pursuant to N.J.S.A. 26:2C-47c. However, this report is outside the scope of this rulemaking, as it would provide a broad review of the implementation of the Department's auction provisions under the CO_2 Budget Trading Program. As this is a statutory requirement imposed on the Department, the inclusion of this requirement in the rules is unnecessary.

68. COMMENT: The definition of "beneficial interest" is overly broad. N.J.A.C. 7:27C-1.2 defines beneficial interest as "profit, benefit, or advantage resulting from the ownership of a CO_2 allowance." Under this definition, a violation occurs if a company holds a small equity (or debt) share of many power plants, and these plants make more than 25 percent of allowance purchases. This violation occurs even if the company has no role in allowance purchasing, due to its minority share ownership. The power industry is extremely complex and companies hold shares, or operational or financial interest, in many plants; therefore, the open-ended nature of the terms "benefit" or "advantage" could potentially lead to an unnecessary disqualification of plants that need allowances. The Department should limit the definition of beneficial interest to include only entities that own allowances or hold majority ownership in entities owning allowances. This will assure that plant owners, operators, debt holders, or other entities that have relationships that are minor and have no impact on bidding strategy or market results, are not unnecessarily disqualified by the 25 percent restriction. (10)

RESPONSE: The Department intends to apply the definition of beneficial interest through the auction notice for each auction issued pursuant to N.J.A.C. 7:27C-5.9. This approach is consistent with N.J.S.A. 26:2C-47(a)(2), which exempts from the rulemaking requirements of the Administrative Procedure Act the "(a)pproval and notice by the department of specific procedures and requirements for any auction or other sale of allowances" by a non-profit corporation, association or organization in which the Department is authorized to participate pursuant to N.J.S.A. 26:1C-45 et seq., "provided that the specific procedures and requirements are consistent with the process and general requirements outlined in regulations adopted by the department" and further provided that the public is afforded "an opportunity for review and comment" on these procedures and requirements.

The Department was actively involved in drafting the auction notice for first auction conducted by six participating RGGI states on September 25, 2008 (CO_2 Allowance Auction Notice for CO_2 Allowance Auction 1 on September 25, 2009, released July 24, 2008; available at http://www.rggi.org). The auction procedures outlined in this notice provided specific criteria for what constituted a "beneficial interest" in another bidder's auction participation (section 1.7.4.2). These criteria addressed whether a party has an interest in the CO_2 allowances purchased by another auction participant on its behalf (a "disclosable bidding association"). This is distinct from a corporate association. Corporate associations were determined in the auction procedures for the September 25, 2008 auction based on a 20-percent ownership interest to indicate if a corporate association exists (section 1.7.4.1). Both corporate association and bidding association criteria were used to apply the 25-percent bidding activity limit for the September 25, 2008 auction administered by six of the participating RGGI states. The criteria for disclosable corporate associations and disclosable bidding associations specified in the auction notice for the September 25, 2008 auction did not create significant implementation problems during the review of qualification applications submitted by prospective auction participants.

In developing the 25-percent bidding activity limit, the Department evaluated company portfolios of electric generation facilities that would be affected by the state CO_2 Budget Trading Programs in the 10 participating states. The company with the largest CO_2 emissions exposure comprised 14 percent of the regional CO_2 emissions from facilities that would be affected under the CO_2 Budget Trading Programs based on 2004 CO_2 emissions data. As a result, the Department believes it is very unlikely that the 25 percent bidding activity would constrain the procurement of CO_2 allowances by compliance entities.

69. COMMENT: The commenter supports implementing joint and uniform multi-state auctions as soon as possible, as opposed to single-state auctions. To the extent that single-state auctions are deemed necessary initially, allowances purchased in those auctions should be completely fungible; that is, they should be usable in any other participating state without restriction to increase market liquidity and transparency. (14)

RESPONSE: The Department intends to participate in regional auctions subsequent to the adoption of rules. The Department has been an active participant in the design of the regional auction and the implementation of the first auction. However, if the Department were to offer CO_2 allowances through a single-state CO_2 allowance auction, the CO_2 allowances purchased through such an auction would be fully fungible with other CO_2 allowances. The decision to hold a multi-state or single-state auction would not alter the characteristics of a CO_2 allowance, which are established in the Department's rules at N.J.A.C. 7:27C-1.2 and in the corresponding rules of other participating states. N.J.A.C. 7:27C-1.2 defines the terms "CO_2 allowance" and "participating state." The term "CO_2 allowance" means a limited authorization by the Department, or a participating state, under the CO_2 Budget Trading Program to emit up to one

ton of CO_2, subject to all applicable limitations under N.J.A.C. 7:27C. The term "participating state" means a state or jurisdiction that has adopted corresponding rules or regulations as part of the CO_2 Budget Trading Program. These characteristics of a CO_2 allowance establish reciprocity across the participating states with regard to the use of a CO_2 allowance.

70. COMMENT: The commenter supports both the 1,000-allowance lot size for the auction and the single-round, sealed-bid, uniform-price auction method as reasonable. The commenter appreciates the signal that the RGGI States are open to alternative auction methods as the RGGI allowance market emerges and changes over time. However, it would be beneficial for the RGGI States to identify how such a decision would be made and how much input stakeholders will have in that process. (14)

RESPONSE: The Department consulted with stakeholders as part of the regional auction design process and will continue to do so, as appropriate, if a change to the auction format is considered in the future.

71. COMMENT: In light of the decision to have an auction open to all entities in all states that can financially qualify, the commenter supports the 25-percent limitation as reasonable. (14)

RESPONSE: The Department acknowledges the commenter's support for the 25-percent auction activity limit.

72. COMMENT: As an alternative to basing the reserve price for subsequent auctions on 80 percent of the market price, the RGGI states should consider using a similar methodology as the stage 1 trigger event, which uses a 14-month market settling period. For example, if RGGI applied the same market settling period approach to the reserve price, RGGI could escalate the $1.86 reserve price used in the first auction (by some percentage plus CPI) for the first 14 months of the compliance period (which would span the first seven auctions). After this "settling period," the reserve price could then transition to 80 percent of the market price. (14)

RESPONSE: The process established by the rules for setting the reserve price is appropriate and provides market benefits. The rules combine the two alternatives for setting a reserve price proposed in the auction design study commissioned by the participating RGGI states (Holt, C. et al., Auction Design for Selling CO_2 Emission Allowances under the Regional Greenhouse Gas Initiative -- Final Report, October 26, 2007). The primary intent of a reserve price is to reduce the potential for collusion among bidders or to address weak competition among bidders with asymmetric values for CO_2 allowances in a scenario where there is weak competition among bidders. The academic literature and evidence from other auctions indicate that the establishment of a credible and efficient reserve price is one of the most important aspects of auction design, as indicated in the auction design study.

The commenter's suggestion raises the possibility that the reserve price could vary significantly from the recent market price of CO_2 allowances, which would undermine the efficiency of the reserve price as a tool to avoid auction results that clear significantly below a competitive price. The auction design study indicated that if the reserve price were not set close to the market price, this could result in some level of tacit collusion for an auction with limited competitiveness, as the reserve price could serve as a focal point for coordinated bids. The auction design study also indicated that the reserve price would not lead the market price, because it would be set low enough to account for reasonable short-term variations in market prices. As a result, if there had been a short-term run up in prices during the period when the reserve price was set, this would allow for market prices to lower over time without the reserve price leading the market price.

73. COMMENT: The RGGI auction design elements are right to state, "A reserve price based on the current market price will only be used if RGGI states determine that there are sufficient, reliable market data available to establish a valid current market price." However, the methodology that will be utilized and how this determination will be made should be explained further and provided to market participants on the RGGI auction website well in advance of the December 2008 auction. (14)

RESPONSE: The general methodology for establishing the current market price is specified in the Department's proposal. The definition of "current market price" at N.J.A.C. 7:27C-1.2 indicates that such a price would be determined based on CO_2 allowance prices reported to the Department (through the RGGI CO_2 Allowance Tracking System), CO_2 allowance prices reported publicly through reputable sources (such as market indices published by market analysts), and the results from previous CO_2 allowance auctions. The Department would utilize all or a combination of these information sources, as appropriate, to determine the current market price. Prior to an auction, the Department intends to disclose on the auction website the methodology used for calculating the current market price if a current market reserve price is used. If a current market price was not calculated due to a lack of market data, the Department also intends to disclose the basis for such a decision on the auction website prior to an auction.

74. COMMENT: The Department is right to provide flexibility to change the auction format, as well as the entities that can participate in the quarterly auctions depending on how the market functions. The Department could limit auctions to compliance entities (owners and operators of CO_2 budget units located in New Jersey and other participating states) if market conditions warrant such limitation, in order to maintain CO_2 allowance availability to compliance entities and ensure a well-functioning CO_2 allowance market. However, the Department should identify how such a decision to change the auction format and eligible participants will be made in consultation with the regulatory agencies in other participating states and how much input stakeholders will have in that process. (14)

RESPONSE: Any change to the auction format and the eligible entities that may participate in an auction will be considered by the Department in consultation with the other participating RGGI states and the independent market monitor retained by Regional Greenhouse Gas Initiative, Inc. The Department will address the level of appropriate stakeholder input to such considerations at such time that any such considerations are made by the Department.

75. COMMENT: The Department indicated in its proposal preamble (40 N.J.R. 3795) that it will perform calculations of the minimum reserve price, current market price and the reserve price in consultation with the regulatory agencies in other participating states. The Department should clarify when this information will be provided and where it will be posted. (14)

RESPONSE: This information will be provided on the auction website prior to each auction. The date for the posting of such information on the auction website would be established in the auction notice, or such information would be contained in the notice as appropriate, which will be posted at least 45 days prior to each auction.

76. COMMENT: The proposal indicates that unsold allowances (those not sold at auction due to the reserve price not being met) will be offered for sale at the next auction only if a reserve price based on the current market price is used. The Department should reconsider this determination and provide that all unsold allowances will roll forward to future auctions, regardless of the reserve price method used. (14)

RESPONSE: The approach to addressing any unsold CO_2 allowances, as outlined at N.J.A.C. 7:27C-5.8(c), is appropriate and provides benefits that reduce market volatility. The approach in the rules is based on the results of the auction design study commissioned by the participating RGGI states (Holt, C. et al., Auction Design for Selling CO_2 Emission Allowances under the Regional Greenhouse Gas Initiative -- Final Report, October 26, 2007). The study concluded that simply rolling forward any unsold CO_2 allowances to the next auction could create an awkward start for the RGGI market in a situation where available CO_2 allowances significantly exceeded recent CO_2 emissions at the start of the program. This could result in a series of auctions with unsold CO_2 allowances, which could lead to an impression that the auctions were failing. Instead, the study recognized that creating a contingency bank of CO_2 allowances that would be released to the market at a set price would provide a mechanism for reducing the potential for price volatility by blunting rapid spikes in prices. The study concluded that a contingency bank would also tend to moderate bid prices since bidders would know that additional CO_2 allowance supply could become available. New markets are susceptible to initial price volatility; the Department's approach would reduce the potential for price volatility as the RGGI market develops.

It is also appropriate to reserve the flexibility to retire CO_2 allowances that remain unsold after a control period, as provided at N.J.A.C. 7:27C-5.8(c)2ii. The intent in setting the state CO_2

emissions budgets agreed to in the 2005 RGGI MOU was to initially cap CO_2 emissions at projected 2009 levels. Since the execution of the RGGI MOU, regional CO_2 emissions form affected facilities have dropped significantly in the past couple of years due to mild weather and significant shifts in the relative price of fuel oil and natural gas. It now appears that CO_2 emissions at the outset of the regional program may be significantly below the initial regional CO_2 emissions cap. Given such developments, it is appropriate to retain the flexibility to adjust the CO_2 emissions cap going forward, as needed.

77. COMMENT: New Jersey is urged to participate in the December 2008 planned RGGI regional auction and all subsequent regional auctions. The Department should change the reference in the rules to the frequency with which auctions will be held from "no less frequently than annually," to "on a quarterly basis." (18)

RESPONSE: The Department will participate in the next regional auction subsequent to the adoption of the rules, scheduled for December 17, 2008, and all subsequent regional quarterly auctions. The Department believes that the language at N.J.A.C. 7:27C-5.7(a) that addresses the frequency with which the Department will conduct auctions is appropriate, as it provides the Department with suitable flexibility to adjust the frequency of auctions in response to market conditions, as appropriate.

78. COMMENT: The commenter supports the auction reserve price of $1.86 per CO_2 allowance in 2008 and 2009 and the plan to adjust the reserve price using the Consumer Price Index, thereafter. Setting a reserve price is critical to ensuring market liquidity and preventing collusion. A reserve price also ensures a market signal to developers of green technology and ensures that a societal value is placed on the CO_2 allowance and requires that allowances are not given away in a capricious manner. While the summary in the proposal provides details concerning the reserve price, the actual reserve price is not included in the rules. This detail should be included in the rules to ensure consistency among the RGGI states on this topic. (18)

RESPONSE: The rules provide sufficient detail establishing how the reserve price will be set, as specified at N.J.A.C. 7:27C-5.8 and at the definitions of "minimum reserve price," "current market reserve price," and "current market price" at N.J.A.C. 7:27C-1.2. It is not possible, nor would it be advisable, to announce in the rules the value of the reserve price for auctions, because the process specified in the proposal is dependent on calculating the current market price prior to each auction. The reserve price for each auction will be announced prior to each auction on the auction website designated by the Department, and will be set through the process specified in the proposed rules.

79. COMMENT: If it is determined that RGGI is significantly over-allocated, any allowances falling below the reserve price should be retired. At a minimum, any allowances that

fall below the reserve price should be placed in a contingency reserve account as is stipulated in the proposal. (18)

RESPONSE: N.J.A.C. 7:27C-5.8(c)2 provides that if following the end of a control period there are unsold CO_2 allowances of allocation years from that fall within the control period, the Department may retire these CO_2 allowances.

Monitoring, Recordkeeping and Reporting

80. COMMENT: The record keeping and reporting requirements of the CO_2 Budget Trading Program rules will unduly burden regulated sources. The record keeping requirements for the output data associated with the CO_2 Budget Trading Program requires sources to retain the data used to monitor, determine, or calculate net electric output and net thermal output for 10 years, as provided at N.J.A.C. 7:27C-8.8(i). This 10-year time period is extensive and unprecedented, as Clean Air Act programs have either a three or five-year time period for record retention. The Title IV Part 75 Acid Rain Program for the SO_2 and NO_X trading programs only require a record retention of three years. The Title V Part 70 Operating Permit Program requires facilities to maintain monitoring data and supporting information records for five years. Since the CO_2 Budget Trading Program has a control period of three calendar years, a six-year (two control periods) record retention requirement is sufficient to ensure compliance with the program. (8)

RESPONSE: The record retention requirements at N.J.A.C. 7:27C-1.3(f), 1.4(n), and 8.8(h) are appropriate considering the three-year control period under the CO_2 Budget Trading Program (which may be extended to four years upon the occurrence of a stage-two trigger event). The programs referenced by the commenter have either a static compliance requirement (operating permits) or an annual compliance requirement. The Department will reconsider the record retention requirements at such time as any amendments to the CO_2 Budget Trading Program rules may be considered in the future.

81. COMMENT: Reporting both net electrical output and net thermal output is duplicative, as these parameters are currently reported and recorded in the PJM Generator Attribute Tracking System (GATS). The Department should work closely with GATS, as appropriate, in order to obtain these data, rather than require power generators to report the information twice. (8)

RESPONSE: The requirements for reporting of net electrical output and net thermal output are appropriate because the Department does not have access to the unit-level megawatt- hour (MWh) output data reported to the PJM Environmental Information Services GATS, and the GATS system does not provide output data for useful steam output. For affected sources that report net MWh electricity generation output to GATS, the Department is requesting that the same information submitted to GATS be submitted to the Department. The submission of net

electric generation for a CO_2 budget unit should not create a significant reporting burden for affected sources, as this information has already been compiled in GATS and can be easily queried in GATS by the owner or operator of the facility reporting to GATS and submitted to the Department.

82. COMMENT: If power generators are required to report net electrical output and net thermal output, the annual reporting requirement of March 1 for the immediately preceding calendar year is burdensome for CO_2 budget sources. The Acid Rain Program has an annual March 1 reporting deadline. Also, some state programs have an annual emission inventory due date of March 1. Based on those reporting dates, an April 1 reporting deadline would be more amenable for the sources to allow for adequate quality assurance and certification of the reported data. The April 1 deadline will allow ample time for oversight, as the program control period is three years in length. (8)

RESPONSE: The annual reporting requirement at N.J.A.C. 7:27C-8.8(i)1 of March 1 for net electrical and thermal output is appropriate, as it coincides with the compliance deadline under the CO_2 Budget Trading Program at the end of a three-year control period and the deadline for submission of emissions statements to the Department pursuant to N.J.A.C. 7:27-21. This will make the submission and receipt of such information more administratively efficient for the reporter and the Department, respectively.

83. COMMENT: The requirement to submit the annual report of net electrical output and net thermal output in both electronic and hardcopy format is duplicative and inefficient. The Title IV Part 75 Acid Rain Program allows for electronic submittal only, provided a paper copy can be furnished upon request by the EPA. The commenter suggests the following language be substituted: "The data shall be submitted to the Department electronically, provided a paper copy can be furnished upon request, by April 1 for the immediately preceding calendar year." (8)

RESPONSE: In response to comment, the Department has modified the data submission requirement at N.J.A.C. 7:27C-8.8(i)1 to indicate that data shall be submitted to the Department electronically, provided a paper copy shall be provided to the Department upon request. This will reduce the reporting burden placed on CO_2 authorized account representatives without reducing the Department's ability to audit submitted data.

84. COMMENT: N.J.A.C. 7:27C-8.8 does not provide a timeframe for submittal of the output monitoring plan. This should be added to the final rule with adequate time allowed for collection of the detailed information required by this provision. The rule should allow at least 90 days following adoption for preparation and submittal of this output monitoring plan. (10)

RESPONSE: While N.J.A.C. 7:27C-8.8(e) does not specify a deadline for the submittal of an output monitoring plan, N.J.A.C. 7:27C-8.8(a) requires, among other things, that a CO_2 budget

source report net electric output and net thermal output pursuant to an approved output monitoring plan in accordance with N.J.A.C. 7:27C-8.8(e). The Department suggests that a CO_2 budget source submit an output monitoring plan for approval by no later than January 30, 2009, to ensure that output monitoring data for calendar year 2009 is reported in accordance with an approved output monitoring plan. Early submittal of an output monitoring plan will minimize risk to the source of being in non-compliance with the requirements at N.J.A.C. 7:27C-8.8(a) if the Department rejects output monitoring data that is not submitted in accordance with an approved output monitoring plan.

85. COMMENT: The CO_2 Budget Trading Program should include monitoring requirements for continuous emissions monitoring of regulated facilities for particulate matter, nitrogen oxides, sulfur dioxide, and carbon dioxide, if such monitoring is not already required by other regulations or laws. (16)

RESPONSE: As the focus of the CO_2 Budget Trading Program is on CO_2 emissions, the proposed focus of the monitoring provisions on CO_2 emissions is appropriate. Other pollutants are more appropriately addressed through other rules specific to those pollutants.

86. COMMENT: RGGI should require the following information to be easily accessible to the public: the number of allowances bought at the auction by each entity or person and the facility of their intended use; the number of allowances held by each entity or person and used by each facility; a record of allowance trades made by each entity or person; facility emissions data; and any violations and fines incurred at each facility.
(16)

RESPONSE: The regional CO_2 Allowance Tracking System (COATS) that will be used by each of the 10 state CO_2 Budget Trading Programs is currently under development. COATS will include a public report capability for non-registered users of the system. The Department is using its best efforts to ensure that COATS, which is being developed in conjunction with other participating RGGI states, provide as much public access as possible, provided such access does not significantly undermine the functioning of the CO_2 allowance market and create concerns related to the potential for collusion and manipulation of CO_2 allowance auctions or the secondary CO_2 allowance market.

87. COMMENT: Facilities subject to the CO_2 Budget Trading Program that co-fire solid eligible biomass are required to report the total as-fired biomass fuel input and moisture content for each shipment and the dry basis carbon content, dry basis higher heating value, total fuel heat input, and chemical analysis including heating value and carbon content for each fuel type. Based on this information, the covered facility is required to calculate its CO_2 emissions from eligible biomass using the equation at N.J.A.C. 7:27C-8.7(c). The Department should accept CO_2 emissions data from continuous emissions monitor systems (CEMS) operated in accordance with

applicable State and Federal regulations. CEMS data is superior to grab sampling of biomass shipments because it is continuous and subject to existing calibration and accuracy standards.

To ascertain the portion of total CO_2 emissions attributable to biogenic sources, the Department should consider the use of standard test method ASTM-D6866. This method determines the amount of biomass CO_2 by comparing the relative amount of radiocarbon C14 to a modern reference standard. The California Air Resources Board and the European Union Emissions Trading Scheme both recognize this procedure in determining biogenic stack CO_2 emissions. When using a combination of CEMS data and ASTM-D6866 test results, participants should be absolved from all other reporting requirements at N.J.A.C. 7:27C-8.7. (17)

RESPONSE: The Department is discussing the use of the ASTM-D6866 method for determining the portion of biogenic CO_2 emissions with the other participating RGGI states. This method should provide a valid indicator of the portion of CO_2 emissions derived from biomass, and could reduce monitoring costs for affected sources that co-fire biomass. However, application of this method for use in the CO_2 Budget Trading Program will require the development of additional monitoring protocols that address sampling procedures and frequency for flue gas samples and chain-of-custody issues related to offsite testing of samples. Such regulatory development is best achieved through a transparent stakeholder process and administrative rulemaking. The Department intends to recommend that the participating states develop model regulatory language that would facilitate the use of the ASTM-D6866 method should the states agree to coordinate other amendments to their CO_2 Budget Trading Program rules in the future. In August 2008, ASTM International published a standard for the collection of stack gas samples for the specification of biogenic CO_2 emissions from stationary emissions sources that could support such regulatory development efforts.

Emissions Offsets

88. COMMENT: The commenter appreciates the flexibility provided by the inclusion of offset allowances and encourages the Department to further expand the amount and the types of offsets allowable. The limitation on CO_2 offset allowances to 3.3 percent of a unit's total compliance obligation during a control period is a reasonable amount at the outset of the program. However, the proposed rules should provide for a phase-in of an additional half a percentage per year up to 10 percent for each year of the program after 2009 (for example, 3.8 percent in 2010, 4.3 percent in 2011, and so forth). This will allow for additional flexibility as the demand and need to produce energy rises, while also assisting in the reduction of greenhouse gas emissions. (3)

RESPONSE: The quantitative limits on the use of CO_2 offset allowances to meet a portion of a CO_2 budget source's compliance obligation in the rules are appropriate. The 3.3 percent limit established by N.J.A.C. 7:27C-6.9(a) was based on an analysis of modeling results that projected

the avoided CO_2 emissions that would need to be achieved in order to meet a regional CO_2 emissions cap that is comparable to that implemented through the CO_2 Budget Trading Program. The 3.3 percent limit represents approximately 50 percent of the cumulative regional avoided CO_2 emissions that were projected to be required to meet the CO_2 emissions limitation through 2020, as expressed as a percent of the initial regional CO_2 emissions budget (see RGGI Staff Working Group, "Analysis Supporting Offsets Limit Recommendation," May 1, 2006; available at http:www.rggi.org). The Department's intention in setting the limit at this level is that at least 50 percent of avoided CO_2 emissions be achieved from within the capped electric power generation sector. However, the program design also provides additional flexibility based on certain contingencies that indicate that avoided CO_2 emissions requirements may be larger than anticipated. The stage-one and stage-two price triggers would expand the ability to use CO_2 offset allowances to five percent and 10 percent of a CO_2 budget source's CO_2 emissions compliance obligation, providing the ability to use more CO_2 offset allowances for compliance if CO_2 allowance prices rise. Rising CO_2 allowance prices would indicate a greater amount of avoided CO_2 reductions required to meet the regional CO_2 emissions cap, as represented by a higher marginal cost of CO_2 emissions abatement.

The modeling projections of CO_2 emissions used to derive the 3.3 percent offset limit assumed a regional CO_2 emissions cap that was equivalent to CO_2 emissions from affected sources at the start of the program. CO_2 emissions from affected sources dropped significantly in 2006, indicating that CO_2 emissions may be significantly below the regional emissions cap at the start of the program. As a result, the recommendation for the provision of additional compliance flexibility through the expanded use of offsets is not warranted at the outset of the CO_2 Budget Trading Program.

89. COMMENT: The Department and the other participating RGGI states should work together to expand the types of offset allowances beyond the five project categories for eligible offsets provided for in the proposed rules. While N.J.A.C. 7:27C-10 details the definitions from the RGGI Model Rule and hence outlines the characteristics of offset projects, opportunities to mitigate carbon emissions continue to develop. New Jersey should encourage RGGI's evolution with carbon control technologies and form a working group that includes industry stakeholders to monitor and discuss the potential for expansion of offsets under RGGI. Therefore, there should be additional language in the rules that would link to this dialogue and expand the offset potentials when the working group identifies additional sound and scientific means for reducing greenhouse gas emissions. (3)

RESPONSE: The commenter is requesting a working group to evaluate issues related to policy development that could support future rulemaking to add eligible offset categories to the CO_2 Budget Trading Program; however, this is outside the scope of the proposed rules. The 2005 RGGI MOU outlined the desire of the participating RGGI states to expand the eligible offset categories over time. The Department is engaged in discussion with the other participating states

about developing additional offset categories. However, such expansion would involve the development of model regulatory language and, ultimately, rulemaking in the 10 participating RGGI states. The Department will engage with interested stakeholders, as appropriate, as these discussions with the participating states continue.

90. COMMENT: N.J.A.C. 7:27C-10.8(b)7 allows for fuel switching from a more carbon-intensive fuel to a less carbon-intensive fuel as one of the eligible types of energy conservation measures that may be implemented as an offset project for the award of CO_2 offset allowances under the building energy efficiency offset category at N.J.A.C. 7:27C-10.8. The Department should delete N.J.A.C. 7:27C-10.8(b)7 as it is inconsistent with the rest of the proposal and creates an uneven playing field that would benefit some competitors over others while achieving little or no reduction in greenhouse gas emissions. The rule appears to explicitly disadvantage the oil heat industry and advantages one fossil fuel source (natural gas) over another (heating oil). Adoption of this rule will lead to an increase in greenhouse gas emissions.

A report prepared by the consulting firm ICF International, "Final Report Resource Analysis of Energy Use and Greenhouse Gas Emissions from Residential Boilers for Space Heating and Hot Water," August 2008, which evaluates the full fuel cycle greenhouse gas emissions of heating oil and natural gas from wellhead to burner tip and also evaluates the fuel cycle impacts greenhouse gas emissions of delivery of energy services through different home heating system configurations, support this assertion, as does a summary of the ICF report by researchers from Exergy Partners Corp. and Brookhaven National Laboratory, "Assessing Full Fuel Cycle Efficiency and Carbon Emissions: Evaluating Residential Hydronic Heating and Domestic Hot Water Systems in New Jersey," which focuses on aspects of the Department's proposed offset provisions at N.J.A.C. 7:27C-10.8.

Retaining the fuel switching provisions for eligible offsets at N.J.A.C. 7:27C-10.8(b)7 will lead to higher greenhouse gas emissions, as the full fuel cycle greenhouse gas emissions of liquefied natural gas (LNG, the assumed replacement fuel for heating oil) are higher than the full fuel cycle greenhouse gas emissions of heating oil. The focus of the offset provisions at N.J.A.C. 7:27-10.8 on CO_2 emissions reductions rather than CO_2-equivelent reductions is contrary to the focus on all major greenhouse gas emissions throughout the rest of the proposal, as evidenced by the inclusion of a defined term, "CO_2-equivalent" at proposed N.J.A.C 7:27C-1.2. The retention of the proposed provision will continue past unfair treatment of the oil-heat industry, as most recently evidenced through section 13 of P.L. 2007, c. 340 (N.J.S.A. 26:2C-45 et seq.). (4)

RESPONSE: Retention of N.J.A.C. 7:27C-10.8(b)7 is appropriate. The ICF study estimates that the full fuel cycle greenhouse gas emissions of natural gas delivered to the Mid-Atlantic in 2006 (from wellhead to burner tip) is 20.4 percent lower than heating oil per equivalent MMBtu unit of energy. Assuming LNG as the replacement fuel, the full fuel cycle greenhouse gas emissions of LNG delivered to the Mid-Atlantic in 2020 (from wellhead to burner tip) is 8.3 percent to 16.8

percent lower than heating oil per equivalent MMBtu unit of energy, depending on whether the LNG was delivered to import terminals on the East Coast (higher emissions reduction estimate) or the Gulf Coast (lower emissions reduction estimate). (The ICF study provided no estimate for full fuel cycle greenhouse gas emissions for LNG in 2006.) By comparison, at the point of combustion and ignoring full fuel cycle emissions, natural gas CO_2 emissions are 27.5 percent lower than heating oil per equivalent MMBtu of energy. As a result, the documentation provided by the commenter does not support the claim that retention of the proposed provisions will lead to greenhouse gas emissions increases when considering the full fuel cycle impacts of switching from heating oil to natural gas.

When also considering the relative energy efficiency of delivering energy services through an oil-fired boiler heating system and a natural gas-fired heating system in an assumed reference home, the ICF and Exergy/Brookhaven studies estimate that under certain limited scenarios in 2020, the natural gas-fired system would produce higher full fuel cycle greenhouse gas emissions than the oil-fired system. However, the evaluation of the relative energy efficiency of different configured systems, as referenced in the ICF and Exergy/Brookhaven studies, is irrelevant to the assertions that implementation of N.J.A.C. 7:27C-10.8(b)7 would lead to offset projects that result in higher greenhouse gas emissions. This is because the proposed method for determining the CO_2 offset allowances that would be awarded for energy efficiency offset projects is technology neutral. The awarded CO_2 offset allowances would be determined based on actual energy savings achieved by the offset project relative to baseline energy use, which would preclude the award of CO_2 offset allowances for a project that resulted in a direct increase in CO_2 emissions and would also fully account for the relative energy efficiency of delivered energy services provided by different heating system configurations and equipment.

In addition, the full fuel cycle results presented by the commenter are subject to significant uncertainty, as they rely on regional, national, and international estimates of emissions across the fuel supply chain. In particular, the full fuel cycle greenhouse gas emissions estimates for LNG are speculative, as they are sensitive to both the location of LNG importation and the country of origin for the delivered LNG.

Nor is it valid to say that evaluation of emissions reductions achieved from fuel switching to natural gas should assume that LNG is the marginal form of natural gas delivered. The full fuel cycle greenhouse gas emissions estimates provided by ICF for 2020 assume an increasing share of LNG. As a result, the full fuel cycle estimates provided for natural gas already assume LNG as the marginal fuel. It is impossible to determine the origin of the natural gas that is delivered through the transmission and distribution network. Therefore, assuming that all offset projects that incorporate fuel switching measures should calculate emissions impacts based on the fuel cycle emissions of LNG rather than natural gas is not valid. In addition, one can only speculate, not assume, that incremental gas demand at the margin will be supplied through LNG. The natural gas market is highly dynamic, as evidenced by recent reports that natural gas increasingly

may be supplied from North America from shale beds (Clifford Krauss, "Drilling Boom Revives Hopes for Natural Gas," New York Times, August 24, 2008).

91. COMMENT: Proposed N.J.A.C. 7:27C-10.8(c) uses a faulty metric, Annual Fuel Utilization Efficiency (AFUE), to measure energy efficiency for residential boilers. This efficiency metric does not accurately reflect system performance for home heating systems using boilers, as it does not consider advanced control schemes such as ambient air reset, combined appliance operation (boilers with potable water heating capabilities), and well-insulated combustion chambers. The proposed efficiency criteria for residential boilers at proposed N.J.A.C. 7:27C-10.8(e)2 appears to require condensing boilers. The commenter references the ICF study, which demonstrates that a high efficiency non-condensing oil-fired boiler is more energy efficient than a condensing oil-fired boiler using a baseboard system for heat distribution. (4)

RESPONSE: The existing metric as proposed is appropriate. The metric is used as a benchmark to establish a level of residential boiler energy efficiency that is unlikely to be achieved under standard market practice during the period 2006 through 2008. The Department used AFUE as an energy efficiency metric as it is the established Federal standard. The Department incorporated the specific AFUE requirement for residential oil-fired furnaces of greater than or equal to 92 percent efficiency and oil-fired boilers of greater than or equal to 90 percent efficiency based on an analysis of current best practice. The ICF study provided by the commenter estimates that a condensing oil-fired boiler under certain configurations, such as with a radiant floor distribution system, is significantly more energy-efficient than a high-efficiency, non-condensing oil-fired boiler.

The commenter did not propose an alternative standard to the one proposed by the Department. The study by ICF indicated that an alternate energy efficiency metric to the AFUE approach is under development by ASHRAE. This metric may better address the operating profile of commercial boilers, and could be applied to residential boilers. However, this efficiency metric has yet to be established. In the absence of an alternate metric, the AFUE metric, as the currently recognized metric, is appropriate. For energy efficiency offset projects initiated after 2008, the proposed rules would establish a market penetration performance standard to determine whether combustion equipment is significantly more energy efficient than equipment installed under standard market practice. This performance standard approach would address the concerns raised by the commenter.

The metric proposed by the Department is not used to determine the energy savings achieved by an offset project and the number of CO_2 offset allowances awarded. CO_2 offset allowances awarded would be determined based on actual achieved energy savings, which would incorporate the energy performance of the heating system implemented as part of the offset project. As a result, the actual achieved energy performance of an oil-fired boiler and

distribution system would be taken into account when determining the CO_2 offset allowances to be awarded.

92. COMMENT: Proposed N.J.A.C. 7:27C-10.8(i)2 states that "for offset projects that replaced existing combustion equipment, the assumed minimum energy performance required by applicable building codes or equipment standards shall be that which applies to new equipment that uses the same fuel type as the equipment being replaced." This energy performance would be assumed when establishing the baseline energy use for such an offset project. In accordance with the referenced Exergy/Brookhaven study, this language should be revised to indicate that the minimum energy performance used in determining the baseline energy usage should be the "highest efficiency EPA published Energy Star equipment using the fuel being replace (sic)." (4)

RESPONSE: The language of N.J.A.C. 7:27C-10.8(i)2 is appropriate. The intent of the rule is to ensure that the baseline energy use not be lower than the minimum energy use that would be achieved when replacing a piece of combustion equipment with new equipment that meets minimum energy performance requirements established through applicable building codes or equipment standards. The language is intended to establish the minimum energy performance that would be achieved through replacement with new equipment under a "business as usual scenario," not an energy performance level that is equivalent to current best practice, as implied by the commenter.

The commenter assumes that the baseline scenario is likely to be one where a party replacing combustion equipment will choose the most energy-efficient equipment available absent additional incentives. This is often not the case. The intent of the offset provisions, in fact, is to provide incentives that result in such decisions and therefore achieve incremental CO_2 emissions reductions through the installation of the best-performing equipment.

The intent of N.J.A.C. 7:27C-10.8(i)2 acknowledges that significant energy savings will likely be achieved when replacing old equipment with equipment that merely meets current minimum energy performance requirements. The rule would ensure that offset projects are only awarded CO_2 offset allowances for incremental actions that go beyond current standard market practice, such as the incremental energy savings that would be achieved by replacing old equipment with new high-efficiency equipment, rather than equipment that only meets minimum energy performance standards.

93. COMMENT: The proposal at N.J.A.C. 7:27C-10.8 provides no means to calculate the greenhouse gas emissions reduction benefits of biofuels and biofuel blends. Using the chemical combustion methodology in the proposal, a conversion from heating oil to 100 percent biofuel would result in the award of no CO_2 offset allowances. (4)

RESPONSE: The Department did not intend this result when it proposed N.J.A.C. 7:27C-10.8(b)7, which references fuel switching to a less carbon-intensive fuel, "including the use of liquid or gaseous eligible biomass…" Proposed N.J.A.C. 7:27C-10.8(i)'s method of determining emissions reductions for an offset project does not address the use of eligible biomass as part of an offset project and the CO_2 emissions reduction benefits of eligible biomass, both of which are referenced at N.J.A.C. 7:27C-10.8(b)7, but clearly references fossil fuels. In response to comment, the rule as adopted clarifies the emissions and oxidation factors applicable to liquid eligible biomass and gaseous eligible biomass in Table 4 at N.J.A.C. 7:27C-10.8(i) to provide the means to calculate the greenhouse gas emissions reduction benefits of eligible biofuels. These emissions factors for liquid eligible biomass and gaseous eligible biomass assume these fuels are carbon neutral at the point of combustion, as the carbon released when the fuel is combusted was originally sequestered from the atmosphere during the growth cycle of the biomass feedstock used to produce the fuel. This carbon neutrality concept was implied at N.J.A.C. 7:27C-10.8(b) which provides for CO_2 offset allowances to be awarded for eligible activities that replace the use of a conventional fossil fuel with a "less carbon intensive fuel" including the use of eligible biomass fuel. The application of this carbon neutrality concept at N.J.A.C. 7:27C-10.8(i) is consistent with the provisions at N.J.A.C. 7:27C-6.9(b), which allows CO_2 Budget Sources to deduct CO_2 emissions from the firing of eligible biomass from their compliance obligation to submit CO_2 allowances in a number equivalent to reported CO_2 emissions. Essentially, the provisions do not consider CO_2 emissions from the firing of eligible biomass to be CO_2 emissions from a CO_2 budget source for the purposes of compliance under the CO_2 Budget Trading Program. This compliance deduction is provided because CO_2 emissions from the firing of eligible biomass are carbon neutral at the point of combustion. Because it was implied that eligible biomass was carbon neutral, the Department did not include in the proposal emissions factors for eligible biomass because the value is zero. The Department has made the changes on adoption to repair the confusion created in the proposal by the failure to include emissions factors for eligible biomass.

The oxidation factors for liquid eligible biomass and gaseous eligible biomass at Table 4 at N.J.A.C. 7:27C-10.8(i) are the same as those used for fossil fuels with the same basic properties (liquid and gaseous fossil fuels).

The Department notes that the carbon neutrality of eligible biomass as referenced above is at the point of combustion. As part of the Department's determination of whether a biomass fuel is sustainably harvested, pursuant to N.J.A.C. 7:27C-1.2, the Department will evaluate the lifecycle greenhouse gas emissions of the cultivation, harvesting, and production of the biomass fuel, and compare such lifecycle greenhouse gas emissions with those from the production of a similar fossil fuel.

94. COMMENT: Proposed N.J.A.C. 7:27C-10.7, "CO_2 emissions offset project standards – sequestration of carbon due to afforestation," is extremely limited to sequestration projects that

involve conversion of land from a non-forested condition to a forested condition. While this may be the most productive sequestration approach per unit of land area, New Jersey has vast forest tracts that are losing sequestered carbon due to deer herbivory and invasive earthworms. Projects may be possible, through deer reduction or biological control of earthworms, in which vast amounts of carbon may be recaptured in existing forest stands through ecological restoration from such existing degraded conditions. Rutgers University is currently engaged in research to determine how much carbon is being lost from such degraded forests. The Department should change proposed N.J.A.C 7:27C-10.7 to include the phrase "or other forest based ecological restoration projects which sequester lost carbon" so as not to deter or limit new carbon sequestration procedures from being developed and implemented as part of offset projects. (5, 12)

RESPONSE: The commenter proposes that forestry management be functionally added as an eligible offset category under the New Jersey CO_2 Budget Trading Program through the insertion of a new phrase at proposed N.J.A.C. 7:27C-10.7 that acknowledges "other forest-based ecological restoration projects which sequester lost carbon" as eligible offset project activities. However, the commenter provides no further guidance for the specific requirements that should apply to such new eligible activities. While the Department acknowledges the potential significant environmental and carbon sequestration benefits that might be realized through such activities, creating a new sub-category of eligible sequestration offsets would require significant new regulatory development. At a minimum, this would require the promulgation of new provisions to address the following: definition of specific eligible ecological restoration activities, determination of sequestration baselines, and provisions to address project additionality (the concept of whether an activity was likely to have occurred anyway in the absence of the offset program). These concepts are discussed in detail in the Summary of the proposal, 40 N.J.R. 3810 through 3815. Such regulatory development is best achieved through a transparent stakeholder process and administrative rulemaking. The Department is currently engaged in discussions with the other participating RGGI states about future expansion of the eligible categories of offsets under RGGI, including forestry management, and will consider the commenter's input as these discussions continue.

95. COMMENT: The commenter does not support price triggers that could artificially limit the cost of CO_2 and reduce the economic incentives to move away from fossil fuels and invest in cleaner, more efficient energy technologies. (7)

RESPONSE: The use of a limited amount of CO_2 offset allowances for meeting compliance obligations, including the ability to expand the use of CO_2 offset allowances, if the long-term market price of CO_2 allowances rises above certain thresholds, provides appropriate compliance flexibility to regulated facilities, especially given the lack of fully commercialized emissions control equipment for power plant CO_2 emissions. Given the regional nature of the New Jersey CO_2 Budget Trading Program and complementary regulations in other participating states,

compliance flexibility provided through offsets is expected to provide cost containment benefits that reduce the potential for emissions leakage. Emissions leakage could undermine the CO_2 emissions reductions achieved by the program. As a result, the success of the program depends on design elements, such as offsets, that are intended to moderate CO_2 allowance prices. The ability to expand the use of CO_2 offset allowances if allowance prices rise is a key component of such a price moderation strategy.

96. COMMENT: The commenter does not support offsets. The intent of RGGI is to reduce power plant CO_2 emissions, and plants should not be permitted to emit more global warming pollution by investing elsewhere in offsets. Offsets are difficult to control and difficult to verify. In addition, cleaning up power plants by reducing CO_2 from smokestacks could have the added benefit of reducing co-pollutants such as NO_x, SO_x, and particulate matter. Unlike CO_2, these co-pollutants exacerbate local public health problems in communities near power plants. If offsets are permitted, the Department should ensure that such offsets will achieve the same pollution reductions as would be achieved by curbing smokestack emissions of CO_2 at the same power plant. (7)

RESPONSE: The rules at N.J.A.C. 7:27C-10 contain numerous requirements that will provide reasonable assurance that greenhouse gas emissions reductions achieved through offsets represent equivalent CO_2 emissions reductions as those achieved at CO_2 budget sources and that offset projects are properly verified. The use of a limited amount of emissions offsets for meeting compliance obligations provides appropriate compliance flexibility to regulated facilities, especially given the lack of fully commercialized emissions control equipment for power plant CO_2 emissions. The Department developed these offset provisions through a lengthy regional stakeholder process with full opportunity to comment on model regulatory provisions. With the exception of SF_6 offsets, projects implemented pursuant to all of the eligible offset categories would provide significant environmental co-benefits and would provide economic incentives to commercialize emissions reduction technologies. Furthermore, given the regional nature of the New Jersey CO_2 Budget Trading Program and complementary regulations in other participating states, compliance flexibility provided through offsets is expected to provide cost containment benefits that reduce the potential for emissions leakage. Emissions leakage could undermine the CO_2 emissions reductions achieved by the program. As a result, design elements of the CO_2 Budget Trading Program, such as offsets, that are intended to moderate CO_2 allowance prices are necessary for the success of the program.

97. COMMENT: The offset provisions in the RGGI Model Rule assumed the auction of 25 percent of regional CO_2 allowances, not an auction of 99 percent of CO_2 allowances. As a result, the offset component of the program needs to be broadened, including an expansion of eligible offset categories and the percentage of the compliance obligation that may be met through offsets. (8)

RESPONSE: The CO_2 allowance allocation approach utilized by the Department is unrelated to the appropriate amount of compliance flexibility provided through the use of emissions offsets. The quantitative limits on the use of CO_2 offset allowances to meet a portion of a CO_2 budget source's compliance obligation in the rules are appropriate. The 3.3 percent limit was based on an analysis of modeling results that projected the avoided CO_2 emissions that would need to be achieved in order to meet a regional CO_2 emissions cap that is comparable to that implemented through the CO_2 Budget Trading Program. The 3.3 percent limit represents approximately 50 percent of the cumulative regional avoided CO_2 emissions that were projected to be required to meet the CO_2 emissions limitation through 2020, as expressed as a percent of the initial regional CO_2 emissions budget (see RGGI Staff Working Group, "Analysis Supporting Offsets Limit Recommendation," May 1, 2006); available at http:www.rggi.org). The intention of setting the limit at this level was that at least 50 percent of avoided CO_2 emissions should be achieved from within the capped electric power generation sector. However, the program design also provides additional flexibility based on certain contingencies that indicate that avoided CO_2 emissions requirements may be larger than anticipated. The stage-one and stage-two price triggers would expand the ability to use CO_2 offset allowances to five and 10 percent of a CO_2 budget source's CO_2 emissions compliance obligation, respectively, providing the ability to use more CO_2 offset allowances for compliance if CO_2 allowance prices rise. Rising CO_2 allowance prices would indicate a greater amount of avoided CO_2 reductions required to meet the regional CO_2 emissions cap, as represented by a higher marginal cost of CO_2 emissions abatement.

The modeling projections of CO_2 emissions used to derive the 3.3 percent offset limit assumed a regional CO_2 emissions cap that was equivalent to CO_2 emissions from affected sources at the start of the program. CO_2 emissions from affected sources dropped significantly in 2006, indicating that CO_2 emissions may be significantly below the regional emissions cap at the start of the program. As a result, the recommendation for the provision of additional compliance flexibility through the expanded use of offsets is not warranted at the outset of the CO_2 Budget Trading Program.

With regard to the expansion of eligible offset categories, the 2005 RGGI MOU outlined the desire of the participating RGGI states to expand the eligible offset categories over time. The Department is engaged in discussion with the other participating states about developing additional offset categories. However, such expansion would involve the development of model regulatory language and ultimately rulemaking in the 10 participating RGGI states. The Department will engage with interested stakeholders, as appropriate, as these discussions with the participating states continue.

98. COMMENT: N.J.A.C. 7:27C-10.3(f) provides that, with certain exceptions, "The Department will not award CO_2 offset allowances to an offset project or CO_2 emissions credit retirement that is required pursuant to any local, state or Federal law, regulation, or administrative or judicial order." Offset emissions reductions resulting from offset projects that

are subject to State-issued administrative consent orders and other voluntary agreements or shutdowns should be eligible for CO_2 offset allowances. Emissions reductions from actions agreed to in administrative consent orders are voluntary, and a facility should be able to receive CO_2 offset allowances generated as a result of an administrative consent order or other voluntary action. The word "administrative" should be removed from N.J.A.C. 7:27C-10.3(f) to address this issue. (8)

RESPONSE: While entering into an administrative consent order may be voluntary, the actions taken under such a legally binding enforcement order are being driven by the requirements of the order, not the existence of the offset component of the CO_2 Budget Trading Program. As a result, such actions would fail a basic additionality test, as no reasonable argument could be made that the offset component of the program is responsible for the emissions reductions that would be achieved by such projects. Such projects would therefore not be considered additional and should not be eligible for the award of CO_2 offset allowances.

99. COMMENT: RGGI should not allow emissions offsets, partly because the difficulty in verifying that an offset project emits fewer emissions than a more "traditional" pollution source would and that these emissions reductions satisfy the additionality requirement. If offsets are allowed, in addition to the requirements contained in the CO_2 Budget Trading Program rules, they should be restricted to a location that is in close proximity to the facility seeking the offset to ensure the same communities that would have benefited from emissions reductions from the facility will benefit from the offset. They should also achieve the same emissions reductions in greenhouse gas co-pollutants that emissions reductions from the facility would have achieved. (16)

RESPONSE: As discussed in the proposal, 40 N.J.R. 3810 through 3815, the CO_2 Budget Trading Program rules provide reasonable assurance that emissions offset projects are achieving emissions reductions that would not otherwise have occurred in the absence of the offset provisions of the CO_2 Budget Trading Program. A narrow location-specific requirement for emissions reductions from offsets at the local level is counter to the basic design of a cap-and-trade program, and would create significant inefficiencies that would likely reduce the available supply of offset projects and increase the economic impact of achieving comparable CO_2 emissions reductions.

100. COMMENT: Energy-from-waste should be included as an offset project. An expansion of energy-from-waste in New Jersey will help mitigate potential emissions leakage resulting from New Jersey's participation in RGGI. The ability of energy-from-waste to avoid greenhouse gas emissions has been fully evaluated. Energy-from-waste avoids significant amounts of landfill methane emissions by creating renewable energy from waste that would otherwise have wound up in a landfill and also reduces the need to use fossil fuels for electric generation. Energy-from-waste is not considered "business as usual" because a small fraction of municipal

solid waste (10 percent of the United States waste stream) is disposed of at energy-from-waste facilities. New Jersey has recognized the important role of waste-to-energy in the draft Energy Master Plan. (17)

RESPONSE: While there may be the potential to avoid significant greenhouse gas emissions by using municipal solid waste as a fuel for electricity generation, creating a new category of eligible offsets for indirect greenhouse gas emissions reduction activities, such as waste-to-energy, that avoid landfill emissions of methane would entail considerable regulatory development. At a minimum, new provisions would be required to address the following: definition of specific eligible activities, determination of emissions baselines for average landfill methane emissions in the absence of an offset project, and provisions to address project additionality (the concept of whether an activity was likely to have occurred under standard market practice in the absence of the offset component of the CO_2 Budget Trading Program). The application of these concepts for eligible offset categories is discussed in detail in the Summary of the proposal, 40 N.J.R. 3810 through 3815.

Such regulatory development is best achieved through a transparent stakeholder process and administrative rulemaking. The Department is currently engaged in discussions with the other participating RGGI states about future expansion of the eligible categories of offsets under RGGI. The Department will consider the commenter's input as these discussions continue. Regardless of the outcome of those discussions, the Department recognizes that the development of clean local electric generation has the potential to reduce Statewide greenhouse gas emissions and to mitigate potential emissions leakage as well.

The Department disagrees with the commenter's assertion that avoided greenhouse gas emissions from existing and new waste-to-energy facilities are not "business as usual" and therefore, by implication, represent "additional" activities that would not have happened in the absence of the offset provisions of the CO_2 Budget Trading Program. Existing facilities clearly do not meet this conceptual requirement. For new waste-to-energy facilities, additionality requirements would need to be developed to determine whether the construction and operation of such facilities was likely to occur under standard market practice in the absence of the offset provisions of the CO_2 Budget Trading Program.

101. COMMENT: The commenter recognizes the Department's efforts to use the most up-to-date global warming potentials (GWPs) for greenhouse gases, as evidenced by the use of the GWPs contained in the IPCC's Third Assessment Report in N.J.A.C. 7:27C-10.5(d), (e) and 10.9(e). The Third Assessment Report was the latest version published by the IPCC at the time of the model rule development. However, since the release of the revised model rule, the IPCC released the fourth assessment report in November 2007 with revised GWPs. The commenter suggests that the Department incorporate the GWPs of the fourth assessment report, as appropriate, in the equations in N.J.A.C. 7:27C-10.5(d), (e) and 10.9(e). (17)

RESPONSE: The Department acknowledges that the IPCC Fourth Assessment Report (4AR) revised the CO_2-equivalent global warming potential (GWP) for methane from 23 to 25. However, the Department believes that any change to the GWPs used in the CO_2 Budget Trading Program should be made in coordination with other participating RGGI states in order to maintain consistent requirements for the award of CO_2 offset allowances across the region. The science behind the establishment of GWPs from greenhouse gases continues to evolve and that the GWP of 23 for methane provides a conservative estimate of the emissions reductions achieved by certain offset projects that avoid methane emissions. The Department will consult with the other participating RGGI states on this issue and will recommend that the GWP be revised to the most current IPCC GWPs should the states agree to coordinate other amendments to their CO_2 Budget Trading Program rules in the future.

102. COMMENT: The commenter strongly supports the creation of a credible, market-driven offsets program to offer regulated entities the option to purchase allowance credits from sources not covered by the program's emission cap. All offsets must meet high standards, the so-called "five part test," and be "real, additional, verifiable, enforceable, and permanent," as specified at N.J.A.C. 7:27C-10.1. Offsets offer real emission reductions, increase the flexibility and lower the cost of emission reduction programs, which allows for tighter emissions limits, and protect the market against price volatility, which lessen the need for price control instruments such as a price cap safety valve. (18)

RESPONSE: The Department acknowledges the commenter's support for the offset provisions in the rules.

103. COMMENT: The commenter supports the inclusion of additional offset types in the RGGI program in keeping with the provision in the RGGI Memorandum of Understanding (MOU), which states the RGGI participating states will consider including other types of forestry projects and grassland re-vegetation as eligible project activities in the future, given their potential to yield real emission reductions and substantial benefits for people and the diversity of plants and animals. (18)

RESPONSE: The Department continues to work with the other RGGI participating states to develop additional eligible offset categories, as appropriate. Pending the outcome of this work, these efforts may support future rulemaking to include additional eligible offset categories in the New Jersey CO_2 Budget Trading Program in coordination with other participating states.

Use of CO_2 Allowance Auction and Sale Revenue

104. COMMENT: The Department's analysis in the Net Impacts on Electricity Ratepayers section of the Economic Impact portion of the proposal contains policy statements regarding the

Department's preference for the use of funds raised under the proposed cap-and-trade program. However "prospective and illustrative" they are intended to be, policy statements of this nature are inappropriate. The Department should either amend them to reflect the broader scope of possible uses outlined in the enabling legislation, or remove them, to defer formal Department policy on the use of funds to the rulemaking process. (9)

RESPONSE: The Department agrees that, pursuant to N.J.S.A. 26:2C-52, the guidelines for the use of revenue from the auction and sale of CO_2 allowances should be established through rulemaking. The discussion in question at 40 N.J.R. 3819 through 3821 is appropriate, given that the allocation approach taken by the CO_2 Budget Program, as discussed in the proposal, will significantly influence the program's effectiveness and the net impacts of the program on electricity ratepayers. As a result, the Department could not conduct an appropriate evaluation of the program's anticipated economic impacts without signaling the general approach for the use of CO_2 allowance revenue that the Department believes would reduce ratepayer impacts and support the success of the program in most efficiently reducing CO_2 emissions.

The Department clearly stated at 40 N.J.R. 3819 that the analysis was "prospective and illustrative" pending rulemaking pursuant to N.J.S.A. 26:2C-52. The Department did not make statements that would limit the use of revenue from the auction and sale of CO_2 allowances to certain technologies or measures, and does not believe that the phrase, "the Department proposes to utilize this allowance value...to support incentives for end-use energy efficiency and clean technologies" should be construed as stating that *all* allowance value would be used for such purposes to the exclusion of other purposes, especially considering the Department's clear acknowledgement of the purposes for such use established at N.J.S.A. 26:2C-51b(1) through (4). In particular, the Department made it clear that it was stating the *primary* focus for the use of allowance revenue that it believes would mitigate the impacts of the program on retail electricity rates, which is one of the criteria established by the Legislature at N.J.S.A. 26:2C-52b(2) and (4) for the evaluation of projects and programs funded by CO_2 allowance revenue. The Department stated that the purpose of the discussion was to "demonstrate the economic benefits that will accrue through an allowance allocation approach that utilizes allowance value to reduce electricity demand." The Department merely outlined "general priorities" for the use of revenue, consistent with the purposes outlined at N.J.S.A. 26:2C-51b(1) through (4), that it believes are "anticipated to maximize benefits to the RGGI program and electricity ratepayers." The Department readily acknowledges that N.J.S.A. 26:2C-51 identifies additional uses of the revenue, including support for programs to enhance the stewardship and restoration of the State's forests and tidal marshes and support for programs designed to promote local government efforts to reduce greenhouse gas emissions.

105. COMMENT: The proposal indicates that the revenue from the carbon trading program will be used "to support incentives for end use energy efficiency and clean energy technologies" and that the program is intended to "encourage municipalities to reduce greenhouse gas

emissions through measures such as the improvement of the end use efficiency of municipal facilities." (40 N.J.R. 3819 through 3820) The commenters support increasing end-use efficiency both at the municipal and individual ratepayer level, as it will not only lead to reduced electricity consumption and carbon emissions, but will also help mitigate the effect of higher prices that could result from the carbon trading plan. However, the enabling legislation permits the Department to take an even more "holistic" approach to reducing energy demand when using the proceeds from the carbon trading scheme. Specifically, the legislation permits the Department to give grants to municipalities for use in "land use planning that will result in a measurable reduction in greenhouse gases or a measurable reduction in energy demand." By limiting the use of the proceeds from the carbon trading program to increasing end user energy efficiency, the Department will miss a critical opportunity to reduce energy demand while providing the average resident relief from higher energy prices. The Department can help lower this demand by using a portion of the revenue from the program to fund local planning efforts aimed at reducing vehicles miles traveled through land use decisions at the municipal level. (2, 9)

RESPONSE: The Department agrees that the Department should not miss the opportunity to reduce vehicle miles traveled by providing incentives and funding through CO_2 allowance revenue for local planning efforts. The Department will evaluate such approaches as part of it rulemaking required pursuant to N.J.S.A. 26:2C-52.

In addition, end-use energy efficiency programs can provide land use co-benefits. The Department stated in the proposal, 40 N.J.R. 3821, that due to a number of benefits that would be accrued, CO_2 allowance revenue should be prioritized to support greater electricity end-use energy efficiency in urban areas, with a focus on combined heat and power applications. Such an approach is consistent with the goal to utilize allowance revenue to reduce vehicle miles traveled. In particular, the Department stated in the proposal that combined heat and power investments could provide economic growth magnets in urban areas by providing district energy services to multiple co-located or nearby energy customers, such as industry, commercial and institutional facilities, and affordable housing complexes. (40 N.J.R. 3821) The Department's approach would encourage center-based development, which would help reduce vehicle miles traveled. In general, the Department acknowledges that N.J.S.A. 26:2C-51 identifies additional uses of the revenue, including support for programs to enhance the stewardship and restoration of the State's forests and tidal marshes and support for programs designed to promote local government efforts to reduce greenhouse gas emissions. Programs associated with the latter may include land use planning that results in a measurable reduction in greenhouse gas emissions.

106. COMMENT: The Department should amend the CO_2 Budget Trading Program rules to reference the required collaboration with the Board of Public Utilities pursuant to N.J.S.A. 26:2C-51 in making decisions regarding the use of the Global Warming Solutions Fund to

stimulate investments in clean energy programs and technologies and support low and moderate income consumers. (3)

107. COMMENT: Use of revenue should focus exclusively on reducing CO_2 emissions from the electric sector. Revenue should only fund projects that will achieve the greatest reduction in greenhouse gas emissions and realize the biggest savings on energy bills for all ratepayers. Revenue should not be used to fund any project that will increase fossil fuel consumption, promote new fossil fuel-fired electric generation, or increase reliance on traditional power plants. Because energy-efficient technologies are already cost-competitive and quickly realize a return on investment, revenue should be used to promote and incentivize energy efficiency through modest incentives. A revolving loan program for commercial and industrial customers to invest in energy efficiency would encourage investment in efficient technologies and would help cover higher up-front costs, but would be paid back and replenished as businesses realize substantial monthly energy savings. This would allow for more money to be made available to more businesses and would achieve the greatest State-wide reduction in energy demand while reducing rates for all of the state's ratepayers. Funding should be prioritized in urban areas where electricity demand and congestion are greatest, and where the greatest number of residential customers struggle to pay increasing energy bills. No funding should be used to support unproven or potentially dangerous technologies, such as clean coal and carbon sequestration. (7)

108. COMMENT: Auction revenues represent a new income source for New Jersey. Effective, transparent, and accountable revenue programs should be established for use of the funds accrued in the Global Warming Solutions Fund that are accountable to achieving and measuring goals outlined for the use of these funds. (8)

109. COMMENT: Part of the CO_2 allowance revenues should be allocated to overall administration of the RGGI program. The allocation should be specific and also indicate an overall cap for the administrative support of the program. (8)

110. COMMENT: New Jersey should use the value of all allowances to invest in measures that will reduce the costs of the program to consumers. As electricity consumers are paying for the program, it is appropriate that energy efficiency investments should receive a dominant portion of the auction proceeds. Any revenue generated from allowances should be used to meet the goals of the State's Energy Master Plan, in particular the goal of reducing energy use at least 20 percent by the year 2020. An open and transparent stakeholder process should be established to determine how revenue from the sale of allowances should be used and provide continuing oversight of the spending. (11)

111. COMMENT: The Global Warming Solutions Fund (N.J.S.A. 26:2C-50 et seq.) indicates, at N.J.S.A. 26:2C-52, that the Department, the Economic Development Authority, and the Board of Public Utilities will establish guidelines and a priority ranking system to assist in

annually allocating auction revenues and funds generated through the direct sale of CO_2 allowances to dispatch agreement facilities to eligible projects and programs. It would be helpful if the Department could elaborate on when and how this will be done and how much input stakeholders will have in that process. (14)

112. COMMENT: A significant portion of the generated revenue from the auction of CO_2 allowances should be invested in urban areas in order to provide financial support to low-income residents adversely affected by increases in the price of energy caused by climate change policies. Revenue should also be used to support energy conservation and renewable energy projects in a manner that will create employment and other economic opportunities for local residents, reduce emissions of fine particulate matter and its precursors, and reduce emissions of carbon dioxide. (16)

113. COMMENT: The majority of allowance auction proceeds should be used to provide funding for energy efficiency and the promotion of renewable energy. Allocating the majority of proceeds from the sale of allowances to energy efficiency provides the greatest net benefits to electricity customers and provides many more benefits than electricity bill rebates alone would provide. Modeling conducted during the RGGI process demonstrated that a doubling of energy efficiency investment in the region would negate most of the wholesale price increase due to RGGI and that retail electricity bills would actually fall on average, resulting in 12 times the benefits of using allowance revenue to credit customer bills. A study by the American Council for an Energy-Efficient Economy (ACEEE), "Energy Efficiency's Role in a Carbon Cap-and-Trade System: Modeling Results from the Regional Greenhouse gas Initiative," supports this. (18)

114. COMMENT: In order to ensure the most effective use of the funds allocated for forest and tidal marsh stewardship and restoration, detailed rules will need to be promulgated to fully articulate the legislative intent of the statute. (18)

RESPONSE TO COMMENTS 106 THROUGH 114: The Department will address issues related to the use of funds deposited in the Global Warming Solutions Fund through rulemaking, as appropriate, and as required pursuant to N.J.S.A. 26:2C-52. The Department also notes in response to Comment 109 that N.J.S.A. 26:2C-51 establishes limits on the use of funds in The Global Warming Solutions Fund for administrative costs incurred by the Department, the Economic Development Authority, and the Board of Public Utilities.

Market Monitoring and Potential Market Manipulation

115. COMMENT: Market manipulation is a concern, since non-power generating entities, unlike regulated entities, do not have a compliance requirement to hold CO_2 allowances. This creates a captive market susceptible to price gouging. (8)

RESPONSE: There is no limitation in the existing cap-and-trade programs for SO_2 and NO_X on non-compliance entities holding emissions allowances. SO_2 allowance auctions under the Title IV Acid Rain program are open to both compliance and non-compliance entities. To reduce the potential for market manipulation, the CO_2 Budget Trading Program auction provisions provide the Department with the discretion to limit participation in CO_2 allowance auctions to compliance entities, if market conditions warrant. Regional Greenhouse Gas Initiative, Inc. has also retained an independent market monitor to evaluate the performance of CO_2 allowance auctions and the secondary CO_2 allowance market. The Department will evaluate auction eligibility going forward as the CO_2 allowance market develops, in consultation with the other participating RGGI states and the independent market monitor retained by Regional Greenhouse Gas Initiative, Inc.

116. COMMENT: It is appropriate that Regional Greenhouse Gas Initiative, Inc. is contracting with a firm to provide services to the participating states in the general areas of auction monitoring, ongoing monitoring of allowance holdings and allowance transaction activity, general consultative services, and preparation of an annual report. The market monitoring request for proposal notes that the primary objective of the market monitoring function will be to ensure fair competition, efficient pricing, and protection against collusive or manipulative behavior in the RGGI CO_2 allowance auctions and the RGGI allowance market. If there is no monitoring firm in place for the first auctions, the first auctions should be postponed until a suitable monitor can be hired.

Who will take enforcement measures if the monitoring firm reports abuse either in the auction or in the RGGI market? Oversight and enforcement powers are imperative to the success of the auctions and the functioning of the secondary market. Regional Greenhouse Gas Initiative, Inc. should release information regarding the governmental agency or agencies that will have jurisdiction to enforce regional auction rules or procedures and take action where appropriate. The market monitor will need to coordinate with the enforcement agency and develop reports and/or statistics that are relevant to that agency. Such agency or agencies preferably would be a governmental entity that has jurisdiction over interstate markets, such as the Federal Energy Regulatory Commission and/or the Commodities Futures Trading Commission. (14)

RESPONSE: The comments are outside the scope of the proposed rules. Regional Greenhouse Gas Initiative, Inc., has engaged an independent market monitor on behalf of the participating RGGI states. The Department will work actively with the market monitor to ensure effective market monitoring for the CO_2 allowance auctions and the regional CO_2 allowance market.

Potential Emissions Leakage

117. COMMENT: As noted in the proposed rules, 40 N.J.R. 3822 through 3825, there is an "enormous" (as stated by the commenter) potential for emissions leakage, and it is essential that the Department address the leakage issue immediately. A complementary program, the Carbon Abatement Program (CAP), has been proposed to minimize leakage. This program would require load-serving entities (LSEs) to purchase a set percentage of "Carbon Abated Certificates" from electric generators that serve the RGGI states (either through mandatory requirements or opt-in provisions). This will ensure that a set percentage of electric generation must come from sources that operate in participating RGGI states and will provide incentive to producers for the operation of their cleanest units.

Because this is a new initiative that deserves thoughtful consideration by the Department, the commenter urges the Department to develop a committee made up of the other state agencies to address leakage. Because this issue is of urgent importance, the State should set up stakeholder engagement and plan to take immediate, aggressive action. (3)

RESPONSE: Under N.J.S.A. 48:3-87(c)(2), the authority to adopt a greenhouse gas emissions portfolio standard or other regulatory mechanism to mitigate potential emissions leakage resides with the Board of Public Utilities (Board), not the Department. The commenter advocates a regulatory mechanism which it maintains will mitigate emissions leakage. Over the past several months, the Board held three informal public stakeholder meetings and a public hearing, to evaluate a greenhouse gas emissions portfolio standard to mitigate leakage or another regulatory mechanism to mitigate leakage. The Department participated in that proceeding, and notes that the Carbon Abatement Program advocated by the commenter has been a significant focus of discussion during this Board proceeding. The Board is currently considering the direction the State will take in endeavoring to mitigate potential greenhouse gas emissions leakage.

The Department also notes that the approach outlined by the Department for the auction and sale of CO_2 allowances and the utilization of revenue from such auction and sale to reduce electricity demand is intended in part to mitigate the potential for greenhouse gas emissions leakage. This approach was advocated by the Staff Working Group of the participating RGGI states as the most effective near-term measure for reducing the potential for emissions leakage (see RGGI Emissions Leakage Multi-State Staff Working Group, Potential Emissions Leakage and the Regional Greenhouse Gas Initiative (RGGI), March 2008). However, the Department recognizes that N.J.S.A. 48:3-87(c)(2)(b) puts limitations on the Board's authority to rely on energy efficiency measures to satisfy the statutory mandate to reduce potential greenhouse gas emissions leakage.

118. COMMENT: Emissions leakage represents a major obstacle to achieving meaningful results through RGGI. This issue should be addressed (not simply monitored) prior to implementing RGGI, and not afterwards. An increase in electricity imports is likely due to an increase in operating costs by electric generators subject to the program, which will likely

increase the carbon dioxide emissions of neighboring states. Increased import of electricity will occur as a result of the early retirement of generation within participating RGGI states, the shift in market dispatch in the PJM Interconnection (PJM) and/or New York Independent System Operator (NYISO) wholesale electricity markets as a result of CO_2 allowance price adders, and reduced investment in new generation within the RGGI region. Therefore, the anticipated CO_2 emissions reduction of the RGGI program will be lost due to increases in emissions associated with electricity imports from outside the RGGI region. (8)

A proactive, near-term solution to leakage must be implemented. The Department should work with the Board of Public Utilities to finalize and implement a proactive solution to "leakage" prior to the program's January 1, 2009, start date. The prospect that increased imports of power generated outside the RGGI states by carbon-intensive but unregulated sources could significantly affect the environmental and other benefits of the program. The RGGI region is surrounded by proposals to build new conventional coal plants and demand from the RGGI states could contribute to new coal plant construction. Leaving the door open to leakage by a "wait-and-see" approach by putting in place only the capacity to measure leakage but not policies to prevent it, risks undercutting and discrediting the program from the outset. It will be much harder, both economically and politically, to fix leakage once it has occurred than to prevent it from the outset. (15)

RESPONSE: New Jersey and the other RGGI participating states have recognized the concern that increased emissions associated with imports of electricity could adversely affect the CO_2 emissions reductions that RGGI is expected to achieve. For that reason, New Jersey's Global Warming Response Act (N.J.S.A. 26:2C-37 et seq.) not only sets aggressive targets for reducing "statewide greenhouse gas emissions," but also defines that term to include emissions associated with electricity imported and used in the State, and directed the Board to mitigate potential greenhouse gas emissions leakage. That statutory mandate to mitigate emissions leakage remains, notwithstanding the Department's projection that the near-term potential for emissions leakage resulting from the CO_2 Budget Trading Program rules is modest, and notwithstanding the Department's conclusion (supported by the other RGGI states) that the auction and sale of CO_2 allowances and the utilization of revenue from such auction and sale to reduce electricity demand should mitigate the potential for emissions leakage.

119. COMMENT: The commenter commends the Department for working with PJM to monitor potential emissions leakage from non-affected generation facilities that are serving electricity load in New Jersey. However, monitoring through the Generator Attribute Tracking System (GATS) of PJM and NYISO will not address emissions leakage, but rather simply document its existence. The commenter supports an effective transition from a regional program to a Federal program in order to resolve the emissions leakage issue. (8)

RESPONSE: The Department agrees with the need for an effective transition to a Federal program; the RGGI MOU specifically acknowledges the participating states' intent to transition into a Federal program if such a program rewards states that are "first movers," and is determined to be comparable to RGGI.

120. COMMENT: The Department should conduct a cost-benefit analysis at the outset of the program and issue a report subsequent to each control period to determine if the program is beneficial, in consideration of potential emissions leakage resulting from the projected increase in electricity imports into the State and region. (8)

RESPONSE: The Department agrees that it should report on the benefits of the RGGI program. The Department also notes that the Global Warming Response Act requires (N.J.S.A. 26:2C-37 et seq.) the Department to monitor and report "statewide greenhouse gas emissions," a term that includes emissions associated with imported electricity. The Department is coordinating with PJM to implement a system for monitoring potential emissions leakage through modifications to the PJM Generator Attribute Tracking System (GATS). The Department has also committed to conduct a thorough program review following the end of the first control period in consultation with the other participating RGGI states.

Environmental Justice Issues

121. COMMENT: Environmental justice policy considerations should be considered in the RGGI process. This includes creation of an environmental justice stakeholder group to oversee environmental justice matters in the State, promotion of renewable energy and energy conservation in urban areas, and creation of climate change mitigation strategies specifically targeting poor and minority communities. (11)

RESPONSE: The Department is concerned about environmental justice issues and minimizing environmental impacts to low-income communities and people of color. The Department is open to engaging in ongoing discussions with the commenter to discuss environmental justice concerns related to Department greenhouse gas emissions reduction policy and the operation of the CO_2 Budget Trading Program.

122. COMMENT: The commenter generally opposes carbon trading as a method to address climate change and states that RGGI gives little consideration to environmental justice issues. Carbon trading does not address reductions of greenhouse gas co-pollutants such as fine particulate matter (PM), nitrogen oxides and sulfur dioxide. Carbon trading does not ensure emissions reductions in or near overburdened environmental justice communities and does not ensure that its operation will not create pollution "hot spots" in or near environmental justice communities. Carbon trading, by distributing allowances to emit carbon dioxide, creates a property right to the atmosphere and a right to pollute that should not exist. Carbon trading, by

allocating carbon allowances primarily to large prior pollution emitters, does not distribute allowances in the fairest and most equitable manner possible. Carbon trading may result in only a minimal reduction of carbon dioxide emissions or no reductions at all, because too many allowances are allocated and may not be the policy that will achieve emissions reductions in the shortest time frame. Carbon trading may not provide the necessary incentives to achieve a fundamental change in energy utilization and may result in windfall profits to polluters. Carbon trading may necessitate the creation of a bureaucracy to administer the sale and trading of allowances that may tend to be opaque and prone to fraud. (16)

RESPONSE: In general, the CO_2 Budget Trading Program should provide emissions co-benefits through reductions in criteria pollutants from the combustion of fossil fuels that would accompany reductions in CO_2 emissions. In addition, a number of elements of the design of the CO_2 Budget Trading Program address concerns identified by the commenter. In particular, the CO_2 Budget Trading Program is designed so that the majority of the CO_2 allowances in the New Jersey CO_2 emissions budget will be distributed through auction. This would address issues related to the equitable distribution of CO_2 allowances and prevent "windfall profits" as referenced by the commenter. Regional Greenhouse Gas Initiative, Inc., has retained an independent market monitor to oversee CO_2 allowance auctions and the secondary CO_2 allowance market to ensure market transparency and reduce the potential for market manipulation. Additionally, CO_2 allowances are not a property right, as characterized by the commenter. Instead, a CO_2 allowance represents a limited authorization by the Department or another participating state to emit up to one ton of CO_2.

123. COMMENT: The CO_2 Budget Trading Program rules should include a mechanism that ensures reductions of greenhouse gas co-pollutant emissions by facilities located in or near environmental justice neighborhoods. New Jersey should develop and pursue policies that will simultaneously reduce emissions of carbon dioxide, fine particulate matter (PM) and fine PM precursors. If the State chooses not to use RGGI to actively achieve co-pollutant emissions reductions, then it should at least ensure that RGGI results in carbon dioxide emissions reductions in and near environmental justice communities. (16)

RESPONSE: The CO_2 Budget Trading Program will provide incentives for CO_2 emissions reductions at all affected facilities, as there will be a compliance cost attached to CO_2 emissions that did not previously exist. This cost will be established by the requirement that affected facilities hold CO_2 allowances equivalent to their CO_2 emissions at the end of each control period and will represent either the direct cost of CO_2 allowances purchased or the opportunity cost of the use of CO_2 allowances that are directly allocated to a facility. The CO_2 Budget Trading Program is currently designed to focus on CO_2 emissions at electric generating units. The Department agrees that it is critical that other, more localized, air pollution issues also be addressed that are outside the scope of this program. Through other programs, the Department is addressing fine particle matter (PM) and fine PM precursors.

124. COMMENT: The CO_2 Budget Trading Program rules do not ensure that emissions reductions will occur at any specific location. The location of emissions reductions are important because even though carbon dioxide emissions may not have a local effect, carbon dioxide co-pollutants such as fine PM and its precursors do have detrimental local health effects. (16)

RESPONSE: The CO_2 Budget Trading Program is designed as a cap-and-trade program addressing one pollutant in one sector. Part of the fundamental design of a cap-and-trade program is its imposition of an aggregate emissions cap rather than traditional command-and-control regulation, which would apply a location-specific requirement for emissions reductions. In the case of CO_2 emissions from electric generating units, a location-specific requirement approach may create significant inefficiencies that would increase the economic impact of achieving comparable CO_2 emissions reductions. These economic impacts could have disproportionate economic impacts on low-income communities through higher electricity prices. Imposition of more location-specific requirements may be more appropriate where a significant localized impact (that is, health impacts from fine particulate matter) is anticipated rather than the regional and global impacts associated with CO_2 emissions. However, the Department is considering many different regulatory and non-regulatory approaches for other sectors as it prepares recommendations for achieving the State's 2020 greenhouse gas emissions limits and will take the commenter's input into consideration with regard to concern about localized impacts.

In general, the CO_2 Budget Trading Program should provide emissions reduction co-benefits through reductions in criteria pollutant emissions from the combustion of fossil fuels that would accompany reductions in CO_2 emissions.

125. COMMENT: The Department should include ambient air monitoring for other criteria pollutants in overburdened environmental justice communities in the CO_2 Budget Trading Program rules to ensure that the program does not detrimentally affect air quality in these communities. A portion of the ambient air monitoring system should be community-based. (16)

RESPONSE: The comments are outside the scope of the proposed rules. The Department acknowledges that ambient air monitoring for criteria pollutants is useful for promoting community involvement and for looking at spatial variability in ambient air quality as well as in addressing pollutants with localized impact. However, this type of monitoring is probably not appropriate for the application referenced by the commenter in evaluating any changes in local ambient air quality as a result of the CO_2 Budget Trading Program rules. The annual utilization of individual electric generating facilities varies widely for a number of reasons, including fuel prices, electricity demand, and wholesale electricity prices. As a result, it would be very difficult, if not impossible, to determine the specific impact of the CO_2 Budget Trading Program

rules on individual facility dispatch and emissions in relation to other variables that impact operations and emissions. In addition, local air quality is also a function of ambient weather conditions and emissions from sources that would not be subject to the CO_2 Budget Trading Program, which would add a further layer of complexity to such an endeavor.

In general, the CO_2 Budget Trading Program should provide emissions reduction co-benefits through reductions in criteria pollutant emissions from the combustion of fossil fuels that would accompany reductions in CO_2 emissions.

126. COMMENT: RGGI should include a mechanism that ensures community residents and community groups the ability to challenge CO_2 allowance trades and CO_2 allowance auction purchases that they reasonably believe have the potential to detrimentally affect the air quality of their community. The commenter offered to share with the State details of a proposal that would give residents such a mechanism to challenge CO_2 allowance purchases and trades. (16)

RESPONSE: Such a mechanism to challenge CO_2 allowance trades and auction purchases is not warranted and could undermine the basic functioning of a cap-and-trade program, which depends on the fungibility of CO_2 allowances among parties as a means of determining the most economically efficient means of reducing CO_2 emissions. This could significantly reduce the economic efficiency of the regional program, and in particular the economic efficiency of the program in New Jersey. This would likely increase the economic impact of achieving comparable CO_2 emissions reductions relative to a program with unrestricted trading of CO_2 allowances, which could lead to undesirable impacts on electricity ratepayers.

CO_2 allowance trades are not anticipated to adversely impact local air quality. The CO_2 Budget Trading Program rules should provide incentives for CO_2 emissions reductions at all affected facilities, as there will be a compliance cost attached to CO_2 emissions that did not previously exist. By providing incentives for CO_2 emissions reductions at each affected facility, less efficient facilities will have an incentive to run more efficiently and reduce CO_2 emissions, thus reducing other air contaminants that may have a localized impact. This cost will be established by the requirement that affected facilities hold CO_2 allowances equivalent to their CO_2 emissions at the end of each control period and will represent either the direct cost of CO_2 allowances purchased or the opportunity cost of the use of CO_2 allowances that are directly allocated to a facility. These incentives to reduce CO_2 emissions would apply, whether a facility is a net seller or net purchaser of CO_2 allowances.

In general, the CO_2 Budget Trading Program should provide emissions reduction co-benefits through reductions in criteria pollutant emissions from the combustion of fossil fuels that would accompany reductions in CO_2 emissions.

127. COMMENT: An "Environmental Justice" committee should be formed to address and oversee environmental justice aspects of RGGI. A committee should be formed to address environmental justice issues related to the proposed rules and strong consideration should be given to forming an analogous committee for the entire RGGI program. At a minimum this committee should include paid staff funded by proceeds from the CO_2 allowance auction. (16)

RESPONSE: The comments are outside the scope of the proposed rules. However, the Department is concerned about environmental justice issues and minimizing environmental impacts to low-income communities and people of color. The Department is open to engaging in ongoing discussions with the commenter to discuss environmental justice concerns related to Department greenhouse gas emissions reduction policy and the operation of the CO_2 Budget Trading Program.

Issues Related to a Potential Future Federal Greenhouse Gas Emissions Allowance Trading Program

128. COMMENT: The commenter supports the CO_2 Budget Trading Program as a means to move the Federal government to adopt a national greenhouse gas emissions reduction policy. The commenter recommends that the rules note that the State will make every effort to ensure that the activities undertaken by compliance entities at a state level to participate in the RGGI program do not unduly encumber those entities from achieving compliance in a Federal program. This could include state efforts to use Federal allocations to the states to reward entities for early national action by participation in the state program. (3)

RESPONSE: The Department has been advocating the enactment of a strong Federal greenhouse gas emissions reduction program and other complementary policies to reduce greenhouse gas emissions. The Department will implement the requirements at N.J.S.A. 26:2C-54 to evaluate the comparability of a national emissions allowance trading program for greenhouse gas emissions to the CO_2 Budget Trading Program, should such a national program be established and implemented.

129. COMMENT: The Department should include provisions for addressing the transition from a regional to a Federal program. (8)

RESPONSE: N.J.S.A. 26:2C-54 requires the Commissioner of the Department to render interim and final decisions as to the comparability of a national greenhouse gas emissions allowance trading program to a program in which the State is participating. If the Commissioner determines that a national program is substantially comparable to an existing program being implemented by the State, the Department will transition participation of the national program. However, such actions involve broad policy review and analysis that is outside the scope of this rulemaking, including policy review and analysis that could impact decisions related to future

rulemaking. The Department will conduct the reviews as required by the statutory mandate should a Federal emissions allowance trading program for greenhouse gas emissions be enacted. As such, the addition of provisions addressing such reviews is unnecessary.

130. COMMENT: The RGGI MOU includes a provision that the signatory states conduct a mid-course review during 2012, after the end of the first compliance period. This review will include a review of the RGGI program's success, impacts and future, any future emissions trajectory, the role of offsets to facilitate compliance and cost containment, and the degree to which RGGI has caused additional electricity to be imported into the RGGI region. The mid-course review requirement reflected the reasonable likelihood that by 2012 a Federal program to regulate greenhouse gas emissions from the electric sector would be enacted and that participating states should review and consider the effects of any such Federal program to avoid unnecessary duplication and expense. Simultaneous implementation of both a Federal program and RGGI would dilute the environmental benefits of RGGI and expose New Jersey ratepayers to additional costs without any additional energy or environmental benefits. The Department should include language in the adopted rules to either state that the Department will coordinate with other RGGI states in conducting a mid-course review consistent with that outlined in the RGGI MOU or insert the following new language, which is consistent with section 6D of the RGGI MOU (included in this comment summary in its entirety, as submitted) (this new language would also reflect the recent, related requirement at N.J.S.A. 26:2C-54 that the Department render an interim decision about the comparability or compatibility of any state program within three months after enactment of a Federal program):

> Comparability and compatibility of a national program to regulate GHG emissions with that of New Jersey
>
> Within three months of enactment of a national program or by December 31, 2012, whichever date is earlier, the New Jersey DEP will participate with other RGGI Signatory States will (sic) commence a comprehensive review of all components of the Program, including but not limited to:
>
> > (1) Program Success: whether the Program has been successful in meeting its goals.
> > (2) Program Impacts: whether the Program has had impacts as to price and system reliability.
> > (3) Additional Reductions: whether additional reductions after 2018 should be implemented.
> > (4) Imports and Emissions Leakage: consider the effectiveness of any measures put in place to control emissions leakage.
> > (5) Offsets: evaluate with attention to price, availability, and environmental integrity and recommend whether changes to the Program are warranted. (13)

RESPONSE: The Department agrees that a comprehensive program review should be conducted in 2012 to evaluate the functioning of the New Jersey CO_2 Budget Trading Program and the complementary CO_2 Budget Trading Programs in other RGGI participating states. The Department also acknowledges the statutory requirements at N.J.S.A. 26:2C-54 for the Commissioner of the Department to render interim and final decisions as to the comparability of a national greenhouse gas emissions allowance trading program to a program in which the State is participating. However, such actions involve broad policy review and analysis that is outside the scope of the proposed regulations, including policy review and analysis that could impact decisions related to future rulemaking. The Department has already either made a commitment to conduct the reviews requested by the commenter through the RGGI MOU or has a statutory mandate to conduct such reviews. As such, the Department believes that the addition of new provisions in the rules addressing such reviews is unnecessary.

131. COMMENT: Programs to address climate change should be national in scope. Thus, it is essential that the RGGI implementing rules incorporate program elements that can be easily applied at the national scale. In addition, the regulatory elements of the RGGI program (including implementing regulations at the state level) should either be superseded by or aligned with the national regulatory program so as not to have redundant and possibly conflicting programs. While the RGGI MOU contains the concept of transitioning to a comparable Federal program, this alone is not sufficient. N.J.S.A. 26:2C-45 et seq. addresses this issue and contains the first attempt to address the transition from RGGI to a Federal program. The Department should include the provisions at N.J.S.A. 26:2C-54a, b, and c, where appropriate in N.J.A.C. 7:27-22.28 and 7:27C. (14)

RESPONSE: N.J.S.A. 26:2C-54 requires the Commissioner of the Department to render interim and final decisions as to the comparability of a national greenhouse gas emissions allowance trading program to a program in which the State is participating. However, such actions involve broad policy review and analysis that is outside the scope of this rulemaking, including policy review and analysis that could impact decisions related to future rulemaking. The Department will conduct the reviews as required by the statutory mandate should a Federal emissions allowance trading program for greenhouse gas emissions be enacted. As such, it is not necessary to add provisions to the adopted rules to address such reviews.

Summary of Agency-Initiated Changes

The Department is making a grammatical correction at N.J.A.C. 7:27-22.28(h) to substitute “that” for “which.”

The Department is correcting a typographical error in the definition of “continuous emissions monitoring system” at N.J.A.C. 7:27C-1.2 to remove a duplicative sentence.

The Department is reversing the order of the terms "nameplate capacity" and "New Jersey CO_2 Budget Trading Program Base Budget" so that the definitions will be correctly alphabetized in N.J.A.C. 7:27C-1.2.

The Department is making changes to N.J.A.C. 7:27C-2.5(c), 6.4(c), and 6.5(c) for internal consistency in the sentences.

The Department is making punctuation, spelling and/or grammatical corrections at N.J.A.C. 7:27C-2.6(b), 4.1(b), 5.2(o)2, 5.12(b), 6.6(b), 6.7(d), 8.1(g), 8.2(c), 10.4(e)6, 10.5(d) and (e), 10.8(c)2, 10.8(n)3, 10.9(e)2, and 3, 10.9(g)2, and 10.11(e)3.

The Department is correcting N.J.A.C. 7:27C-1.4(a) and (s), 3.2, and 3.3(a) to include applications for renewed permits in those provisions. These terms were inadvertently omitted and are being inserted to correctly reflect the application of all these provisions to all such permit applications, as indicated in the adopted provisions at N.J.A.C. 7:27-22.28(a) through (e).

The Department proposed elements to be included in an application for an operating permit incorporating CO_2 Budget Trading Program requirements at N.J.A.C. 7:27C-3.3(a). The Department proposes to modify the rule to replace the term "standard requirements" with "general provisions." The heading of N.J.A.C. 7:27C-1.4 is "general provisions," rather than "standard requirements." In order to avoid confusion, the Department is modifying the rule to make it clear that the applicant must include those items set forth in N.J.A.C. 7:27C-1.4, General requirements.

The Department is also modifying N.J.A.C. 7:27C-3.3(a)6 on adoption to add the term "recordkeeping." In the proposal Summary, 40 N.J.R. at 3800, the Department stated, "the complete operating permit application must …include the applicable requirements of the CO_2 Budget Trading Program at Subchapters 1, 4, 6 and 8." At N.J.A.C. 7:27C-3.3(a)3, the rule requires general requirements N.J.A.C. 7:27C-1.4. At N.J.A.C. 7:27C-3.3(a)5, the rule requires the compliance requirements at section 6.9. And at N.J.A.C. 7:27C-8, the rule refers to the requirements of Subchapter 8. As set forth in the Summary, the Department intended that the application include "all applicable" requirements. Subchapter 8 identifies monitoring, recordkeeping and reporting requirements applicable to CO_2 budget unit owners and operators and CO_2 authorized account representatives. Accordingly, it is appropriate that N.J.A.C. 7:27C-3.3(a)6 also refer to recordkeeping requirements, as those are applicable to the applicants.

The Department is correcting punctuation and numbering at N.J.A.C. 7:27C-5.2(f).

The Department has rephrased N.J.A.C. 7:27C-8.2(n) to state more clearly the controlling provisions for the decision to issue a notice of disapproval of the certification status of a monitor. The new text is intended to clarify that the issuance of a notice of disapproval is not discretionary, but that the application of the requirements of N.J.A.C. 7:27C-8.3(b) could result in the issuance of such a notice of disapproval. The Department has reorganized N.J.A.C. 7:27C-8.7(a) to simplify the provisions and make them easier to read.

The Department is correcting a typographical error in N.J.A.C. 7:27C-10.3(c) to correct "emission" to "emissions."

At N.J.A.C. 7:27C-10.8(a), the Department is inserting the qualifier "for end-use," which was inadvertently omitted, and which makes it consistent with the intent expressed in the heading of N.J.A.C. 7:27C-10.8.

The Department is deleting the phrase "as supplemented or amended" from the footnote to Table 3 at N.J.A.C. 7:27C-10.8(e), because the language is unnecessary.

The Department is correcting a typographical error at N.J.A.C. 7:27C-10.8(i) Table 4. The value of 0.99 published in the New Jersey Register as the oxidation factor for natural gas is a typographical error that occurred in Register publication; the correct value in the filed proposal is 0.995.

The Department is correcting a typographical error in the formulas at N.J.A.C. 7:27C-10.8(i) and (j), to remove the inadvertent quotation marks around the "n" in the lines explaining what that symbol represents in the equations.

The Department is adding the phrase "and which is available at http://www.ipmvp.org" to N.J.A.C. 7:27C-10.8(n)1i and ii, from which it was inadvertently omitted in the original proposal document.

The Department is correcting an error at N.J.A.C. 7:27C-10.8(n)3. The fourth reference to ANSI/ASHRAE/IESNA Standard 90.1-2007, Section 11, and Appendix G should match the three previous references to this document at N.J.A.C. 7:27C-10.8(n)3 to include the titles of the section and appendix and to delete the unnecessary phrase "as supplemented and amended and which is (are) incorporated by reference" – the entire ANSI/ASHRAE/IESNA Standard 90.1-2007 is incorporated by reference, as supplemented and amended, as this is a defined term in the rules that includes this incorporation by reference.

Federal Standards Statement

Executive Order No. 27 (1994) and N.J.S.A. 52:14B-1 et seq. (P.L. 1995, c. 65) require State agencies that adopt, readopt or amend State regulations that exceed any Federal standards or requirements to include in the rulemaking document a Federal standards analysis.

The Department is adopting amendments and new rules for which there are no comparable rules or Federal standards. Accordingly, no Federal standards analysis is required.

Full text of the adoption follows (additions to proposal indicated in boldface with asterisks ***thus***; deletions from proposal indicated in brackets with asterisks ***[**thus**]***):

CHAPTER 27
AIR POLLUTION CONTROL

SUBCHAPTER 22 OPERATING PERMITS

7:27-22.16 Operating permit contents

(a)-(l) (No change.)

(m) The operating permit shall contain all applicable requirements of the CO_2 budget trading program at N.J.A.C. 7:27C and 7:27-22.28. The operating permit shall contain sufficient monitoring, recordkeeping, and reporting requirements necessary to assure compliance with applicable requirements of the CO_2 budget trading program at N.J.A.C. 7:27C and 7:27-22.28.

(n)-(t) (No change.)

7:27-22.28 CO_2 budget trading program

(a) A permittee for a facility subject to N.J.A.C. 7:27C shall incorporate the requirements of the CO_2 budget trading program at N.J.A.C. 7:27C, as applicable, into the operating permit.

(b) A permittee for a facility subject to N.J.A.C. 7:27C ***[**shall**]*** ***may*** incorporate the CO_2 budget trading program requirements into the operating permit for the facility through either:
1. An initial operating permit; ***[**or**]***
2. A renewal or a minor modification of the operating permit ***; or**
3. A significant modification of the operating permit*.

(c) If any changes are made to any of the CO_2 budget trading program requirements at N.J.A.C. 7:27C that have been incorporated into an operating permit, the permittee for a facility subject to N.J.A.C. 7:27C shall reflect these changes through a renewal ***[**or**]*** ***,*** minor modification ***, or significant modification*** of the operating permit.

(d) If any changes are made to equipment subject to the CO_2 budget trading program requirements at N.J.A.C. 7:27C, the permittee for a facility subject to N.J.A.C. 7:27C shall

reflect these changes through a renewal ***[**or**]*** ***,*** minor modification ***, or significant modification*** of the operating permit.

(e) A permit shield pursuant to N.J.A.C. 7:27-17 shall apply to CO_2 budget trading program requirements only if the program is incorporated into the operating permit through an initial operating permit***, a significant modification of the operating permit,*** or an operating permit renewal.

(f) The CO_2 budget trading program requirements incorporated in the operating permit shall conform with the applicable provisions of N.J.A.C. 7:27C and this subchapter.

(g) The compliance plan for a facility subject to the CO_2 budget trading program requirements shall be included in the operating permit pursuant to N.J.A.C. 7:27-22.16(n) and meet the requirements for a proposed compliance plan at N.J.A.C. 7:27-22.9.

(h) If the Department approves the incorporation of CO_2 budget trading program requirements in an operating permit, the Department will establish permit conditions in the operating permit ***[**which**]*** ***that*** will enable the Department to readily verify whether emissions from the source operations meet the requirements of N.J.A.C.7:27-27C. Such permit conditions will set forth replicable procedures, including monitoring, source emissions testing, recordkeeping, and reporting procedures, sufficient to ensure that emissions are quantified and recorded and that compliance with the emissions limitation under N.J.A.C. 7:27C is enforceable.

CHAPTER 27A
AIR ADMINISTRATIVE PROCEDURES AND PENALTIES

SUBCHAPTER 3. CIVIL ADMINISTRATIVE PENALTIES AND REQUESTS FOR ADJUDICATORY HEARINGS

7:27A-3.2 Definitions

The following words and terms, when used in this subchapter, have the following meanings unless the context clearly indicates otherwise. Unless otherwise specified below, all words and terms are as defined in N.J.S.A. 26:2C-2, N.J.A.C. 7:27 and N.J.A.C. 7:27C.

7:27A-3.5 Civil administrative penalty determination—general

(a) - (c) (No change.)

(d) The Department may assess a civil administrative penalty for a violation of any provision of N.J.A.C. 7:27 or 7:27C for which no penalty amount is specified under N.J.A.C. 7:27A-3.6 through 3.11. The Department shall base the amount of such a penalty assessment upon the following factors:

1. - 2. (No change.)

(e) - (h) (No change.)

(i) For violations of N.J.A.C. 7:27C, indicated by a continuous monitoring system or when a continuous monitoring system operates out of control or is out of service, the Department shall calculate penalties in accordance with N.J.A.C. 7:27A-3.10(u).

7:27A-3.10 Civil administrative penalties for violation of rules adopted pursuant to the Act

(a) - (t) (No change.)

(u) The violations of N.J.A.C. 7:27C, whether the violation is minor or non-minor in accordance with (q) through (t) above, and the civil administrative penalty amounts for each violation are as set forth in the following Civil Administrative Penalty Schedule. The numbers of the following paragraphs correspond to the numbers of the corresponding subchapter in N.J.A.C. 7:27C. The rule summaries (Class) for the requirements set forth in the Civil Administrative Penalty Schedule in this subsection are provided for informational purposes only and have no legal effect.

CIVIL ADMINISTRATIVE PENALTY SCHEDULE

1. The violations of N.J.A.C. 7:27C-1, General Provisions, and the civil administrative penalty amounts for each violation are as set forth in the following table:

Citation	Class	Type of Violation	First Offense	Second Offense	Third Offense	Fourth and Each Subsequent Offense
N.J.A.C. 7:27C-1.3(e)	Submit an exemption report	M	$2,000	$4,000	$10,000	$30,000
N.J.A.C. 7:27C-1.3(f)	Retain exemption records	M	$2,000	$4,000	$10,000	$30,000

N.J.A.C. 7:27C-1.4(a)	Submit and obtain a Title V permit	NM	$10,000	$20,000	$50,000	$50,000
N.J.A.C. 7:27C-1.4(b)	Obtain a CO_2 budget permit	NM	$10,000	$20,000	$50,000	$50,000
N.J.A.C. 7:27C-1.4(c)	Monitoring requirements	NM	$10,000	$20,000	$50,000	$50,000
N.J.A.C. 7:27C-1.4(f)	Hold CO_2 allowances	NM	$10,000	$20,000	$50,000	$50,000
N.J.A.C. 7:27C-1.4(g)	Excess emissions in any control period	NM	$2,000 [1]	$4, 000 [1]	$10, 000 [1]	$30, 000 [1]
N.J.A.C. 7:27C-1.4(n)	Keep documents on site	M	$2,000	$4,000	$10,000	$30,000
N.J.A.C. 7:27C-1.4(o)	Submit a compliance certification report	M	$2,000	$4,000	$10,000	$30,000

[1] For each ton of CO_2 emitted in excess of the CO_2 budget emissions limitation

2. The violations of N.J.A.C. 7:27C-2, CO_2 Authorized Account Representative of a CO_2 Budget Source, and the civil administrative penalty amounts for each violation are as set forth in the following table:

Citation	**Class**	**Type of Violation**	**First Offense**	**Second Offense**	**Third Offense**	**Fourth and Each Subsequent Offense**
N.J.A.C. 7:27C-2.1(b)	Select a CO_2 authorized account representative	NM	$10,000	$20,000	$50,000	$50,000
N.J.A.C. 7:27C-2.1(f)	Submit a certified report	M	$2,000	$4,000	$10,000	$30,000
N.J.A.C. 7:27C-2.3(c)	Submit an account representative revision	M	$2,000	$4,000	$10,000	$30,000

3. (Reserved)

4. The violations of N.J.A.C. 7:27C-4, Compliance Certification, and the civil administrative penalty amounts for each violation are as set forth in the following table:

Citation	Class	Type of Violation	First Offense	Second Offense	Third Offense	Fourth and Each Subsequent Offense
N.J.A.C. 7:27C-4.1(a)	Submit a certified report	M	$2,000	$4,000	$10,000	$30,000

5. The violations of N.J.A.C. 7:27C-5, CO_2 Allowance Allocations, and the civil administrative penalty amounts for each violation are as set forth in the following table:

Citation	Class	Type of Violation	First Offense	Second Offense	Third Offense	Fourth and Each Subsequent Offense
N.J.A.C. 7:27C-5.2(c)2	Establish a general account	M	$2,000	$4,000	$10,000	$30,000
N.J.A.C. 7:27C-5.4(d)	Provide on-site access to records	M	$2,000	$4,000	$10,000	$30,000
N.J.A.C. 7:27C-5.4(d)	Provide false or misleading information	NM	$500,000[1]	Not Applicable[1]	Not Applicable[1]	Not Applicable[1]
N.J.A.C. 7:27C-5.12(g)	Provide false or misleading information	NM	$2,000	$4,000	$10,000	$30,000

[1] The facility referenced in the sworn affidavit shall not be eligible to be certified as a dispatch agreement facility. In addition to these penalties, the court may assess against the violator the amount of any economic benefit accruing to the violator from the violation.

6. The violations of N.J.A.C. 7:27C-6, CO_2 Allowance Tracking System, and the civil administrative penalty amounts for each violation are as set forth in the following table:

Citation	Class	Type of Violation	First Offense	Second Offense	Third Offense	Fourth and Each Subsequent Offense
N.J.A.C. 7:27C-6.5(d)	Submit a revised application	M	$2,000	$4,000	$10,000	$30,000
N.J.A.C. 7:27C-6.9(e)	Transfer required allowances	M	$2,000	$4,000	$10,000	$30,000

7. (Reserved)

8. The violations of N.J.A.C. 7:27C-8, Monitoring and Reporting, and the civil administrative penalty amounts for each violation are as set forth in the following table:

Citation	Class	Type of Violation	First Offense	Second Offense	Third Offense	Fourth and Each Subsequent Offense
N.J.A.C. 7:27C-8.1(a) and(d)	Monitoring requirements	NM	$10,000	$20,000	$50,000	$50,000
N.J.A.C. 7:27C-8.1(e) and (f)	Monitor, record and report data	NM	$10,000	$20,000	$50,000	$50,000
N.J.A.C. 7:27C-8.2(g)	Submit dates of certification	M	$2,000	$4,000	$10,000	$30,000
N.J.A.C. 7:27C-8.2(h)	Submit certification application	M	$2,000	$4,000	$10,000	$30,000
N.J.A.C. 7:27C-8.2(o)	Substitute data	NM	$10,000	$20,000	$50,000	$50,000
N.J.A.C. 7:27C-8.2(q)	Alternate Monitoring system	NM	$10,000	$20,000	$50,000	$50,000
N.J.A.C. 7:27C-8.3(a)	Substitute data	NM	$10,000	$20,000	$50,000	$50,000

N.J.A.C. 7:27C-8.4	Written notice	M	$2,000	$4,000	$10,000	$30,000
N.J.A.C. 7:27C-8.5(a), (b), (c) and (d)	Recordkeeping and reporting	M	$2,000	$4,000	$10,000	$30,000
N.J.A.C. 7:27C-8.7(a) and (b)	Submit report	M	$2,000	$4,000	$10,000	$30,000
N.J.A.C. 7:27C-8.8 (a), (b), (c), (d), (e) and (f)	Submit additional data	M	$2,000	$4,000	$10,000	$30,000
N.J.A.C. 7:27C-8.8(g)	Quality control activities	M	$2,000	$4,000	$10,000	$30,000
N.J.A.C. 7:27C-8.8(h)	Retain data	M	$2,000	$4,000	$10,000	$30,000
N.J.A.C. 7:27C-8.8(i)	Submit annual report	M	$2,000	$4,000	$10,000	$30,000

9. (Reserved)

10. The violations of N.J.A.C. 7:27C-10, CO_2 Emissions Offset Projects, and the civil administrative penalty amounts for each violation are as set forth in the following table:

Citation	**Class**	**Type of Violation**	**First Offense**	**Second Offense**	**Third Offense**	**Fourth and Each Subsequent Offense**
N.J.A.C. 7:27C-10.3(j)	Access agreement	M	$2,000	$4,000	$10,000	$30,000
N.J.A.C. 7:27C-10.11(e)	Submit monitoring and verification report	M	$2,000	$4,000	$10,000	$30,000

CHAPTER 27C
CO_2 BUDGET TRADING PROGRAM

SUBCHAPTER 1. GENERAL PROVISIONS

7:27C-1.1 Purpose

This chapter establishes the New Jersey component of the CO_2 Budget Trading Program, which is designed to stabilize and then reduce anthropogenic emissions of CO_2, a greenhouse gas, from CO_2 budget sources in an economically efficient manner.

7:27C -1.2 Definitions

The following words and terms, when used in this chapter, have the following meanings, unless the context clearly indicates otherwise.

"Account number" means the identification number given by the Department to each CO_2 Allowance Tracking System account.

"Acid rain emissions limitation" means acid rain emissions limitation, as that term is defined by the EPA at 40 CFR 72.2, incorporated by reference herein.

"Acid Rain Program" means a multi-state sulfur dioxide and nitrogen oxides air pollution control and emission reduction program established by the Administrator under title IV of the Clean Air Act, U.S.C. §§7651 et seq., and 40 CFR Parts 72 through 78.

"Administrator" means the Administrator of the EPA or the Administrator's authorized representative.

"Air contaminant" means any substance, other than water or distillates of air, present in the atmosphere as solid particles, liquid particles, vapors or gases.

"Allocate" or "allocation" means the determination by the Department of the number of CO_2 allowances to be recorded in the compliance account of a CO_2 budget unit, an allocation set-aside account, the consumer benefit account, or the general account of the sponsor of an approved CO_2 emissions offset project.

"Allocation year" means a calendar year for which the Department allocates or awards CO_2 allowances pursuant to N.J.A.C. 7:27C-5 and 10. The allocation year of each CO_2 allowance is reflected in the unique identification number given to the allowance pursuant to N.J.A.C. 7:27C-

6.8(b) or (c).

"Alternate CO_2 authorized account representative" means, for a CO_2 budget source and each CO_2 budget unit at the source, the natural person who is authorized by the owners and operators of the source and all CO_2 budget units at the source, in accordance with N.J.A.C. 7:27C-2, to represent and legally bind each owner and operator in matters pertaining to the CO_2 Budget Trading Program or, for a general account, the natural person who is authorized, under N.J.A.C. 7:27C-6, to transfer or otherwise dispose of CO_2 allowances held in the general account.

"AP-42" means the January 1995, 5th edition of the manual entitled "Compilation of Air Pollutant Emission Factors," which is published by the EPA, including supplements A through G and any subsequent revisions, as amended and supplemented, incorporated herein by reference. The manual may be obtained from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, Virginia, 22161, (703) 487-4650; or from the Superintendent of Documents, Government Printing Office, Washington, D.C., 20402, (202) 783-3228. In addition, the manual can be accessed electronically through the EPA Technology Transfer Network CHIEF site at http://www.epa.gov/ttn/chief/ap42/index.html.

"Ascending price, multiple-round auction" means a multiple-round auction that starts with an opening price, which increases each round by predetermined increments. In each round, a bidder offers the quantity of CO_2 allowances the bidder is willing to purchase at the posted price. Rounds continue so long as demand exceeds the quantity of CO_2 allowances offered for sale. At the completion of the final round, CO_2 allowances may be awarded to remaining bidders at the final price or according to an alternative mechanism.

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

"Attribute credit" means a credit that represents the attributes related to one megawatt-hour of electricity generation.

"Automated data acquisition and handling system" or "DAHS" means that component of the continuous emissions monitoring system, or other emissions monitoring system approved for use under N.J.A.C. 7:27C-8, designed to interpret and convert individual output signals from pollutant concentration monitors, flow monitors, diluent gas monitors, and other component parts of the monitoring system to produce a continuous record of the measured parameters in the measurement units required by N.J.A.C. 7:27C-8.

"Award" means the determination by the Department of the number of CO_2 allowances to be recorded in the compliance account of a CO_2 budget unit for early reduction CO_2 allowances pursuant to N.J.A.C. 7:27C-5.2(q), or the determination by the Department of the number of CO_2 offset allowances to be recorded in the general account of a project sponsor pursuant to N.J.A.C. 7:27C-10.11. An award is a type of allocation.

"Beneficial interest" means profit, benefit, or advantage resulting from the ownership of a CO_2 allowance.

"Bidder" means a qualified party that has met the requirements of N.J.A.C. 7:27C-5.10 through 5.13 and has received approval from the Department to participate in a specified CO_2 allowance auction pursuant to N.J.A.C. 7:27C-5.13(b).

"Billing meter" means the device used to measure electric or thermal output for commercial billing under a contract between the owner or owners of the facility selling the electric or thermal output and the owner or owners of the entity purchasing the electric or thermal output, where no owner of either the seller or the buyer also is an owner of the other party.

"Boiler" means an enclosed fossil or other fuel-fired combustion device used to produce heat and to transfer heat to recirculating water, steam, or other medium.

"Bottoming-cycle cogeneration unit" means a cogeneration unit in which the energy input to the unit is first used to produce useful thermal energy and at least some of the reject heat from the useful thermal energy application or process is then used for electricity production.

"British thermal unit" or "Btu" means the quantity of heat required to raise the temperature of one pound of water one degree Fahrenheit, at the temperature at which water has its greatest density (approximately 39 degrees Fahrenheit).

"CAIR NO_x Annual Trading Program" means a multi-state nitrogen oxides air pollution control and emission reduction program approved and administered by the Administrator in accordance with 40 CFR Part 96 subparts AA through II and 40 CFR 51.123(o)(1) or (2) or established by the Administrator in accordance with subparts AA through II of 40 CFR Part 97 and 40 CFR 51.123(p) and 52.35, as a means of mitigating interstate transport of fine particulates and nitrogen oxides.

"CAIR NO_x Ozone Season Trading Program" means a multi-state nitrogen oxides air pollution control and emission reduction program approved and administered by the Administrator in accordance with subparts AAAA through IIII of 40 CFR Part 96 and 40 CFR 51.123(aa)(1) or (2) (and (bb)(1)), (bb)(2), or (dd) or established by the Administrator in accordance with subparts

AAAA through IIII of 40 CFR Part 97 and 40 CFR 51.123(ee) and 52.35, as a means of mitigating interstate transport of ozone and nitrogen oxides.

"CAIR SO_2 Trading Program" means a multi-state sulfur dioxide air pollution control and emission reduction program approved and administered by the Administrator in accordance with subparts AAA through III of 40 CFR Part 96 and 40 CFR 51.124(o)(1) or (2) or established by the Administrator in accordance with subparts AAA through III of 40 CFR Part 97 and 40 CFR 51.124(r) and 52.36, as a means of mitigating interstate transport of fine particulates and sulfur dioxide.

"Certified dispatch agreement facility" means a CO_2 budget source that is eligible to receive a fixed price sale offer of CO_2 allowances from the Department pursuant to N.J.A.C. 7:27C-5.4(c).

"CH_4" means methane.

"CO_2" means carbon dioxide.

"CO_2 allowance" means a limited authorization by the Department, or a participating state, under the CO_2 Budget Trading Program to emit up to one ton of CO_2, subject to all applicable limitations contained in this chapter.

"CO_2 allowance auction" means the sale of CO_2 allowances through competitive bidding as administered in accordance with N.J.A.C. 7:27C-5.5 through 5.18.

"CO_2 allowance auction website" means a website established by the Department that contains information about CO_2 allowance auctions.

"CO_2 allowance deduction" or "deduct CO_2 allowances" means the permanent withdrawal of CO_2 allowances by the Department from a compliance account to account for the number of tons of CO_2 emitted from a CO_2 budget source for a control period, determined in accordance with N.J.A.C. 7:27C-8, or for the forfeit or retirement of CO_2 allowances as provided by this chapter.

"CO_2 allowance price" means the price for CO_2 allowances in the CO_2 Budget Trading Program for a particular time period as determined by the Department, calculated based on a volume-weighted average of transaction prices reported to the Department, and taking into account prices as reported publicly through reputable sources.

"CO_2 allowances held" or "hold CO_2 allowances" means the CO_2 allowances recorded by the Department, or submitted to the Department for recordation, in accordance with N.J.A.C. 7:27C-6 and 7, in a CO_2 Allowance Tracking System account.

"CO_2 Allowance Tracking System" means the system by which the Department records allocations, deductions, and transfers of CO_2 allowances under the CO_2 Budget Trading Program. The tracking system may also be used to track CO_2 offset allowances, CO_2 allowance prices and emissions from affected sources.

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

"CO_2 allowance transfer deadline" means midnight of the March 1 occurring after the end of the relevant control period or, if that March 1 is not a business day, midnight of the first business day thereafter, and also means the deadline by which CO_2 allowances shall be submitted for recordation in a CO_2 budget source's compliance account in order for the source to meet the CO_2 requirements of N.J.A.C. 7:27C -1.4 for the control period immediately preceding such deadline.

"CO_2 authorized account representative" means:

1. For a CO_2 budget source and each CO_2 budget unit at the source, the natural person who is authorized by the owners and operators of the source and all CO_2 budget units at the source, in accordance with N.J.A.C. 7:27C-2, to represent and legally bind each owner and operator in matters pertaining to the CO_2 Budget Trading Program; or
2. For a general account, the natural person who is authorized, under N.J.A.C. 7:27C-6, to transfer or otherwise dispose of CO_2 allowances held in the general account.

Except in N.J.A.C. 7:27C-2.2, 2.3, 2.4, 2.5, 2.6 and 6.3, whenever the term "CO_2 authorized account representative" is used in this chapter, it includes the alternate CO_2 authorized account representative.

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

"CO_2 budget permit" means the portion of the legally binding permit issued by the Department pursuant to N.J.A.C. 7:27-22 to a CO_2 budget source or CO_2 budget unit that specifies the CO_2 Budget Trading Program requirements applicable to the CO_2 budget source, to each CO_2 budget unit at the CO_2 budget source, and to the owners and operators and the CO_2 authorized account representative of the CO_2 budget source and each CO_2 budget unit.

"CO_2 budget source" means a source that includes one or more CO_2 budget units.

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

"CO_2 budget unit" means a fossil fuel-fired unit that at any time on or after January 1, 2005 served or serves an electricity generator with a nameplate capacity equal to or greater than 25 MWe.

"CO_2 equivalent" means the quantity of a given greenhouse gas multiplied by its global warming potential (GWP).

"CO_2 offset allowance" means a CO_2 allowance that is awarded to the sponsor of a CO_2 emissions offset project pursuant to N.J.A.C. 7:27C-10.11 and is subject to the relevant compliance deduction limitations of N.J.A.C. 7:27C-6.9(a)3.

"Cogeneration unit" means a stationary, fossil-fuel-fired boiler or stationary, fossil-fuel-fired combustion turbine:

1. Having equipment used to produce electricity and useful thermal energy for industrial, commercial, heating, or cooling purposes through the sequential use of energy; and
2. Producing electricity during the 12-month period starting on the date the unit first produces electricity, and producing, during any calendar year after the calendar year in which the unit first produces electricity, the following:
    i. For a topping-cycle cogeneration unit, useful thermal energy not less than 5.0 percent of total energy output, and:
        (1) Useful power that, when added to one-half of useful thermal energy produced, is not less then 42.5 percent of total energy input, if useful thermal energy produced is 15 percent or more of total energy output; or
        (2) Useful power that, when added to one-half of useful thermal energy produced, is not less than 45 percent of total energy input, if useful thermal energy produced is less than 15 percent of total energy output;
    ii. For a bottoming-cycle cogeneration unit, useful power that is not less than 45 percent of total energy input; and
3. Provided that if the cogeneration unit is a boiler, the total energy input at 2i and ii above is equal to the unit's total energy input from all fuel except biomass.

"Combined cycle system" means a system comprised of one or more of each of the following configured to improve overall efficiency of electricity generation or steam production:

1. Combustion turbine;
2. Heat recovery steam generator; and
3. Steam turbine.

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

the combustion of fuel in the combustor passes through the turbine, rotating the turbine.

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

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

"Compliance account" means a CO_2 Allowance Tracking System account, established by the Department for a CO_2 budget source under N.J.A.C. 7:27C-6, in which the CO_2 allowance allocations for the source are initially recorded and in which are held CO_2 allowances available for use by the source for a control period for the purpose of meeting the CO_2 requirements of N.J.A.C. 7:27C-1.5.

"Consumer benefit account" means a general account established by the Department from which CO_2 allowances will be sold or auctioned in order to provide moneys to promote energy efficiency; directly mitigate electricity ratepayer impacts attributable to the implementation of the CO_2 Budget Trading Program; develop and deliver renewable or non-carbon-emitting energy technologies; stimulate or reward investment in the development of innovative carbon emissions abatement technologies with significant carbon emissions reduction potential; fund programs that promote measurable end-use energy efficiency improvements in the commercial, institutional, and industrial sectors; ***support programs that enhance the stewardship and restoration of the State's forests and tidal marshes that provide important opportunities to sequester or reduce greenhouse gases;*** or fund the administration of greenhouse gas emissions allowance trading programs or consumer benefit programs. Moneys collected through the sale or auction of CO_2 allowances in the consumer benefit account will be deposited in the Global Warming Solutions Fund established by the Department of the Treasury pursuant to N.J.S.A. 26:2C-50 and will be administered in accordance with N.J.S.A. 26:2C-51 and the Department's rules adopted pursuant to N.J.S.A. 26-2C-52.

"Consumer Price Index" or "CPI" means the U.S. Department of Labor, Bureau of Labor Statistics unadjusted Consumer Price Index for All Urban Consumers for the U.S. city average, for All Items on the latest reference base.

"Continuous emissions monitoring system" or "CEMS" means the equipment required under N.J.A.C. 7:27C-8 to sample, analyze, measure, and provide, by means of readings recorded at least once every 15 minutes (using an automated data acquisition and handling system), a permanent record of stack gas volumetric flow rate, stack gas moisture content, and oxygen or carbon dioxide concentration (as applicable), in a manner consistent with 40 CFR Part 75 and N.J.A.C. 7:27C-8. The following are examples of the types of continuous emissions monitoring systems that may be used to comply with N.J.A.C. 7:27C-8**[**. The following systems are examples of types of continuous emissions monitoring systems that may be required under N.J.A.C. 7:27C-8**]***:

1. A flow-monitoring system, consisting of a stack flow rate monitor and an automated data acquisition and handling system and providing a permanent, continuous record of stack gas volumetric flow rate, in standard cubic feet per hour (scfh);
2. A nitrogen oxides emissions rate (or NO_X-diluent) monitoring system, consisting of a NO_X pollutant concentration monitor, a diluent gas (CO_2 or O_2) monitor, and an automated data acquisition and handling system and providing a permanent, continuous record of NO_X concentration, in parts per million (ppm), diluent gas concentration, in percent CO_2 or O_2, and NO_X emissions rate, in pounds per million British thermal units (lb/MMBtu);
3. A moisture-monitoring system, as defined in 40 CFR 75.11(b)(2), incorporated by reference herein, and providing a permanent, continuous record of the stack gas moisture content, in percent H_2O;
4. A carbon dioxide-monitoring system, consisting of a CO_2 pollutant concentration monitor (or an oxygen monitor plus suitable mathematical equations from which the CO_2 concentration is derived) and an automated data acquisition and handling system and providing a permanent, continuous record of CO_2 emissions, in percent CO_2; and
5. An oxygen-monitoring system, consisting of an O_2 concentration monitor and an automated data acquisition and handling system and providing a permanent, continuous record of O_2, in percent O_2.

"Control area" means an independent system operator or regional transmission organization that includes a participating state in its operating territory.

"Control period" means a three-calendar-year time period, unless extended to four years upon occurrence of a stage-two trigger event. The first control period is January 1, 2009 through December 31, 2011, provided that if a stage-two trigger event occurs during the first control period, then the first control period will be extended by one year, through December 31, 2012. Each subsequent sequential three-calendar-year period is a separate control period that is subject to a single one-year extension upon the occurrence of a stage-two trigger event during the control

period. In no event may a control period be longer than four calendar years.

"Current market price" means the volume-weighted average price of CO_2 allowances used in determining the current market reserve price, which is based on the following:

1. CO_2 allowance transaction prices reported to the Department;
2. CO_2 allowance prices as reported publicly through reputable sources;
3. CO_2 allowance award price(s) from previous CO_2 allowance auction(s); or
4. Any combination of 1 through 3 above.

"Current market reserve price" means the monetary amount calculated to be 80 percent of the current market price.

"Descending price, multiple-round auction" means a multiple-round auction that starts with a high provisional price, which falls in each round by predetermined increments. In each round, a bidder can lock in the purchase of some number of CO_2 allowances at the current provisional price and/or wait for the price to fall. Rounds continue so long as the number of CO_2 allowances locked-in is less than the quantity of CO_2 allowances offered for sale.

"Discriminatory price, sealed-bid auction" means a single-round, sealed-bid auction in which a bidder may submit multiple bids for CO_2 allowances at different prices. The price(s) paid by winning bidders with the highest bids for CO_2 allowances is their own bid price(s).

"Dispatch agreement facility" means a CO_2 budget source that meets the criteria at N.J.A.C. 7:27C-5.4(c).

"Distillates of air" means helium (He), nitrogen (N_2), oxygen (O_2), neon (Ne), argon (Ar), krypton (Kr), and xenon (Xe).

"Electronic submission agent" means a natural person to whom the CO_2 authorized account representative or alternate CO_2 authorized account representative has delegated the authority to make an electronic submission to the Department on his or her behalf.

"Eligible biomass" means the following sustainably harvested woody and herbaceous fuel sources, that are available on a renewable or recurring basis (excluding old-growth timber): dedicated energy crops and trees, agricultural food residues and feed crop residues, aquatic plants, unadulterated wood and wood residues, animal wastes, other clean organic wastes not mixed with other solid wastes, biogas, and other neat liquid biofuels derived from such fuel sources. Sustainably harvested will be determined by the Department, based on an evaluation of the environmental sustainability of harvesting practices applicable to the biomass feedstock, taking into consideration pest management, fertilizer and nutrient use, crop rotation practices, water use and pollution management, soil management, and forestry management.

"EPA" means the United States Environmental Protection Agency.

"ERAs" means early reduction CO_2 allowances.

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

"Facility code" means a five-digit code assigned by the Energy Information Agency at the United States Department of Energy to power plants that are not owned by electric utilities.

"Fossil fuel" means natural gas, petroleum, coal, or any form of solid, liquid, or gaseous fuel derived from such material.

"Fossil fuel-fired" means:

1. With regard to a unit that commenced operation prior to January 1, 2005, the combustion of fossil fuel, alone or in combination with any other fuel, where the fossil fuel combusted comprises, or is projected to comprise, more than 50 percent of the annual heat input on a Btu basis during any year; and
2. With regard to a unit that commences operation on or after January 1, 2005, the combustion of fossil fuel, alone or in combination with any other fuel, where the fossil fuel combusted comprises, or is projected to comprise, more than five percent of the annual heat input on a Btu basis during any year.

"General account" means a CO_2 Allowance Tracking System account established by the Department under N.J.A.C. 7:27C-6 for the purpose of holding and transferring CO_2 allowances, which is not a compliance account.

"Global warming potential" or "GWP" means a measure of the radiative efficiency (heat-absorbing ability) of a particular gas relative to that of CO_2 after taking into account the decay rate of each gas (the amount removed from the atmosphere over a given number of years) relative to that of CO_2.

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

"Hr" means hour.

"Lb" means pound.

"Life-of-the-unit contractual arrangement" means a unit participation power sales agreement under which a customer reserves, or is entitled to receive, a specified amount or percentage of nameplate capacity and/or associated energy from any specified unit for:

1. The life of the unit;
2. A cumulative term of no less than 25 years, including contracts that permit an election for early termination; or
3. A period equal to or greater than 20 years or 70 percent of the economic useful life of the unit determined as of the time the unit is built, with option rights to purchase or release some portion of the nameplate capacity and associated energy generated by the unit at the end of the period.

"Market settling period" means the first 14 months of any control period.

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

"Maximum potential hourly heat input" means an hourly heat input used for reporting purposes when a unit lacks certified monitors to report heat input. If Appendix D of 40 CRF Part 75 is used to report a unit's heat input, this is the value calculated, in accordance with 40 CFR Part 75, using the maximum fuel flow rate and the maximum gross calorific value. If a flow monitor and a diluent gas monitor are used for the unit, this is the value reported, in accordance with 40 CFR Part 75, using the maximum potential flowrate and either the maximum carbon dioxide concentration (in percent CO_2) or the minimum oxygen concentration (in percent O_2).

"Minimum reserve price" means the monetary amount of $1.86 in 2008 and 2009, and thereafter means the monetary amount, established as of the first day of each calendar year, as derived through the following formula:

MRP(2009+n) = MRP(2009+(n-1)) x [1+(CPI(2009+(n-1)) – CPI(2009+(n-2))/CPI(2009+(n-2))]

where:

MRP = the minimum reserve price

n = the number of years since 2009

"CPI" means, for any calendar year, the 12-month average of the CPI published by the United States Department of Labor, as of the close of the 12-month period ending on August 31 of each calendar year.

"Monitoring system" means any monitoring system that meets the requirements of N.J.A.C. 7:27C-8, including a continuous emissions monitoring system, an excepted monitoring system, or an alternative monitoring system.

"MMBtu" means million Btu.

"MWe" means megawatt electrical.

"MWh" means megawatt hours.

["New Jersey CO_2 Budget Trading Program Base Budget" means the annual number of CO_2 tons available in New Jersey for allocation in a given allocation year, in accordance with the CO_2 Budget Trading Program. CO_2 offset allowances awarded to project sponsors and early reduction CO_2 allowances awarded to CO_2 budget sources are separate from and in addition to CO_2 allowances allocated from the New Jersey CO_2 Budget Trading Program Base Budget.**]***

"Nameplate capacity" means the maximum electrical output (in MWe) that a generator can sustain over a specified period of time, under specific conditions designated by the manufacturer, when not restricted by seasonal or other deratings.

"New Jersey CO_2 Budget Trading Program Base Budget" means the annual number of CO_2 tons available in New Jersey for allocation in a given allocation year, in accordance with the CO_2 Budget Trading Program. CO_2 offset allowances awarded to project sponsors and early reduction CO_2 allowances awarded to CO_2 budget sources are separate from and in addition to CO_2 allowances allocated from the New Jersey CO_2 Budget Trading Program Base Budget.

"NYISO" means the New York independent system operator.

"Non-CO_2 budget unit" means a unit that does not meet the definition of "CO_2 budget unit."

"Notice of CO_2 allowance auction" means the notification for a specific auction or auctions issued pursuant to N.J.A.C. 7:27C-5.9.

"O_2" means oxygen.

"Operator" means any person who operates, controls, or supervises a CO_2 budget unit or a CO_2 budget source and includes, but is not limited to, any holding company, utility system, or plant manager of such a unit or source.

"ORIS code" means a four-digit number assigned by the Energy Information Agency at the United States Department of Energy to power plants owned by electric utilities.

"Owner" means any of the following persons:

1. Any holder of any portion of the legal or equitable title in a CO_2 budget unit;

2. Any holder of a leasehold interest in a CO_2 budget unit, other than a passive lessor, or a person who has an equitable interest through such lessor, whose rental payments are not based, either directly or indirectly, upon the revenues or income from the CO_2 budget unit;
3. Any purchaser of power from a CO_2 budget unit under a life-of-the-unit contractual arrangement in which the purchaser controls the dispatch of the unit; or
4. With respect to any general account, any person who has an ownership interest with respect to the CO_2 allowances held in the general account.

"Participating state" means a state or jurisdiction that has adopted corresponding rules or regulations as part of the CO_2 Budget Trading Program.

"Person" means any individual or entity and shall include, without limitation, corporations, companies, associations, societies, firms, partnerships, and joint stock companies, and shall also include, without limitation, all political subdivisions of this State or any agencies or instrumentalities thereof.

"PJM" means PJM Interconnection, a regional transmission organization.

"Qualified party" means a party that has submitted a qualification application pursuant to N.J.A.C. 7:27C-5.12(a) and that the Department determines to be qualified to participate in CO_2 allowance auctions pursuant to N.J.A.C. 7:27C-5.12(e).

"Receive" or "receipt of" means, when referring to the Department, to come into possession of a document, information, or correspondence (whether sent in writing or by authorized electronic transmission), as indicated in an official correspondence log, or by a notation made on the document, information, or correspondence, by the Department in the regular course of business.

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

"Reserve price" means the minimum price that the Department will accept for each CO_2 allowance offered for sale in a specific CO_2 allowance auction.

"Retail provider" means a person that provides renewable energy or renewable energy attribute credits to a retail customer through a retail sales transaction, or a person that provides to a retail customer the service of procuring and retiring renewable energy attribute credits on the customer's behalf.

"Serial number" means, when referring to CO_2 allowances, the unique identification number assigned to each CO_2 allowance by the Department under N.J.A.C. 7:27C-6.8(b) and (c).

"Source" means any governmental, institutional, commercial, or industrial structure, installation, plant, building, or facility that emits, or has the potential to emit, any air contaminant.

"Stage-one threshold price" means the monetary amount, established as of the first day of each calendar year, derived annually from use of the following formula:

S1TP(2005+n) = S1TP(2005) x [1+(CPI(2005+(n-1)) - CPI (2005))/CPI(2005)]

where:

"S1TP" is the stage-one threshold price;

"S1TP(2005)" is $7:00;

"n" is the number of years since 2005; and

"CPI" means, for any calendar year, the 12-month average of the CPI published by the United States Department of Labor, as of the close of the 12-month period ending on August 31 of each calendar year.

"Stage-one trigger event" means the occurrence of any 12-month period that completely transpires following the market settling period that is characterized by an average CO_2 allowance price equal to or greater than the stage-one threshold price.

"Stage-two threshold price" means the monetary amount, established as of the first day of each calendar year, derived annually from use of the following formula:

S2TP(2005+n) = [S2TP(2005+(n-1)) x [[{CPI(2005+(n-1)) - CPI (2005+ (n-2))}/CPI(2005+(n-2))]+0.02] + S2TP(2005+(n-1))

where:

"S2TP" is the stage-two threshold price;

"S2TP(2005)" is $10.00; and

"n" is the number of years since 2005.

"CPI" means, for any calendar year, the 12-month average of the CPI published by the United States Department of Labor, as of the close of the 12-month period ending on August 31 of each calendar year.

"Stage-two trigger event" means the occurrence of any 12-month period that completely transpires following the market settling period that is characterized by an average CO_2 allowance price equal to or greater than the stage-two threshold price.

"State" means a state of the United States of America, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, and American Samoa and includes the Commonwealth of the Northern Mariana Islands.

"Submit" or "serve" means to send or transmit a document, information, or correspondence to the person specified in accordance with the applicable regulation in the following manner:

1. In person;
2. By United States Postal Service; or
3. By other commonly accepted means of dispatch or transmission and delivery.

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

"Ton" or "tonnage" means a short ton, that is, 2,000 pounds.

"Topping-cycle cogeneration unit" means a cogeneration unit in which the energy input to the unit is first used to produce useful power, including electricity, and at least some of the reject heat from the electricity production is then used to provide useful thermal energy.

"Total energy input" means, with regard to a cogeneration unit, total energy of all forms supplied to the cogeneration unit, excluding energy produced by the cogeneration unit itself, where each form of energy supplied is measured by the lower heating value of that form of energy, calculated as follows:

$$LHV = HHV - 10.55(W + 9H)$$

where:
LHV = lower heating value of fuel in Btu/lb,
HHV = higher heating value of fuel in Btu/lb,
W = weight, by percent, of moisture in fuel, and
H = weight, by percent, of hydrogen in fuel.

"Total energy output" means, with regard to a cogeneration unit, the sum of useful power and useful thermal energy produced by the cogeneration unit.

"12-month period" means a period of 12 consecutive months determined on a rolling basis where a new 12-month period begins on the first day of each calendar month.

"Uniform-price, sealed-bid auction" means a single-round, sealed-bid auction in which a bidder may submit multiple bids at different prices. The price paid by bidders with winning bids for CO_2 allowances is equal to the price of the highest rejected bid.

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

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

"Unsold allowance" means a CO_2 allowance that has been made available for sale in an auction conducted by the Department, but is not sold in such auction.

"Useful power" means, with regard to a cogeneration unit, electricity or mechanical energy made available for use, excluding any such energy used in the power production process (which process includes, but is not limited to, any on-site processing or treatment of fuel combusted at the unit and any on-site emission controls).

"Useful thermal energy" means with regard to a cogeneration unit, thermal energy that is:

1. Made available to an industrial or commercial process (not a power production process), excluding any heat contained in condensate return or makeup water;
2. Used in a heating application (for example, space heating or domestic hot water heating); or
3. Used in a space cooling application (that is, thermal energy used by an absorption chiller).

"Voluntary renewable energy market account" means an account into which the Department will allocate one percent of the CO_2 allowances for each allocation year from the New Jersey CO_2 Budget Trading Program annual base budget and manage to support the functioning of the voluntary renewable energy market.

"Voluntary renewable energy purchase" means a purchase of electricity from renewable energy generation or a purchase of renewable energy attribute credits, by a retail electricity customer on a voluntary basis. Renewable energy includes electricity generated from biomass, wind, solar thermal, photovoltaic, geothermal, hydroelectric facilities certified by the Low Impact Hydropower Institute, wave and tidal action, and fuel cells powered by renewable fuels. A voluntary renewable energy purchase does not include the purchase of any renewable energy generation or the purchase of any renewable energy attribute credits used by the generator or purchaser to meet any regulatory mandate, such as a renewable portfolio standard.

7:27C-1.3 Applicability

(a) The requirements of this chapter apply to any CO_2 budget unit or CO_2 budget source.

(b) Notwithstanding (a) above, a CO_2 budget unit that has a permit containing a condition restricting the supply of the unit's annual electrical output to the electric grid to no more than 10 percent of the annual gross generation of the unit, and which complies with (d) through (i) below, is exempt from the requirements of this chapter, except for the provisions of this section, N.J.A.C. 7:27C-1.6 and N.J.A.C. 7:27C-8.8, and, if applicable because of the award or allocation of CO_2 allowances during the pre-exemption time period, N.J.A.C. 7:27C-5 through 7.

(c) The exemption under (b) above shall become effective as of the January 1 that is on or after the date on which the restriction on the percentage of annual gross generation that may be supplied to the electric grid and the provisions in the permit required at (b) above become final.

(d) A CO_2 budget unit exempt under (b) above shall comply with the restriction on percentage of annual gross generation that may be supplied to the electric grid described in (b) above.

(e) A CO_2 budget unit exempt under (b) above shall report to the Department, in accordance with the applicable provisions at N.J.A.C. 7:27C-8.8, the amount of annual gross generation and the amount of annual gross generation supplied to the electric grid during the year by the following February 1.

(f) For a period of 10 years from the date the records are created, the owners and operators of a unit exempt under (b) above shall retain, at the source that includes the unit, records demonstrating that the conditions of the permit under (b) were met. The 10-year period for keeping records may be extended for cause, at any time prior to the end of the period, in writing by the Department. The owners and operators bear the burden of proof that the unit met the restriction on the percentage of annual gross generation that may be supplied to the electric grid.

(g) The owners and operators and, to the extent applicable, the CO_2 authorized account representative of a CO_2 budget unit exempt under (b) above shall comply with all the requirements of this chapter concerning all time periods for which the exemption is not in effect, even if such requirements arise, or must be complied with, after the exemption takes effect.

(h) A CO_2 budget unit exempt under (b) above will lose its exemption upon the occurrence of either of the following:

1. The restriction on the percentage of annual gross generation that may be supplied to the electric grid described in (b) above is removed from the unit's permit or otherwise becomes no longer applicable in any year that commences on or after January 1, 2009; or
2. The unit fails to comply or the owners and operators fail to meet their burden of proving that the unit is complying with the restriction on the percentage of annual gross generation that may be supplied to the electric grid described in (b) above during any year that commences on or after January 1, 2009.

(i) A unit that loses its exemption in accordance with (h) above shall be subject to the requirements of this chapter. For the purposes of this chapter, the date of commencement of operation for a unit that loses its exemption pursuant to (h) above will be the date the unit loses its exemption.

(j) In the event that the Department grants an exemption under this section to one or more units that on January 1, 2005, serves an electricity generator with a nameplate capacity equal to or greater than 25 MWe, the Department will retire for each subsequent allocation year the number of CO_2 allowances equal to the unit's average annual CO_2 emissions over the most recent three calendar years for which data are available.

7:27C-1.4 General provisions

(a) The CO_2 authorized account representative of each CO_2 budget source required to have an operating permit pursuant to N.J.A.C. 7:27-22 and each CO_2 budget unit required to have an operating permit pursuant to N.J.A.C. 7:27-22 shall:

1. Submit to the Department a complete application for a new***, renewed,*** or modified operating permit under N.J.A.C. 7:27C-3.3 in accordance with the deadlines specified in N.J.A.C. 7:27C-3.2; and
2. Submit in a timely manner any supplemental information that the Department determines is necessary in order to review the operating permit application and issue or deny an operating permit***, permit renewal,*** or ***[**a**]*** permit modification that includes CO_2 Budget Trading Program requirements.

(b) The owners and operators of each CO_2 budget source required to have an operating permit pursuant to N.J.A.C. 7:27-22 and of each CO_2 budget unit required to have an operating permit pursuant to N.J.A.C. 7:27-22 for the source shall have an operating permit that incorporates the requirements of the CO_2 budget trading program and shall operate the CO_2 budget source and the CO_2 budget unit at the source in compliance with such operating permit.

(c) The owners and operators and, to the extent applicable, the CO_2 authorized account representative of each CO_2 budget source and each CO_2 budget unit at the source shall comply with the monitoring requirements of N.J.A.C. 7:27C-8.

(d) The Department will use the emissions measurements recorded and reported in accordance with N.J.A.C. 7:27C-8 to determine compliance by the unit with the CO_2 requirements at (e) below. For the purpose of determining compliance with (f) below, total tons for a control period shall be calculated as the sum of all recorded hourly emissions (or the tonnage equivalent of the recorded hourly emissions rates) in accordance with N.J.A.C. 7:27C-8. The Department will round total CO_2 emissions to the nearest whole ton, so that any fraction of a ton equal to or greater than 0.50 tons is deemed to equal one ton and any fraction of a ton less than 0.50 tons is deemed to equal zero tons.

(e) A CO_2 budget unit shall be subject to the requirements at (f) below starting on January 1, 2009, or the date on which the unit commences operation, whichever comes later.

(f) The owners and operators of each CO_2 budget source and each CO_2 budget unit at the source shall hold CO_2 allowances available for compliance deductions under N.J.A.C. 7:27C-6.9, as of the CO_2 allowance transfer deadline, in the source's compliance account in an amount not less than the total CO_2 emissions for the control period from all CO_2 budget units at the source, as determined in accordance with N.J.A.C. 7:27C-6 and 8.

(g) Each ton of CO_2 emitted in excess of the CO_2 budget emissions limitation shall constitute a separate violation of this subchapter and applicable State law.

(h) CO_2 allowances shall be held in, deducted from, or transferred among CO_2 Allowance Tracking System accounts in accordance with N.J.A.C. 7:27C-5, 6 and 7.

(i) A CO_2 allowance shall not be deducted, in order to comply with (f) above, for a control period that ends prior to the year for which the CO_2 allowance was allocated.

(j) A CO_2 offset allowance shall not be deducted, in order to comply with (f) above, beyond the applicable percent limitations at N.J.A.C. 7:27C-6.9(a)3.

(k) A CO_2 allowance is a limited authorization by the Department or a participating state to emit one ton of CO_2 in accordance with this chapter. No provision of the CO_2 Budget Trading Program, this chapter, the application for a new or modified operating permit to incorporate the requirements of the CO_2 Budget Trading Program, or the operating permit that includes the requirements of the CO_2 Budget Trading Program shall be construed to limit the authority of the Department or a participating state to terminate or limit such authorization.

(*l*) A CO_2 allowance does not constitute a property right.

(m) The owners and operators of a CO_2 budget source that has excess emissions in any control period shall:

1. Forfeit the CO_2 allowances required for deduction under N.J.A.C. 7:27C-6.9(e);
2. Not use any CO_2 offset allowances to cover any part of such excess emissions; and
3. Pay any fine, penalty, or assessment or comply with any other remedy imposed under N.J.A.C. 7:27C-6.9(f).

(n) Except as provided at (n)1 below, the owners and operators of the CO_2 budget source and each CO_2 budget unit at the source shall keep on site at the source each of the following documents for a period of 10 years from the date the document is created. The Department may at any time prior to the end of the 10-year period extend the 10-year period, if it determines that retention of the documents beyond the 10-year period is necessary to determine compliance with the requirements of this chapter:

1. The account certificate of representation for the CO_2 authorized account representative for the CO_2 budget source and each CO_2 budget unit at the source and all documents that demonstrate the truth of the statements in the account certificate of representation, in accordance with N.J.A.C. 7:27C-2.4, provided that the certificate and documents shall be retained on site at the source beyond such 10-year period until such documents are superseded by a submitted new account certificate of representation changing the CO_2 authorized account representative of the CO_2 budget source;

2. All emissions monitoring information, in accordance with N.J.A.C. 7:27C-8;
3. Copies of all reports, compliance certifications, and other submissions, and all records made or required under the CO_2 Budget Trading Program; and
4. Copies of all documents used to complete an application for a new or modified operating permit that incorporates the requirements of the CO_2 Budget Trading Program and any other submission under the CO_2 Budget Trading Program or to demonstrate compliance with the requirements of the CO_2 Budget Trading Program.

(*o*) The CO_2 authorized account representative of a CO_2 budget source and each CO_2 budget unit at the source shall submit the reports and compliance certifications required under this chapter, including the requirements at N.J.A.C. 7:27C-4.

(p) A violation of the requirements of this chapter cannot be cured by a revision to the operating permit of a CO_2 budget source if that revision is effective after the violation occurs.

(q) Each provision of this chapter that applies to a CO_2 budget source or to the CO_2 authorized account representative of the CO_2 budget source also applies to the owners and operators of such source and of the CO_2 budget units at the source.

(r) Each provision of this chapter that applies to a CO_2 budget unit or to the CO_2 authorized account representative of the CO_2 budget unit also applies to the owners and operators of such unit.

(s) No provision of the CO_2 Budget Trading Program, this chapter, the application for a new***, renewed,*** or modified operating permit to incorporate the requirements of the CO_2 Budget Trading Program, or the operating permit that includes the requirements of the CO_2 Budget Trading Program, shall be construed as exempting or excluding the owners and operators and, to the extent applicable, the CO_2 authorized account representative of a CO_2 budget source or CO_2 budget unit from compliance with any other provisions of applicable State and Federal law and regulations.

7:27C-1.5 Computation of time

(a) Unless otherwise stated, any time period scheduled, pursuant to this chapter, to begin on the occurrence of an act or event shall begin on the day the act or event occurs.

(b) Unless otherwise stated, any time period scheduled, pursuant to this chapter, to begin before the occurrence of an act or event shall be computed so that the period ends the day before the act or event occurs.

(c) Unless otherwise stated, if the final day of any time period, pursuant to this chapter, falls on a weekend or a State or Federal holiday, the time period shall be extended to the next business day.

7:27C-1.6 Appeal procedure

(a) A person who believes himself or herself to be aggrieved with respect to a decision made by the Department may appeal the decision within 20 calendar days after the date of the decision and request an administrative hearing.

(b) Requests for an administrative hearing shall be submitted to:

Office of Legal Affairs
ATTENTION: Adjudicatory Hearing Requests
Department of Environmental Protection
401 East State Street, 4th Floor
PO Box 402
Trenton, New Jersey 08625-0402

(c) All requests for an administrative hearing shall be submitted to the Department in writing on a hearing request form available from the Department and shall contain:

1. The name, address, and telephone number of the person making the request;
2. When the request is submitted by someone other than the applicant, evidence that a copy of the hearing request has been mailed to the applicant;
3. A statement of the legal authority and jurisdiction under which the request for a hearing is made;
4. A brief and clear statement of the Department decision being appealed, indicating the specific grounds for the applicant's appeal;
5. A copy of the Department notice or decision for which a hearing is being requested;
6. A statement of all facts alleged to be at issue and their relevance to the Department decision for which a hearing is requested. Any legal issues associated with the alleged facts at issue shall also be included; and
7. All information supporting the request or other written documents relied upon to support the request, unless this information is already in the administrative record (in which case, such information shall be specifically referenced in the request).

(d) The Department will deny any hearing request it did not receive within 20 calendar days after the date of the Department decision being appealed.

(e) The Department may deny any hearing request if the applicant or interested party fails to include all the information required by (c) above.

(f) Following receipt of a complete request for a hearing pursuant to (c) above, the Department may attempt to informally settle the dispute by conducting such proceedings, meetings, and conferences as it deems appropriate.

(g) If the Department determines that the matter is a contested case, the Department will submit the request for an administrative hearing to the Office of Administrative Law. Such hearings will be conducted in accordance with the provisions of the Administrative Procedure Act, N.J.S.A. 52:14B-1 et seq. and 52:14F-1 et seq. and the Uniform Administrative Procedure Rules, N.J.A.C. 1:1. In making such determination, the Department will evaluate the request to determine whether a contested case exists and whether there are issues of fact, which, if assumed to be true, might change the Department's decision. Where only issues of law are raised by a request for a hearing, the request will be denied. Denial by the Department of a request for a contested case hearing shall constitute the final decision of the Department for the purposes of judicial appeal.

(h) Nothing in this section shall be construed to provide a right to an adjudicatory hearing in contravention of N.J.S.A. 52:14B-3.1 through 3.3.

(i) As part of a request for an adjudicatory hearing, a person may request that the Department determine whether the matter for which the adjudicatory hearing is requested is suitable for mediation by the Department's Office of Dispute Resolution. The Department shall promptly notify the requester of its determination. If the Department determines the matter is suitable for mediation, it shall also notify the requester of the procedures and schedule for mediation.

(j) At the conclusion of any adjudicatory hearing in the Office of Administrative Law, the administrative law judge will submit an initial decision to the Commissioner. The Commissioner will issue a final decision affirming, rejecting, or modifying the findings of fact and conclusions of law in the Initial Decision, in accordance with the Administrative Procedure Act, N.J.S.A. 52:14B-1 et seq., and the Uniform Administrative Procedure Rules, N.J.A.C. 1:1.

(k) The Commissioner's final decision under (j) above may be appealed to the Appellate Division of the Superior Court, within the time provided by court rule.

7:27C-1.7 Severability

If any provision of this chapter or the application thereof to any person or circumstance is adjudicated to be invalid or unenforceable to any extent, the remainder of this chapter or its application to any person or circumstance other than those that are the subject of the adjudication shall continue to be unaffected by the adjudication.

SUBCHAPTER 2 CO_2 AUTHORIZED ACCOUNT REPRESENTATIVE OF A CO_2 BUDGET SOURCE

7:27C-2.1 Authorization and responsibilities of the CO_2 authorized account representative of a CO_2 budget source

(a) Except as provided under N.J.A.C. 7:27C-2.2, each CO_2 budget source, including all CO_2 budget units at the source, shall have one and only one CO_2 authorized account representative, with regard to all matters regulated by this chapter concerning the source or any CO_2 budget unit at the source.

(b) The CO_2 authorized account representative of the CO_2 budget source shall be selected pursuant to an agreement binding on the owners and operators of the source and all CO_2 budget units at the source.

(c) If the CO_2 budget source is also subject to the CAIR NO_x Ozone Season Trading Program, CAIR NO_x Annual Trading Program, or CAIR SO_2 Trading Program, then the CO_2 authorized account representative of the CO_2 budget source shall be the same as the CAIR designated representative. If the CO_2 budget source is also subject to the Acid Rain Program, then the CO_2 authorized account representative shall be the same as the Acid Rain Program designated representative.

(d) Upon receipt by the Department of a complete account certificate of representation under N.J.A.C. 7:27C-2.4, the CO_2 authorized account representative of the CO_2 budget source shall represent and, by his or her representations, actions, inactions, or submissions, legally bind each owner and operator of the CO_2 budget source represented and each CO_2 budget unit at the source in all matters pertaining to the CO_2 Budget Trading Program, notwithstanding any agreement between the CO_2 authorized account representative of the CO_2 budget source and such owners and operators. The owners and operators shall be bound by any decision or order regarding the source or unit issued to the CO_2 authorized account representative of the CO_2 budget source by the Department or a court of competent jurisdiction.

(e) The Department will issue an operating permit that incorporates the requirements of the CO_2 Budget Trading Program and establish a CO_2 Allowance Tracking System account for a CO_2 budget source only after it has received a complete account certificate of representation that complies with N.J.A.C. 7:27C-2.4 for a CO_2 authorized account representative of the CO_2 budget source and the CO_2 budget units at the source.

(f) Each submission under the CO_2 Budget Trading Program shall be submitted, signed, and certified by the CO_2 authorized account representative for each CO_2 budget source on behalf of which the submission is made. Each such submission shall include the following certification by

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

(g) The Department will accept or act on a submission made on behalf of owners or operators of a CO_2 budget source or a CO_2 budget unit only if the submission has been made, signed, and certified in accordance with (f) above.

7:27C-2.2 Alternate CO_2 authorized account representative of the CO_2 budget source

(a) An account certificate of representation may designate one and only one alternate CO_2 authorized account representative of the CO_2 budget source who may act on behalf of the CO_2 authorized account representative of the CO_2 budget source.

(b) The agreement by which the alternate CO_2 authorized account representative is selected shall include a procedure for authorizing the alternate CO_2 authorized account representative of the CO_2 budget source to act in lieu of the CO_2 authorized account representative of the CO_2 budget source.

(c) Upon receipt by the Department of a complete account certificate of representation under N.J.A.C. 7:27C-2.4, any representation, action, inaction, or submission by the alternate CO_2 authorized account representative of the CO_2 budget source will be deemed to be a representation, action, inaction, or submission by the CO_2 authorized account representative of the CO_2 budget source.

7:27C-2.3 Changing the CO_2 authorized account representative of the CO_2 budget source and the alternate CO_2 authorized account representative of the CO_2 budget source; changes in the owners and operators

(a) The CO_2 authorized account representative of the CO_2 budget source (or the alternate CO_2 authorized account representative of the CO_2 budget source) may be changed at any time by submitting a superseding complete account certificate of representation to the Department, pursuant to N.J.A.C. 7:27C-2.4. The change in the CO_2 authorized account representative of the CO_2 budget source or the alternate CO_2 authorized account representative of the CO_2 budget source is effective upon receipt by the Department of the superseding complete account

certificate of representation. Notwithstanding any such change, all representations, actions, inactions, and submissions by the previous CO_2 authorized account representative of the CO_2 budget source or alternate CO_2 authorized account representative of the CO_2 budget source prior to the time and date that the Department receives the superseding account certificate of representation shall be binding on the new CO_2 authorized account representative of the CO_2 budget source and the new alternate CO_2 authorized account representative of the CO_2 budget source and the owners and operators of the CO_2 budget source and the CO_2 budget units at the source.

(b) In the event a new owner or operator of a CO_2 budget source or a CO_2 budget unit is not included in the list of owners and operators submitted in the account certificate of representation, such new owner or operator is subject to and bound by the account certificate of representation, the representations, actions, inactions, and submissions of the CO_2 authorized account representative and any alternate CO_2 authorized account representative of the CO_2 budget source or CO_2 budget unit, and the decisions, orders, actions, and inactions of the Department, as if the new owner or operator were included in such list.

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

7:27C-2.4 Account certificate of representation

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

1. Identification of the CO_2 budget source and each CO_2 budget unit at the source for which the account certificate of representation is submitted;
2. The name, address, e-mail address, telephone number, and facsimile transmission number of the CO_2 authorized account representative of the CO_2 budget source and any alternate CO_2 authorized account representative of the CO_2 budget source;
3. A list of the owners and operators of the CO_2 budget source and of each CO_2 budget unit at the source;
4. The following certification by the CO_2 authorized account representative of the CO_2 budget source and any alternate CO_2 authorized account representative of the CO_2 budget source: "I certify that I was selected as the CO_2 authorized account representative of the CO_2 budget source (or alternate CO_2 authorized account representative of the CO_2 budget source, as applicable) by an agreement binding on the owners and operators of the CO_2 budget source and each CO_2 budget unit at the source. I certify that I have all the necessary

authority to carry out my duties and responsibilities under the CO_2 Budget Trading Program on behalf of the owners and operators of the CO_2 budget source and of each CO_2 budget unit at the source and that each such owner and operator shall be fully bound by my representations, actions, inactions, or submissions and by any decision or order issued to me by the Department or a court of competent jurisdiction regarding the source or unit."; and

5. The signature of the CO_2 authorized account representative of the CO_2 budget source and any alternate CO_2 authorized account representative of the CO_2 budget source, and the dates signed.

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

7:27C-2.5 Objections concerning the CO_2 authorized account representative of the CO_2 budget source or alternate CO_2 authorized account representative of the CO_2 budget source

(a) Once the Department has received a complete account certificate of representation under N.J.A.C. 7:27C-2.4, the Department will rely on the account certificate of representation, unless and until the Department receives a superseding complete account certificate of representation under N.J.A.C. 7:27C-2.4.

(b) Except as provided in N.J.A.C. 7:27C-2.3(a), no objection or other communication submitted to the Department concerning the authorization, or any representation, action, inaction, or submission of the CO_2 authorized account representative of the CO_2 budget source or the alternate CO_2 authorized account representative of the CO_2 budget source, will affect any representation, action, inaction, or submission of the CO_2 authorized account representative of the CO_2 budget source or the alternate CO_2 authorized account representative of the CO_2 budget source, or the finality of any decision or order by the Department under the CO_2 Budget Trading Program.

(c) The Department will not decide or otherwise intervene in any dispute concerning the authorization of, or any representation, action, inaction, or submission by any CO_2 authorized account representative of a CO_2 budget source or ***[**an**]*** ***__by any__*** alternate CO_2 authorized account representative of a CO_2 budget source, including private legal disputes concerning the proceeds of CO_2 allowance transfers.

7:27C-2.6 Delegation of authority to make electronic submissions by the CO_2 authorized account representative of the CO_2 budget source and the alternate CO_2 authorized account representative of the CO_2 budget source

(a) The CO_2 authorized account representative of a CO_2 budget source and the alternate CO_2 authorized account representative of a CO_2 budget source may delegate, to one or more natural persons, his or her authority to make an electronic submission to the Department under this chapter.

(b) To delegate authority to make an electronic submission to the Department ***₂*** a CO_2 authorized account representative of a CO_2 budget source or alternate CO_2 authorized account representative of a CO_2 budget source, as appropriate, shall submit to the Department a notice of delegation, in a format prescribed by the Department, that includes the following elements:

1. The name, address, e-mail address, telephone number, and facsimile transmission number of the delegating CO_2 authorized account representative or alternate CO_2 authorized account representative;
2. The name, address, e-mail address, telephone number, and facsimile transmission number of each such natural person, herein referred to as the "electronic submission agent";
3. For each such natural person, a list of the types of electronic submissions under (a) above for which authority is delegated to him or her; and
4. The following certifications by the delegating CO_2 authorized account representative or the delegating alternate CO_2 authorized account representative, as appropriate:
   i. "I agree that any electronic submission to the Department that is by the natural person identified in this notice of delegation and of a type listed for such electronic submission agent in this notice of delegation and that is made when I am a CO_2 authorized account representative (or alternate CO_2 authorized account representative, as appropriate,) and before this notice of delegation is superseded by another notice of delegation under N.J.A.C. 7:27C-2.6(c) shall be deemed to be an electronic submission by me ***[**;**]*** ***₂***" ***₂***and
   ii. "Until this notice of delegation is superseded by another notice of delegation under N.J.A.C. 7:27C-2.6(c), I agree to maintain an e-mail account and to notify the Department immediately of any change in my e-mail address unless all delegation authority by me under N.J.A.C. 7:27C-2.6 is terminated."

(c) A notice of delegation submitted under (b) above shall be effective, with regard to the delegating CO_2 authorized account representative for the CO_2 budget source or the delegating alternate CO_2 authorized account representative for the CO_2 budget source identified in such notice, upon receipt of such notice by the Department and until receipt by the Department of a superseding notice of delegation by such CO_2 authorized account representative or alternate CO_2 authorized account representative, as appropriate. The superseding notice of delegation may replace any previously identified electronic submission agent, add a new electronic submission agent, or eliminate entirely any delegation of authority.

(d) Any electronic submission covered by the certification in (b)4 above and made in accordance with a notice of delegation effective under (b) above shall be deemed to be an electronic submission by the CO_2 authorized account representative of the CO_2 budget source or alternate CO_2 authorized account representative of the CO_2 budget source submitting such notice of delegation.

SUBCHAPTER 3. PERMITS

7:27C-3.1 General requirements for an operating permit incorporating CO_2 Budget Trading Program requirements

(a) Each CO_2 budget source must have an operating permit issued by the Department pursuant to N.J.A.C. 7:27-22.

(b) The operating permit for each CO_2 budget source shall contain all applicable CO_2 Budget Trading Program requirements, as set forth in N.J.A.C. 7:27C-3.3(a)3 through 6.

7:27C-3.2 Submission of an application for a new*, renewed* or modified operating permit incorporating CO_2 Budget Trading Program requirements

For any CO_2 budget source, the CO_2 authorized account representative shall submit a complete application under N.J.A.C. 7:27-22.28, and in conformance with the requirements of this chapter, to incorporate the CO_2 budget trading program requirements covering such CO_2 budget source to the Department by the later of January 1, 2009 ***[**(or one week after the operative date of this chapter)**]*** or 12 months before the date on which the CO_2 budget source, or a new unit at the source, commences operation.

7:27C-3.3 Information requirements for an application for an operating permit incorporating CO_2 Budget Trading Program requirements

(a) A complete application for a new***, renewed*** or modified operating permit for a CO_2 budget source shall include the following elements concerning the CO_2 budget source for which the application is submitted, in a format prescribed by the Department:

1. Identification of the CO_2 budget source, including plant name and the ORIS or facility code assigned to the source by the Energy Information Administration of the United States Department of Energy, if applicable;
2. Identification of each CO_2 budget unit at the CO_2 budget source;
3. The ***[**standard requirements**]* *general provisions*** at N.J.A.C. 7:27C-1.4;
4. The compliance certification requirements at N.J.A.C. 7:27C-4.1;
5. The compliance requirements at N.J.A.C. 7:27C-6.9; and
6. The monitoring ***, recordkeeping*** and reporting requirements at N.J.A.C. 7:27C-8.

SUBCHAPTER 4. COMPLIANCE CERTIFICATION

7:27C-4.1 Compliance certification report

(a) For each control period in which a CO_2 budget source is subject to the CO_2 requirements of N.J.A.C. 7:27C-1.4, the CO_2 authorized account representative of the source shall submit a compliance certification report to the Department, in a format provided by the Department, by March 1 following the relevant control period.

(b) The CO_2 authorized account representative shall include in the compliance certification report under (a) above the following elements:

1. Identification of the CO_2 budget source and each CO_2 budget unit at the source;
2. At the CO_2 authorized account representative's option, the serial numbers of the CO_2 allowances that are to be deducted from the CO_2 budget source's compliance account under N.J.A.C. 7:27C-6.9 for the control period, including the serial numbers of any CO_2 offset allowances that are to be deducted ***,*** subject to the limitations of N.J.A.C. 7:27C-6.9(a)3; and
3. The compliance certification under (c) below.

(c) In the compliance certification report required at (a) above, the CO_2 authorized account representative shall certify, based on reasonable inquiry of those persons with primary responsibility for operating the CO_2 budget source and the CO_2 budget units at the source in compliance with the CO_2 Budget Trading Program, whether the CO_2 budget source and each CO_2 budget unit at the source for which the compliance certification is submitted was operated during the calendar years covered by the report in compliance with the requirements of the CO_2 Budget Trading Program, including:

1. Whether the CO_2 budget source was operated in compliance with the CO_2 requirements of N.J.A.C. 7:27C-1.4;
2. Whether the monitoring plan applicable to each CO_2 budget unit at the CO_2 budget source has been maintained to reflect the actual operation and monitoring of the CO_2 budget unit, and contains all information necessary to attribute CO_2 emissions to the CO_2 budget unit, in accordance with N.J.A.C. 7:27C-8;
3. Whether all the CO_2 emissions from the CO_2 budget units at the CO_2 budget source were monitored or accounted for through the missing data procedures and reported in the quarterly monitoring reports, including whether conditional data were reported in the quarterly reports in accordance with N.J.A.C. 7:27C-8. If conditional data were reported, the owner or operator shall indicate whether the status of all conditional data has been resolved and all necessary quarterly report resubmissions have been made;
4. Whether the facts that form the basis for certification under N.J.A.C. 7:27C-8 of each monitor at each CO_2 budget unit at the CO_2 budget source, or for using an excepted

monitoring method or alternative monitoring method approved under N.J.A.C. 7:27C-8, if any, have changed; and

5. If a change is required to be reported under (c)4 above, the specific nature of the change, the reason for the change, when the change occurred, and how the CO_2 budget unit's compliance status was determined subsequent to the change, including what method was used to determine emissions when a change mandated the need for monitor recertification.

7:27C-4.2 Department action on compliance certifications

(a) The Department may review and conduct independent audits of any compliance certification or any other submission under N.J.A.C. 7:27C and make appropriate adjustments of the information in the compliance certification or other submission.

(b) The Department will deduct CO_2 allowances from or transfer CO_2 allowances to a CO_2 budget source's compliance account, as appropriate, based on the information in the compliance certification or other submission, as adjusted under (a) above.

SUBCHAPTER 5. CO_2 ALLOWANCE ALLOCATIONS

7:27C-5.1 New Jersey CO_2 Budget Trading Program base budget

(a) The New Jersey CO_2 Budget Trading Program annual base budget for the allocation years 2009 and later is as follows:

1. For the 2009 through 2014 allocation years, 22,892,730 tons;
2. For the 2015 allocation year, 22,320,412 tons;
3. For the 2016 allocation year, 21,748,094 tons;
4. For the 2017 allocation year, 21,175,775 tons; and
5. For the 2018 allocation year and each succeeding allocation year, 20,603,457 tons.

7:27C-5.2 CO_2 allowance allocations

(a) The Department will allocate CO_2 allowances representing 99 percent of the tons for each allocation year from the New Jersey CO_2 Budget Trading Program base budget set forth in N.J.A.C. 7:27C-5.1 to a consumer benefit account.

(b) The Department will distribute allowances from the consumer benefit account in accordance with N.J.A.C. 7:27C-5.3 through 5.5.

(c) The Department will allocate CO_2 allowances representing one percent of the tons for each allocation year from the New Jersey CO_2 Budget Trading Program annual base budget set forth in N.J.A.C. 7:27C-5.1 to a voluntary renewable energy market account. The Department will

administer the voluntary renewable energy market account in accordance with the following procedures:

1. A retail provider of renewable energy or renewable energy attribute credits may submit a written request following the end of an allocation year to the Department to retire CO_2 allowances in the voluntary renewable energy market account for that allocation year. A request shall be submitted by the July 30 following the allocation year for which the request is being made and shall include sufficient information to demonstrate, to the satisfaction of the Department, that the voluntary renewable energy purchases referenced in the request resulted in avoided CO_2 emissions in a participating state or states during the allocation year. Any such request shall document that the voluntary renewable energy purchases addressed in such request represented a purchase of renewable energy or renewable energy attribute credits by an electricity ratepayer in New Jersey and that such purchases represented renewable energy or renewable energy attribute credits generated or created, as applicable, in a participating state or states. All data submitted must be verifiable and from reputable sources, which may include retail electricity providers, organizations that certify renewable energy products, and other parties, as determined to be appropriate by the Department. A request shall contain the following information:
   i. Documentation of voluntary renewable energy or renewable energy attribute credit purchases by electricity ratepayers in New Jersey from the retail provider, designated in megawatt-hours or number of attribute credits by customer class in New Jersey during the allocation year, including documentation of the time period when the retail purchases were made;
   ii. With respect to purchases documented pursuant to (c)1i above, documentation that the renewable energy or renewable energy attribute credits related to the voluntary renewable energy or renewable energy attribute credit purchases, designated by megawatt-hours or number of attribute credits, were procured by the retail provider;
   iii. With respect to purchases documented pursuant to (c)1i above, documentation of the participating state where the electricity was generated or the renewable energy attribute credit was created, including documentation of the electric generation facility name, unique generator identification number, and fuel type; and
   iv. With respect to purchases documented pursuant to (c)1i above, documentation of the time period when the electricity was generated or the renewable energy attribute credit was created;

2. By the October 31 that follows the July 30 request date at (c)1 above, the Department will determine the actual voluntary renewable energy purchases in New Jersey that occurred during the allocation year and that represent renewable energy generation in one or more participating states during the allocation year. The Department will multiply the megawatt-hours of demonstrated voluntary renewable energy purchases or the number of renewable energy attribute credit purchases during an allocation year by the marginal CO_2 emissions rate, in pounds of CO_2 per megawatt hour, for the control area where the generation occurred, as determined by the Department. If data to determine the marginal emissions rate are

unavailable, the Department will use the average emissions rate, in pounds of CO_2 per megawatt hour, as determined by the Department;

3. The Department will calculate CO_2 allowances to be retired from the voluntary renewable energy market account for an allocation year as follows:

CO_2 tons = MP x EF

where:

CO_2 tons, rounded down to the nearest whole ton, is the number of CO_2 allowances to be retired from the voluntary renewable energy market account for a specific allocation year;

MP is the demonstrated megawatt-hours of voluntary renewable energy or the number of renewable energy attributes credits (with each attribute credit representing the attributes related to one megawatt-hour of electric generation) purchased in New Jersey during the applicable allocation year, as submitted and demonstrated to the satisfaction of the Department in accordance with (c)1 above; and

EF is the CO_2 emissions factor, in pounds of CO_2 per MWh, for the control area where the electricity represented by the sale was generated, for the applicable allocation year, as determined by the Department pursuant to (c)2 above;

4. As of the November 30 that follows the allocation year referenced in a request pursuant to (c)1 above, the Department will retire CO_2 allowances in the voluntary renewable energy market account for the applicable allocation year in an amount up to the number of tons of avoided CO_2 emissions represented by actual voluntary renewable energy purchases, as determined by the Department pursuant to (c)2 and 3 above. In no event will the number of CO_2 allowances retired exceed the number of CO_2 allowances for a respective allocation year in the voluntary renewable energy market account;

5. If more than one retail provider of renewable energy or renewable energy attribute credits requests the retirement of CO_2 allowances, and the number of CO_2 allowances that are subject to the requests approved by the Department exceeds the number of CO_2 allowances for a respective allocation year in the voluntary renewable energy market account, the Department will retire CO_2 allowances from the account for such requests in the order in which such submitted retirement requests were received and subsequently approved by the Department. For purposes of this paragraph, requests will be considered simultaneous if they are made in the same month. Should retirement requests be submitted in the same month in excess of the allocation of allowances for a respective allocation year to the voluntary renewable energy market account, the Department will retire CO_2 allowances for such requests on a basis proportional to the number of CO_2 allowances requested for retirement and subsequently approved by the Department;

6. The Department will approve only those requests for CO_2 allowance retirements that demonstrate avoided CO_2 emissions during control periods starting on or after January 1, 2009; and

7. After retiring CO_2 allowances from the voluntary renewable market account for an allocation year pursuant to (c)4 above, the Department will transfer any remaining CO_2 allowances for that allocation year from the account to the consumer benefit account.

(d) The Department will allocate CO_2 allowances to CO_2 budget units that are cogeneration units pursuant to (e) through (k) below.

(e) In order for a CO_2 budget unit that is a cogeneration unit to qualify for the allocation of CO_2 allowances, the CO_2 budget unit shall meet the requirements at (g) and (h) below, and the CO_2 authorized account representative shall submit to the Department, by the March 30 following the end of the allocation year for which CO_2 allowances are being requested, a complete application, pursuant to (f) below, for the allocation of CO_2 allowances.

(f) An application for the allocation of CO_2 allowances shall include the following:

1. Documentation that the CO_2 budget unit meets the criteria for a cogeneration unit;
2. Documentation that the CO_2 budget unit meets the applicable thermal efficiency requirements at (g)2 and 3 and (h)2 below;
3. Identification of the compliance account for the CO_2 budget unit;
4. Identification of the allocation year for which an allocation request is being made;

[**4.**]* *5. Specification of the number of CO_2 allowances being requested, as calculated pursuant ***to*** (j) or (k) below, as appropriate; and

[**5.**]* *6. The calculations and supporting data used to determine the number of CO_2 allowances being requested, and an explanation of the data and the methods on which the calculations are based.

(g) To qualify for the allocation of allowances pursuant to (j) below, a CO_2 budget unit shall meet the following requirements:

1. The CO_2 budget unit must be a cogeneration unit;
2. The CO_2 authorized account representative for the CO_2 budget unit has not accepted a fixed-price sale offer of CO_2 allowances from the Department for the CO_2 budget unit pursuant to N.J.A.C. 7:27C-5.4(b) during the calendar year that corresponds to the allocation year for which the request for CO_2 allowances pursuant to (f) above is being made;
3. For the allocation of CO_2 allowances for the 2009 through 2011 allocation years, a CO_2 budget unit that is a cogeneration unit shall meet the following thermal efficiency levels, as demonstrated during the allocation year for which an allocation request is being submitted:
   i. 42.5 percent thermal efficiency for a topping-cycle cogeneration unit if useful thermal energy produced is 15.0 percent or more of total energy output;
   ii. 45.0 percent thermal efficiency for a topping-cycle cogeneration unit if useful thermal energy produced is less than 15.0 percent of total energy output;
   iii. 45.0 percent thermal efficiency for all bottoming-cycle cogeneration units; and
4. For the allocation of CO_2 allowances for the 2012 allocation year and subsequent

allocation years, a CO_2 budget unit that is a cogeneration unit shall meet a thermal efficiency level of 60.0 percent, as demonstrated during the allocation year for which an allocation request is being submitted.

(h) To qualify for the allocation of CO_2 allowances pursuant to (k) below, a CO_2 budget unit shall meet the following requirements:

1. The CO_2 budget unit must be a cogeneration unit;
2. The CO_2 authorized account representative for the CO_2 budget unit has not accepted a fixed-price sale offer of CO_2 allowances from the Department for the CO_2 budget unit pursuant to N.J.A.C. 7:27C-5.4(b) during the calendar year that corresponds to the allocation year for which the request for CO_2 allowances pursuant to (f) above is being made; and
3. The CO_2 budget unit shall meet a thermal efficiency of 70.0 percent, as demonstrated during the allocation year for which an allocation request is being submitted.

(i) A CO_2 budget unit shall demonstrate thermal efficiency as follows:

$$Percent\ \ efficiency\ \ = \frac{UP + UTE}{TEI} \times 100\,\%$$

where:
UP = useful power, represented in MMBtu, based on a conversion of 3.413 MMBtu per MWh, and reported in accordance with N.J.A.C. 7:27C-8.8;
UTE = useful thermal energy in MMBtu for the allocation year, as based on reported net steam output pursuant to N.J.A.C. 7:27C-8.8, provided that for the 2009 allocation year, 2009 data shall be used; and
TEI = total energy input in MMBtu, as reported pursuant to N.J.A.C. 7:27C-8.

(j) The Department will determine the allocation for a CO_2 budget unit that is a cogeneration unit that meets the applicable requirements at (g) above as follows:

$$CO_2\ \ Allowances\ \ = \frac{UTE}{LHV} \times \frac{EF_{CO_2}}{2000}$$

where:
UTE = useful thermal energy in MMBtu for the allocation year, as based on reported net steam output pursuant to N.J.A.C. 7:27C-8.8, provided that for a request for CO_2 allowances for the 2009 allocation year, the Department will use reported 2009 net steam output data;
LHV = lower heating value of the fuel from EPA, Compilation of Air Pollutant Emissions Factors, Volume I: Stationary Point and Area Sources (AP-42), 1995, as supplemented and amended and incorporated by reference herein, which may be accessed electronically through the EPA Technology Transfer Network CHIEF site at http://www.epa.gov/ttn/chief/ap42/index.html;

EF_{CO2} = CO_2 emission factor for the fuel from EPA, Compilation of Air Pollutant Emissions Factors, Volume I: Stationary Point and Area Sources (AP-42), 1995, as supplemented and amended and incorporated by reference herein, which may be accessed electronically through the EPA Technology Transfer Network CHIEF site at http://www.epa.gov/ttn/chief/ap42/index.html; and
2000 = conversion from lbs to tons.

(k) The Department will determine the allocation for a CO_2 budget unit that is a cogeneration unit that meets the applicable requirements at (h) above based on the CO_2 emissions for the CO_2 budget unit during the allocation year for which an allocation request is being submitted. The Department will allocate CO_2 allowances in a number equivalent to the CO_2 emissions of the CO_2 budget unit during the allocation year.

(*l*) The Department will award early reduction CO_2 allowances to a CO_2 budget source for reductions in the CO_2 budget source's CO_2 emissions (inclusive of all emissions from CO_2 budget units at the CO_2 budget source) that are achieved by the source during the early reduction period (2006, 2007, and 2008), pursuant to (m) through (q) below. Total facility shutdowns are not eligible for early reduction CO_2 allowances.

(m) The CO_2 budget source shall submit its application to the Department for the award of early reduction CO_2 allowances by May 1, 2009.

(n) The CO_2 budget source shall demonstrate that all CO_2 budget units that existed at the source during the baseline period (2003, 2004, and 2005) are included as CO_2 budget units for the early reduction period. New CO_2 budget units added at the CO_2 budget source shall also be accounted for during the early reduction period.

(*o*) The Department will calculate the number of early reduction CO_2 allowances to be awarded to a particular CO_2 budget source for the early reduction period pursuant to the following methodology, as appropriate:

1. If total heat input to all CO_2 budget units at the CO_2 budget source during the early reduction period is less than or equal to the total heat input to all the CO_2 budget units at the CO_2 budget source during the baseline period, then early reduction CO_2 allowances will be calculated as follows:

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

where:
"ERAs" is the number of early reduction CO_2 allowances, represented as tons of CO_2;
"$AEER_{BASELINE}$" is the average CO_2 emissions rate resulting from electric energy output and thermal energy output for all of the CO_2 budget units at the CO_2 budget source during the baseline period (in pounds of CO_2/MWhth+e);

"$AEER_{ERP}$" is the average CO_2 emissions rate resulting from electric energy output and thermal energy output for all of the CO_2 budget units at the CO_2 budget source during the early reduction period (in pounds of CO_2 /MWhth+e);
"EO_{ERP}" is the total electric energy output from all CO_2 budget units at the CO_2 budget source during the early reduction period (in MWhe); and
"TO_{ERP}" is the total useful thermal energy output from all CO_2 budget units at the CO_2 budget source during the early reduction period (in MMBtu); or

2. If total heat input to all CO_2 budget units at the CO_2 budget source during the early reduction period is greater than the total heat input to all the CO_2 budget units at the CO_2 budget source during the baseline period, then early reduction CO_2 allowances will be calculated as follows:

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

where:
"ERAs" is the number of early reduction CO_2 allowances, represented as tons of CO_2;
"$E_{BASELINE}$" ***[**are**]*** ***is*** total CO_2 emissions from ***[**the**]*** all of the CO_2 budget units at the CO_2 budget source during the baseline period (in tons); and
"E_{ERP}" ***[**are**]*** ***is*** total CO_2 emissions from ***[**the**]*** all of the CO_2 budget units at the CO_2 budget source during the early reduction period (in tons).

(p) The CO_2 budget source shall demonstrate that the data submitted in support of the early reduction application were recorded in accordance with the requirements of N.J.A.C. 7:27C-8 for all of the baseline years and the early reduction years for which the CO_2 budget source was required to report CO_2 data pursuant to 40 CFR Part 75. A CO_2 budget source that was not required to submit CO_2 data pursuant to 40 CFR Part 75 for any of the years contained in the baseline period or early reduction period may petition the Department, as part of its application for early reduction CO_2 allowances submitted pursuant to N.J.A.C. 7:27C-5.2(d), for the use of an alternative data source or sources for the calculation of early reduction allowances.

(q) After the Department confirms a CO_2 budget source's early reductions of CO_2 emissions, it will award the early reduction CO_2 allowances to the CO_2 budget source's compliance account by December 31, 2009.

7:27C-5.3 Timing requirements for distribution of CO_2 allowances in the consumer benefit account

Except for CO_2 allowances transferred by the Department into the consumer benefit account pursuant to N.J.A.C. 7:27C-5.2(c)7 or allocated to a CO_2 budget source pursuant to N.J.A.C. 7:27C-5.2(j) and (k), the Department will make all CO_2 allowances for an allocation year that are held in the consumer benefit account for that allocation year available for purchase or auction by no later than the December 31 of the calendar year that corresponds to that allocation year.

7:27C-5.4 Distribution of CO_2 allowances in the consumer benefit account

(a) Except for those CO_2 allowances allocated to a CO_2 budget unit pursuant to N.J.A.C. 7:27C-5.2(j) and (k) or sold to a CO_2 authorized account representative pursuant to (b) below, the Department will make all CO_2 allowances for a respective allocation year that are held in the consumer benefit account available for sale through an auction administered on behalf of the Department, pursuant to N.J.A.C. 7:27C-5.5.

(b) On an annual basis, the Department will make CO_2 allowances in the consumer benefit account available for sale to the CO_2 authorized account representative of a CO_2 budget unit or units at a certified dispatch agreement facility through a fixed-price sale offer, as follows:

1. The Department will apportion CO_2 allowances available annually for sale to each CO_2 budget unit at a certified dispatch agreement facility based on the average annual CO_2 emissions for the CO_2 budget unit, as determined by the Department, for the most recent three-year period for which complete CO_2 emissions data are available. The Department will use emissions data as reported pursuant to N.J.A.C. 7:27C-8, if available, and as supplemented by such other data as necessary, in making such a determination;
2. The Department will offer CO_2 allowances made available for sale through a fixed-price sale offer for a price of $2.00 per CO_2 allowance;
3. The Department will publish notice of the procedures for purchasing CO_2 allowances through a fixed-price sale offer at least 45 days prior to the fixed-price sale offer. The public notice will include the following:
    i. The number of CO_2 allowances available for purchase by a CO_2 authorized account representative on behalf of each CO_2 budget unit at a certified dispatch agreement facility; and
    ii. The procedures for purchasing CO_2 allowances through the fixed-price sale offer, including the date by which a purchase option shall be exercised by a CO_2 authorized account representative on behalf of a CO_2 budget unit at a certified dispatch agreement facility, and the procedures for exercising a purchase option;
4. The CO_2 authorized account representative for a CO_2 budget unit at a certified dispatch agreement facility shall notify the Department by the deadline specified in the Department's notice of a fixed-price sale offer issued pursuant to (b)3 above as to whether the CO_2 authorized account representative accepts the Department's sale offer of CO_2 allowances for a specified CO_2 budget unit. The CO_2 authorized account representative shall specify the number of CO_2 allowances the CO_2 authorized account representative intends to purchase on behalf of each CO_2 budget unit, up to the number specified by the Department in the notice, as specified pursuant to (b)3 above for the applicable CO_2 budget unit; and
5. For those CO_2 allowances purchased by a CO_2 authorized account representative on behalf of a CO_2 budget unit, the Department will allocate allowances to the compliance account of the CO_2 budget unit.

(c) For a CO_2 budget source to be eligible to receive a fixed-price sale offer from the Department pursuant to (b) above, the owner or operator of the CO_2 budget source shall certify to the Department, through a sworn affidavit and supporting documentation from an independent entity, signed by both an official representative of the independent entity and by the chief financial officer or equivalent of the owner or operator of the CO_2 budget source, that the CO_2 budget source meets the criteria for a dispatch agreement facility as follows:

1. The CO_2 budget source is a cogeneration facility or the CO_2 budget source has a heat rate of less than 8,100 Btu per kilowatt-hour electric; and
2. The CO_2 budget source is subject to a power purchase agreement that includes the following conditions:
    i. The agreement was executed prior to January 1, 2002;
    ii. The agreement is for a duration of more than 15 years from its effective date;
    iii. The agreement provides that the counterpart to the agreement that purchases energy from the facility controls the electric dispatch of the facility;
    iv. The agreement does not allow for the facility to pass the cost of CO_2 allowances on to the counterpart to the agreement that purchases energy from the facility; and
    v. The agreement is currently in effect.

(d) The owner or operator of a CO_2 budget source certified as a dispatch agreement facility shall provide on-site access, upon the request of the Department, to any information the Department requires to determine the validity of the certification provided pursuant to (c) above.

(e) If, subsequent to the submittal of a sworn affidavit and supporting documentation pursuant to (c) above, there is any material change to the information and statements contained in the sworn affidavit and supporting material, the persons who submitted the sworn affidavit and supporting material shall submit a supplemental sworn affidavit and supporting material addressing any such material change within 30 days after the change occurs. If the supplemental sworn affidavit and supporting material is not submitted to the Department, the CO_2 budget source will not be eligible to receive a fixed-price sale offer.

(f) At such time that the power purchase agreement documented pursuant to (c)2 above for a certified dispatch agreement facility expires or is terminated, or when the services under a new contract become effective, the facility will no longer be considered a certified dispatch agreement facility.

(g) Any signatory to a sworn affidavit submitted pursuant to (c) above who knowingly gives or causes to be given any false or misleading information or who knowingly makes any false or misleading statement in such affidavit shall be subject to the penalties and financial assessments outlined at N.J.S.A. 26:2C-49e, and the CO_2 budget unit referenced in the affidavit shall no longer be considered a certified dispatch agreement facility.

(h) Any CO_2 allowances purchased by a CO_2 authorized account representative on behalf of a CO_2 budget unit at a certified dispatch agreement facility and that remain in the compliance account for the related CO_2 budget source subsequent to the compliance deduction by the Department of CO_2 allowances for a control period pursuant to N.J.A.C. 7:27C-6.9(b) shall be assigned to the consumer benefit account established pursuant to N.J.A.C. 7:27C-5.2(a).

7:27C-5.5 Auction of CO_2 allowances

(a) The Department will conduct auctions to sell CO_2 allowances allocated to the consumer benefit account in accordance with N.J.A.C. 7:27C-5.5 through 5.18.

(b) Implementation and administrative support functions for any CO_2 allowance auction conducted pursuant to N.J.A.C. 7:27C-5.5 through 5.18 may be delegated by the Department to an agent qualified to conduct auctions, including a regional entity, provided that such agent shall perform all such functions under the direction and oversight of the Department.

(c) The proceeds from the auction of CO_2 allowances will be deposited in the Global Warming Solutions Fund established pursuant to N.J.S.A. 26:2C-50.

7:27C-5.6 Auction format

(a) In conducting CO_2 allowance auctions, the Department will employ one or more of the following auction formats:

1. Uniform-price sealed-bid;
2. Discriminatory-price sealed-bid;
3. Ascending price, multiple-round; or
4. Descending price, multiple round.

(b) The Department will auction CO_2 allowances in lots of 1,000 CO_2 allowances, except in such instance where the volume of CO_2 allowances auctioned requires an individual lot size smaller than 1,000.

7:27C-5.7 Auction timing and CO_2 allowance submission schedule

(a) The Department will hold CO_2 allowance auctions no less frequently than annually, and as frequently as determined by the Department to be necessary and practical to ensure the availability of CO_2 allowances to CO_2 budget units and to support the effective functioning of the CO_2 allowance market.

(b) Prior to the end of a control period, the Department will make available for sale all CO_2 allowances of allocation years that fall within the control period that are held in the consumer benefit account, less any CO_2 allowances allocated pursuant to N.J.A.C. 7:27C-5.2(j) and (k) and 5.4(b).

(c) In each CO_2 allowance auction, the Department will make available for sale CO_2 allowances of allocation years that fall within a corresponding control period and CO_2 allowances of allocation years that fall within a subsequent future control period, in a number as determined to be appropriate by the Department.

(d) The number of CO_2 allowances to be made available for sale in a specific auction will be disclosed in the notice of CO_2 allowance auction issued pursuant to N.J.A.C. 7:27C-5.9.

7:27C-5.8 Reserve price and disposition of unsold allowances

(a) The Department will establish a reserve price for each CO_2 allowance auction, which is the price below which no CO_2 allowances will be sold. The Department will publicly announce the reserve price prior to each CO_2 allowance auction.

(b) The monetary amount of the reserve price established by the Department will be the higher of the minimum reserve price or the current market reserve price, as determined by the Department, unless the Department determines there are not enough data available to justify the calculation of a current market reserve price, in which case the established reserve price will be the minimum reserve price.

(c) If, after a CO_2 allowance auction has been held, any CO_2 allowances offered for sale at the CO_2 allowance auction remain unsold, such unsold CO_2 allowances will be distributed as follows:

1. Unsold CO_2 allowances of a particular allocation year will be made available for sale in the subsequent CO_2 allowance auction for CO_2 allowances of that allocation year, subject to the limitations at (c)2 below, provided a reserve price greater than the minimum reserve price is in effect for such CO_2 allowance auction; and
2. If following the end of a control period there are unsold CO_2 allowances of allocation years that fall within that control period, such CO_2 allowances will be distributed as follows:
    i. The Department will offer such CO_2 allowances for sale in a subsequent CO_2 allowance auction or auctions during the next control period for which a reserve price greater than the minimum reserve price is in effect; or
    ii. The Department will retire the unsold CO_2 allowances.

7:27C-5.9 Auction notice

(a) The Department will provide a notice of CO_2 allowance auction on the auction website no later than 45 days prior to the date upon which the auction will be conducted.

(b) The notice of CO_2 allowance auction will include, but not necessarily be limited to, the following:

1. The date, time, and location of the CO_2 allowance auction, including the Internet address or electronic address for the CO_2 allowance auction location, as applicable;
2. The format for the CO_2 allowance auction;
3. The number of CO_2 allowances to be auctioned, by allocation year;
4. The procedures for conducting the CO_2 allowance auction, including the required bid submission format and process, and information regarding financial settling of CO_2 allowance payments;
5. All CO_2 allowance auction participation requirements;
6. The amount and type of financial security required;
7. Participation limits, such as bidding limits that may apply to an individual bidder or a group of related bidders;
8. Application instructions for applying to participate in the CO_2 allowance auction, and application forms; and
9. Identification of a contact person for further information.

7:27C-5.10 Auction participant requirements

(a) In order to participate in a CO_2 allowance auction, a party must:

1. Be listed in the notice of CO_2 allowance auction issued pursuant to N.J.A.C. 7:27C-5.9(a) as a member of one of the categories of parties that are eligible to participate in the specified CO_2 allowance auction;
2. Open and maintain a compliance account or general account, established pursuant to N.J.A.C. 7:27C-6.2(a) or (b), respectively;
3. Submit a qualification application pursuant to N.J.A.C. 7:27C-5.12(a) and become qualified by the Department to participate in CO_2 allowance auctions pursuant to N.J.A.C. 7:27C-5.12(e); and
4. Submit financial security such as a bond, cash, certified funds, or an irrevocable stand-by letter of credit, in a manner and form acceptable to the Department, as specified in the notice of CO_2 allowance auction issued pursuant to N.J.A.C. 7:27C-5.9(a).

(b) Only a party that meets the requirements at (a) above will be classified by the Department as a bidder and approved to participate in a specified CO_2 allowance auction.

7:27C-5.11 Auction participant eligibility

(a) The Department will announce the categories of parties that are eligible to participate in a specific CO_2 allowance auction as part of the notice of CO_2 allowance auction, provided that an owner or operator of a CO_2 budget unit located in New Jersey is always eligible to participate in a CO_2 allowance auction.

(b) For any CO_2 allowance auction, the following categories of parties may be eligible to participate:

1. An owner or operator of a CO_2 budget unit located in New Jersey, which shall always be eligible to participate, pursuant to (a) above;
2. An owner or operator of a CO_2 budget unit located in a participating state; and
3. Any other market participants, as may be specified in the notice of CO_2 allowance auction, with or without limitation.

7:27C-5.12 Auction participant qualification

(a) Any party that intends to participate in a CO_2 allowance auction or auctions shall submit a qualification application to the Department, in the form and manner specified in the notice of CO_2 allowance auction.

(b) The deadline for submitting a qualification application will be established in the notice of CO_2 allowance auction and ***[**shall**]* *<u>will</u>*** be no sooner than 15 days following the publication of such notice.

(c) As part of a qualification application, an applicant shall provide information and documentation relating to the applicant's ability and authority to execute bids and honor contractual obligations, as well as information required to ensure adherence to the auction requirements and procedures specified in N.J.A.C. 7:27C-5.10, 5.11, and 5.13 through 5.15, as follows:

1. Identification by the applicant of either a compliance account or general account, established pursuant to N.J.A.C. 7:27C-6.2(a) or (b), and identification of the CO_2 authorized account representative for such compliance account or general account;
2. Information and documentation regarding the corporate identity, ownership, affiliations, and capital structure of the entity represented by the applicant;
3. Identification of any indictment or felony conviction of the applicant or any member, director, principle, partner, or officer of the entity represented by the applicant or any affiliate or related entity;
4. Identification of any previous or pending investigation of the applicant or the entity represented by the applicant or any affiliate or related entity, with respect to any alleged violation of any rule, regulation, or law associated with any commodity market or exchange; and

5. Such other information and declarations as the Department determines may be required of an applicant in order to evaluate prospective auction participants and ensure the integrity of the CO_2 allowance auction process in accordance with the requirements and procedures for CO_2 allowance auctions established at N.J.A.C. 7:27C-5.10, 5.11, and 5.13 through 5.15.

(d) The Department will determine whether a qualification application is complete, incomplete, or otherwise deficient. If the Department determines that an application is incomplete or otherwise deficient, the applicant will be given a reasonable opportunity, and in no event less than five business days and no more than 10 business days, as specified in the notice of CO_2 allowance auction, to provide additional information to the Department in order to complete the application or remedy any application deficiency.

(e) The Department will review a complete qualification application and make a determination as to whether the applicant is qualified to participate in CO_2 allowance auctions. The Department will make a determination as to the qualification status of the applicant by the deadline for such determination specified in the notice of CO_2 allowance auction.

(f) The Department may deny qualification to a party based on information submitted in a qualification application in order to ensure the integrity of the CO_2 allowance auction process in accordance with the requirements and procedures for auctions established at N.J.A.C. 7:27C-5.10, 5.11, and 5.13 through 5.15.

(g) The Department may revoke the qualification status of a party, if such party fails to comply with the requirements of N.J.A.C. 7:27C-5.10, 5.11, and 5.13 through 5.15, or if the Department determines that such party has provided false or misleading information or withheld pertinent information from its qualification application submitted pursuant to (a) above. The Department may also prohibit a party that has engaged in such conduct from participating in future CO_2 allowance auctions where the Department determines that the prior conduct of the party could compromise the integrity of a subsequent CO_2 allowance auction.

(h) A party found by the Department to be qualified to participate in a CO_2 allowance auction will be qualified to participate in subsequent CO_2 allowance auctions, provided that there has been no material change to the information supplied to the Department in the qualification application submitted pursuant to (a) above. If there is any material change to the information in the qualification application submitted pursuant to (a) above, the party's qualification will expire as of the date of such change, pending the submission by the party of a new qualification application pursuant to (a) above and a determination by the Department that the party is qualified to participate in CO_2 allowance auctions.

(i) Prior to each CO_2 allowance auction, a party that intends to participate in the auction shall notify the Department, through a notice of intent to participate, that the party intends to

participate in the upcoming CO_2 allowance auction. Such notice shall be submitted to the Department by the same date as that required for submitting a qualification application established in the notice of CO_2 allowance auction for such auction.

(j) As part of a notice of intent to participate submitted to the Department pursuant to (i) above, a qualified party shall notify the Department whether there has been any material change to the information supplied by the qualified party to the Department in the qualification application submitted pursuant to (a) above.

7:27C-5.13 Submission of financial security

(a) In order to participate in any specific CO_2 allowance auction, a qualified party shall provide financial security to the Department, such as a bond, cash, certified funds, or an irrevocable stand-by letter of credit, in a form and manner prescribed by the Department in the notice of CO_2 allowance auction.

(b) Upon receipt and approval by the Department of financial security submitted pursuant to (a) above, the Department will approve the party to participate as a bidder in the specified CO_2 allowance auction.

(c) A party that submits financial security may request return of such financial security at any time prior to or following any CO_2 allowance auction, subject to the following limitations:

1. Any request for the return of financial security prior to the conduct of a CO_2 allowance auction will result in the Department revoking approval to participate in such CO_2 allowance auction, as of the date of such request;
2. The Department will not return such financial security if the Department has any current or pending claim to such financial security as a result of the failure of the bidder to abide by the requirements of N.J.A.C. 7:27C-5.10 through 5.15 or to pay the full amount of any submitted bid when payment is due; and
3. Financial security may be forfeited to the Department in the event the bidder's offer to purchase CO_2 allowances is accepted and the bidder fails to tender payment of the full amount when due.

7:27C-5.14 Bidder limitations

(a) A bidder may only submit a bid or bids in an amount up to the amount of financial security provided to the Department.

(b) No bidder or combination of bidders with related beneficial interests may purchase more than 25 percent of the CO_2 allowances offered for sale in any one CO_2 allowance auction.

7:27C-5.15 Bid submittal requirements

(a) All bids shall be submitted in a form and manner prescribed by the Department, which the Department will make available on the CO_2 allowance auction website, as appropriate.

(b) A bid submitted at a CO_2 allowance auction is a binding offer for the purchase of CO_2 allowances.

7:27C-5.16 Approval of auction results

(a) The Department will approve or disapprove the outcome of a CO_2 allowance auction following the completion of the auction.

(b) The Department will approve or disapprove the results of a CO_2 allowance auction based on an evaluation, in consultation with a market monitor, of whether the auction was conducted in accordance with the proposed procedures and requirements at N.J.A.C. 7:27C-5.5 through 5.15 and whether there was any indication of collusive behavior among auction participants or attempts at market manipulation that impacted the results of the auction.

7:27C-5.17 Award of CO_2 allowances to winning bidders

(a) Following the approval of the results of a CO_2 allowance auction by the Department pursuant to N.J.A.C. 7:27C-5.16 and the settlement of financial transactions by a winning bidder, the Department will award CO_2 allowances to such winning bidder in a number equal to the number of CO_2 allowances represented in winning bids submitted by the bidder.

(b) The Department will allocate CO_2 allowances to the compliance account or general account identified in the qualification application of a winning bidder, in a number equal to the CO_2 allowances awarded to the bidder pursuant to (a) above.

7:27C-5.18 Publication of auction results

Following the approval of an auction by the Department pursuant to N.J.A.C. 7:27C-5.16(a), and no later than 10 days following the allocation of CO_2 allowances to the CO_2 allowance accounts of winning bidders pursuant to N.J.A.C. 7:27C-5.17, the Department will publish on the CO_2 allowance auction website the auction clearing price and the number of CO_2 allowances sold in the auction.

SUBCHAPTER 6. CO_2 ALLOWANCE TRACKING SYSTEM

7:27C-6.1 CO_2 Allowance Tracking System accounts

(a) Consistent with N.J.A.C. 7:27C-6.2(a), the Department will establish one compliance account for each CO_2 budget source. Allocations of CO_2 allowances pursuant to N.J.A.C. 7:27C-5 and 11 and deductions or transfers of CO_2 allowances pursuant to N.J.A.C. 7:27C-4.2, 6.9, or 7 will be recorded in the compliance accounts in accordance with this subchapter.

(b) Consistent with N.J.A.C. 7:27C-6.2(b), the Department will establish, upon request, a general account for any person. Transfers of CO_2 allowances pursuant to N.J.A.C. 7:27C-7 will be recorded in the general account in accordance with this subchapter.

7:27C-6.2 Establishment of a CO_2 Allowance Tracking System account

(a) Upon receipt of a complete account certificate of representation under N.J.A.C. 7:27C-2.4, the Department will establish a compliance account for each CO_2 budget source for which the account certificate of representation was submitted, and will assign a unique identifying number to each such established account.

(b) Upon receipt of a complete application for a general account under N.J.A.C. 7:27C-6.3(b), the Department will establish a general account for the person or persons for whom the application is submitted, and will assign a unique identifying number to each such established account.

(c) Once the Department has established a CO_2 Allowance Tracking System account, all submissions to the Department pertaining to the account, including, but not limited to, submissions concerning the deduction or transfer of CO_2 allowances in the account, shall be made only by the CO_2 authorized account representative for the account.

7:27C-6.3 Procedures for opening a general account

(a) Any person may apply to open a general account for the purpose of holding and transferring CO_2 allowances by submitting an application for a general account pursuant to (b) below.

(b) A complete application for a general account shall include the following elements in a format prescribed by the Department:

1. The name, address, e-mail address, telephone number, and facsimile transmission number of the CO_2 authorized account representative for the general account and any alternate CO_2 authorized account representative for the general account;
2. At the option of the CO_2 authorized account representative for the general account, the organization name and type of organization;
3. A list of all persons subject to a binding agreement for the CO_2 authorized account

representative for the general account or any alternate CO_2 authorized account representative for the general account to represent their ownership interest with respect to the CO_2 allowances held in the general account;

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

5. The signature of the CO_2 authorized account representative for the general account and any alternate CO_2 authorized account representative for the general account and the dates signed; and

6. Documents of agreement referred to in the application for a general account, as may be required by the Department.

(c) The Department is under no obligation to review or evaluate the sufficiency of any documents of agreement referred to in the application for a general account.

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

7:27C-6.4 Authorization of the CO_2 authorized account representative for a general account

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

decision issued to the CO_2 authorized account representative for the general account or any alternate CO_2 authorized account representative for the general account by the Department or a court of competent jurisdiction regarding the general account.

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

(c) Each submission concerning the general account shall be submitted, signed, and certified by the CO_2 authorized account representative for the general account or ***[**any**]*** ***__the__*** alternate CO_2 authorized account representative for the general account. Each such submission shall include the following certification by the CO_2 authorized account representative for the general account or any alternate CO_2 authorized account representative for the general account:
"I am authorized to make this submission on behalf of the persons having an ownership interest with respect to the CO_2 allowances held in the general account. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."

(d) The Department will accept or act on a submission concerning the general account only if the submission has been made, signed, and certified in accordance with (c) above.

7:27C-6.5 Changing the CO_2 authorized account representative for a general account and the alternate CO_2 authorized account representative for a general account; changes in ownership interest with respect to CO_2 allowances in a general account

(a) The CO_2 authorized account representative for a general account or the alternate CO_2 authorized account representative for a general account may be changed at any time by submitting a superseding complete application for a general account pursuant to N.J.A.C. 7:27C-6.3(b). The change in the CO_2 authorized account representative for the general account or the alternate CO_2 authorized account representative for the general account is effective upon receipt by the Department of the superseding complete application for a general account. Notwithstanding any such change, all representations, actions, inactions, and submissions by the previous CO_2 authorized account representative for the general account or the previous alternate CO_2 authorized account representative for the general account prior to the time and date when the Department receives the superseding application for a general account shall be binding on the

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

(b) In the event a person with an ownership interest in CO_2 allowances in a general account is not included in the list of such persons in the application for a general account, such person shall be deemed to be subject to and bound by the application for a general account, the representations, actions, inactions, and submissions of the CO_2 authorized account representative and any alternate CO_2 authorized account representative, and the decisions, orders, actions, and inactions of the Department, as if the person were included in the list.

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

7:27C-6.6 Objections concerning the CO_2 authorized account representative for a general account

(a) Once the Department has received a complete application for a general account under N.J.A.C. 7:27C-6.3(b), the Department will rely on the application, unless and until the Department receives a superseding complete application for a general account under N.J.A.C. 7:27C-6.5(a).

(b) Except as provided at N.J.A.C. 7:27C-6.5(a) or (b), no objection or other communication submitted to the Department concerning the authorization, or any representation, action, inaction, or submission of the CO_2 authorized account representative for the general account***,*** or ***[**any**]* *the*** alternate CO_2 authorized account representative for the general account, shall affect any representation, action, inaction, or submission of the CO_2 authorized account representative for the general account or ***[**any**]* *the*** alternate CO_2 authorized account representative for the general account or the finality of any decision or order by the Department under this chapter.

(c) The Department will not decide or otherwise intervene in any dispute concerning the authorization or any representation, action, inaction, or submission of a CO_2 authorized account representative or any alternate CO_2 authorized account representative for a general account, including private legal disputes concerning the proceeds of CO_2 allowance transfers.

7:27C-6.7 Delegation of authority to make electronic submissions by the CO_2 authorized account representative for a general account and the alternate CO_2 authorized account representative for a general account

(a) A CO_2 authorized account representative for a general account or an alternate CO_2 authorized account representative for a general account may delegate, to one or more natural persons, his or her authority to make an electronic submission to the Department under N.J.A.C. 7:27C-7.1 as provided at (b) below.

(b) In order to delegate authority to make an electronic submission to the Department in accordance with (a) above, the CO_2 authorized account representative for a general account or alternate CO_2 authorized account representative for a general account, as appropriate, shall submit to the Department a notice of delegation, in a format prescribed by the Department, that includes the following elements:

1. The name, address, e-mail address, telephone number, and facsimile transmission number of such CO_2 authorized account representative or alternate CO_2 authorized account representative;
2. The name, address, e-mail address, telephone number, and facsimile transmission number of each such natural person, herein referred to as "electronic submission agent";
3. For each such natural person, a list of the types of electronic submissions under (a) above for which authority is delegated to him or her; and
4. The following certification by the delegating CO_2 authorized account representative for the general account or the delegating alternate CO_2 authorized account representative for the general account, as appropriate:
    i. "I agree that any electronic submission to the Department that is by a natural person identified in this notice of delegation and of a type listed for such electronic submission agent in this notice of delegation and that is made when I am a CO_2 authorized account representative (or alternate CO_2 authorized account representative, as appropriate,) and before this notice of delegation is superseded by another notice of delegation under N.J.A.C. 7:27C-6.7(b) shall be deemed to be an electronic submission by me."; and
    ii. "Until this notice of delegation is superseded by another notice of delegation under N.J.A.C. 7:27C-6.7(b), I agree to maintain an e-mail account and to notify the Department immediately of any change in my e-mail address unless all delegation authority by me under N.J.A.C. 7:27C-6.7(b) is terminated."

(c) A notice of delegation submitted under (b) above shall be effective, with regard to the delegating CO_2 authorized account representative for the general account or the delegating alternate CO_2 authorized account representative for the general account identified in such notice, upon receipt of such notice by the Department and until the Department has received a superseding notice of delegation by such CO_2 authorized account representative or alternate CO_2 authorized account representative, as appropriate. The superseding notice of delegation may

replace any previously identified electronic submission agent, add a new electronic submission agent, or eliminate entirely any delegation of authority.

(d) ***[**Any**]* *<u>An</u>*** electronic submission covered by the certification in (b)4 above and made in accordance with a notice of delegation effective under (b) above shall be deemed to be an electronic submission by the CO_2 authorized account representative for the general account or alternate CO_2 authorized account representative for the general account submitting such notice of delegation.

7:27C-6.8 Recordation of CO_2 allowance allocations and CO_2 allowance awards

(a) By no later than January 30, 2009, the Department will record in the following accounts the CO_2 allowances for the 2009 through 2018 allocation years:

1. The CO_2 allowances allocated to the consumer benefit account, pursuant to N.J.A.C. 7:27C-5.2(a); and
2. The CO_2 allowances allocated to the voluntary renewable energy account pursuant to N.J.A.C. 7:27C-5.2(c).

(b) When allocating CO_2 allowances to and recording them in an account pursuant to (a) above, the Department will assign each CO_2 allowance a unique identification number that will include digits identifying the year for which the CO_2 allowance is allocated.

(c) When awarding CO_2 allowances to and recording them in an account pursuant to (d) and (h) below, the Department will assign each CO_2 allowance a unique identification number that will include digits identifying the year for which the CO_2 allowance is allocated. If the CO_2 allowance is a CO_2 offset allowance, the unique identification number will identify the CO_2 offset allowance as such.

(d) On or before December 31, 2009, the Department will record any early reduction CO_2 allowances awarded to a CO_2 budget source pursuant to N.J.A.C. 7:27C-5.2(q) in the applicable CO_2 budget source's compliance account.

(e) The Department will record any CO_2 allowances allocated to a CO_2 budget source pursuant to N.J.A.C. 7:27C-5.2(j) and (k) in the compliance account of the applicable CO_2 budget source within five business days of such allocation by the Department.

(f) The Department will record any CO_2 allowances allocated to a CO_2 budget source pursuant to N.J.A.C. 7:27C-5.4(b) to the compliance account of the applicable CO_2 budget source within five business days of such allocation by the Department.

(g) The Department will record any CO_2 allowances awarded to a winning bidder in a CO_2 allowance auction pursuant to N.J.A.C. 7:27C-5.17(b) in the compliance account or general account identified by such winning bidder within five business days of such award by the Department.

(h) The Department will record any CO_2 allowances awarded to an offset project sponsor pursuant to N.J.A.C. 7:27C-10.11(a) or (b) in the applicable offset project sponsor's general account within five business days of such award by the Department.

7:27C-6.9 Compliance

(a) CO_2 allowances are available to be deducted in order for a CO_2 budget source to comply with the CO_2 requirements of N.J.A.C. 7:27C-1.4 for a control period, provided that:

1. The CO_2 allowances, other than CO_2 offset allowances, are of allocation years that fall within a prior control period or the same control period for which the allowances will be deducted;
2. The CO_2 allowances are held in the CO_2 budget source's compliance account as of the CO_2 allowance transfer deadline for that control period or are transferred into the compliance account by a CO_2 allowance transfer correctly submitted for recordation under N.J.A.C. 7:27C-7.1 by the CO_2 allowance transfer deadline for that control period;
3. For CO_2 offset allowances, the number of CO_2 offset allowances that are available to be deducted in order for a CO_2 budget source to comply with the CO_2 requirements of N.J.A.C. 7:27C-1.4 for a control period may not exceed the number of tons representing the following percentages of the CO_2 budget source's CO_2 emissions for that control period, as determined in accordance with (a)3i through iii below, and N.J.A.C. 7:27C-8:
    i. Unless the provisions of (a)3ii or iii below apply, 3.3 percent;
    ii. If the Department determines that there has been a stage-one trigger event, five percent; or
    iii. If the Department determines that there has been a stage-two trigger event, 10 percent; and
4. The CO_2 allowances are not necessary for deductions for excess emissions for a prior control period under (e) below.

(b) Following the recordation, in accordance with N.J.A.C. 7:27C-7.2, of CO_2 allowance transfers submitted for recordation in the CO_2 budget source's compliance account by the CO_2 allowance transfer deadline for a control period, the Department will deduct CO_2 allowances available under (a) above to cover the source's CO_2 emissions for the control period, as follows:

1. Until the number of CO_2 allowances deducted equals the number of tons of total CO_2 emissions, less any CO_2 emissions attributable to the burning of eligible biomass, determined in accordance with N.J.A.C. 7:27C-8, from all CO_2 budget units at the CO_2 budget source for the control period; or

2. If there are insufficient CO_2 allowances to complete the deductions at (b)1 above, until there are no more CO_2 allowances remaining in the compliance account that are available to be deducted under (a) above.

(c) The CO_2 authorized account representative for a CO_2 budget source's compliance account may request the deduction of specific CO_2 allowances in the compliance account, identified by serial number, for emissions or excess emissions for a control period in accordance with (b) above or (e) below, as applicable. Such identification shall be made in the compliance certification report pursuant to N.J.A.C. 7:27C-4.1(b)2.

(d) Where there is no identification by the CO_2 authorized account representative, or only partial identification, of available CO_2 allowances by serial number pursuant to N.J.A.C. 7:27C-4.1(b)2, the Department will deduct CO_2 allowances for a control period from the CO_2 budget source's compliance account, in the following order:

1. CO_2 offset allowances, subject to the relevant compliance deduction limitations under (a)3 above, in chronological order (that is, CO_2 offset allowances from earlier allocation years shall be deducted before CO_2 offset allowances from later allocation years). In the event that some, but not all, CO_2 offset allowances from a particular allocation year are to be deducted, CO_2 offset allowances shall be deducted by serial number, with lower serial number allowances deducted before higher serial number allowances; and
2. Any CO_2 allowances, other than CO_2 offset allowances, that are available for deduction under (a) above. CO_2 allowances shall be deducted in chronological order (that is, CO_2 allowances from earlier allocation years shall be deducted before CO_2 allowances from later allocation years). In the event that some, but not all, CO_2 allowances from a particular allocation year are to be deducted, CO_2 allowances shall be deducted by serial number, with lower serial number allowances deducted before higher serial number allowances.

(e) If, after the deduction of CO_2 allowances for compliance in accordance with (b) above, a CO_2 budget source has excess emissions, the Department will deduct from the CO_2 budget source's compliance account a number of CO_2 allowances, from allocation years that occur after the control period in which the CO_2 budget source has excess emissions, equal to three times the number of the CO_2 budget source's excess emissions. In the event that a CO_2 budget source has insufficient CO_2 allowances to cover three times the number of the CO_2 budget source's excess emissions, the CO_2 budget source shall be required to immediately transfer CO_2 allowances into its compliance account in a quantity equal to three times the CO_2 budget source's excess emissions. No CO_2 offset allowances may be deducted to account for the source's excess emissions.

(f) The deduction of any CO_2 allowances required under (e) above will not affect the liability of the owners and operators of the CO_2 budget source or the CO_2 budget units at the CO_2 budget source for any fine, penalty, or assessment, or their obligation to comply with any other remedy,

for the same violation, as ordered under applicable State law.

(g) The Department's determination that a CO_2 budget source had excess emissions and the concomitant deduction of CO_2 allowances from that CO_2 budget source's account may be later challenged in the context of the initial administrative action as set forth at N.J.A.C. 7:27C-1.6, or in the context of or any civil or criminal judicial action arising from or encompassing that excess emissions violation. The commencement or pendency of any administrative enforcement or civil or criminal judicial action arising from or encompassing that excess emissions violation will not act to prevent the Department from deducting the CO_2 allowances resulting from the Department's original determination that the relevant CO_2 budget source has had excess emissions. Should the Department's determination of the existence or extent of the CO_2 budget source's excess emissions be revised, either by a settlement or final conclusion of any administrative or judicial action, the Department will act as follows:

1. In any instance where the Department's determination of the extent of excess emissions was held to be too low, the Department will take further action under (e) and (f) above to address the expanded violation; and
2. In any instance where the Department's determination of the extent of excess emissions was held to be too high, the Department will distribute to the relevant CO_2 budget source a number of CO_2 allowances equaling the number of CO_2 allowances deducted which are attributable to the difference between the original and final quantity of excess emissions. Should such CO_2 budget source's compliance account no longer exist, the CO_2 allowances will be provided to a general account selected by the owner or operator of the CO_2 budget source from which they were originally deducted.

(h) The Department will record in the appropriate compliance account all deductions from such an account made pursuant to (b) and (e) above.

(i) The Department may review and conduct independent audits concerning any submission under this chapter and make appropriate adjustments of the information in the submissions.

(j) The Department may deduct CO_2 allowances from or transfer CO_2 allowances to a CO_2 budget source's compliance account based on information in the submissions, as adjusted under (i) above.

7:27C-6.10 Banking

Each CO_2 allowance that is held in a compliance account or a general account will remain in such account unless and until the CO_2 allowance is deducted or transferred under N.J.A.C. 7:27C-4.2, 6.9, 6.11, or 7.

7:27C -6.11 Account error

The Department may, at its sole discretion and on its own motion, correct any error in any CO_2 Allowance Tracking System account. Within 10 business days of making such correction, the Department will notify the CO_2 authorized account representative for the account.

7:27C-6.12 Closing of general accounts

(a) A CO_2 authorized account representative of a general account may instruct the Department to close the account by submitting a statement requesting deletion of the account from the CO_2 Allowance Tracking System and by correctly submitting for recordation under N.J.A.C. 7:27C-7.1 a CO_2 allowance transfer of all CO_2 allowances in the account to one or more other CO_2 Allowance Tracking System accounts.

(b) If a general account shows no activity for a period of six or more years and does not contain any CO_2 allowances, the Department may notify the CO_2 authorized account representative of the account that the account will be closed in the CO_2 Allowance Tracking System 20 business days after the notice is sent. The Department will close the account after the 20-day period, unless before the end of the 20-day period the Department receives a correctly submitted transfer of CO_2 allowances into the account under N.J.A.C. 7:27C-7.1 or a statement submitted by the CO_2 authorized account representative demonstrating to the satisfaction of the Department good cause as to why the account should not be closed.

SUBCHAPTER 7. CO_2 ALLOWANCE TRANSFERS

7:27C-7.1 Submission of CO_2 allowance transfers

(a) A CO_2 authorized account representative seeking recordation of a CO_2 allowance transfer shall submit the transfer to the Department. The transfer shall include the following elements, in a format prescribed by the Department:

1. The numbers identifying both the transferor and transferee accounts;
2. A specification by serial number of each CO_2 allowance to be transferred;
3. The printed name and signature of the CO_2 authorized account representative of the transferor account and the date signed;
4. The date of the completion of the last sale or purchase transaction for the CO_2 allowance, if any; and
5. The purchase or sale price of the CO_2 allowances that are the subject of a sale or purchase transaction under (a)4 above.

7:27C-7.2 Recordation

(a) Within five business days of receiving a CO_2 allowance transfer, except as provided at (b)

below, the Department will record a CO_2 allowance transfer by moving each CO_2 allowance from the transferor account to the transferee account as specified by the request, provided that:

1. The transfer is submitted in accordance with N.J.A.C. 7:27C-7.1; and
2. The transferor account includes each CO_2 allowance identified by serial number in the transfer.

(b) The Department will not record a CO_2 allowance transfer into or out of a compliance account that is submitted for recordation after the CO_2 allowance transfer deadline that includes any CO_2 allowances of allocation years falling within a control period prior to or the same as the control period to which the CO_2 allowance transfer deadline applies until after completion of the process at N.J.A.C. 7:27C-6.9(b).

(c) The Department will not record a CO_2 allowance transfer submitted for recordation that fails to meet the requirements of (a)1 and 2 above.

7:27C-7.3 Notification

(a) Within five business days of recordation of a CO_2 allowance transfer under N.J.A.C. 7:27C - 7.2, the Department will notify each party to the transfer by giving notice to the CO_2 authorized account representatives of both the transferor and transferee accounts.

(b) Within 10 business days of receipt of a CO_2 allowance transfer that fails to meet the requirements of N.J.A.C. 7:27C-7.2(a), the Department will notify the CO_2 authorized account representatives of both accounts subject to the transfer of a decision not to record the transfer and the reasons for such non-recordation.

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

SUBCHAPTER 8 MONITORING, RECORDKEEPING AND REPORTING

7:27C-8.1 General requirements

(a) The owner, operator, and to the extent applicable, the CO_2 authorized account representative of a CO_2 budget unit, shall comply with the monitoring, recordkeeping and reporting requirements as provided in this subchapter and all applicable sections of 40 CFR Part 75 and all Appendices thereto, as specified in this subchapter, which are incorporated by reference herein. Where referenced in this subchapter, the monitoring requirements of 40 CFR Part 75 shall be adhered to in a manner consistent with the purpose of monitoring and reporting CO_2 mass emissions pursuant to this chapter. For purposes of complying with such requirements, the definitions in N.J.A.C. 7:27C-1.2 and in 40 CFR 72.2, as supplemented and amended, and which

are incorporated by reference herein, apply, and the terms "affected unit" and "designated representative" in 40 CFR Part 75 are replaced by the terms "CO_2 budget unit" and "CO_2 authorized account representative," respectively. Furthermore, where the term "continuous emissions monitoring system" or "CEMS" is used in 40 CFR Part 75, the definition of that term at N.J.A.C. 7:27C-1.2 applies. For units not subject to an acid rain emissions limitation, the term "Administrator" in 40 CFR Part 75 shall be replaced with the term "the Department."

(b) The owner or operator of a CO_2 budget unit who monitors a non-CO_2 budget unit pursuant to the common, multiple, or bypass stack procedures in 40 CFR 75.16(b)(2)(ii)(B) or 75.72(b)(2)(ii), for the purpose of complying with this subchapter shall monitor and report CO_2 mass emissions from such non-CO_2 budget unit according to the procedures for CO_2 budget units established in this section through N.J.A.C. 7:27C-8.7.

(c) The owner or operator of each CO_2 budget unit shall:

1. Install all monitoring systems necessary to monitor CO_2 mass emissions in accordance with 40 CFR Part 75, except for equation G-1 of Appendix G, which shall not be used to determine CO_2 emissions. Compliance with this paragraph may require systems to monitor CO_2 concentration, stack gas flow rate, O_2 concentration, heat input, and fuel flow rate;
2. Successfully complete all certification tests required under N.J.A.C. 7:27C-8.2 and meet all other requirements of this subchapter and 40 CFR Part 75, applicable to the monitoring systems installed pursuant to (c)1 above; and
3. Record, report, and quality-assure the data from the monitoring systems required pursuant to (c)1 above.

(d) The owner or operator of a CO_2 budget unit shall meet the monitoring system certification and other requirements of (c) above on or before the following dates, and shall record, report, and quality-assure the data from the monitoring systems under (c)1 above on and after the applicable date, as follows:

1. For the owner or operator of a CO_2 budget unit that commences commercial operation before July 1, 2008, by January 1, 2009;
2. For the owner or operator of a CO_2 budget unit that commences commercial operation on or after July 1, 2008, by the later of the following dates:
    i. January 1, 2009; or
    ii. The earlier of 90 unit-operating days after the date on which the unit commences commercial operation, or 180 calendar days after the date on which the unit commences commercial operation; and
3. For the owner or operator of a CO_2 budget unit for which construction of a new stack or flue installation is completed after the applicable deadline under (d)1 or 2 above, by the earlier of:
    i. Ninety unit-operating days after the date on which emissions first exit to the atmosphere through the new stack or flue; or

ii. One hundred eighty calendar days after the date on which emissions first exit to the atmosphere through the new stack or flue.

(e) Except as provided in (f) below, the owner or operator of a CO_2 budget unit that does not meet the applicable compliance date set forth in (d) above for any monitoring system under (c)1 above shall, for each such monitoring system, determine, record, and report maximum (or, as appropriate, minimum) potential values for CO_2 concentration, CO_2 emissions rate, stack gas moisture content, fuel flow rate, heat input, and any other parameter required to determine CO_2 mass emissions in accordance with 40 CFR 75.31(b)(2) or (c)(3) and section 2.4 of Appendix D of 40 CFR Part 75, as applicable.

(f) The owner or operator of a CO_2 budget unit that does not meet the applicable compliance date set forth in (d)3 above for any monitoring system under (c)1 above shall, for each such monitoring system, determine, record, and report substitute data using the applicable missing data procedures in 40 CFR Part 75, Subpart D, or Appendix D, in lieu of the maximum (or, as appropriate, minimum), potential values for a parameter, if the owner or operator demonstrates that there is continuity between the data streams for that parameter before and after the construction or installation under (d)3 above.

(g) A CO_2 budget unit that is subject to an acid rain emissions limitation or the requirements of the Department's Clean Air Interstate Rule (CAIR) NO_x Trading Program (set forth at N.J.A.C. 7:27-30) and that qualifies for the optional SO_2, NO_X, and CO_2 (for the Acid Rain Program) or NO_x (for the Department's CAIR NO_x Trading Program***[ )]* *)*** emissions calculations for low mass emissions (LME) units under 40 CFR 75.19 and reports emissions for such programs using the calculations under 40 CFR 75.19, shall also use the CO_2 emissions calculations for LME units under 40 CFR 75.19 for purposes of compliance with this chapter.

(h) A CO_2 budget unit that is subject to an acid rain emissions limitation or the requirements of the Department's CAIR NO_x Trading Program (set forth at N.J.A.C. 7:27-30) that does not qualify for the optional SO_2, NO_X, and CO_2 (for the Acid Rain Program) or NO_x (for the Department's CAIR NO_x Trading Program) emissions calculations for LME units under 40 CFR 75.19, shall not use the CO_2 emissions calculations for LME units under 40 CFR 75.19 for purposes of compliance with this chapter.

(i) A CO_2 budget unit that is not subject to an acid rain emissions limitation or the requirements of the Department's CAIR NO_x Trading Program (set forth at N.J.A.C. 7:27-30) shall qualify for the optional CO_2 emissions calculation for LME units under 40 CFR 75.19, provided that it emits less than 100 tons of NO_X annually and no more than 25 tons of SO_2 annually.

(j) No owner or operator of a CO_2 budget unit shall:

1. Use any alternative monitoring system, alternative reference method, or any other alternative for the required continuous emissions monitoring system without having obtained prior written approval in accordance with N.J.A.C. 7:27C-8.6;
2. Operate the CO_2 budget unit so as to discharge, or allow to be discharged, CO_2 emissions to the atmosphere without accounting for all such emissions in accordance with the applicable provisions of this subchapter and 40 CFR Part 75;
3. Disrupt the continuous emissions monitoring system, any portion thereof, or any other approved emissions monitoring method, and thereby avoid monitoring and recording CO_2 mass emissions discharged into the atmosphere, except for periods of recertification or periods when calibration, quality assurance testing, or maintenance is performed in accordance with the applicable provisions of this subchapter and 40 CFR Part 75; or
4. Retire or permanently discontinue use of the continuous emissions monitoring system, any component thereof, or any other approved emissions monitoring system under this subchapter, except under any of the following circumstances:
   i. The owner or operator is monitoring emissions from the unit with another certified monitoring system that has been approved by the Department in accordance with the applicable provisions of this subchapter and 40 CFR Part 75 for use at that unit and that provides emissions data for the same pollutant or parameter as the retired or discontinued monitoring system; or
   ii. The CO_2 authorized account representative submits notification of the date of certification testing of a replacement monitoring system in accordance with N.J.A.C. 7:27C-8.2(g).

7:27C-8.2 Initial certification and recertification procedures

(a) The owner or operator of a CO_2 budget unit is exempt from the initial certification, but not the recertification, requirements of this section for a monitoring system installed pursuant to N.J.A.C. 7:27C-8.1(c)1 if the monitoring system:
1. Has been previously certified in accordance with 40 CFR Part 75; and
2. Meets the applicable quality-assurance and quality-control requirements of 40 CFR 75.21 and Appendices B and D of 40 CFR Part 75.

(b) If the Administrator has previously approved a petition under 40 CFR 75.72(b)(2)(ii), or 40 CFR 75.16(b)(2)(ii)(B) as pursuant to 40 CFR 75.13 for apportioning the CO_2 emissions rate measured in a common stack or a petition under 40 CFR 75.66 for an alternative requirement in 40 CFR Part 75, the CO_2 authorized account representative shall submit the petition to the Department under N.J.A.C. 7:27C-8.6(a) to determine whether the approval applies under this program.

(c) Except as provided in (a) above, the owner or operator of a CO_2 budget unit shall comply with the initial certification and recertification procedures set forth below at (d) through (*o*)***[**,**]***

for a continuous emissions monitoring system and an excepted monitoring system under Appendix D of 40 CFR Part 75. The owner or operator of a CO_2 budget unit that qualifies to use the low mass emissions excepted monitoring methodology in 40 CFR 75.19 or that qualifies to use an alternative monitoring system under Subpart E of 40 CFR Part 75 shall comply with the initial certification and recertification procedures set forth below at (p) or (q), respectively.

(d) The owner or operator of a CO_2 budget unit shall ensure, for each continuous emissions monitoring system required under N.J.A.C. 7:27C-8.1(c)1 (including the automated data acquisition and handling system) the successful completion of all of the initial certification testing required under 40 CFR 75.20 by the applicable deadlines specified in N.J.A.C. 7:27C-8.1(d). In addition, whenever the owner or operator installs a monitoring system in order to meet the requirements of this subchapter in a location where no such monitoring system was previously installed, initial certification in accordance with 40 CFR 75.20 is required.

(e) The owner or operator shall recertify a monitoring system in accordance with 40 CFR 75.20(b) whenever the owner or operator of a CO_2 budget unit makes the following replacement, modification, or changes:

1. A replacement, modification, or change to a certified continuous emissions monitoring system under N.J.A.C. 7:27C-8.1(c)1 that the Administrator or the Department determines significantly affects the ability of the system to accurately measure or record CO_2 mass emissions or heat input or to meet the quality-assurance and quality-control requirements of 40 CFR 75.21 or 40 CFR Part 75, Appendix B; or
2. For a system using stack measurements, such as stack flow, stack moisture content, CO_2 or O_2 monitors, a replacement, modification or change to the flue gas handling system, or the unit's operation that the Administrator or the Department determines to significantly change the flow or concentration profile. Examples of changes that require recertification include replacement of the analyzer, change in the location or orientation of the sampling probe or site, or changing of flow rate monitor polynomial coefficients.

(f) Subsections (g) through (n) below apply to both initial certification and recertification of a monitoring system under N.J.A.C. 7:27C-8.1(c)1. For recertifications, replace the words "certification" and "initial certification" with the word "recertification;" replace the word "certified" with "recertified;" and proceed in the manner prescribed in 40 CFR 75.20(b)(5) and (g)(7) in lieu of (*o*) below.

(g) The CO_2 authorized account representative shall submit to the Department and the Administrator a written notice of the dates of certification in accordance with N.J.A.C. 7:27C-8.4.

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

(i) The provisional certification date for a monitor shall be determined in accordance with 40 CFR 75.20(a)(3). A provisionally certified monitor may be used under the CO_2 Budget Trading Program for a period not to exceed 120 days after the Department receives the complete certification application for the monitoring system or component thereof under (h) above. Data measured and recorded by the provisionally certified monitoring system or component thereof, in accordance with the requirements of 40 CFR Part 75, will be considered valid quality-assured data (retroactive to the date and time of provisional certification), provided that the Department does not invalidate the provisional certification by issuing a notice of disapproval within 120 days of receipt of the complete certification application by the Department.

(j) The Department will issue a written notice of approval or disapproval of the certification application to the owner or operator within 120 days of receipt of the complete certification application under (h) above. In the event the Department does not issue such a notice within such 120-day period, each monitoring system which meets the applicable performance requirements of 40 CFR Part 75 and is included in the certification application will be deemed certified for use under the CO_2 Budget Trading Program.

(k) If the certification application is complete and shows that each monitoring system meets the applicable performance requirements of 40 CFR Part 75, then the Department will issue a written notice of approval of the certification application within 120 days of receipt.

(*l*) If the certification application is not complete, then the Department will issue a written notice of incompleteness that sets a reasonable date by which the CO_2 authorized account representative shall submit the additional information required to complete the certification application. If the CO_2 authorized account representative does not comply with the notice of incompleteness by the specified date, then the Department may disapprove the application and issue a notice of disapproval under (m) below. The 120-day review period specified at (j) above shall not begin before receipt of a complete certification application.

(m) If the certification application shows that any monitoring system or component thereof does not meet the performance requirements of 40 CFR Part 75, or if the certification application is incomplete and the Department disapproves the application pursuant to (*l*) above, then the Department will issue a written notice of disapproval of the certification application. The issuance of such notice of disapproval invalidates the provisional certification, and the data measured and recorded by each uncertified monitoring system or component thereof shall not be considered valid quality-assured data beginning with the date and hour of provisional certification. The owner or operator shall follow the procedures for loss of certification in (*o*)

below, for each monitoring system, or component thereof, that the Department has disapproved for initial certification.

(n) The Department ***[**may issue**]*** ***will conform with the requirements at N.J.A.C. 7:27C-8.3(b) in issuing** a notice of disapproval of the certification status of a monitor ***[**in accordance with N.J.A.C. 7:27C-8.3(b)**]***.

(*o*) If the Department issues a notice of disapproval of a certification application under (m) above or a notice of disapproval of certification status under (n) above, then:

1. The owner or operator shall substitute the following values for each disapproved monitoring system, for each hour of unit operation during the period of invalid data, beginning with the date and hour of provisional certification and continuing until the time, date, and hour specified under 40 CFR 75.20(a)(5)(i) or 75.20(g)(7):
   i. For a unit using or intending to monitor for CO_2 mass emissions using heat input, or for a unit using the low mass emissions excepted methodology under 40 CFR 75.19, as supplemented and amended and which is incorporated by reference herein, the maximum potential hourly heat input of the unit; or
   ii. For a unit intending to monitor for CO_2 mass emissions using a CO_2 pollutant concentration monitor and a flow monitor, the maximum potential concentration of CO_2 and the maximum potential flow rate of the unit under section 2.1 of Appendix A of 40 CFR Part 75, as supplemented and amended and which is incorporated by reference herein;
2. The CO_2 authorized account representative shall submit a notification of certification retest dates and a new certification application in accordance with (g) and (h) above; and
3. The owner or operator shall repeat all certification tests or other requirements that were failed by the monitoring system, as indicated in the Department's notice of disapproval, no later than 30 unit-operating days after the date of issuance of the notice of disapproval.

(p) The owner or operator of a unit qualified to use the low mass emissions excepted methodology under N.J.A.C. 7:27C-8.1(g) shall meet the applicable certification and recertification requirements of 40 CFR 75.19(a)(2) and 75.20(h) and N.J.A.C 7:27C-8.2. If the owner or operator of such a unit elects to certify a fuel flow meter system for heat input determinations, the owner or operator shall also meet the certification and recertification requirements in 40 CFR 75.20(g).

(q) The CO_2 authorized account representative of each unit for which the owner or operator intends to use an alternative monitoring system approved by the Administrator and, if applicable, by the Department, under Subpart E of 40 CFR Part 75, shall comply with the applicable notification and application procedures of 40 CFR 75.20(f).

7:27C-8.3 Out-of-control periods

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

(b) Whenever both an audit of a monitoring system and a review of the initial certification or recertification application reveal that any monitoring system should not have been certified or recertified because it did not meet a particular performance specification or other requirement under N.J.A.C. 7:27C-8.2 or the applicable provisions of 40 CFR Part 75, both at the time of the initial certification or recertification application submission and at the time of the audit, the Department or the Administrator will issue a notice of disapproval of the certification status of such monitoring system. An audit will be either a field audit or an audit of any information submitted to the Department or the Administrator. By issuing the notice of disapproval, the Department or Administrator revokes prospectively the certification status of the monitoring system. The data measured and recorded by the monitoring system shall not be considered valid quality-assured data from the date of issuance of the notification of the revoked certification status until the date and time that the owner or operator completes subsequently approved initial certification or recertification tests for the monitoring system. The owner or operator shall follow the initial certification or recertification procedures in N.J.A.C. 7:27C-8.2 for each disapproved monitoring system.

7:27C-8.4 Notifications

The CO_2 authorized account representative for a CO_2 budget unit shall submit to the Department and the Administrator all written notice required by this subchapter in accordance with 40 CFR 75.61.

7:27C-8.5 Recordkeeping and reporting

(a) In addition to the requirements of N.J.A.C. 7:27C-2.1(e) and the recordkeeping and reporting requirements in this section, the CO_2 authorized account representative shall comply with all applicable recordkeeping and reporting requirements under 40 CFR 75.73.

(b) The owner or operator of a CO_2 budget unit shall submit a monitoring plan in the manner prescribed in 40 CFR 75.62.

(c) The CO_2 authorized account representative shall submit a certification or recertification application to the Department within 45 days after completing all CO_2 monitoring system initial certification or recertification tests required under N.J.A.C. 7:27C-8.2 including the information required under 40 CFR 75.53(g) and (h) and 75.63.

(d) The CO_2 authorized account representative shall submit quarterly reports, as follows:

1. The CO_2 authorized account representative shall report the CO_2 mass emissions data for the CO_2 budget unit, in an electronic format prescribed by the Administrator, unless otherwise prescribed by the Department, for each calendar quarter beginning with:

   i. For a unit that commences commercial operation before July 1, 2008, the calendar quarter beginning January 1, 2009; or

   ii. For a unit commencing commercial operation on or after July 1, 2008, the calendar quarter corresponding to the earlier of the date of provisional certification or the applicable deadline for initial certification under N.J.A.C. 7:27C-8.1(d). If the calendar quarter so determined is the third or fourth quarter of 2008, reporting shall commence in the quarter beginning January 1, 2009;

2. The CO_2 authorized account representative shall submit each quarterly report to the Department within 30 days following the end of the calendar quarter covered by the report. Quarterly reports shall be submitted in the manner specified in Subpart H of 40 CFR Part 75 and 40 CFR 75.64. Quarterly reports shall be submitted for each CO_2 budget unit (or group of units using a common stack), and shall include all of the data and information required in Subpart G of 40 CFR Part 75, except for opacity, NO_x and SO_2 provisions; and

3. The CO_2 authorized account representative shall submit to the Department a compliance certification in support of each quarterly report based on reasonable inquiry of those persons with primary responsibility for ensuring that all of the unit's emissions are correctly and fully monitored. In addition, the CO_2 authorized account representative shall certify:

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

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

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

7:27C-8.6 Petitions

(a) Except as provided in (c) below, the CO_2 authorized account representative of a CO_2 budget unit that is subject to an acid rain emissions limitation may submit a petition to the Administrator under 40 CFR 75.66, as supplemented and amended and which is incorporated by reference herein, and to the Department requesting approval to apply an alternative to any requirement of 40 CFR Part 75. Application of an alternative to any requirement of 40 CFR Part 75 is in accordance with this subchapter only to the extent that the petition is approved in writing by the Administrator and subsequently approved in writing by the Department.

(b) The CO_2 authorized account representative of a CO_2 budget unit that is not subject to an acid rain emissions limitation may submit a petition to the Administrator under 40 CFR 75.66, and to the Department requesting approval to apply an alternative to any requirement of 40 CFR Part 75. Application of an alternative to any requirement of 40 CFR Part 75 is in accordance with this subchapter only to the extent that the petition is approved in writing by the Administrator and subsequently approved in writing by the Department.

(c) The CO_2 authorized account representative of a CO_2 budget unit that is subject to an acid rain emissions limitation may submit a petition to the Administrator under 40 CFR 75.66, as supplemented and amended and which is incorporated by reference herein, and to the Department requesting approval to apply an alternative to a requirement concerning any additional CEMS required under the common stack provisions of 40 CFR 75.72 or a CO_2 concentration CEMS used under 40 CFR 75.71(a)(2). Application of an alternative to any such requirement is in accordance with this subchapter only to the extent the petition is approved in writing by the Administrator and subsequently approved in writing by the Department.

7:27C-8.7 CO_2 budget units that co-fire eligible biomass

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

1. For each shipment of solid eligible biomass fuel fired at the CO_2 budget unit***[**, the**]**:**

   i. The* total eligible biomass fuel input, on an as-fired basis, in pounds; ***and***

   [**2.**]* *ii.* *[**For each shipment of solid eligible biomass fuel fired at the CO_2 budget unit, the**]* *The moisture content, on an as-fired basis, as a fraction by weight;

[**3.**]* *2. For each distinct type of gaseous eligible biomass fuel fired at the CO_2 budget unit ***[**, the**]* *:**

   i. The* density of the biogas, on an as-fired basis, in pounds per standard cubic foot;

   [**4.**]* *ii.* *[**For each distinct type of gaseous eligible biomass fuel fired at the CO_2 budget unit, the**]* *The moisture content of the biogas, on an as-fired basis, as a fraction by weight; ***and***

   [**5.**]* *iii.* *[**For each distinct type of gaseous eligible biomass fuel fired at the CO_2 budget unit, the**]* *The total eligible biomass fuel input, in standard cubic feet;

[**6.**]* *3. For each distinct type of eligible biomass fuel fired at the CO_2 budget unit***[**, the**]* *:**

   i. The* dry basis carbon content of the fuel type, as a fraction by dry weight;

   [**7.**]* *ii.* *[**For each distinct type of eligible biomass fuel fired at the CO_2 budget unit, the**]* *The dry basis higher heating value, in MMBtu per dry pound;

[**8.**]* *iii.* *[**For each distinct type of eligible biomass fuel fired at the CO_2 budget unit, the**]* *The total dry basis eligible biomass fuel input, in pounds, calculated in accordance with (b) below;

[**9. The total CO_2 emitted from the CO_2 budget unit due to firing eligible biomass fuel, in tons, calculated in accordance with (c) below;**]

[**10.**]* *iv.* *[**For each distinct type of eligible biomass fuel fired at the CO_2 budget unit, the**]* *The total eligible biomass fuel heat input, in MMBtu, calculated in accordance with (d)1 below; ***and**

v. A chemical analysis, including heating value and carbon content;*

[**11.**]* *4. The total heat input to the CO_2 budget unit due to firing eligible biomass fuel, in MMBtu, calculated in accordance with (d)(2) below;

[**12.**]* *5. A description and documentation of the monitoring technology employed, and a description and documentation of the fuel sampling methodology employed, including sampling frequency; and

[**13. For each distinct type of eligible biomass fuel fired at the CO_2 budget unit, a chemical analysis, including heating value and carbon content.**]

6. The total CO_2 emitted from the CO_2 budget unit due to firing eligible biomass fuel, in tons, calculated in accordance with (c) below.

(b) An owner or operator of a CO_2 budget unit shall calculate and submit to the Department on a quarterly basis the total dry weight for each distinct type of eligible biomass fired by the CO_2 budget unit during the reporting quarter. The total dry weight shall be determined for each fuel type as follows:

1. For solid fuel types:

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

where:

F_j = Total eligible biomass dry basis fuel input (lbs) for fuel type j;
F_i = Eligible biomass as-fired fuel input (lbs) for fired shipment i;
M_i = Moisture content (fraction) for fired shipment i;
i = fired fuel shipment;
j = fuel type; and
n = number of shipments; and

2. For gaseous fuel types:

$$F_j = D_j \times V_j \times (1 - M_j)$$

where:

F_j = Total eligible biomass dry basis fuel input (lbs) for fuel type j;
D_j = Density of biogas (lbs/scf) for fuel type j;
V_j = Total volume (scf) for fuel type j;
M_j = Moisture content (fraction) for fuel type j; and

j = fuel type.

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

1. For any full calendar quarter during which no fuel other than eligible biomass is fired at the CO_2 budget unit, as measured and recorded in accordance with N.J.A.C. 7:27C-8.1 through 8.6; or
2. For any full calendar quarter during which fuels other than eligible biomass are fired at the CO_2 budget unit, as determined using the following equation:

$$CO_2 \text{ tons} = \sum_{j=1}^{n} F_j \times C_j \times O_j \times 44/12 \times 0.0005$$

where:

CO_2 tons = CO_2 emissions due to firing of eligible biomass for the reporting quarter;

F_j = Total eligible biomass dry basis fuel input (lbs) for fuel type j, as calculated in (b) above;

C_j = carbon fraction (dry basis) for fuel type j;

O_j = Oxidation factor for eligible biomass fuel type j, derived for solid fuels based on the ash content of the eligible biomass fired and the carbon content of this ash, as determined pursuant to (a)13 above; for gaseous eligible biomass fuels, a default oxidation factor of 0.995 may be used;

44/12 = The number of tons of carbon dioxide that are created when one ton of carbon is combusted;

0.0005 = The number of short tons which is equal to one pound;

j = fuel type; and

n = number of distinct fuel types.

(d) Heat input due to firing of eligible biomass for each quarter shall be determined as follows:

1. For each distinct fuel type:

$$H_j = F_j \times HHV_j$$

where:

H_j = Heat input (MMBtu) for fuel type j;

F_j = Total eligible biomass dry basis fuel input (lbs) for fuel type j, as calculated at (b) above;

HHV_j = Higher heating value (MMBtu/lb), dry basis, for fuel type j, as determined through chemical analysis pursuant to (a)13 above;

j = fuel type; and

2. For all fuel types:

$$\text{Heat Input MMBtu} = \sum_{j=1}^{n} H_j$$

where:

H_j = Heat input (MMBtu) for fuel type j;
j = fuel type; and
n = number of distinct fuel types.

(e) Fuel sampling methods and fuel sampling technology shall be consistent with the New York State Renewable Portfolio Standard Biomass Guidebook, May 2006, as supplemented and amended and which is incorporated by reference herein. A copy may be obtained from the New York State Energy Research and Development Authority's website at http://www.nyserda.org/rps/RPS_Biomass_Guide.pdf.

7:27C-8.8 Additional requirements to provide output data

(a) A CO_2 budget source shall report net electric output and net thermal output to the Department pursuant to (b) through (i) below.

(b) A CO_2 budget unit that participates in a wholesale electricity market administered by PJM or NYISO shall submit to the Department the same megawatt-hour value submitted to PJM or NYISO to document megawatt-hours of electrical output and a statement certifying that the megawatt-hours of electrical output reported reflects the total actual electrical output for the CO_2 budget unit used by PJM or NYISO to determine settlement of transactions among wholesale electricity market participants.

(c) A CO_2 budget unit that does not participate in a wholesale electricity market administered by PJM or NYISO shall report net electrical output in accordance with an output monitoring plan approved by the Department pursuant to (e) below.

(d) A CO_2 budget source that sells steam shall use billing meters to determine and report net steam output. A CO_2 budget source for which steam output is not measured by billing meters or for which steam output is combined with output from a non-CO_2 budget unit prior to measurement by the billing meter shall report net steam output in accordance with an output monitoring plan approved by the Department pursuant to (e) below. If data for steam output is not available, the CO_2 budget source shall report heat input providing useful steam output as a surrogate for steam output in accordance with an output monitoring plan approved by the Department pursuant to (e) below.

(e) Each CO_2 budget source shall submit to the Department for approval an output monitoring plan that includes a diagram and description as stated below:

1. A diagram of the electrical and/or steam system, as applicable, for which output is being monitored, as follows:
    i. For monitoring net electric output, the diagram must contain all CO_2 budget units and all electric generators served by each CO_2 budget unit and the relationship between CO_2

budget units and electric generators. If an electric generator served by a CO_2 budget unit is also served by a non-affected unit, the non-affected unit and its relationship to each electric generator shall be indicated on the diagram as well. The diagram shall indicate where the net electric output is measured and include all electrical inputs and outputs to and from the facility. If net electric output is determined using a billing meter, the diagram shall show each billing meter used to determine net sales of electricity and show that all electricity measured at the point of sale is generated by the CO_2 budget unit; or

ii. For monitoring net thermal output, the diagram must include all steam or hot water coming into the net steam system, including steam from CO_2 budget units and non-affected units, and all exit points of steam or hot water from the net steam system. In addition, each input and output stream must have an estimated temperature, pressure, and phase indicator, and an enthalpy in Btu/lb. The diagram of the net steam system must identify all steam loads, including, but not limited to, useful loads, house loads, parasitic loads, and all boiler feedwater returns. The diagram must represent all energy losses in the system as either usable or unusable losses. The diagram must also indicate all flow meters, temperature or pressure sensors, or other equipment used to calculate gross thermal output. If a sales agreement is used to determine net thermal output, the diagram shall show the monitoring equipment used to determine the sales of steam;

2. A description of each output monitoring system. The description of the output monitoring system must include a written description of the output system and the equations used to calculate output. For net thermal output systems, descriptions and justifications of each useful load must be included;

3. A detailed description of all quality assurance and quality control activities that will be performed to maintain the output system in accordance with (g) below; and

4. Documentation supporting any output value(s) to be used as a missing data value should there be periods of invalid output data. The missing data output value must be either zero or an output value that is likely to be lower than a measured value.

(f) The CO_2 authorized account representative for the CO_2 budget source shall submit a certification, which may be submitted with the certification application required under N.J.A.C. 7:27C-8.5(d), stating that the output monitoring system either consists entirely of billing meters or meets one of the accuracy requirements for non-billing meters at (f)2 below. The certification shall state that the monitoring system meets the following requirements, as applicable:

1. The billing meter must record the electric or thermal output. Any electric or thermal output values that the CO_2 budget source reports must be the same as the values used in billing for the output. Any output measurement equipment used as a billing meter in commercial transactions requires no additional certification or testing; or

2. For non-billing meters, the output monitoring system must either meet an accuracy of within 10.0 percent of the reference value (a system approach to accuracy), or each component monitor for the output system must meet an accuracy of within 3.0 percent of the full scale value (a component approach to accuracy), whichever is less stringent, as follows:

i. The system approach to accuracy must include a determination of how the system accuracy of 10.0 percent is achieved using the individual components in the system and include data loggers and any wattmeters used to calculate the final net electric output data and/or any flowmeters for steam or condensate, temperature measurement devices, absolute pressure measurement devices, and differential pressure devices used for measuring thermal energy; or

ii. If testing a piece of output measurement equipment pursuant to the component approach to accuracy shows that the output readings are not accurate to within 3.0 percent of the full scale value, then the equipment shall be repaired or replaced to meet that requirement.

(g) Ongoing quality assurance and quality control (QA/QC) activities shall be performed in order to maintain the output system in accordance with the following:

1. Where billing meters are used to determine output, no QA/QC activities beyond what are already performed are required;

2. Where non-billing meters are used to determine output, certain types of equipment such as potential transformers, current transformers, nozzle and venturi type meters, and the primary element of an orifice plate only require an initial certification of calibration and do not require periodic recalibration unless the equipment is physically changed. However, the pressure and temperature transmitters accompanying an orifice plate shall be periodically retested. For other types of equipment, recalibration or reverification of the meter accuracy shall be performed at least once every two years (that is, at least once every eight calendar quarters), unless a consensus standard, approved by the Department as part of an output monitoring plan at (e) above, allows for less frequent calibrations or accuracy tests. For non-billing meters, the output monitoring system must either meet an accuracy of within 10.0 percent of the reference value, or each component monitor for the output system must meet an accuracy of within 3.0 percent of the full scale value, whichever is less stringent. If testing a piece of output measurement equipment shows that the output readings are not accurate to within 3.0 percent of the full scale value, then the equipment shall be repaired or replaced to meet that requirement; and

3. If testing a piece of output measurement equipment shows that the output readings are not accurate to the certification value at (f)2 above, as applicable, 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. All invalid data shall be replaced by either zero or an output value that is likely to be lower than a measured value and that is approved as part of the output monitoring plan required under (e) above.

(h) The owner or operator of a CO_2 budget source shall retain data used to monitor, determine, or calculate net electrical output and net thermal output for 10 years.

(i) The CO_2 authorized account representative shall submit annual output reports, as follows:

1. The ***[**data**]*** ***annual output report*** shall be submitted to the Department ***[**both**]*** electronically ***[**and in hardcopy**]*** ***,*** by the March 1 following the immediately preceding calendar year;

2. The annual output report shall also be submitted, upon request by the Department, in hardcopy;

[**2.**] ***3.*** The annual ***output*** report shall include unit level megawatt-hours and all useful steam output; and

[**3.**] ***4.*** The annual ***output*** report shall include a certification from the CO_2 authorized account representative stating the following:

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

SUBCHAPTER 9. (RESERVED)

SUBCHAPTER 10. CO_2 EMISSIONS OFFSET PROJECTS

7:27C-10.1 Purpose

The Department will provide for the award of CO_2 offset allowances to sponsors of CO_2 emissions offset projects or CO_2 emissions credit retirements that have reduced or avoided atmospheric loading of CO_2, CO_2 equivalent, or sequestered carbon as demonstrated in accordance with the applicable provisions of this subchapter. The requirements of this subchapter are designed to ensure that CO_2 offset allowances awarded represent CO_2-equivalent emission reductions, avoided CO_2-equivalent emissions, or carbon sequestration that is real, additional, verifiable, enforceable, and permanent within the framework of a standards-based approach. Subject to the relevant compliance deduction limitations at N.J.A.C. 7:27C-6.9(a)3, any CO_2 budget source may use CO_2 offset allowances for compliance purposes.

7:27C-10.2 Definitions

The following words and terms, when used in this subchapter, have the following meanings, unless the context clearly indicates otherwise.

"Accredited independent verifier" means an independent verifier who has been accredited by the Department pursuant to N.J.A.C. 7:27C-10.10.

"Afforestation" means the direct human-induced conversion of land from a non-forested state to a forested state.

"AFUE" means annual fuel utilization efficiency, which is a measure of heating efficiency on an annual basis, based on the heat transferred to the conditioned space divided by the fuel energy supplied, as determined pursuant to U.S. Department of Energy testing procedures specified at 10 CFR Part 430, Subpart B, Appendix N, incorporated by reference herein.

"Allocation period" means the number of years for which an offset project that has received a consistency determination pursuant to N.J.A.C. 7:27C-10.4(i) is qualified for the award of CO_2 offset allowances pursuant to N.J.A.C. 7:27C-10.11(a).

"Animal unit" means a unit for measuring animal inventories, where one animal unit is equal to 1,400 pounds of animal live weight.

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

"Anaerobic digestion" means the degradation of organic material, such as manure, brought about through the action of microorganisms in the absence of elemental oxygen.

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

"ANSI" means the American National Standards Institute.

"ANSI/ASHRAE/IESNA Standard 90.1-2007" means ANSI/ASHRAE/ IESNA Standard 90.1-2007: Energy Standard for Buildings Except Low-Rise Residential Buildings, I-P Edition, as supplemented and amended and incorporated by reference herein, which is available from the American Society of Heating, Refrigerating and Air-Conditioner Engineers at http://www.ashrae.org.

"ASHRAE" means the American Society of Heating, Refrigerating and Air-Conditioner Engineers.

"ASHRAE Guideline 14-2002" means ASHRAE Guideline 14-2002, Measurement of Energy and Demand Savings, as supplemented and amended and incorporated by reference herein,

which is available from the American Society of Heating, Refrigerating and Air-Conditioner Engineers at http://www.ashrae.org.

"Biogas" means gas resulting from the decomposition of organic matter under anaerobic conditions, the principle constituents of which are methane and carbon dioxide.

"Boiler (commercial)" means a self-contained, low-pressure appliance for supplying steam or hot water to a commercial building.

"Boiler (residential)" means a self-contained, low-pressure appliance for supplying steam or hot water to a residential building.

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

"Carbon pool" means a reservoir that has the ability to accumulate and store carbon.

"Carbon stock" means the quantity of carbon in a carbon pool.

"CO_2e" means carbon dioxide equivalent.

"CO_2 emissions credit retirement" means the permanent retirement of greenhouse gas allowances or credits issued pursuant to any governmental mandatory carbon-constraining program outside the United States that places a specific tonnage limit on greenhouse gas emissions, provided the allowances or credits are acceptable and valid for use in that program at the time of the filing of the consistency application under N.J.A.C. 7:27C-10.4, or certified greenhouse gas emissions reduction credits issued pursuant to the United Nations Framework Convention on Climate Change (UNFCCC) or protocols adopted through the UNFCCC process.

"Commercial building" means a building to which the provisions of ANSI/ASHRAE/IESNA Standard 90.1 apply, which includes buildings other than low-rise residential buildings.

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

"Cooperating regulatory agency" means a regulatory agency in a state or United States jurisdiction, other than a participating state, that has entered into a memorandum of understanding with the appropriate regulatory agencies of all participating states to carry out

certain obligations relative to CO_2 emissions offset projects in that state or United States jurisdiction, including, but not limited to, the obligation to perform audits of offset project sites, and to report violations of this subchapter to the Department.

"Energy conservation measure" or "ECM" or "energy efficiency measure" or "EEM" means a set of activities designed to increase the energy efficiency of a building or improve the management of energy demand. An ECM/EEM may involve, but is not limited to, one or more of the following: physical changes to facility equipment, modifications to a building, revisions to operating and maintenance procedures, software changes, or new means of training or managing users of the building or operations and maintenance staff.

"Energy factor" means the efficiency ratio of the energy supplied in heated water divided by the energy input to the water heater, as determined pursuant to U.S. Department of Energy testing procedures specified at 10 CFR Part 430, Subpart B, Appendix E, incorporated by reference herein.

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

"Energy services" means services provided to building occupants, such as heating and hot water, cooling, and lighting, which entail the use of energy.

"Forested condition" means a condition whereby land:

1. Is at least 1.0 acre in size and 120.0 feet wide measured stem-to-stem from the outer-most edge. Forested strips must be 120.0 feet wide for a continuous length of at least 363.0 feet in order to meet the acre threshold; and
2. Meets at least one of the two following stocking criteria:
   i. The land is at least 10 percent stocked by trees of any size or has been at least 10 percent stocked in the past, and is not subject to non-forest use(s) that prevent normal tree regeneration and succession such as regular mowing, intensive grazing, or recreation activities; or
   ii. In the case of several western woodland species where stocking cannot be determined, the land has at least five percent crown cover by trees of any size, or has had at least five percent crown cover in the past, and the condition is not subject to non-forest use that prevents normal tree regeneration and succession such as regular mowing, chaining, or recreation activities.

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

"HVAC system" means a system or systems that provide, either collectively or individually, heating, ventilation, or air conditioning to a building, including the equipment, distribution network, and terminals.

"IESNA" means the Illuminating Engineering Society of North America.

"Market penetration rate" means a measure of the diffusion of a technology, product, or practice in a defined market, as represented by the percentage of annual sales for a product or practice, or as a percentage of the existing installed stock for a product or category of products, or as the percentage of existing installed stock that utilizes a practice.

"New building" means a newly constructed building designed to replace an existing building on an offset project site, or a newly constructed building designed to be a zero net energy building.

"Non-census water" means streams, sloughs, estuaries, and canals more than 120 feet and less than one-eighth of a mile (680 feet) wide and lakes, reservoirs, and ponds up to and including 40 acres in size.

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

"Offset project" means all equipment, materials, items, or actions directly related to the reduction of CO_2 equivalent emissions, avoidance of CO_2-equivalent emissions, or the sequestration of carbon specified in a consistency application submitted pursuant to N.J.A.C. 7:27C-10.4. Equipment, materials, items, or actions unrelated to an offset project reduction of CO_2 equivalent emissions, avoidance of CO_2-equivalent emissions, or the sequestration of carbon, but occurring at a location where an offset project occurs, shall not be considered part of an offset project, except as set forth at N.J.A.C. 7:27C-10.5 through 10.9.

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

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

"Permanent retirement" means, for a CO_2 emissions credit retirement, the placement of a greenhouse gas allowance or credit in a retirement account controlled by the jurisdiction that generated the allowance or credit, or in an allowance retirement account controlled by the Department, or the determination by the Department that the greenhouse gas allowance or credit has otherwise been rendered unusable.

"Project commencement" means, for an offset project involving physical construction, other work at an offset project site, or installation of equipment or materials, the date of the beginning of such activity. For an offset project that involves the implementation of a management activity or protocol, "project commencement" means the date on which such activity is first implemented or such protocol is first utilized.

"Project sponsor" means the sponsor of an offset project or CO_2 emissions credit retirement under this subchapter.

"Regional-type anaerobic digester" means an anaerobic digester that uses feedstock from more than one agricultural operation, or that imports feedstock from more than one agricultural operation. A regional-type anaerobic digester is also commonly referred to as a "community digester" or "centralized digester."

"Renewable portfolio standard" means a statutory or regulatory requirement that a load-serving entity provide a certain portion of the electricity it supplies to its customers from renewable energy sources, or any other statutory or regulatory requirement that a certain portion of electricity supplied to the electricity grid be generated from renewable energy sources.

"Residential building" means a low-rise residential building to which the provisions of ANSI/ASHRAE/IESNA Standard 90.1 do not apply, including single family homes, multifamily structures of three stories or fewer above grade, and manufactured homes (modular and mobile).

"Residential Energy Services Network" or "RESNET" means an industry not-for-profit membership corporation that acts as a national standards-making body for building energy efficiency rating systems.

"SF_6-containing operating equipment" means any equipment used for the transmission and distribution of electricity that contains sulfur hexafluoride (SF_6).

"System benefit fund" means any fund made up of revenue collected directly from retail electricity or natural gas ratepayers through retail energy bills.

"Total solids" means the total of all solids in a sample, including the total suspended solids, total dissolved solids, and volatile suspended solids.

"Transmission and/or distribution entity" means the assets and equipment used to transmit and distribute electricity from an electric generator to the electrical load of a customer.

"Transmission and/or distribution entity" 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.

"Verification" means the confirmation by an accredited independent verifier that certain parts of a CO_2 emissions offset project consistency application and/or measurement, monitoring or verification report conforms to the requirements of this subchapter.

"Volatile solids" means the portion of total solids that is comprised primarily of organic matter.

"Whole-building energy performance" means the overall energy performance of a building, taking into account the integrated impact on energy usage of all building components and systems.

"Whole-building retrofit" means any building project that involves the replacement of more than one building system, or set of building components, and that also requires a building permit.

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

7:27C-10.3 General requirements

(a) Any of the following types of offset projects are eligible for the award of CO_2 offset allowances, provided they have otherwise satisfied all the applicable requirements of this subchapter:

1. Landfill methane capture and destruction;
2. Reduction in emissions of sulfur hexafluoride (SF_6);
3. Sequestration of carbon due to afforestation;
4. Reduction or avoidance of CO_2 emissions from natural gas, oil, or propane end-use combustion due to end-use energy efficiency; and
5. Avoided methane emissions from agricultural manure management operations.

(b) To qualify for the award of CO_2 offset allowances, an offset project must be located:

1. In New Jersey;

2. Partly in New Jersey and partly in one or more other participating states, provided that more of the CO_2-equivalent emissions reduction, avoided CO_2-equivalent emissions or carbon sequestration due to the offset project is projected to occur in New Jersey than in any other participating state; or

3. In any state or United States jurisdiction in which a cooperating regulatory agency has entered into a memorandum of understanding with the appropriate regulatory agencies of all participating states to carry out certain obligations relative to CO_2 emissions offset projects in that state or United States jurisdiction, including, but not limited to, the obligation to perform audits of offset project sites, and to report violations of this subchapter.

(c) To qualify for the award of CO_2 offset allowances, the sponsor of a CO_2 emission***s*** credit retirement shall satisfy all the applicable requirements of this subchapter.

(d) The Department will only award CO_2 offset allowances for CO_2 emissions credit retirements after the occurrence of a stage-two trigger event.

(e) Any person meeting the requirements of N.J.A.C. 7:27C-10.4 may act as the sponsor of an eligible CO_2 emissions offset project or offset project credit retirement.

(f) Except as provided at N.J.A.C. 7:27C-10.5 through 10.9, the Department will not award CO_2 offset allowances to:

1. An offset project or CO_2 emissions credit retirement that is required pursuant to any local, state or Federal law, regulation, or administrative or judicial order. If an offset project has been issued a consistency determination under N.J.A.C. 7:27C-10.4 and is later required by local, state or Federal law, regulation, or administrative or judicial order, then the offset project shall remain eligible for the award of CO_2 offset allowances until the end of its current allocation period, described at (g) and (h) below, but its eligibility shall not be extended for an additional allocation period;

2. An offset project that includes an electric generation component, unless the project sponsor transfers legal rights to any and all attribute credits (other than the CO_2 offset allowances awarded under N.J.A.C. 7:27C-10.11) generated from the operation of the offset project that may be used for compliance with a renewable portfolio standard or other regulatory requirement, to the Department;

3. An offset project that receives funding or other incentives from any system benefit fund, or funds, or other incentives provided through revenue from the auction or sale of CO_2 allowances in the consumer benefit account pursuant to N.J.A.C. 7:27C-5.4(a) or (b); and

4. An offset project or CO_2 emissions credit retirement that is awarded credits or allowances under any other mandatory or voluntary greenhouse gas program.

(g) Except as provided in (h) below, the Department will award CO_2 offset allowances under N.J.A.C. 7:27C-10.11 for an initial 10-year allocation period. At the end of the initial 10-year

allocation period, the Department will award CO_2 offset allowances under N.J.A.C. 7:27C-10.11 for a second 10-year allocation period, provided the offset sponsor has submitted a consistency application pursuant to N.J.A.C. 7:27C-10.4 prior to the expiration of the initial allocation period, and the Department has issued a consistency determination pursuant to N.J.A.C. 7:27C-10.4(i).

(h) The Department will award CO_2 offset allowances under N.J.A.C. 7:27C-10.11 for an afforestation offset project for an initial 20-year allocation period. At the end of the initial 20-year allocation period, the Department will award CO_2 offset allowances under N.J.A.C. 7:27C-10.11 for a second 20-year allocation period, provided the offset sponsor has submitted a consistency application for the afforestation offset project pursuant to N.J.A.C. 7:27C-10.4 prior to the expiration of the initial allocation period, and the Department has issued a consistency determination pursuant to N.J.A.C. 7:27C-10.4(i). At the end of the second 20-year allocation period, the Department will award CO_2 offset allowances under N.J.A.C. 7:27C-10.11 for a third 20-year allocation period, provided the offset sponsor has submitted a consistency application for the afforestation offset project pursuant to N.J.A.C. 7:27C-10.4 prior to the expiration of the second allocation period, and the Department has issued a consistency determination pursuant to N.J.A.C. 7:27C-10.4(i). In no event will the Department award CO_2 offset allowances under N.J.A.C. 7:27C-10.11 to an afforestation offset project for more than a total of 60 allocation years.

(i) The Department will award CO_2 offset allowances under N.J.A.C. 7:27C-10.11 only for offset projects that are initially commenced on or after December 20, 2005.

(j) A project sponsor shall provide the Department, in writing, an access agreement granting the Department access to the physical location of the offset project to inspect for compliance with this subchapter. For an offset project located in a state or United States jurisdiction that is not a participating state, the project sponsor shall also provide the Department, in writing, an access agreement granting the cooperating regulatory agency access to the physical location of the offset project to inspect for compliance with this subchapter.

(k) If at any time the Department determines that a project sponsor has not complied with the requirements of this subchapter, the Department may revoke and retire any and all CO_2 offset allowances in the project sponsor's account. If at any time the Department determines that an offset project does not comply with the requirements of this subchapter, then the Department may revoke any approvals it has issued relative to the offset project.

7:27C-10.4 Consistency application process

(a) The sponsor of an offset project or CO_2 emissions credit retirement shall establish a general account under N.J.A.C. 7:27C-6.2(b).

(b) All submissions to the Department required for the award of CO_2 offset allowances under this subchapter shall be from the CO_2 authorized account representative for the general account of the sponsor of the relevant offset project or CO_2 emissions credit retirement.

(c) A consistency application for an offset project must be submitted, in a format prescribed by the Department, and consistent with the requirements of this section, by the following deadlines:

1. For an offset project commenced prior to January 1, 2009, by June 30, 2009; and
2. For an offset project commenced on or after January 1, 2009, by the date that is 180 days after the commencement of the offset project.

(d) The Department will deny any consistency application that fails to meet the deadlines of (c) above.

(e) A consistency application for an offset project shall include:

1. The project sponsor's name, address, e-mail address, telephone number, facsimile transmission number, and account number;
2. The offset project description, as required by the relevant provisions of N.J.A.C. 7:27C-10.5 through 10.9;
3. A demonstration that the offset project meets all applicable requirements of this subchapter;
4. The emissions baseline determination as required by the relevant provisions of N.J.A.C. 7:27C-10.5 through 10.9;
5. An explanation of how the projected reduction or avoidance of atmospheric loading of CO_2 or CO_2 equivalent or the sequestration of carbon is to be quantified, monitored, and verified as required by the relevant provisions of N.J.A.C. 7:27C-10.5 through 10.9;
6. A completed consistency application agreement signed by the project sponsor that reads as follows: "I, the undersigned project sponsor (name) recognize and accept that the application for, and the receipt of, CO_2 offset allowances under the CO_2 Budget Trading Program is predicated on the project sponsor following all the requirements of N.J.A.C. 7:27C-10. I, the undersigned project sponsor, hereby certify that I hold the legal rights to the offset project, or have been granted the right to act on behalf of a party that holds the legal rights to the offset project. I understand that eligibility for the award of CO_2 offset allowances under N.J.A.C. 7:27C-10 is contingent on meeting the requirements of N.J.A.C. 7:27C-10. I authorize the Department to audit this offset project for purposes of verifying that the offset project, including the monitoring and verification plan, has been implemented as described in this application. I understand that this right to audit includes the right to enter the physical location of the offset project. With regard to any legal dispute under this subchapter, I submit to the jurisdiction of the State of New Jersey and all such disputes will be subject to applicable New Jersey law**.**";
7. A statement and certification report signed by the offset project sponsor certifying that all

offset projects for which the sponsor has received CO_2 offset allowances under this subchapter (or similar provisions in the rules of other participating states), under the sponsor's ownership or control (or under the ownership or control of any entity which controls, is controlled by, or has common control with the sponsor) are in compliance with all applicable requirements of the CO_2 Budget Trading Program in all participating states;

8. A verification report and certification signed by an accredited independent verifier that expresses that the accredited independent verifier has reviewed the entire application and evaluated the following in relation to the applicable requirements at N.J.A.C. 7:27C-10.3 and 10.5 through 10.9, and any applicable guidance issued by the Department:

i. The adequacy and validity of information supplied by the project sponsor to demonstrate that the offset project meets the applicable requirements of N.J.A.C. 7:27C-10.3, and 10.5 through 10.9;

ii. The adequacy and validity of information supplied by the project sponsor to demonstrate baseline emissions pursuant to the applicable requirements at N.J.A.C. 7:27C-10.5 through 10.9;

iii. The adequacy of the monitoring and verification plan submitted pursuant to the applicable requirements at N.J.A.C. 7:27C-10.5 through 10.9; and

iv. Such other evaluations and statements as may be required by the Department to fully review whether the offset project meets the applicable requirements of N.J.A.C. 7:27C-10;

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

10. For an offset project located in a state or United States jurisdiction that is not a participating state, a demonstration that the project sponsor has complied with all requirements of the cooperating regulatory agency in the state or United States jurisdiction where the offset project is located.

(f) A consistency application for a CO_2 emissions credit retirement shall be submitted in a format prescribed by the Department and shall include sufficient information to demonstrate that the CO_2 emissions credit is eligible pursuant to N.J.A.C. 7:27C-10.3(f), was lawfully held by the project sponsor, and has been permanently and irrevocably retired.

(g) The Department will not accept as submitted a consistency application for an offset project or CO_2 emissions credit retirement if:

1. A consistency application has already been submitted for the same project, or any portion of the same project, in another participating state, unless the consistency application was rejected by the participating state solely because more of the CO_2 equivalent emissions reduction or carbon sequestration due to the offset project is projected to occur in New Jersey than in any other participating state; or

2. A consistency application has already been submitted for the same CO_2 emissions credit retirement in another participating state.

(h) Within 30 days following the receipt of the consistency application filed pursuant to (c) or (f) above, the Department will notify the project sponsor whether the consistency application is complete. A complete consistency application is one that is in a form prescribed by the Department and is determined by the Department to contain all applicable information and documentation required by this subchapter. In no event shall a completeness determination prevent the Department from requesting additional information in order to enable the Department to make a consistency determination under (i) below.

(i) Within 90 days of making the completeness determination under (h) above, the Department will issue a determination as to whether the offset project or CO_2 emissions credit retirement is consistent with the requirements of N.J.A.C. 7:27C-10.3 and 10.4 and the requirements of the applicable offset project standards of N.J.A.C. 7:27C-10.5 through 10.9. For any offset project or CO_2 emissions credit retirement found to be consistent with these requirements, the Department will issue a consistency determination to the project sponsor. For any offset project found to lack consistency with these requirements, the Department will inform the project sponsor of the offset project's deficiencies.

7:27C-10.5 CO_2 emissions offset project standards – landfill methane (CH_4) capture and destruction

(a) To qualify for the award of CO_2 offset allowances, in addition to satisfying the other applicable requirements of this subchapter, an offset project that captures and destroys methane from landfills shall meet the requirements of (b) through (f) below.

(b) An offset project under this section shall occur at a landfill that is not subject to the New Source Performance Standards for municipal solid waste landfills, 40 CFR Part 60, Subpart Cc and Subpart WWW;

(c) The offset project sponsor shall provide a detailed narrative of the offset project actions to be taken, including documentation that the offset project meets the requirements of (b) above. The project narrative shall include the following:

1. Identification of the owner and operator of the offset project;
2. The location and specifications of the landfill where the offset project will occur, including waste in place;
3. Identification of the owner and operator of the landfill where the offset project will occur; and
4. Specifications of the equipment to be installed and a technical schematic of the offset project.

(d) The emissions baseline shall represent the potential fugitive landfill emissions of methane (in tons of CO_2e), as represented by the methane collected and metered for thermal destruction as part of the offset project, and shall be calculated as follows:

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

where:

V = Volume of CH_4 collected (ft^3);

M = Mass of CH_4 per cubic foot (0.04246 lbs/ft^3 default value at one atmosphere and 20 degrees Celsius);

OX = Oxidation factor (0.10), representing estimated portion of collected CH_4 that would have eventually oxidized to CO_2 if not collected; and

GWP = CO_2e global warming potential of CH_4 (23)**.***

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

Emissions Reductions (tons CO_2e) = (V x M x (1 - OX) x C_{ef} x GWP)/2000

where:

V = Volume of CH_4 collected (ft_3);

M = Mass of CH_4 per cubic foot (0.04246 lbs/ft^3 default value at one atmosphere and ***[**2020**]*** ***__20__*** degrees ***[**Clesius**]*** ***__Celsius__***);

OX = Oxidation factor (0.10), representing estimated portion of collected CH_4 that would have eventually oxidized to CO_2 if not collected;

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

GWP = CO_2e global warming potential of CH_4 (23)***__.__***

(f) An offset project under this section shall employ a landfill gas collection system that provides continuous metering and data computation of landfill gas volumetric flow rate and methane concentration. Annual monitoring and verification reports shall include monthly volumetric flow rate and methane concentration data, including documentation that the methane was actually supplied to the combustion source. Monitoring and verification is also subject to the following requirements:

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

2. The project sponsor shall annually verify landfill gas methane concentration through landfill gas sampling and independent laboratory analysis using EPA Test Method 3C, Determination of Carbon Dioxide, Nitrogen, and Oxygen from Stationary Sources, as supplemented and amended and which is incorporated by reference herein, and is available at http://www.epa.gov/ttn/emc/promgate.html.

7:27C-10.6 CO_2 emissions offset project standards – reductions in emissions of sulfur hexafluoride

(a) To qualify for the award of CO_2 offset allowances, in addition to satisfying the other applicable requirements of this subchapter, an offset project that prevents emissions of sulfur hexafluoride (SF_6) to the atmosphere from equipment in the electricity transmission and distribution sector, through capture and storage, recycling, or destruction, shall meet the requirements of (b) through (k) below.

(b) An offset project under this section shall consist of incremental actions beyond those taken during the baseline year to achieve a reduction in SF_6 emissions relative to the baseline year. These incremental actions may include an expansion of existing actions. The identified actions to be taken shall be consistent with the guidance provided in International Electrotechnical Commission (IEC) 1634, "High-voltage switchgear and control gear—Use and handling of sulfur hexafluoride (SF_6) in high-voltage switchgear and control gear," (CEI/IEC 1634, 1995-04), as supplemented or amended, and which is incorporated by reference herein, which is available from the American National Standards Institute, at http://www.ansi.org.

(c) Except as provided in (d) below, an offset project under this section shall have an SF_6 entity-wide emissions rate for the baseline year that is less than the applicable emissions rate in Table 1 below. The entity-wide SF_6 emissions rate shall be calculated as follows:

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

where:

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

Table 1

SF_6 Emissions Rate Performance Standards

Emission Regions

Region A	Region B	Region C	Region D	Region E
Connecticut	Alabama	Colorado	Arkansas	Alaska
Delaware	District of Columbia	Illinois	Iowa	Arizona
Maine	Florida	Indiana	Kansas	California
Massachusetts	Georgia	Michigan	Louisiana	Hawaii
New Jersey	Kentucky	Minnesota	Missouri	Idaho
New York	Maryland	Montana	Nebraska	Nevada
New Hampshire	Mississippi	North Dakota	New Mexico	Oregon
Pennsylvania	North Carolina	Ohio	Oklahoma	Washington
Rhode Island	South Carolina	South Dakota	Texas	
Vermont	Tennessee	Utah		
	Virginia	Wisconsin		
	West Virginia	Wyoming		

Emissions Rate Performance Standards

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

[a] Based on weighted average 2004 emissions rates for EPA SF_6 Partnership utilities in each region. In the case of a region where the weighted average emissions rate was higher than the national weighted average, the default performance standard reflected in the table is the national weighted average emissions rate.

(d) The SF_6 entity-wide emissions rate in the baseline year may exceed the applicable rate in Table 1 at (c) above, provided that the project sponsor demonstrates and the Department determines that the project is being implemented at a transmission and/or distribution entity serving a predominantly urban service territory and that at least two of the following factors prevent optimal management of SF_6:

1. The entity is comprised of older-than-average installed transmission and distribution equipment in relation to the national average age of equipment;
2. A majority of the entity's electricity load is served by equipment that is located underground, and poor accessibility of such underground equipment precludes management of SF_6 emissions through regular ongoing maintenance;
3. The entity is unable to take a substantial portion of equipment out of service, as such activity would impair system reliability; and
4. The required equipment purpose or design for a substantial portion of entity transmission and distribution equipment results in inherently leak-prone equipment.

(e) The offset project sponsor shall provide a detailed narrative of the offset project actions to be taken, including documentation that the offset project meets the requirements of (b) through (d) above. The offset project narrative shall include:

1. A description of the transmission and/or distribution entity sufficiently detailed so as to specify the service territory served by the entity; and
2. Identification of the owner and operator of the transmission and/or distribution entity.

(f) If the consistency application is filed after June 30, 2009, baseline SF_6 emissions shall be determined based on annual entity-wide reporting of SF_6 emissions for the calendar year immediately preceding the calendar year in which the consistency application is filed (designated the baseline year). If the consistency application is filed on or before June 30, 2009, the baseline year may be 2005 or the calendar year immediately preceding the calendar year in which the consistency application is filed. The reporting entity shall systematically track and account for all entity-wide uses of SF_6 in order to determine entity-wide emissions of SF_6. The scope of such tracking and accounting shall include all electric transmission and distribution assets and all SF_6-containing and SF_6-handling equipment owned and/or operated by the reporting entity. Emissions shall be determined and calculated as follows:

1. Emissions shall be determined based on the following mass balance method:
   SF_6 Emissions (lbs) = (SF_6 Change in Inventory) + (SF_6 Purchases and Acquisitions) – (SF_6 Sales and Disbursements) – (Change in Total SF_6 Nameplate Capacity of Equipment)
      where:
      Change in Inventory is the difference between the quantity of SF_6 gas in storage at the beginning of the reporting year and the quantity in storage at the end of the reporting year. "Quantity in storage" includes all SF_6 gas contained in cylinders (such as 115-pound storage cylinders), gas carts, and other storage containers, but does not include SF_6 gas held in SF_6-using operating equipment. The change in inventory will be negative if the quantity of SF_6 gas in storage increases over the course of the year;
      Purchases and Acquisitions of SF_6 is the sum of all the SF_6 gas acquired from other parties during the reporting year, as contained in storage containers or SF_6-using operating equipment;

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

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

2. Emissions shall be calculated as follows:

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

where (all SF_6 values in lbs):

V_{iby} = SF_6 inventory in cylinders, gas carts, and other storage containers (not SF_6-containing operating equipment) at the beginning of the reporting year;

V_{iey} = SF_6 inventory in cylinders, gas carts, and other storage containers (not SF_6-containing operating equipment) at the end of the reporting year;

PA_{psd} = SF_6 purchased from suppliers or distributors in cylinders;

PA_e = SF_6 provided by equipment manufacturers with or inside SF_6-containing operating equipment;

PA_{rre} = SF_6 returned to the reporting entity after off-site recycling;

SD_{op} = Sales of SF_6 to other parties, including gas left in SF_6-containing operating equipment that is sold;

SD_{rs} = Returns of SF_6 to supplier (producer or distributor);

SD_{df} = SF_6 sent to destruction facilities;

SD_{sor} = SF_6 sent off-site for recycling;

CNP_{ne} = Total SF_6 nameplate capacity of new SF_6-containing operating equipment at proper full charge;

CNP_{rse} = Total SF_6 nameplate capacity of retired or sold SF_6-containing operating equipment at proper full charge; and

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

(g) As part of the consistency application required at N.J.A.C. 7:27C-10.4 and in the annual monitoring and verification report required at N.J.A.C. 7:27C-10.11, the project sponsor shall provide the documentation required at (i) through (k) below to support emissions calculations.

(h) Emissions reductions shall represent the annual entity-wide emissions reductions of SF_6 for the reporting entity, relative to emissions in the baseline year. Emissions reductions shall be

determined using the quantification method outlined in (f)2 above to determine emissions in both the baseline year and reporting year, as follows:

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

where:

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

(i) The annual monitoring and verification report shall include supporting material detailing the calculations and data used to determine SF_6 emissions reductions, including identification of the facility or facilities managed by the entity from which all SF_6 gas is procured and disbursed, and the entity-wide log of all SF_6 gas procurements and disbursals, maintained pursuant to (j) below. The annual monitoring and verification report shall also include a current entity-wide inventory of all SF_6-containing operating equipment and all other SF_6-related items, including cylinders, gas carts, and other storage containers used by the entity, certified by an accredited independent verifier.

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

(k) The project sponsor shall provide a monitoring and verification plan as part of the consistency application, which shall include an SF_6 inventory management and auditing protocol and a process for quality assurance and quality control of inventory data. The monitoring and verification plan shall be certified by an accredited independent verifier.

7:27C-10.7 CO_2 emissions offset project standards – sequestration of carbon due to afforestation

(a) To qualify for the award of CO_2 offset allowances, in addition to satisfying the other applicable requirements of this subchapter, an offset project that sequesters carbon through the conversion of land from a non-forested to forested condition shall meet the requirements of (b) through (u) below.

(b) An offset project under this section shall occur on land that has been in a non-forested state for at least 10 years immediately preceding the commencement of the offset project.

(c) An offset project under this section shall be managed in accordance with widely accepted environmentally sustainable forestry practices and designed to promote the restoration of native forests by using mainly native species and avoiding the introduction of invasive non-native species. If commercial timber harvest activities are to occur, certification shall be obtained, prior to any harvest activities at the site, through the Forest Stewardship Council, the Sustainable Forestry Institute, or the American Tree Farm System.

(d) The offset project sponsor shall provide a detailed narrative of the offset project actions to be taken, including documentation that the offset project meets the requirements of (b) above. The offset project narrative shall include the following:

1. Identification of the owner of the land within the offset project boundary;
2. A detailed map of the land within the offset project boundary and areas adjacent to the offset project boundary;
3. A copy of the permanent conservation easement required pursuant to (u) below;
4. For offset projects located in a state or United States jurisdiction that is not a participating state, a written legal opinion from an attorney licensed to practice in the state where the offset project is located, or from the cooperating regulatory agency, that the permanent conservation easement has been recorded with the appropriate jurisdiction and is enforceable; and
5. Identification of the plant species to be planted or established via natural regeneration and a forest management plan consistent with the requirements at (c) above.

(e) The existing sequestered carbon within the offset project boundary shall be calculated prior to commencement of the offset project. The carbon sequestration baseline shall be determined based on a sum of measurements, made no more than 12 months prior to offset project commencement, of the carbon content of the required and optional carbon pools, as set forth in (f) through (o) below.

(f) The carbon pools for which carbon calculation is required are as follows:

1. Live above-ground tree biomass;
2. Live below-ground tree biomass;
3. Soil carbon; and
4. Dead organic matter - coarse woody debris, unless the baseline measurement for this carbon pool is de minimis, that is, at or near zero, in which case measurement of this carbon pool during the allocation period is optional.

(g) The carbon pools for which carbon calculation is optional are as follows:

1. Live above-ground non-tree biomass; and
2. Dead organic matter - forest floor.

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

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

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

CO_2 tons = [(A x C/ha)(44/12)] / 0.9072

where:

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

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

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

(k) Total carbon contained within the offset project boundary (represented in CO_2 tons, calculated pursuant to (j) above) shall be calculated as follows:

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

where:

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

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

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

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

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

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

TC_{docwd} [mandatory/optional, as applicable, pursuant to (f)4 above] = Sum of carbon content of dead organic matter, coarse woody debris in all reporting sub-populations.

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

1. An adequate sample size that meets the requirements of this subsection shall be determined for each sub-population; and
2. The minimum number of required sampling plots for each sub-population shall be determined based on the following:

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

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

(m) Direct measurement procedures shall be consistent with current forestry good practice and the guidance contained in U.S. Department of Energy, Technical Guidelines Voluntary Reporting of Greenhouse Gases (1605(b)) Program; Chapter 1, Emissions Inventories; Part 1 Appendix: Forestry; Section 3: Measurement Protocols for Forest Carbon Sequestration (March 2006), as supplemented and amended and which is incorporated by reference herein, which is available from the U.S. Department of Energy at http://www.pi.energy.gov/enhancingGHGregistry/documents/PartIForestryAppendix.pdf.

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

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

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

(o) Except as provided in (f)4 above, each of the carbon pools that was measured as part of the baseline determination shall be re-measured using the same methodology, and to the same or

better quantified precision consistent with the requirements of (*l*) and (m) above, as that used for the baseline determination.

(p) The net change in each carbon pool's carbon stock in each reporting sub-population is calculated by subtracting the baseline carbon stock (or carbon stock at the previous monitoring, if above the baseline carbon content) from the carbon stock at the time of the current monitoring. Determination of carbon stock shall be in accordance with the formulas and procedures in this section.

(q) Net carbon stock change for the offset project is the sum of the net changes in the carbon stock of all applicable pools in all reporting sub-populations within the offset project boundary, less 10 percent, to account for potential losses of sequestered carbon. This 10 percent discount shall not be required, provided the project sponsor retains long-term insurance that guarantees replacement of any lost sequestered carbon for which CO_2 offset allowances were awarded pursuant to N.J.A.C. 7:27C-10.11(a).

(r) Total carbon stock within the offset project boundary shall be calculated at least once every five years.

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

(t) The consistency application shall include a monitoring and verification plan certified by the Department or an accredited independent verifier. The monitoring and verification plan shall include the following:

1. Direct carbon measurement procedures consistent with the requirements at (m) above;
2. The designation of sub-populations pursuant to (i) above and the determination of the minimum number of sampling plots pursuant to (*l*) above; and
3. If commercial timber harvest activities have occurred or will occur, an assessment of management practices to ensure that the offset project has been or will be managed in accordance with environmentally sustainable forestry practices consistent with the Forest Stewardship Council, the Sustainable Forestry Institute, or the American Tree Farm System.

(u) The offset project shall meet the following requirements to address permanence of sequestered carbon:

1. The project sponsor shall place the land within the offset project boundary under a legally binding permanent conservation easement that requires the land to be maintained in a forested state in perpetuity;
2. The conservation easement shall include a requirement that the carbon density within the offset project boundary be maintained at long-term levels at or above that achieved as of the

end of the final allocation period for the offset project pursuant to N.J.A.C. 7:27C-10.3(h); and

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

7:27C -10.8 CO_2 emissions offset project standards – reduction or avoidance of CO_2 emissions from natural gas, oil, or propane end-use combustion due to end-use energy efficiency

(a) To qualify for the award of CO_2 offset allowances, in addition to satisfying the other applicable requirements of this subchapter, an offset project that reduces CO_2 emissions by reducing on-site combustion of natural gas, oil, or propane ***for end-use*** in an existing or new commercial or residential building by improving the energy efficiency of fuel usage and/or the energy-efficient delivery of energy services shall meet the requirements of (b) through (n) below.

(b) An offset project under this section shall reduce CO_2 emissions through one or more of the following energy conservation measures:

1. Improvements in the energy efficiency of combustion equipment that provide space heating and hot water, including a reduction in fossil fuel consumption through the use of solar or geothermal energy;
2. Improvements in the efficiency of heating distribution systems, including proper sizing and commissioning of heating systems;
3. Installation or improvement of energy management systems;
4. Improvement in the efficiency of hot water distribution systems and reduction in demand for hot water;
5. Measures that improve the thermal performance of the building envelope and/or reduce building envelope air leakage;
6. Measures that improve the passive solar performance of buildings and utilization of active heating systems using renewable energy; or
7. Fuel switching to a less carbon-intensive fuel for use in combustion systems, including the use of liquid or gaseous eligible biomass, provided that conversions to electricity are not eligible.

(c) An HVAC system installed as part of an offset project shall meet the following sizing and installation requirements:

1. For a commercial HVAC system, the applicable sizing and installation requirements of ANSI/ASHRAE/IESNA Standard 90.1-2007 and ANSI/ASHRAE Standard 62.1-2004: Ventilation for Acceptable Indoor Air Quality, as supplemented and amended and which is incorporated by reference herein, which is available from the American Society of Heating, Refrigerating and Air-Conditioner Engineers at http://www.ashrae.org; or

2. For a residential HVAC system, the applicable sizing specifications of Air Conditioner Contractors of America Manual J: Residential Load Calculation (***[**Eight**]*** ***Eighth**** Edition), and the applicable installation specifications of "Specification of Energy-Efficient Installation and Maintenance Practices for Residential HVAC Systems," Consortium for Energy Efficiency, 2000, both as supplemented and amended and incorporated by reference herein, which is available from the ***[**of**]*** Air Conditioner Contractors of America at http://www.acca.org.

(d) A new building or whole-building retrofit that is part of an offset project shall meet the following requirements:

1. A commercial building shall exceed by 30 percent the energy performance requirements of ANSI/ASHRAE/IESNA Standard 90.1-2007, with the exception of multi-family residential buildings classified as commercial by ANSI/ASHRAE/IESNA Standard 90.1-2007, which must exceed these energy performance requirements by 20 percent; and
2. A residential building shall exceed by 30 percent the energy performance requirements of the 2004 International Energy Conservation Code, as supplemented and amended and which is incorporated by reference herein, which is available from the International Code Council at http://www.iccsafe.org.

(e) Combustion equipment installed as part of an offset project commenced before January 1, 2009 shall meet the following energy efficiency performance standards:

1. A commercial boiler shall meet or exceed the energy efficiency criteria in Table 2 below:

Table 2
Minimum Commercial Boiler Energy Efficiency

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

[a] A gas-fired boiler shall be installed with controls that allow the boiler to operate in condensing mode and installed with vents designed for positive vent static pressure and vent gas temperature that leads to condensate production in the vent.
[b] Thermal Efficiency is determined by dividing useful energy output (Btu) by energy input (Btu), expressed as a percentage. This shall be measured under steady state conditions, at full-rated useful thermal output, 140 degrees Fahrenheit supply from, and 120 degrees Fahrenheit return water temperature to, the boiler.

; and

2. Residential combustion equipment, including furnaces, boilers, and water heaters, shall meet or exceed the energy efficiency criteria in Table 3 below:

Table 3
Minimum Residential Combustion Equipment[a] Energy Efficiency

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

[a] For furnaces, defined as equipment with a heat input rate of less than 225,000 Btu/hr; for boilers, defined as equipment with a heat input rate of less than 300,000 Btu/hr; for water heaters, defined as equipment subject to 10 CFR 430, ***[**as supplemented or amended,**]*** and which is incorporated by reference herein.

(f) Energy conservation measures implemented as part of an offset project commenced before January 1, 2009 other than combustion equipment described at (e) above, shall meet the prescriptive requirements, as applicable, in Energy Benchmark for High Performance Buildings, Version 1.1, New Buildings Institute, 2005 (Energy Benchmark), which is incorporated herein by reference, which is available from Advanced Buildings at http://www.advancedbuildings.net/publications.htm, or applicable state building energy codes,

whichever result in better energy performance. An energy conservation measure for which the Energy Benchmark does not provide specified performance criteria shall meet the requirements of the Federal Energy Management Program Product Energy Efficiency Recommendations (issued pursuant to Executive Orders 13123 and 13221) as supplemented and amended and which is incorporated herein by reference, which is available through the FEMP website at http://www1.eere.energy.gov/femp/procurement/eep_requirements.html, or Energy Star criteria issued jointly by the EPA and the United States Department of Energy, incorporated by reference herein and which are available at the Energy Star website at http://www.energystar.gov/index.cfm?c=product_specs.pt_product_specs, whichever result in better energy performance.

(g) For an offset project under this section initiated on or after January 1, 2009, the project sponsor shall demonstrate that the energy conservation measures implemented as part of the offset project have a market penetration rate of less than five percent.

(h) The offset project sponsor shall provide a detailed narrative of the offset project actions to be taken, and shall include supporting documentation that the offset project meets the requirements of (b) through (g) above. The offset project narrative and supporting documentation shall include the following:

1. The location and specifications of the building(s) where the offset project actions will occur;
2. The name/identification of the owner and operator of the building(s);
3. The name/identification of the parties implementing the offset project, including lead contractor(s), subcontractors, and consulting firms;
4. Specifications of equipment and materials to be installed as part of the offset project; and
5. Building plans and offset project technical schematics, as applicable.

(i) The emissions baseline shall be determined in accordance with (i)1 through 3 below, based on energy usage (MMBtu) by fuel type for each energy conservation measure, derived using historic fuel use data from the most recent calendar year for which data is available, and multiplied by an emissions factor and oxidation factor for each respective fuel in Table 4 below:

Table 4
Emissions and Oxidation Factors

Fuel	Emissions Factor (lbs. CO_2/MMBtu)	Oxidation Factor
Natural Gas	116.98	***[**0.99**]*** ***** **0.995***

Propane	139.04	0.995
Distillate Fuel Oil	161.27	0.99
Kerosene	159.41	0.99
Liquid Eligible Biomass	***0.00***	***0.99***
Gaseous Eligible Biomass	***0.00***	***0.995***

1. The baseline energy usage of the application to be targeted by the energy conservation measure shall be isolated in a manner consistent with (n) below;
2. Annual baseline energy usage shall be determined as follows:

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

where:

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

A = Adjustments to account for differing conditions during the two time periods (pre-installation and post-installation), such as weather, building occupancy, and changes in building use or function. Adjustments shall be determined in accordance with the applicable requirements at (n) below; and

3. Annual baseline emissions shall be determined as follows:

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

where:

BEU_i = Annual baseline energy usage for fuel type i (MMBtu) demonstrated pursuant to the requirements at (n) below;
EF_i = Emissions factor (lbs. CO_2/MMBtu) for fuel type i listed in Table 4 above;
OF_i = Oxidation factor for fuel type i listed at Table 4 above; and
["n"**]* *n*** = Number of fuel types.

(j) Emissions reductions shall be determined based upon annual energy savings by fuel type (MMBtu) for each energy conservation measure, multiplied by the emissions factor and oxidation factor for the respective fuel type at Table 4 at (i) above. Annual energy savings and annual emissions reductions shall be determined as set forth in (j)1 and 2 below, respectively:

1. Annual energy savings shall be determined as follows:

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

where:
BEU_{AECM} = Annual pre-installation baseline energy use by fuel type (MMBtu) calculated pursuant to (n) below;
$PIEU_{ECM}$ = Annual post-installation energy use by fuel type (MMBtu) attributable to the energy conservation measure. Post-installation energy usage shall be determined in accordance with the applicable requirements at (n) below; and
A = Adjustments to account for any differing conditions during the two time periods (pre-installation and post-installation), such as weather, building occupancy, and changes in building use or function. Adjustments shall be determined in accordance with the applicable requirements at (n) **[**above**]* *below***; and

2. Annual emissions reductions shall be determined as follows:

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

where:
ES_i = Energy savings for fuel type i (MMBtu) demonstrated pursuant to (n) below;
EF_i = Emissions factor (lbs. CO_2/MMBtu) for fuel type i listed at Table 4 at (i) above;
OF_i = Oxidation factor for fuel type i listed at Table 4 at (i) above; and
["n"**]* *n***= Number of fuel types.

(k) As part of the consistency application, the project sponsor shall provide a monitoring and verification plan certified by an accredited independent verifier.

(*l*) Annual monitoring and verification reports shall be certified by an accredited independent verifier. An accredited independent verifier shall conduct a site audit when reviewing the first monitoring and verification report submitted by the project sponsor, except for offset projects that save less than 1,500 MMBtu per year. For offset projects that save less than 1,500 MMBtu per year, the project sponsor shall provide the accredited independent verifier with equipment

specifications and copies of equipment invoices and other relevant offset project-related invoices.

(m) All offset project documentation, including the consistency application and monitoring and verification reports, shall be signed by a professional engineer, identified by license number.

(n) Monitoring and verification shall meet the following requirements, in addition to those at (k) through (m) above:

1. Monitoring and verification of energy usage shall be demonstrated through a documented process consistent with the following protocols and procedures, as applicable:

i. For an existing commercial building, determination of baseline energy usage shall be consistent with the International Performance Measurement & Verification Protocol, Volume I: Concepts and Options for Determining Energy and Water Savings (IPMVP Volume I), "Option B. Retrofit Isolation" and "Option D. Calibrated Simulation," as supplemented and amended and which are incorporated by reference herein, and which are available at http://www.ipmvp.org. If a building project involves only energy conservation measures implemented as part of an offset project, a process consistent with IPMVP Volume I "Option C. Whole Facility," as supplemented and amended and which is incorporated by reference herein and which is available at http://www.ipmvp.org, may be used, as applicable. Application of the IPMVP Volume I general guidance, as supplemented and amended and which is incorporated by reference herein, ***and which is available at http://www.ipmvp.org,*** shall be consistent with the applicable detailed specifications in ASHRAE Guideline 14-2002;

ii. For a new commercial building, determination of baseline energy usage shall be consistent with the International Performance Measurement & Verification Protocol, Volume III: Concepts and Options for Determining Energy Savings in New Construction (IPMVP Volume III), "Option D. Calibrated Simulation," as supplemented and amended and which is incorporated by reference herein and which is available at http://www.ipmvp.org. Application of the IPMVP Volume III general guidance, as supplemented and amended and which is incorporated by reference herein, ***and which is available at http://www.ipmvp.org,*** shall be consistent with the applicable detailed specifications in ASHRAE Guideline 14-2002; or

iii. For an existing or new residential building, determination of baseline energy usage shall be consistent with the requirements of the RESNET National Home Energy Rating Technical Guidelines, 2006 (Chapter 3 and Appendix A of 2006 Mortgage Industry National Home Energy Rating System Standards), as supplemented and amended and which is incorporated by reference herein, which is available from the Residential Energy Services Network at http://www.resnet.us;

2. In calculating both baseline energy usage and energy savings, the project sponsor shall isolate the impact of each ECM, either through direct metering or energy simulation modeling. For offset projects with multiple ECMs, and where an individual ECM can affect

the performance of other ECMs, the sum of energy savings due to an individual ECM shall be adjusted to account for the interaction of ECMs. For commercial buildings, this process shall be consistent with the requirements of ASHRAE Guideline 14-2002, and ANSI/ASHRAE/IESNA Standard 90.1-2007. For residential buildings, this process shall be consistent with the requirements of RESNET National Home Energy Rating Technical Guidelines, 2006 (Chapter 3 and Appendix A of 2006 Mortgage Industry National Home Energy Rating System Standards), as supplemented and amended and which is incorporated by reference herein, which is available from the Residential Energy Services Network at http://www.resnet.us. Reductions in energy usage due to the ECM shall be based upon actual energy usage data. Energy simulation modeling shall only be used to determine the relative percentage contribution to total fuel usage (for each respective fuel type) of the application targeted by the ECM;

3. For monitoring and verification of energy usage, annual energy savings shall be determined based on the following:

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

where:

BEU_{AECM} = Annual pre-installation baseline energy use by fuel type (MMBtu) attributable to the application(s) to be targeted by the ECM, based upon annual fuel usage data for the most recent calendar year for which data is available. For new commercial buildings, baseline energy use for a reference building equivalent in basic configuration, orientation, and location to the building in which the eligible ECM is implemented shall be determined according to ASHRAE Guideline 14-2002, and ANSI/ASHRAE/IESNA Standard 90.1-2007, Section 11, Energy Cost Budget Method and Appendix G, Performance Rating Method. Where energy simulation modeling is used to evaluate an existing commercial building, modeling shall be conducted in accordance with ASHRAE Guideline 14-2002, and ANSI/ASHRAE/IESNA Standard 90.1-2007, Section 11, Energy Cost Budget Method and Appendix G ***,*** Performance Rating Method. For existing and new residential buildings, energy simulation modeling shall be conducted in accordance with the requirements of RESNET National Home Energy Rating Technical Guidelines, 2006 (Chapter 3 and Appendix A of 2006 Mortgage Industry National Home Energy Rating System Standards), as supplemented and amended and which is incorporated by reference herein, which is available from the Residential Energy Services Network at http://www.resnet.us;

$PIEU_{ECM}$ = Annual post-installation energy use by fuel type (MMBtu) attributable to the energy conservation measure, to be verified based on annual energy usage after installation of the energy conservation measure(s), consistent with the requirements of ASHRAE Guideline 14-2002. Where energy simulation modeling is used to evaluate a new or existing commercial building, modeling shall be conducted in accordance with ASHRAE Guideline 14-2002 and ANSI/ASHRAE/IESNA Standard 90.1-2007, Section 11, Energy Cost Budget Method and Appendix G, Performance

Rating Method. For existing and new residential buildings, energy simulation modeling shall be consistent with the requirements of RESNET National Home Energy Rating Technical Guidelines, 2006 (Chapter 3 and Appendix A of 2006 Mortgage Industry National Home Energy Rating System Standards), as supplemented and amended and which is incorporated by reference herein, which is available from the Residential Energy Services Network at http://www.resnet.us; and A = Adjustments to account for any differing conditions during the two time periods (pre-installation and post-installation), such as weather (***[**weather normalized**]* *weather-normalized***energy usage based on heating and cooling degree days), building occupancy, and changes in building use or function. For commercial buildings, adjustments shall be consistent with the specifications of ASHRAE Guideline 14-2002, and ANSI/ASHRAE/IESNA Standard 90.1-2007, Section 11***, Energy Cost Budget Method*** and Appendix G***, Performance Rating Method* *[**as supplemented and amended and which is incorporated by reference herein**]***. For residential buildings, adjustments shall be consistent with the specifications of RESNET National Home Energy Rating Technical Guidelines, 2006 (Chapter 3 and Appendix A of 2006 Mortgage Industry National Home Energy Rating System Standards), as supplemented and amended and which is incorporated by reference herein, which is available from the Residential Energy Services Network at http://www.resnet.us; and

4. For monitoring and verification of energy usage, offset projects that implement similar measures in multiple residential buildings may employ representative sampling of buildings to determine aggregate baseline energy usage and energy savings. Sampling protocols shall employ sound statistical methods such that there is 95 percent confidence that the reported value is within 10 percent of the true mean. Any sampling plan shall be certified by an accredited independent verifier.

7:27C-10.9 CO_2 emissions offset project standards – avoided methane emissions from agricultural manure management operations

(a) To qualify for the award of CO_2 offset allowances, in addition to satisfying the other applicable requirements of this subchapter, an offset project that reduces CO_2–equivalent emissions by capturing and destroying methane from animal manure and organic food waste using anaerobic digesters shall meet the requirements of (b) through (g) below.

(b) An offset project that captures and destroys methane from animal manure and organic food waste using anaerobic digesters shall:

1. Consist of the destruction of that portion of methane generated by an anaerobic digester that would have been generated in the absence of the offset project through the uncontrolled anaerobic storage of manure or organic food waste; and

2. Employ only manure-based anaerobic digester systems using livestock manure as the majority of digester feedstock, defined as more than 50 percent of the mass input into the digester on an annual basis. The remainder of the digester feedstock may be organic food waste that would have been stored in anaerobic conditions in the absence of the offset project.

(c) The provisions of N.J.A.C. 7:27C-10.3(f)2 and 3 do not apply to agricultural manure management offset projects if:

1. The offset project is located in a state that has a market penetration rate for anaerobic digester projects of five percent or less. The market penetration rate determination shall utilize the most recent market data available at the time of submission of the consistency application pursuant to N.J.A.C. 7:27C-10.4 and shall be determined as follows:

MP (percent) = MG_{AD} / MG_{STATE}

where:

MG_{AD} = Average annual manure generation for the number of dairy cows and swine serving all anaerobic digester projects in the applicable state at the time of submission of a consistency application pursuant to N.J.A.C. 7:27C-10.4; and

MG_{STATE} = average annual manure production of all dairy cows and swine in the state at the time of submission of a consistency application pursuant to N.J.A.C. 7:27C-10.4; or

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

(d) The offset project sponsor shall provide a detailed narrative of the offset project actions to be taken, including documentation that the offset project meets the requirements of (b) above. The offset project narrative shall include:

1. Identification of the owner and operator of the offset project;
2. The location and specifications of the facility where the offset project will occur;
3. Identification of the owner and operator of the facility where the offset project will occur;
4. Specifications of the equipment to be installed and a technical schematic of the offset project; and
5. The location and specifications of the facilities from which anaerobic digester influent will be received, if different from the facility where the offset project will occur.

(e) The emissions baseline shall represent the potential emissions of the methane that would have been produced in a baseline scenario under uncontrolled anaerobic storage conditions and

released directly to the atmosphere in the absence of the offset project, and is calculated as follows:

1. Baseline methane emissions shall be calculated as follows:

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

where:

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

V_m = Volume of CH_4 produced each month from degradation of volatile solids in a baseline uncontrolled anaerobic storage scenario under site-specific storage and weather conditions for the facility at which the manure or organic food waste is generated (ft^3);

M = Mass of CH_4 per cubic foot (0.04246 lb/ft^3 default value at one atmosphere and 20 degrees Celsius); and

GWP = Global warming potential of CH_4 (23);

2. The estimated amount of volatile solids degraded each month under the uncontrolled anaerobic storage baseline scenario (kg) shall be calculated as follows:

$VS_{deg} = VS_{avail}$ x f

where:

VS = volatile solids as determined from the equation:

$VS = M_m$ x $TS_{percent}$ x $VS_{percent}$

where:

M_m = mass of manure or organic food waste produced per month (kg);

$TS_{percent}$ = concentration (percent) of total solids in manure or organic food waste as determined through USGS I-3750-85, Solids, residue on evaporation at 105 degrees Celsius, total, gravimetric, as supplemented or amended and incorporated by reference herein, which is available at http://www.usgs.gov ***[.]* *; and***

$VS_{percent}$ = concentration (percent) of volatile solids in total solids as determined through EPA Test Method Number 160.4, Residue, Volatile (Gravimetric, Ignition at 550° C), as supplemented or amended and incorporated by reference herein, and which is available at http://www.usgs.gov***[.]* *;***

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

$VS_{avail} = VS_p + ½\ VS_{in} - VS_{out}$

where:

VS_p = volatile solids present in manure or organic food waste storage at beginning of month (left over from previous month) (kg);

VS_{in} = volatile solids added to manure or organic food waste storage during the course of the month (kg). The factor of ½ is multiplied by this number to represent the average mass of volatile solids available for degradation for the entire duration of the month; and

VS_{out} = volatile solids removed from the manure or organic food waste storage for land application or export (assumed value based on standard farm practice); and

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

$f = \exp\{[E(T_2 - T_1)]/[(GC \times T_1 \times T_2)]\}$

where:

f = conversion efficiency of VS to CH_4 per month;

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

T_2 = average monthly ambient temperature for facility where manure or organic food waste is generated (converted from degrees Celsius to degrees Kelvin) as determined from the nearest National Weather Service certified weather station (if reported temperature in degrees Celsius > five degrees Celsius; if reported temperature in degrees Celsius < five degrees Celsius, then f = 0.104); ***and***

T_1 = 303.15 (30 degrees Celsius converted to degrees Kelvin); and

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

3. The volume of methane produced, in cubic feet (ft^3), from degradation of volatile solids shall be calculated as follows:

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

where:

V_m = volume of CH_4 (ft^3);

VS_{deg} = volatile solids degraded (kg); ***and***

B_o = manure or organic food waste type-specific maximum methane generation constant (m^3 CH_4/kg VS degraded). For dairy cow manure, B_o = 0.24 m^3 CH_4/kg VS degraded. The methane generation constant for other types of manure shall be those cited at EPA, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-***[2004]*** ***2005***, Annex 3.10, Methodology for Estimating CH_4 and N_2O Emissions from Manure Management, Table A-160 (2006 Manure Distribution Among Waste Management Systems by Operation (Percent)) (EPA, April 2007), as supplemented or amended, and which is incorporated by reference herein and which is available from EPA at http://www.epa.gov/climatechange/emissions/usinventoryreport.html# , unless the project sponsor proposes an alternate methane generation constant.

(f) Emissions reductions shall be determined based on the potential emissions (in tons of CO_2e) of the methane that would have been produced in the absence of the offset project under a baseline scenario that represents uncontrolled anaerobic storage conditions, as calculated pursuant to (e)1 through 3 above, and released directly to the atmosphere. Emissions reductions shall not exceed the potential emissions of the anaerobic digester, as represented by the annual volume of methane produced by the anaerobic digester, as monitored pursuant to (g) below. If the project is a regional-type digester, CO_2 emissions due to transportation of manure and organic food waste from the site where the manure and organic food waste was generated to the

anaerobic digester shall be subtracted from the emissions reduction calculated pursuant to (e)1 through 3 above. Transport CO_2 emissions shall be determined through one of the following methods:

1. Documentation of transport fuel use for all shipments of manure and organic food waste from off-site to the anaerobic digester during each reporting year and a log of transport miles for each shipment. CO_2 emissions shall be determined through the application of an emissions factor for the fuel type used. For this method of determination, the emissions factor for the use of diesel fuel is 22.912 pounds of CO_2 per gallon, and for the use of gasoline, 19.878 pounds of CO_2 per gallon. If other fuel is used, the project sponsor, as part of the monitoring and verification report submitted pursuant to N.J.A.C. 7:27C-10.11(c) or (d) may submit an emissions factor for approval by the Department as technically appropriate; or
2. Documentation of total tons of manure and organic food waste transported from off-site for input into the anaerobic digester during each reporting year, as monitored pursuant to (g)1 below, and a log of transport miles and fuel type used for each shipment. CO_2 emissions shall be determined through the application of a ton-mile transport emissions factor for the fuel type used. The appropriate emissions factor shall be applied for each ton of manure delivered, and multiplied by the number of miles transported. For this method of determination, the emissions factor for the use of diesel fuel is 0.131 pounds of CO_2 per ton-mile, and for the use of gasoline is 0.133 pounds of CO_2 per ton-mile. If other fuel is used, the project sponsor may submit an emissions factor for approval by the Department as technically appropriate;

(g) An offset project must employ a system that provides metering of biogas volumetric flow rate and determination of methane concentration. Annual monitoring and verification reports shall include monthly biogas volumetric flow rate and methane concentration determination. Monitoring and verification shall also meet the following requirements:

1. If the offset project is a regional-type digester, manure and organic food waste from each distinct source supplying to the anaerobic digester shall be sampled monthly to determine the amount of volatile solids present. Any emissions reduction will be calculated according to mass of manure and organic food waste, in kilograms (kg) being digested and percentage of volatile solids present before digestion, consistent with (e) above and (g)3 below, and apportioned accordingly among sources. The project sponsor shall provide supporting material and receipts tracking the monthly receipt of manure and organic food waste in kilograms (kg) used to supply the anaerobic digester from each supplier;
2. If the offset project includes the digestion of organic food waste eligible pursuant to (b)2 above, organic food waste shall be sampled monthly to determine the amount of volatile solids present before digestion, consistent with the requirements at (e) ***above*** and (g)3 below, and apportioned accordingly;
3. The project sponsor shall submit a monitoring and verification plan as part of the consistency application that includes a quality assurance and quality control program

associated with equipment used to determine biogas volumetric flow rate and methane composition. The monitoring and verification plan shall be consistent with the applicable input monitoring requirements listed in Table 5 below. The monitoring and verification plan shall also include provisions for ensuring that measuring and monitoring equipment is maintained, operated, and calibrated based on manufacturer's recommendations, as well as provisions for the retention of maintenance records for audit purposes. The monitoring and verification plan shall be certified by an accredited independent verifier; and

Table 5
Input Monitoring Requirements

Input Parameter	Measurement Unit	Frequency of Sampling	Sampling Method(s)
Influent flow (mass) into the digester	Kilograms (kg) per month (wet weight)	Monthly total into the digester	In descending order of preference: 1.Recorded weight; 2. Digester influent pump flow; or 3. Livestock population and application of American Society of Agricultural and Biological Engineers standard, ASAE D384.2, Manure Production and Characteristics, March 2005, as supplemented or amended, and incorporated by reference herein, and which is available from the American National Standards Institute (ANSI) at http://www.ansi.org.

Influent total solids concentration (TS)	Percent (of sample)	Monthly, depending upon recorded variations	USGS I-3750-85, Solids, residue on evaporation at 105 degrees C total, gravimetric, as supplemented and amended, and incorporated by reference herein, and which is available at http://www.usgs.gov.
Influent volatile solids (VS) concentration	Percent (of TS)	Monthly, depending upon recorded variations	EPA Test Method Number ***[**160.3**]* *160.4***, Residue, Volatile (Gravimetric, Ignition at 550°C), as supplemented or amended and incorporated by reference herein, and which is available at http://www.usgs.gov.
Average monthly ambient temperature	Temperature degrees Celsius	Monthly (based on farm averages)	Closest National Weather Service-certified weather station

4. The project sponsor shall verify biogas methane composition quarterly through gas sampling and third party laboratory analysis using EPA Test Method 3C, Determination of Carbon Dioxide, Nitrogen, and Oxygen from Stationary Sources, as supplemented and amended and incorporated by reference herein, and which is available at http://www.epa.gov/ttn/emc/promgate.html.

7:27C-10.10 Accreditation of independent verifiers

(a) To be accredited by the Department to provide verification services as required of project sponsors under this subchapter, an independent verifier shall:

1. Demonstrate knowledge of:
   i. Utilization of engineering principles;

ii. Quantification of greenhouse gas emissions;
iii. Development and evaluation of air emissions inventories;
iv. Auditing and accounting principles;
v. Information management systems;
vi. The requirements of this subchapter and other applicable requirements of this chapter; and
vii. The data collection, quantification, monitoring, and verification requirements for the individual offset categories specified at N.J.A.C. 7:27C-10.5 through 10.9;

2. Demonstrate that there is no direct or indirect financial relationship, beyond a contract for provision of verification services, between the independent verifier and any offset project developer or project sponsor;

3. Demonstrate the employment of staff with professional licenses, knowledge, and experience appropriate to the specific category or categories of offset projects at N.J.A.C. 7:27C-10.5 through 10.9 to be verified;

4. Demonstrate coverage of a minimum of $1,000,000 of professional liability insurance. If the insurance is in the name of a related entity, the independent verifier shall disclose the financial relationship between the independent verifier and the related entity, and provide documentation supporting the description of the relationship;

5. Demonstrate implementation of an adequate management protocol to identify potential conflicts of interest with regard to an offset project, offset project developer, or project sponsor, or any other party with a direct or indirect financial interest in an offset project that is seeking or has been granted approval of a consistency application pursuant to N.J.A.C. 7:27C-10.4(e), and remedy any such conflicts of interest prior to providing verification services; and

6. Prior to submitting an application for accreditation, successfully complete any training course, workshop, or test developed by the Department to ensure that an independent verifier has sufficient demonstrated knowledge pursuant to (a)1 above to provide verification services under this subchapter.

(b) An application for accreditation shall not contain any proprietary information, and shall include the following:

1. The applicant's name, address, e-mail address, telephone number, and facsimile transmission number;

2. Documentation that the applicant has at least two years of experience in each of the knowledge areas at (a)1i through v above, and as may be required pursuant to (a)1vii above;

3. Documentation that the applicant has successfully completed the requirements at (a)6 above, as applicable;

4. A sample of at least one work product that provides supporting evidence that the applicant meets the requirements at (a)1 above. The work product shall have been produced, in whole or part, by the applicant and shall consist of a final report or other material provided to a client under contract in previous work. For a work product that was jointly produced by the

applicant and another entity, the role of the applicant in the work product shall be clearly explained;

5. Documentation that the applicant holds professional liability insurance as required pursuant to (a)4 above; and

6. Documentation that the applicant has implemented an adequate management protocol to address and remedy any conflict of interest issues that may arise, as required pursuant to (a)5 above.

(c) The Department will approve or deny a complete application for accreditation within 45 days after submission. Upon approval of an application for accreditation, the independent verifier shall be accredited for a period of three years from the date of application approval.

(d) The Department will accept the accreditation of an independent verifier that is accredited in another participating state where the Department has determined substantial equivalency between the accreditation requirements in New Jersey and those of the other participating state.

(e) Prior to engaging in verification services for an offset project sponsor, an accredited independent verifier shall disclose all relevant information to the Department to allow for an evaluation of potential conflict of interest with respect to an offset project, offset project developer, or project sponsor. The accredited independent verifier shall disclose information concerning its ownership, past and current clients, related entities, as well as any other facts or circumstances that have the potential to create a conflict of interest.

(f) An accredited independent verifier shall have an ongoing obligation to disclose to the Department any facts or circumstances that may give rise to a conflict of interest with respect to an offset project, offset project developer, or project sponsor.

(g) The Department may reject a verification report and certification from an accredited independent verifier, submitted as part of a consistency application required pursuant to N.J.A.C. 7:27C-10.4 or submitted as part of a monitoring and verification report submitted pursuant to N.J.A.C. 7:27C -10.11(c) or (d), if the Department determines that the accredited independent verifier has a conflict of interest related to the offset project, offset project developer, or project sponsor.

(h) The Department may revoke the accreditation of an independent verifier at any time, for any of the following:

1. Failure by the accredited independent verifier to fully disclose any issues that may lead to a conflict of interest situation with respect to an offset project, offset project developer, or project sponsor;

2. A change in staffing or other criteria so that the accredited independent verifier is no longer qualified;

3. Negligence or neglect of responsibilities by the accredited independent verifier pursuant to the requirements of this subchapter; or
4. Intentional misrepresentation of data or other fraud by the accredited independent verifier.

7:27C-10.11 Award of CO_2 offset allowances

(a) Following the issuance of a consistency determination under N.J.A.C. 7:27C-10.4(i) and the submission and approval of a monitoring and verification report under the provisions of (g) and (h) below, the Department will award one CO_2 offset allowance for each ton of demonstrated reduction in CO_2 or CO_2-equivalent emissions or sequestration of CO_2.

(b) If a project sponsor received a consistency determination pursuant to N.J.A.C. 7:27C-10.4(i), one CO_2 offset allowance will be awarded for each ton of reduction of CO_2 or CO_2 equivalent or sequestration of CO_2, represented by the relevant credits or allowances retired. If a credit or allowance is represented in metric tons, 1.1023 tons will be awarded for every metric ton, provided that total CO_2 offset allowances awarded shall be rounded down to the nearest whole ton.

(c) For CO_2 emissions offset projects undertaken prior to January 1, 2009, the project sponsor shall submit a monitoring and verification report covering the pre-2009 period by June 30, 2009.

(d) For CO_2 emissions offset projects undertaken on or after January 1, 2009, the project sponsor shall submit a monitoring and verification report within six months following the completion of the last calendar year during which the offset project achieved CO_2-equivalent emissions reductions or sequestration of CO_2 for which the project sponsor seeks the award of CO_2 offset allowances.

(e) For an offset project, a monitoring and verification report shall be submitted in a form prescribed by the Department and shall include:

1. The project's sponsor's name, address, e-mail address, telephone number, facsimile transmission number, and account number;
2. The CO_2 emissions reduction or CO_2 sequestration determination as required by the relevant provisions of N.J.A.C. 7:27C-10.5 through 10.9, including a demonstration that the project sponsor complied with the required quantification, monitoring, and verification procedures under N.J.A.C. 7:27C-10.5 through 10.9, as well as those outlined in the consistency application approved pursuant to N.J.A.C. 7:27C-10.4(i);
3. A signed certification statement by the project sponsor that reads "The undersigned project sponsor hereby confirms and attests that the offset project upon which this monitoring and verification report is based is in full compliance with all of the requirements of N.J.A.C. 7:27C-10. The project sponsor holds the legal rights to the offset project, or has been granted the right to act on behalf of a party that holds the legal rights to the offset project. I

understand that eligibility for the award of CO_2 offset allowances under N.J.A.C. 7:27C-10 is contingent on meeting the requirements of N.J.A.C. 7:27C-10. I authorize the Department or its agent to audit this offset project for purposes of verifying that the offset project, including the monitoring and verification plan, has been implemented as described in the consistency application that was the subject of a consistency determination by the Department. I understand that this right to audit shall include the right to enter the physical location of the offset project and to make available to the Department any and all documentation relating to the offset project at the Department's request. I submit to the legal jurisdiction of the State of New Jersey**.**";

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

5. A verification report and certification signed by an accredited independent verifier that documents that the accredited independent verifier has reviewed the monitoring and verification report and evaluated the following in relation to the applicable requirements at N.J.A.C. 7:27C-10.5 through 10.9, and any applicable guidance issued by the Department:

i. The adequacy and validity of information supplied by the project sponsor to determine CO_2 emissions reductions or CO_2 sequestration pursuant to the applicable requirements at N.J.A.C. 7:27C-10.5 through 10.9;

ii. The adequacy and consistency of methods used to quantify, monitor, and verify CO_2 emissions reductions and CO_2 sequestration in accordance with the applicable requirements at N.J.A.C. 7:27C-10.5 through 10.9 and as outlined in the consistency application approved pursuant to N.J.A.C. 7:27C-10.4(i);

iii. The adequacy and validity of information supplied by the project sponsor to demonstrate that the offset project meets the applicable eligibility requirements of N.J.A.C. 7:27C-10.5 through 10.9; and

iv. Such other evaluations and verification reviews as may be required by the Department;

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

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

(f) Following the receipt of a monitoring and verification report pursuant to (c) or (d) above, the Department will determine whether the report is complete for the purposes of commencing

review. In no event shall a completeness determination prevent the Department from requesting additional information needed by the Department to approve or deny the submitted monitoring and verification report.

(g) The Department will only accept a monitoring and verification report for an offset project for which the Department has issued a consistency determination pursuant to N.J.A.C. 7:27C-10.4(i).

(h) The Department will approve or deny a complete monitoring and verification report within 45 days following receipt of a complete report.