OFFICIAL FILE COPY
CLERK OF THE BOARD
OF COUNTY COMMISSIONERS
MIAMI-DADE COUNTY, FLORIDA

Approved _____ Mayor
Veto _____
Override _____

Agenda Item No. 8(D)(1)(A)
06-26-07

RESOLUTION NO. R-757-07

RESOLUTION APPROVING FORM OF CHICAGO CLIMATE EXCHANGE, INC. APPLICATION FOR MEMBERSHIP AS A PHASE II MEMBER FOR DIRECT EMISSIONS ONLY AND ALL RELATED AGREEMENTS AND LETTERS; AUTHORIZING COUNTY MAYOR OR HIS DESIGNEE TO EXECUTE AND FILE FOR AND ON BEHALF OF THE COUNTY SUCH APPLICATION AND RELATED AGREEMENTS AND LETTERS; DESIGNATING COUNTY REPRESENTATIVES TO PERFORM THE REQUIRED DUTIES AS SET FORTH IN THE APPLICATION FOR MEMBERSHIP AND RELATED RULEBOOK; AND AUTHORIZING THE COUNTY MAYOR OR HIS DESIGNEE TO DESIGNATE ANY ADDITIONAL REPRESENTATIVES OR MAKE SUBSTITUTIONS AS NEEDED DURING THE TERM OF MEMBERSHIP OF THE COUNTY IN THE CHICAGO CLIMATE EXCHANGE, INC. AS A PHASE II MEMBER FOR DIRECT EMISSIONS ONLY

WHEREAS, this Board desires to accomplish the purposes set forth in the accompanying County Manager's memorandum, a copy of which is incorporated in this Resolution by reference ("County Manager's Memorandum"); and

WHEREAS, the Chicago Climate Exchange, Inc. (CCX) is a voluntary, private, self-regulating, multi-sector, market-based program that is designed to quantify, verify, register, reduce, and trade the emissions of various greenhouse gases; and

WHEREAS, Resolution R-324-07 previously passed by this Commission on March 6, 2007, directed the County Manager to apply for and obtain Miami-Dade County membership in the Chicago Climate Exchange, Inc. as a Phase II member for Direct Emissions only,

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF MIAMI-DADE COUNTY, FLORIDA, that:

4

MEMORANDUM
(Revised)

TO: Honorable Chairman Bruno A. Barreiro and Members, Board of County Commissioners

DATE: June 26, 2007

FROM: Murray A. Greenberg County Attorney

SUBJECT: Agenda Item No. 8(D)(1)(A)

Please note any items checked.

_____ **"4-Day Rule" ("3-Day Rule" for committees) applicable if raised**

_____ **6 weeks required between first reading and public hearing**

_____ **4 weeks notification to municipal officials required prior to public hearing**

_____ **Decreases revenues or increases expenditures without balancing budget**

_____ **Budget required**

_____ **Statement of fiscal impact required**

_____ **Bid waiver requiring County Manager's written recommendation**

_____ **Ordinance creating a new board requires detailed County Manager's report for public hearing**

_____ **Housekeeping item (no policy decision required)**

_____ **No committee review**

Section 1. The Chicago Climate Exchange, Inc. (CCX) Application for Membership as a Phase II Member for Direct Emissions Only (the "Application"), the Authorization Agreement, the Letter of Commitment, and the Commitment Letter Addendum Agreement Between Miami-Dade County, Florida and the Chicago Climate Exchange, Inc. (collectively, the "Chicago Climate Exchange, Inc. Documents"), are approved in substantially the forms attached to this Resolution.

Section 2. The County Mayor or his designee is authorized to execute and file for, and on behalf of the County, the attached Chicago Climate Exchange, Inc. Documents with the filling in of any blanks as necessary, after consultation with the Office of the County Attorney, with such execution and filing being conclusive evidence of the County's approval of the Chicago Climate Exchange, Inc. Documents.

Section 3. Roger Carlton, Frank Hinton and Wendi Norris, current employees of the County, are designated to act as County representatives with the authority to perform the tasks set forth in the Application and the related Rulebook with respect to the purchase or redemption of energy credits, as the case may be.

Section 4. The County Mayor or his designee is authorized to designate additional County representatives and to make substitutions from time to time as needed while the County remains a member of the Chicago Climate Exchange, Inc.

Section 5. The provisions of Resolution No. R-1198-05, as amended by Resolution No. R-130-06, requiring that any contracts of the County with third parties be executed and finalized prior to their placement on the committee agenda, is waived at the request of the County Manager for the reason set forth in the County Manager's Memorandum.

5

The foregoing resolution was offered by Commissioner Natacha Seijas, who moved its adoption. The motion was seconded by Commissioner Rebeca Sosa and upon being put to a vote, the vote was as follows:

Bruno A. Barreiro, Chairman absent
Barbara J. Jordan, Vice-Chairwoman aye

Jose "Pepe" Diaz	aye	Audrey M. Edmonson	aye
Carlos A. Gimenez	aye	Sally A. Heyman	aye
Joe A. Martinez	aye	Dennis C. Moss	aye
Dorrin D. Rolle	aye	Natacha Seijas	aye
Katy Sorenson	aye	Rebeca Sosa	aye
Sen. Javier D. Souto	aye		

The Chairperson thereupon declared the resolution duly passed and adopted this 26th day of June, 2007. This resolution shall become effective ten (10) days after the date of its adoption unless vetoed by the Mayor, and if vetoed, shall become effective only upon an override by this Board.

MIAMI-DADE COUNTY, FLORIDA
BY ITS BOARD OF
COUNTY COMMISSIONERS

HARVEY RUVIN, CLERK

By: KAY SULLIVAN
Deputy Clerk

Approved by County Attorney as
to form and legal sufficiency. PST

Peter S. Tell

Memorandum

MIAMI-DADE COUNTY

Date: June 26, 2007

Agenda Item No. 8(D)(1)(A)

To: Honorable Chairman Bruno A. Barreiro and Members, Board of County Commissioners

From: George M. Burgess
County Manager

Subject: Resolution Approving the Form of the Chicago Climate Exchange, Inc., Application for Membership and All Other Related Agreements and Letters; Authorizing Execution of These Documents by the County Mayor or His Designee; Designating County Representatives to Perform Required Duties; and Authorizing the County Mayor or His Designee to Designate Additional or Substitute Representatives as Needed

---

Recommendation

It is recommended that the Board approve the attached resolution approving the form of the attached Chicago Climate Exchange (CCX) Application for Membership as a Phase II Member for Direct Emissions only and all related agreement and letters, and authorizing the County Mayor or his designee to execute the application and all related documents for and on behalf of Miami-Dade County. This resolution also designates specific employees to perform required duties associated with CCX membership and authorizes the County Mayor or his designee to designate additional or substitute representatives as needed during the term of membership of the County in the Chicago Climate Exchange, Inc.

Due to the fact that the supplemental Agreements need to be submitted with the application, which is subject to review and acceptance by the Chicago Climate Exchange, Inc., it is not possible to have them executed in advance. Since the agreements are necessary to protect the County's interest, a waiver is requested from Resolution No. R-1198-05, as amended by Resolution No. R-130-06, which requires that County contracts be executed by the other party in advance of committee review, so the filing of the application may proceed.

Scope

Membership in the Chicago Climate Exchange, Inc., will require that Miami-Dade County closely track, report, and make efforts to reduce its greenhouse gas emissions associated with county fleet fuel usage. Since county vehicles are utilized throughout the County, this will have a countywide impact.

Fiscal Impact/Funding Source

A report (attachment) was presented to the Board on March 6, 2007, which includes a detailed data analysis by CCX of the County's baseline emissions numbers and future year fuel and energy consumption data. This analysis included a description of the goals and purpose of the CCX, as well as the various membership options available in the CCX. Miami-Dade County will apply as a Phase II member for Direct Emissions only; therefore only fuel consumption will be used to measure annual greenhouse gas emissions for comparison to the baseline and mandated annual reduction targets. Based on the growth of the County's fuel consumption during the years 2000 – 2006, versus the reduction targets required by CCX, it is expected that the County would be a "buyer" of emission credits over the 4-year term of our membership. The estimated costs to the County as a "buyer" of emission credits for Direct Emissions is approximately $280,000 over the 4-year period. This is based on the current market price of $4.00 per Carbon Financial Instrument, which can vary depending on market forces. In addition, there is an initial $5,000 membership application fee, as well as annual membership dues of $10,000, during the four-year term of membership. Therefore, the estimated impact for

years 2007 – 2010 is approximately $325,000. The Office of Strategic Business Management (OSBM) is currently examining potential funding options.

Track Record/Monitor

A list of Due Diligence questions (attachment) was sent to the Chicago Climate Exchange Inc., on Friday, April 20, 2007, but a response has not yet been received from CCX. An update will be provided as this information is received from CCX. As an additional due diligence measure the Miami-Dade Risk Management Department is obtaining a comprehensive report from Dun & Bradstreet. This Report will be forwarded once it is obtained.

Background

At their March 6, 2007 meeting, the Board adopted Resolution No. R-324-07 (Attachment) sponsored by Commissioner Seijas, directing the County Manager to apply for and obtain membership in the Chicago Climate Exchange (CCX), Inc. Since that time staff from the Department of Environmental Resources Management (DERM), the Finance Department and the County Attorney's Office have been conducting research and have prepared the documents necessary to complete the membership application package. The completed Chicago Climate Exchange (CCX) application for Membership, the Authorization/Agreement, the Letter of Commitment, and the Commitment Letter Addendum Agreement Between Miami-Dade County, Florida and the Chicago Climate Exchange, Inc., are attached, as well as additional supporting documents including the Due Diligence Request to CCX and the Chicago Climate Exchange, Inc. Rulebook.

The CCX is a private, self-regulating, multi-sector, market-based program that is designed to quantify, verify, register, reduce, and trade the emissions of various greenhouse gases. Section 2(1) of 17 CFR 36.3 (Exempt Commercial Markets) states: "Prohibited representation: An electronic trading facility relying upon the exemption in section 2(h)(3) of the Act shall not represent to any person that it is registered with, designated, recognized, licensed or approved by the Commission." Although the National Association of Securities Dealers (NASD) provides regulatory services, including audit and market surveillance functions, pursuant to a contract with CCX, Page 1-1, Paragraph 1.2 Regulatory Status, of the CCX Rule Book states: "CCX is an Exempt Commercial Market as defined in Section 2(h)(3) of the Commodity Exchange Act and in Part 36.3 of the regulations of the Commodity Futures Trading Commission (CFTC). The Exchange is not registered with, or recognized, designated, licensed or approved by the CFTC. The circumstances set forth in this paragraph are subject to change." Chicago Climate Exchange, Inc., is one of approximately 17 legal entities that have filed notices with the CFTC as an "Exempt Commercial Market." A table entitled "Exempt Commercial Markets That Have Filed Notice with the CFTC" (attachment) and additional information can be found on the CFTC website at http://www.cftc.gov/dea/dea_ecm_table.htm .

Although membership itself in the CCX is voluntary, members make a legally binding commitment to reduce greenhouse gas emissions on an annual basis by 1.5% of their baseline emissions in order to reach a final emission reduction goal of 6% over the four-year period of 2007 through 2010. If a member is unable to attain the annual greenhouse emission reduction goals, they are required to purchase emission credits on the CCX market-trading platform. The unit traded on the CCX trading platform is the "Carbon Financial Instrument Contract," or CFI, which is equivalent to 100 metric tons of CO_2 and has a current market value of $4.00 on the CCX Trading Platform.

Assistant County Manager

MEMORANDUM

Agenda Item No. 11(A)(16)

TO: Honorable Chairman Bruno A. Barreiro
and Members, Board of County Commissioners

DATE: March 6, 2007

FROM: Murray A. Greenberg
County Attorney

SUBJECT: Resolution directing County Manager to apply for membership in the Chicago Climate Exchange

The accompanying resolution was prepared and placed on the agenda at the request of Commissioner Natacha Seijas, Commissioner Jose "Pepe" Diaz, Commissioner Audrey M. Edmonson, Commissioner Carlos A. Gimenez, Commissioner Joe A. Martinez and Commissioner Dorrin D. Rolle.

Murray A. Greenberg
County Attorney

MAG/bw

MEMORANDUM
(Revised)

TO: Honorable Chairman Bruno A. Barreiro and Members, Board of County Commissioners

DATE: March 6, 2007

FROM: Murray A. Greenberg County Attorney

SUBJECT: Agenda Item No. 11(A)(16)

Please note any items checked.

_____ **"4-Day Rule" ("3-Day Rule" for committees) applicable if raised**

_____ **6 weeks required between first reading and public hearing**

_____ **4 weeks notification to municipal officials required prior to public hearing**

_____ **Decreases revenues or increases expenditures without balancing budget**

_____ **Budget required**

_____ **Statement of fiscal impact required**

_____ **Bid waiver requiring County Manager's written recommendation**

_____ **Ordinance creating a new board requires detailed County Manager's report for public hearing**

_____ **Housekeeping item (no policy decision required)**

_____ **No committee review**

Approved _____ Mayor
Veto _____
Override _____

Agenda Item No. 11(A)(16)
3-6-07

OFFICIAL FILE COPY
CLERK OF THE BOARD
OF COUNTY COMMISSIONERS
MIAMI-DADE COUNTY, FLORIDA

RESOLUTION NO. R-324-07

RESOLUTION AUTHORIZING AND DIRECTING THE COUNTY MANAGER TO APPLY FOR AND OBTAIN MIAMI-DADE COUNTY MEMBERSHIP IN THE CHICAGO CLIMATE EXCHANGE AS A PHASE II MEMBER FOR DIRECT EMISSIONS AND TO BUDGET SUFFICIENT FUNDS TO SUPPORT MEMBERSHIP IN THE CHICAGO CLIMATE EXCHANGE

WHEREAS, the Chicago Climate Exchange (CCX) is a voluntary, self-regulating, multi-sector program that is designed to quantify, verify, register, reduce and trade the emissions of various greenhouse gases; and

WHEREAS, although membership itself in the CCX is voluntary, members make a legally binding commitment to reduce greenhouse gas emissions by a set percentage of their baseline emissions; and

WHEREAS, the stated goals of the CCX are as follows:

- To facilitate the transaction of greenhouse gas emissions allowance trading, price transparency, design excellence, and environmental integrity.
- To build the skills and institutions needed to cost-effectively manage greenhouse gas emissions.
- To facilitate capacity-building in both the public and private sectors to facilitate greenhouse gas mitigation.
- To strengthen the intellectual framework required for cost-effective and valid greenhouse gas reduction.
- To help inform the public debate on managing the risk of global climate change; and

WHEREAS, the potential benefits to Miami-Dade County far exceed the minimal costs incurred by entering into this legally binding commitment; and

WHEREAS, as suggested by the CCX, the dollars spent by the County as a Phase II member:

- contribute to bona fide greenhouse gas (GHG) reductions under the CCX cap-and-trade system.
- are an investment that will help the County develop long-term energy and emissions management systems over time that will in turn deliver value and possible revenue to the public budget through minimization of waste.
- enable the County to highlight where best to spend "green" dollars so that these dollars are deployed where they will deliver the most actual green benefit especially in terms of GHG reductions.
- will put the County at the forefront of practical and intellectual development of cap-and-trade market architecture and innovation, including the development of new protocols of importance to public sector entities such as public transportation "credit" systems,

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF MIAMI-DADE COUNTY, FLORIDA, that this Board hereby authorizes and directs the County Manager to apply for and obtain Miami-Dade County membership in the Chicago Climate Exchange as a Phase II Member for Direction Emissions and to budget sufficient funds to support the membership requirements of the Chicago Climate Exchange.

The foregoing resolution was sponsored by Commissioner Natacha Seijas, Commissioner Jose "Pepe" Diaz, Commissioner Audrey M. Edmonson, Commissioner Carlos A. Gimenez, Commissioner Joe A. Martinez and Commissioner Dorrin D. Rolle. and offered by Commissioner Natacha Seijas, who moved its adoption. The motion was seconded by Commissioner Carlos A. Gimenez and upon being put to a vote, the vote was as follows:

10

A

Bruno A. Barreiro, Chairman	aye		
Barbara J. Jordan, Vice-Chairwoman	aye		
Jose "Pepe" Diaz	aye	Audrey M. Edmonson	absent
Carlos A. Gimenez	aye	Sally A. Heyman	aye
Joe A. Martinez	absent	Dennis C. Moss	aye
Dorrin D. Rolle	aye	Natacha Seijas	aye
Katy Sorenson	aye	Rebeca Sosa	absent
Sen. Javier D. Souto	absent		

The Chairman thereupon declared the resolution duly passed and adopted this 8th day of March, 2007. This resolution shall become effective ten (10) days after the date of its adoption unless vetoed by the Mayor, and if vetoed, shall become effective only upon an override by this Board.

MIAMI-DADE COUNTY, FLORIDA
BY ITS BOARD OF
COUNTY COMMISSIONERS

HARVEY RUVIN, CLERK

By: KAY SULLIVAN
Deputy Clerk

Approved by County Attorney as
to form and legal sufficiency.

Peter S. Tell

C:\WP\RESOM (2).DOC

11

Memorandum

MIAMI-DADE COUNTY

Date: March 6, 2007

Agenda Item No. 12(B)4

To: Honorable Chairman Bruno A. Barreiro and Members, Board of County Commissioners

From: George M. Burgess
County Manager

Subject: Miami-Dade County Membership in the Chicago Climate Exchange

---

At their September 25, 2006 meeting, the Board adopted Resolution No. R-1204-06, sponsored by Commissioner Seijas, and directing the County Manager to prepare and submit a report and recommendation regarding the possibility of Miami-Dade County (County) joining the Chicago Climate Exchange (CCX). Since that time the Department of Environmental Resources Management (DERM) collected fuel and energy consumption data from several County departments for the CCX to calculate a baseline emissions total for the County. On January 5, 2007, the CCX provided DERM a detailed data analysis of the County's baseline emissions numbers and future year fuel and energy consumption data (Attachment 1). This report describes the goals and purpose of the CCX, the various membership options in the CCX, and my recommendation going forward as it relates to the County being a part of the CCX.

The CCX is a voluntary, self-regulating, multi-sector program that is designed to quantify, verify, register, reduce, and trade the emissions of various greenhouse gases. Although membership itself in the CCX is voluntary, members make a legally binding commitment, to reduce greenhouse gas emissions by a set percentage of their baseline emissions. The stated goals of the CCX are as follows:

- To facilitate the transaction of greenhouse gas emissions allowance trading price transparency, design excellence, and environmental integrity.
- To build the skills and institutions needed to cost-effectively manage greenhouse gas emissions.
- To facilitate capacity-building in both the public and private sectors to facilitate greenhouse gas mitigation.
- To strengthen the intellectual framework required for cost-effective and valid greenhouse gas reduction.
- To help inform the public debate on managing the risk of global climate change.

As mentioned above, submittal of fuel and energy consumption data and establishment of a baseline emissions number is required for membership. The CCX distinguishes fuel and energy consumption data into two categories: Direct Emissions and Indirect Emissions, respectively. To join the CCX, only Direct Emissions are <u>required</u> to be used in calculation of baseline emissions for membership purposes; use of Indirect Emissions is optional. This distinction will be discussed further below.

There are two (2) types of membership options: Phase I and Phase II. Phase I requires members to reduce their baseline emissions by 1% annually, or a total of 4%, by the end of calendar year 2006. Due to the timing of our proposed membership, the County cannot join as a Phase I member. Therefore, the County would be required to join as a Phase II member, meaning that we would be

+ 12

required to reduce our emissions by 1.5% annually, for a total of 6%, over the 4-year period of 2007 through 2010. Attachment 1, the January 5, 2007, CCX analysis, projects future emissions levels for both Direct and Indirect emissions using the data provided by the County for the years 2000-2006. Based on the growth of our fuel and energy consumption versus the reduction targets required by CCX, it is expected that the County would be a "buyer" of emission credits over the 4-year term of our membership. As mentioned in the January 16, 2007, CCX status report that was provided to the INLUC Committee (Attachment 2), the costs to the County as a "buyer" of emission credits for Direct Emissions could be approximately $280,000 over the 4-year period, and for Indirect emissions (optional), is approximately $1.4 million over that same period, not including estimated membership fees of $25,000 over that term.

The magnitude of measures the County would have to take in order to reduce the "buyer" costs for a Phase II membership are significant. For example, the County would have to reduce its current fuel usage by 40%, or roughly 12.4 million gallons of combined fuel usage, in 2007 alone. While implementing such an action over time to reduce our greenhouse gas emissions is certainly a goal of the County, it is clear that financial realities and feasibility of accomplishing such significant reductions in the near term is nearly impossible as we expand the use of our bus fleet and continue to grow in population. If we became members, it would be our goal to revise the bus fleet calculation so as to receive credit for expanding public transit.

Even with the financial risk, joining the CCX will provide many advantages and benefits for the County. This includes an increased awareness of the need to implement greenhouse gas initiatives by County departments, solidification of the County's reputation as a leader in greenhouse gas reduction, and access to state of the art emissions management tools. Further, having a seat at a national forum regarding climate change issues is important, as this topic has now moved to the national stage.

At this time, I am recommending that the County join the CCX as a Phase II member for Direct Emissions only. Joining for Direct Emissions only will allow the County to be a part of the CCX while limiting our financial exposure as we grow to better learn and understand their systems and policies and further reduce our greenhouse gas emissions. As part of this recommendation, it will also be necessary to obtain authorization from the Board to set aside first-year estimated funding of approximately $80,000, not including possible administrative costs and implementation of our membership. While a funding source has not yet been identified, I have directed the Office of Strategic Business Management (OSBM) to examine some possible options that could include a cost-share arrangement between County departments based on their ability to meet baseline target emissions, a surcharge on fuel purchases by County departments, or resources generated from the sale of recycled materials. Departments most likely to be affected by this are the Water and Sewer Department, Department of Solid Waste Management, Miami-Dade Transit, Miami-Dade Police Department, Public Works Department, the Parks and Recreation Department, and the General Services Administration.

Assistant County Manager

ATTACHMENT 1

CCX Chicago Climate Exchange™

190 S. LaSalle Street, Suite 800
Chicago, Illinois 60603

T 312.554.3350
F 312.554.3373

January 5, 2007

Carlos Espinosa, PE
Director, Department of Environmental
Resources Management
Miami-Dade County
33 Southwest 2nd Avenue PH 2
Miami, FL 33130

Dear Mr. Espinosa,

Pursuant to inquires by your staff and conference call on 1/4/06, attached is the data analysis we are able to provide relative to CCX membership.

Apropos of several other points we discussed with Mr. Wong, Ms. Griner and Mr. Gandi:

Buying allowances as a greenhouse gas reduction tool

As we discussed, it appears as if Miami-Dade County would be a buyer in CCX and in this case Membership would thus involve an ongoing "cost" to the County. However as we discussed, a cap-and-trade system is designed to incentivize reductions from ALL sectors and emissions and to enable the most cost-effective cuts to be achieved as soon as possible. Thus it is possible that the dollars spent buying may represent the most cost effective reductions available to the County if it wishes to make a global contribution to climate change mitigation at this time.

We would suggest that the "cost" of CCX membership will be dwarfed by the developing value of membership terms of the County's ability to manage and track emissions and energy use, as well as manage, track, highlight and maximize energy efficiencies and reduce energy waste. As we've said, CCX is a "turn key" emissions management system and as such will deliver value and return to the County on an ongoing basis.

In short, the dollars spent buying allowances:

a) are contributing to bona fide ghg reductions under the CCX cap-and trade
b) can be viewed as an investment that will helping the County develop long-term energy and emissions management systems over time that will in turn deliver value and possible revenue to the public budget through minimization of waste
c) enable the County to highlight where best to spend "green" dollars so that these dollars are deployed where they will deliver the most actual green benefit especially in terms of greenhouse gas reductions
d) put the County at the forefront of practical and intellectual development of cap-and trade market architecture and innovation, including the development of new protocols of importance to public sector entities such as public transportation "credit" systems.

Miami-Dade's Urban CO_2 Reduction Plan

It would be helpful for us to know more about the reductions the County has achieved under this plan. As you know, CCX is a legally binding commitment and therefore the County commitment/membership would cover only those emissions for which the County is legally responsible, which is normally County-owned facilities.

If the County "owns" reductions through the CO_2 Reduction Plan, these may be included in the CCX membership structure.

Feel free to call with any questions.

Many thanks,
Paula DiPerna
Executive Vice President, Corporate Recruitment & Public Policy

Cc: Debbie Griner, Patrick Wong, Venu Gandi

K 3/14

Discussion Memorandum

CONFIDENTIAL – FOR INTERNAL USE

January 5, 2007

From: Paula DiPerna, Executive Vice President for Corporate Recruitment and Policy, Chicago Climate Exchange (CCX)

To: Carolos Espinosa, PE, Director of Environmental Resources Management
Debbie Griner, Project Supervisor
Patrick Wong, Chief, Air Quality Management Division
Venu Gandi, Engineer 2, Air Quality Management Division

Cc: Angela Leontis, CCX

Re: Miami-Dade County -- Summary of Baseline & Buyer Position, Membership in CCX, Phase II

This memo summarizes data and potential position of Miami-Dade County in the Chicago Climate Exchange for Phase II (2007-2010) and follows a teleconference with Debbie Griner, Ray Baker, Venu Gandi and Patrick Wong on January 4, 2007. On the call, the County's data and CCX membership were discussed. It was explained that, based on data provided by Miami-Dade County to CCX, CCX projects the County to be in a buyer position for Phase II. Miami-Dade staff requested a CCX analysis to provide a detailed explanation of this position. For the past several months, CCX has been in communication with the Miami-Dade staff as it has undergone the process of assembling its emissions inventory in preparation for its report reviewing CCX and evaluating the potential for Miami-Dade County's membership in the Exchange. The origin of CCX and Miami-Dade County's discussions was a National Association of Counties (NACo) briefing on CCX in Chicago in August 2006, where Miami-Dade County expressed interest in examining membership in CCX.

Summary

For Phase II, based on data provided by the County for baseline year 2000 and trends from 2003-2006, CCX has prepared an *estimate* analysis of Miami-Dade County's carbon dioxide (CO_2) emissions, the primary greenhouse gas (GHG) released by Miami-Dade County's operations. Based on this analysis of its emissions, CCX projects Miami-Dade County to be in a position to be a buyer of emission reduction allowances for CCX Phase II (years 2007-2010). Based on projections that Miami-Dade County's direct emissions would remain flat at 2006 levels, this would result in a *minimum*[1] buy position of 70,174 metric tons over years 2007-2010. At January 4, 2007 CCX closing prices of $4.00 per metric ton CO_{2e}, the cost of these allowances would be valued at $280,696. (See Table 1; also see www.chicagoclimateexchange.com for daily prices.)

The optional inclusion of indirect emissions in Miami-Dade County's CCX reduction commitment would result in an additional buy position of a minimum of 343,569 metric tons (see table 2). This also assumes that indirect emissions would remain flat at 2006 levels. The comprehensive buy position of both direct and indirect emissions, assuming emissions remain flat at 2006 levels, would be 413,743 metric tons during Phase II.

---

[1] Includes direct emissions only.

3 of 6

Note on Data Assumptions and Calculations

For the purpose of this analysis, projections assume emissions remain flat at 2006 levels during Phase II years (2007-2010). Should emissions decrease below 2006 levels over the course of Phase II years, Miami-Dade County's emissions position could change.

Miami-Dade County has warranted to CCX that data provided includes natural gas, propane, jet fuel, LPG, unleaded gasoline, diesel and electricity purchases for years 2000 and 2003-2006.
Missing data in Baseline (2000) year includes:

- Miami-Dade Police Department generator LPG and diesel data
- Propane consumption

For purposes of calculating the Baseline, a 1% per year emissions growth rate protocol was applied to data provided by the County for later years, as defined by CCX Rules. (LPG and diesel data was extrapolated from data provided for 2004; propane data was extrapolated from data provided for 2001).

Note: Some incomplete police CNG and Public Works equipment data was omitted and considered de minimis by CCX staff (less than 5% of Baseline).

Miami-Dade County, Phase II (2007-2010) Data Analysis

The tables on the next pages present Miami-Dade County's Baseline and 2003-2006 emissions along with its annual reduction targets and projected emissions position for Phase II (2007-2010). CCX distinguishes between a Member's Direct and Indirect Emissions. Direct Emissions or Owned Emissions[2] result from the Member's on-site combustion of fossil fuels such as natural gas and coal and are presented in Table 1. Indirect Emissions result from the Member's purchase of electricity and its corresponding emissions are presented in Table 2. Inclusion of a Member's Indirect Emissions into the CCX program is optional, but encouraged. Earned "surplus" allowances from Indirect Emissions can be used to offset an increase in Direct Emissions and vice versa. Emission reductions associated with electricity purchases are subject to the same limits on sales and liability that are applied to direct emissions.

Table 1: Direct Emissions Position Phase II (year 2000 Baseline)

(all figures in metric tons CO2)	2000 Baseline	2003	2004	2005	2006	2007	2008	2009	2010
1. CCX Reduction Target	% Below Baseline					1.50%	3.00%	4.50%	6.00%
	Metric Tons					256,005	252,107	248,208	244,310
2. Owned Emissions	259,904	275,153	277,073	301,082	279,753	279,753	279,753	279,753	279,753
3. Gross Amount						-23,748	-27,646	-31,545	-35,443
4. Net Position						BUY	BUY	BUY	BUY
5. Maximum Recognized Reductions/Max Recognized Increases (EGP)	% of Baseline					4.5%	6%	7.5%	9%
	Metric Tons					11,696	15,594	19,493	23,391
6. Required Purchase						11,696	15,594	19,493	23,391
7. Allowed Sales/Banking						n/a	n/a	n/a	n/a

[2] Owned Emissions are the direct greenhouse gas emissions, expressed in metric tons carbon dioxide (CO_2) equivalent, associated with the activities undertaken at facilities the CCX Member owns and are defined on the basis of the Member's equity ownership percentage of a jointly owned facility that releases GHGs.

4 5 16

Table 1 shows Miami-Dade County's Direct Emissions Baseline to be approximately 259,904 metric tons CO_2. This figure is calculated using the County's owned emissions from the year 2000[3]. Reported emissions in 2003-2006 are 275,153 metric tons, 277,073 metric tons, 301,082 metric tons and 279,753 metric tons CO_2 respectively. Over the 2003-2006 time period, Miami-Dade County's emissions grew, on average, about 9% above the Baseline level. Should this trend continue in the future, it can be expected that Miami-Dade County will be in a buy position during all Phase II years.

Miami-Dade County emission reduction targets for Phase II would be 1.5% per year below Baseline, as outlined in row 1. If emissions stayed relatively flat at 2006 levels, Miami-Dade County would fall short of its annual CCX reduction commitments. The gross amount of shortages is presented in row 3. Row 5 shows the maximum recognized reductions as dictated by the Economic Growth Provision (EGP). The EGP limits the maximum increase in emissions for the purpose of True-up at 3% above baseline for years 2007 through 2010. (This provision is applied symmetrically around reduction targets, thereby providing a limit on both required purchases and allowed sales). When combined with the CCX annual reduction targets, these limits result in a maximum required purchase level that is 4.5% of baseline in 2007, 6% of baseline in 2008, 7.5% of baseline in 2009 and 9.0% of baseline in 2010. The corresponding metric ton amounts are presented in rows 5 and 6 of the table above.

Table 2: Indirect Emissions Position Phase II (year 2000 Baseline)									
(all figures in metric tons CO2)	2000 Baseline	2003	2004	2005	2006	2007	2008	2009	2010
1. CCX Reduction Target	% Below Baseline					1.50%	3.00%	4.50%	6.00%
	Metric Tons					1,253,388	1,234,301	1,215,214	1,196,127
2. Owned Emissions	1,272,476	1,362,930	1,264,720	1,392,079	1,492,795	1,492,795	1,492,795	1,492,795	1,492,795
3. Gross Amount						-239,407	-258,494	-277,581	-296,668
4. Net Position						BUY	BUY	BUY	BUY
5. Maximum Recognized Reductions/Max Recognized Increases (EGP)	% of Baseline					4.5%	6%	7.5%	9%
	Metric Tons					57,261	76,349	95,436	114,523
6. Required Purchase						57,261	76,349	95,436	114,523
7. Allowed Sales/Banking						n/a	n/a	n/a	n/a

Table 2 outlines Miami-Dade County's Indirect Emissions from electricity purchases. The CCX Indirect Emissions Baseline is calculated as the average megawatt hours purchased during the baseline period (the year 2000) and converted to metric tons CO_2. CCX uses a conversion rate of 0.61 metric tons CO_2 per purchased MW hour. This rate reflects the U.S. average emissions rate for electricity production during the CCX Baseline period.

Miami-Dade County's Indirect Emissions Baseline totals 1,272,476 metric tons. From this Baseline, CCX Phase II Members make a legally binding commitment to a 1.5% reduction each year. This reduction target is compared against the company's Indirect Emissions during each of the program years. Miami-Dade County's 2003, 2004, 2005 and 2006 emissions are outlined in row 2 above. Over the 2003-2006 time period, Miami-Dade County's emissions grew, on average, about 4.3% above the Baseline level.

[3] All calculations used for this document were prepared using data provided by Miami-Dade County. Miami-Dade County's LPG, propane and some gasoline and diesel data were missing for the year 2000. To accommodate for these gaps, a 1% per year emissions growth rate protocol was used, as defined by CCX Rules.

5 6
17

Should this growth trend continue, Miami-Dade County would be in a buy position for all Phase II program years.

Miami-Dade County emission reduction targets for Phase II would be 1.5% per year below Baseline, as outlined in row 1. Assuming emissions stay relatively flat at 2006 levels, Miami-Dade County would fall short of its annual CCX reduction commitments. The gross amount of shortages is presented in row 3. Row 5 shows the maximum recognized reductions as dictated by the Economic Growth Provision (EGP). The EGP limits the maximum increase in emissions for the purpose of True-up at 3% above baseline for years 2007 through 2010. Row 5 captures the "maximum buy" scenario. Should emissions continue to follow recent trends, they will increase over time and the County will need to purchase Carbon Financial Instrument™ (CFI™) contracts for annual compliance True-up in a quantity dictated by the Economic Growth Provision (see row six).

Neither CCX nor any of its respective officers and employees make any express or implied representation, warranty or undertaking with respect to the calculations contained herein, and none of them accept any responsibility or liability as to their accuracy or completeness. The information contained in this document should not be considered as a recommendation by CCX in relation to any decision by Miami-Dade County. This information has not been reviewed by the NASD or independently verified.

7 18

– Appendices –

Appendix 1 – Methodology
Appendix 2 – Terms Defined

7
8
19

Appendix 1

– Methodology –

Introduction

For those facilities and/or activities that are included in the CCX Emission Reduction Schedule, the entity will determine a Baseline average level of emissions (the average of emissions for the years 1998-2001) and includes those emission sources to the CCX Emission Reduction Schedule for the duration of the pilot market time period (2003-2006). The Emission Reduction Schedule is 1% below-Baseline in 2003, 2% below-Baseline in 2004, 3% in 2005 and 4% in 2006. Those that cut further can sell surplus emission allowances. Those that cannot make sufficient cuts internally must achieve annual compliance through purchase of emission allowances from those making extra cuts. Each Member's Baseline is adjusted to reflect facility acquisitions and sales. Emissions from combustion of renewable fuels are excluded. Entities that own eligible project-based Offsets can sell those or use them as a "credit" against emissions.

Emissions to be Included

Each CCX Member includes in its Emission Baseline and Periodic Emission Reports its Owned Emissions from all Large Emission Sources, as defined in the CCX Rulebook (see below). "Owned Emissions" are defined on the basis of a Member's Equity Ownership Percentage in an emission source. For example, if an entity has a 20% or higher ownership share in an emitting facility, that percentage of the co-owned plant's emissions would be included in that entity's baseline and subsequent periodic emission reports. "Large Emission Sources" as follows:

1. for CCX Members with entity-wide Owned Direct Emissions less than 200,000 metric tons of CO_2 equivalent per year, Large Emissions Sources are those facilities or activities with Owned emissions of 10,000 metric tons of CO_2 equivalent per year or more;
2. for CCX Members not primarily engaged in electricity production and having entity-wide Owned Direct Emissions of 200,000 metric tons CO_2 equivalent per year or more, those facilities and activities that release emissions owned by the Member that are estimated to be 5% or more of the Member's total owned emissions; and,
3. for CCX Members primarily engaged in electricity production, Large Emissions Sources are defined as electric power generation facilities having a rated capacity of 25 megawatts or larger.

Each CCX Member may elect to "Opt-in" the following emission sources, which would then be included in the Member's Emission Baseline, Emissions Reduction Schedule and Periodic Emission Reports:

1. electricity purchases, which are converted to CO_2 emissions using national average emission rates
2. emissions from Small Emission Sources and emissions sources in which the CCX Member holds a minor ownership percentage;
3. emissions associated with activities in Canada and Mexico; and,
4. non-CO_2 emissions associated with fossil fuel combustion (N_2O and CH_4).

8

9 20

Appendix 2

– Terms Defined –

Attachment 3 defines the terms unique to the CCX emission reduction and trading program that are used in this Memo. Terms are listed in the order in which they appear in the Memo.

Owned Emissions are the direct greenhouse gas emissions, expressed in metric tons carbon dioxide (CO_2) equivalent, associated with the activities undertaken at facilities the CCX Member or Associate Member owns and are defined on the basis of the Member's or Associate Member's Equity Ownership Percentage of a Jointly Owned facility that releases GHGs.

Relevant section(s) of CCX Rulebook Section 4.11.2:

Each CCX Member and Associate Member is to include in its Emission Baseline and Periodic Emission Reports its Owned Emissions from all Large Emission Sources in which the CCX Member's or Associate Member's Equity Ownership Percentage is greater than or equal to 20%, subject to provisions contained in this Chapter. Exceptions to this provision may be recommended, on a case-by-case basis, by the CCX Committee on Environmental Compliance if a CCX Member's Equity Ownership Percentage of a Large Emission Source or Large Electricity Purchase Activities is less than or equal to 50% and data on emissions or electricity purchases from the jointly owned facility are not accessible to the CCX Member.

Large Emission Sources are:

1. for CCX Members not primarily engaged in electricity production and having entity-wide Owned Direct Emissions of 200,000 tons CO_2 equivalent per year or more, those facilities and activities that release emissions owned by the Member that are estimated to be 5% or more of the Member's total owned emissions;
2. for CCX Members having estimated entity-wide Owned Direct Emissions totaling less than 200,000 metric tons of CO_2 equivalent per year, Large Emission Sources are those facilities or activities that have Owned emissions of 10,000 metric tons of CO_2 equivalent per year or more; and,
3. for CCX Members primarily engaged in electricity production, Large Emission Sources are defined as electric power generation facilities having a rated capacity of 25 megawatts or larger.

Small Emission Sources are:

1. for CCX Members having entity-wide Owned Direct Emissions of 200,000 tons CO_2 equivalent per year or more, those facilities or activities that release emissions owned by the Member that are estimated to be less than 5% of the Member's total Owned Direct Emissions;
2. for CCX Members having estimated entity-wide Owned Direct Emissions totaling less than 200,000 metric tons of CO_2 equivalent per year, those facilities or activities that have Owned emissions of 10,000 metric tons of CO_2 equivalent per year; and,
3. for CCX Members primarily engaged in electricity production, electric power generation facilities having a rated capacity of less than 25 megawatts.

Opt-in is the election by a CCX Member or Associate Member to include in its Emissions Baseline and Emission Inventory emissions from sources whose inclusion is not mandated as a condition of CCX membership.

Relevant section(s) of CCX Rulebook Section 4.11.2:

9

10

- *Each CCX Member and Associate Member may elect to include as a Supplemental Reduction Objective additional activities through the following Opt-in programs:*
    1. *Small Emission Source Opt-in (Direct Emissions*
    2. *Minor Ownership Opt-in*
    3. *Electricity Purchase Opt-in (for CCX Members not primarily engaged in electricity production)*
    4. *Geographic Opt0in (direct emissions and electricity purchases in NAFTA countries)*
    5. *Non- CO_2 emissions Opt-in.*

The **Economic Growth Provision** is a provision that limits the maximum increase in emissions above a Member's Emission Baseline that will be recognized in determining the annual True-up for each CCX Member. This Provision also applies to changes in Carbon Stocks on lands of CCX Members that are forest product companies. (Sections 4.8, 8.14)

The **Maximum Recognized Emission Reduction** is a limitation on the maximum reductions in CO_2 equivalent emissions that will be recognized in determining the quantity of surplus Exchange Allowances a CCX Member may sell or bank, as a result of the symmetric application of the Economic Growth Provision. (Section 4.11.2)

~~10~~
~~11~~ 22

ATTACHMENT 2

Memorandum

MIAMI-DADE COUNTY

Date: January 16, 2007

INLUC
Agenda Item No. 7(F)

To: Honorable Chairman Bruno A. Barreiro
and Members, Board of County Commissioners

From: George M. Burgess
County Manager

Subject: Chicago Climate Exchange Status Report

At the December meeting of the Infrastructure and Land Use Committee (INLUC), it was reported that staff was gathering the data necessary to provide to the Chicago Climate Exchange (CCX) so that a greenhouse gas emissions baseline could be established for Miami-Dade County. That process has been completed and the CCX just recently provided an analysis to the County on January 5, 2007 (see attached letter). Staff is evaluating this analysis to determine if joining the CCX is a viable option for the County. However, early indications are that the County would have to join the CCX as a "buyer" of emissions credits. The cost to the County as a "buyer" of emissions credits from 2007-2010 for shortfalls in the reduction of direct emissions (fuels) is estimated at approximately $280,000. For indirect emissions (electricity consumption), which is optional for membership, the estimated cost to the County due to projected shortfalls between 2007-2010 would be approximately $1.4 million. This would be a significant financial investment. Nonetheless, DERM is completing their evaluation of the CCX analysis and should have a full recommendation, as well as any other possible alternatives, for the February INLUC meeting.

Assistant County Manager

Chicago Climate Exchange,® Inc.

RULEBOOK

Chicago Climate Exchange,® Inc.
All Rights Reserved
© January 2004

24

Table of Contents

Section		Page
	Chapter 1: Chicago Climate Exchange Objectives, Definitions	
1.0	Introduction	1-1
1.1	Goals of Chicago Climate Exchange	1-1
1.2	Regulatory Status	1-1
1.3	Definitions	1-2
	Chapter 2: Exchange Membership	
Chapter 2 is currently being revised. The revised version will be posted upon its completion. (March 2006)		
2.0	Purpose	2-1
2.1	General Provisions	2-1
2.2	Classes of CCX Membership	2-1
2.2.1	CCX Members	2-1
2.2.2	CCX Associate Members	2-1
2.2.3	CCX Participant Members	2-2
2.2.3.1	Market Maker Program	2-2
2.2.4	Exchange Participants	2-2
2.2.5	Additional Membership Classes	2-2
2.3	Eligibility	2-2
2.4	Registry Account Holder Applications	2-3
2.4.1	General Provisions	2-3
2.4.2	Maintenance of Eligibility	2-4
2.5	Causes for Denial of Membership or Participation	2-4
2.6	Privileges	2-5
2.6.1	Authorized Traders	2-5
2.6.2	Voting	2-5
2.6.3	No Delegation	2-6
2.7	Duties and Obligations	2-6
2.7.1	General Provisions	2-6
2.7.2	Emission Baselines, Monitoring, Reporting and Reduction Schedules	2-6
2.7.3	Fulfillment of Obligations	2-7
2.7.4	Maintenance of Records	2-7
2.7.5	Addresses and Contact Information	2-7
2.7.6	Provision of Information to the Exchange	2-7
2.7.7	Supervision of Employees	2-7

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc.

Section		Page
2.8	Fees and Payments	2-8
2.9	Prohibited Conduct	2-8
2.10	Exchange Rules Violations	2-9
2.11	Termination of Membership	2-10
2.12	Application of Rules and Jurisdiction	2-12
2.13	Indemnification	2-13
2.14	Dispute Resolution	2-13
2.15	Exchange Communications	2-13

Chapter 3: Exchange Governance

Chapter 3 is currently being revised. The revised version will be posted upon its completion. (March 2006)

3.0	Purpose	3-1
3.1	Name	3-1
3.2	Principal Place of Business	3-1
3.3	Effectiveness of Rules	3-1
3.4	Authorization	3-1
3.5	Board of Directors	3-2
3.5.1	Responsibilities	3-2
3.5.2	Membership	3-2
3.5.3	Tenure	3-2
3.5.4	Meetings	3-3
3.5.5	Quorum and Attendance	3-3
3.5.6	Procedures	3-4
3.5.7	Vacancy, Resignation and Removal	3-4
3.5.8	Committees	3-4
3.5.9	Officers	3-5
3.6	Executive Committee	3-5
3.6.1	Responsibilities	3-5
3.6.2	Membership	3-5
3.6.3	Tenure	3-5
3.6.4	Meetings, Quorum and Attendance	3-6
3.6.5	Procedures	3-6
3.6.6	Vacancy, Resignation and Removal	3-6
3.7	Standing Committees	3-6
3.7.1	Responsibilities	3-6
3.7.2	Committee on Environmental Compliance	3-7
3.7.3	Committee on Forestry	3-7
3.7.4	Committee on Membership	3-8
3.7.5	Committee on Offsets	3-8

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Section		Page
3.7.6	Committee on Trading and Market Operations	3-9
3.7.7	Membership of Standing Committees	3-9
3.7.8	Tenure	3-9
3.7.9	Meetings	3-9
3.7.10	Quorum and Attendance	3-10
3.7.11	Procedures	3-10
3.7.12	Resignation and Removal	3-10
3.8	Regulation	3-10
3.9	Indemnification	3-11
3.10	Exchange Liability	3-12
3.11	Confidentiality	3-13
3.12	Conflicts of Interest	3-13
3.13	Emergencies	3-15
3.14	New Rules and Amendments	3-16
	Chapter 4: Emission Reduction Program and Operations	
4.0	Purpose	4-1
4.1	*Not Used*	4-1
4.2	Rule Interpretation and Modifications	4-1
4.3	CCX Carbon Financial Instruments, Vintages and Banking	4-1
4.4	Nature of Transfers in CCX	4-2
4.5	*Not Used*	4-2
4.6	CCX Emission Baselines, Emission Reduction Schedule and Exchange Allowance Allocations	4-2
4.7	True-up	4-3
4.8	Economic Growth Provision (EGP)	4-4
4.9	Exemption of Emissions from Certain New Electric Power Generating Units	4-4
4.10	Electricity Purchase Opt-in Program (EPOP)	4-5
4.10.1	Operation	4-5
4.10.2	Application of the Economic Growth Provision to Electricity Purchases	4-6
4.11	Market Efficiency	4-7
4.11.1	Objectives	4-7
4.11.2	Maximum Recognized Emission Reductions, Electricity Purchase Reductions and Super Reductions	4-7
4.11.2.1	Super Reduction Transactions	4-8
4.11.3	Single Firm Sales Limit	4-8
4.11.4	Limitation on Banking Exchange Allowances and 2003 Special Reserve	4-9

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Section		Page
4.11.5	Use of Exchange Offsets and Exchange Early Action Credits	4-10
4.11.6	Exchange Offsets from Owned and Operated Facilities	4-11
4.12	CCX Auctions	4-12
4.13	Donations of CCX Carbon Financial Instruments	4-12
Appendix 4.1	*Hypothetical Example of the Single Firm Sales Limit and Increases in the Limit as the Program-wide Baseline Increases*	*4-14*
Appendix 4.2	*Hypothetical Example of Escalation of the Single Firm Sales Limit as Program-wide Emissions Rise above Baseline Levels*	*4-15*
Appendix 4.3	*Hypothetical Example: Limitation on Banking During 2003, Maximum Recognized Emission Reductions and Super Reductions*	*4-16*
Table 4.1	*Exchange Allowance Issuance Schedule (CCX Emission Reduction Schedule)*	*4-3*
Table 4.2	*Electricity Purchase Conversion Table*	*4-5*
Table 4.3	*Single Firm Sales Limit*	*4-8*
Table 4.4	*Total Allowed Use for Compliance of Exchange Offsets (XOs) Plus Exchange Early Action Credits (XEs)*	*4-10*
Table 4.5	*Total Net Sales and Use of Exchange Offsets from CCX Member Owned and Operated Facilities*	*4-11*

Chapter 5: CCX Registry, Trading Platform, Clearing and Settlement Systems

5.0	Purpose	5-1
5.1	General Provisions	5-1
5.2	Rule Interpretation and Amendments	5-1
5.3	CCX Registry	5-2
5.3.1	Function of the Registry	5-2
5.3.2	Account Structure	5-2
5.3.3	User Access and Operations	5-3
5.3.4	Management of Multiple Registry Accounts	5-3
5.3.5	Transfer Instructions and Confirmations	5-3
5.3.6	Fees and Fee Payments	5-3
5.4	CCX Trading Platform	5-3
5.4.1	CCX Trading Platform Overview	5-3
5.4.2	Authorized Traders	5-4
5.4.3	Public Dissemination of Summary Price and Transaction Information	5-4
5.4.4	Daily Trading Limits and Closing Prices	5-4

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Section		Page
5.5	CCX Terms and Conditions to Govern All Transactions	5-5
5.6	Market Surveillance	5-5
5.7	CCX Clearing Mechanism	5-5
5.8	Block Trades	5-6
5.8.1	Eligibility	5-6
5.8.2	Negotiations and Reporting	5-6
5.8.3	Fair Price	5-6
5.8.4	Submission and Approval	5-7
5.8.5	Market Participation in Block Trades	5-7
5.8.6	Settlement and Delivery	5-7
5.9	Cash Transactions	5-8
5.9.1	Eligibility	5-8
5.9.2	Negotiations and Reporting	5-8
5.9.3	Submission and Approval	5-8
5.9.4	Settlement and Delivery	5-8
5.9.5	Restrictions on CFIs Acquired Through Cash Transactions	5-8
5.10	Other Transactions	5-9
5.11	Market Maker Program	5-9
Appendix 5.1	*Chicago Climate Exchange Trading Platform and Registry Agreement for Registry Account Holders*	*5-11*
Appendix 5.2	*Carbon Financial Instrument Contract Specifications*	*5-19*
Figure 5.1	*CCX Transaction Terms and Conditions*	*5-5*

Chapter 6: CCX Member Emission Baselines, Purchased Electricity Baselines and Opt-ins

6.0	Purpose	6-1
6.1	General Provisions	6-1
6.2	Rule Interpretation and Modifications	6-1
6.3	Included Emissions and Renewable Fuels	6-1
6.3.1	Included Emissions	6-1
6.3.2	Renewable Fuels	6-2
6.4	Included Emission Sources	6-2
6.4.1	Included Emissions and Baselines for CCX Members That Own Large Emission Sources in the United States	6-3
6.4.2	Included Emissions and Baselines for CCX Members That Own Large Emission Sources Only in Canada	6-4

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Section		Page
6.4.3	Included Emissions and Baselines for CCX Members That Own Large Emission Sources Only in Mexico	6-4
6.4.4	Opt-In Small Emissions Sources in Canada and Mexico	6-4
6.4.5	Included Emissions and Baselines for CCX Members with Other Geographic Conditions	6-4
6.5	Determination of Emission Baselines	6-6
6.5.1	General Provisions	6-6
6.5.2	Determination of Emission Baselines for Facilities Placed Into Service During the Baseline Period	6-6
6.5.3	Baseline Treatment for Facilities Permanently Shut Down by the Member During or After the Baseline Period	6-6
6.5.4	Baseline Modification Due to Facility Acquisition	6-7
6.5.5	Baseline Modification in the Case of Facility Sale	6-7
6.5.6	Baseline Adjustments	6-8
6.6	Determination of Baselines when Baseline Period Emissions Data Is Missing	6-8
6.6.1	Emissions Data Missing for a Portion of Any Single Year of the Baseline Period	6-9
6.6.2	Emissions Data Missing for an Entire Year or Available for Less Than 220 Days in Any Year	6-10
6.6.2.1	Emissions Data Missing for an Entire Year or Available for Less Than 220 Days in Years 1999 or 2000	6-10
6.6.2.2	Emissions Data Missing for an Entire Year or Available for Less Than 220 Days in 1998 or 2001	6-10
6.6.2.3	Emissions Data Missing or Available for Less Than 220 Days for Any Three Years of the Baseline	6-10
6.7	Opt-in Programs	6-11
6.7.1	Small Emission Source Opt-in	6-11
6.7.2	Minor Ownership Emissions Opt-in	6-11
.7.3	Electricity Purchase Opt-in	6-11
6.7.4	Not Used	6-12
6.7.5	Non-CO_2 Emissions Opt-in	6-13
6.7.6	Purchased Steam Opt-in	6-13
Appendix 6.1	*Examples: Emissions Ownership in Cases of Jointly Owned Facilities*	*6-15*
Appendix 6.2	*Not Used*	*6-17*
Appendix 6 3A	*Example. Baseline Treatment for a Facility That was Permanently Shut Down by the Member During the Baseline Period*	*6-18*

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Section		Page
Appendix 6.3B	*Example: Baseline Adjustments in the Case of Acquisition of a Facility That was Operated During the Baseline Period*	*6-19*
Appendix 6.3C	*Example. Baseline Adjustments and Reduced Exchange Allowance Allocations in the Case of the Sale of a Facility That Was Operated During the Baseline Period*	*6-21*
Appendix 6.4	*Not Used*	*6-22*
Appendix 6.5A	*Examples of the Application of the Method to be Employed for Emissions Data Missing for a Portion of Any Single Year of the Baseline Period*	*6-23*
Appendix 6.5B	*Examples of the Application of the Method to be Employed When Emissions Data are Missing for an Entire Year or Available for Less Than 220 Days in Years 1999 or 2000*	*6-24*
Table 6.1	*CCX Facilities Inclusion, Opt-in and Geographic Provisions*	*6-5*
Figure 6.1	*Methods to be Used to Calculate Baseline Period Annual Emissions or Electricity Purchases in Cases of Missing Data*	*6-9*

Chapter 7: Emissions Monitoring and Reporting

7.0	Purpose	7-1
7.1	General Provisions	7-1
7.1.1	Rule Interpretation and Modifications	7-1
7.1.2	Use of Prescribed Methods	7-1
7.1.3	Changes in Methods Employed	7-1
7.1.4	Baseline and Annual Emissions Reporting for New Members	7-2
7.1.5	Monitoring for Exchange Offset Projects, Exchange Early Action Credit Projects and Commercial Forestry Biomass Carbon Sequestration	7-2
7.2	Emissions Reporting	7-2
7.2.1	General Provisions	7-2
7.2.2	Reporting Direct Emissions and Opted-in Electricity Purchases	7-3
7.2.3	Emissions Reporting Procedures	7-3
7.3	Included Gases	7-3
7.4	Emissions Monitoring Principles	7-4
7.5	Emissions Monitoring Methods (Except Entities Primarily Engaged in the Electric Power Production and Oil and Gas Sectors)	7-5
7.5.1	CO_2 Emissions from Stationary Combustion	7-5
7.5.1.1	Weight, Volume and Heat Content Bases	7-6

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Section		Page
7.5.1.2	Emissions from Combustion of Municipal Solid Waste	7-6
7.5.2	CO_2 Emissions from Mobile Combustion	7-6
7.5.3	N_2O Emissions from the Production of Adipic Acid and Nitric Acid (and Conversion of N_2O to CO_2 Equivalence)	7-7
7.5.4	PFC Emissions from the Production of Semi-conductor Wafers (and Conversion of PFCs to CO_2 Equivalence)	7-8
7.5.5	CO_2 Emissions from the Production of Cement	7-8
7.5.6	CO_2 Emissions from the Production of Iron and Steel	7-9
7.5.7	CO_2 Emissions from the Production of Lime	7-9
7.5.8	CO_2 Emissions from the Production of Ammonia	7-10
7.5.9	HFC-23 Emissions from the Production of HCFC-22 (and Conversion to CO_2 Equivalence)	7-10
7.5.10	CO_2 Emissions from Silicon Smelting	7-11
7.6	Greenhouse Gas Emissions from Primary Aluminum Metal Production	7-11
7.7	Emissions Monitoring for the Forest Products Sector	7-12
7.7.1	Direct Emissions Monitoring	7-12
7.8	Emissions Monitoring in the Electric Power and Steam Generation Sector	7-12
7.8.1	CO_2 Emissions from Electric Power and Steam Generation Equipment	7-12
7.8.2	Sulfur Hexafluoride (SF_6) Emissions from Electrical Transmission Equipment	7-13
7.9	Electricity Purchases	7-13
7.10	Emissions Monitoring for the Oil and Gas Sector	7-13
7.10.1	Exploration, Production and Refining	7-13
7.10.2	Transport (Except Gas Pipelines) and Stationary Combustion of Conventional Fuels	7-13
7.10.3	Emissions Monitoring for Natural Gas Pipelines	7-13
Table 7 1	*Factors to be Used in CCX to Convert Greenhouse Gases to Carbon Dioxide Equivalence*	*7-4*

Chapter 8: Commercial Forestry Sector

8.0	Purpose	8-1
8.1	General Provisions	8-1
8.2	Rule Interpretation and Modifications	8-2
8.3	Carbon-stable Accounting Approach	8-2
8.4	Model-based Accounting Approach	8-3

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Section		Page
8.4.1	Proprietary Timber Inventory Techniques	8-3
8.4.2	Publicly Available Growth and Yield Models	8-4
8.5	General Standards for Quantifying and Reporting Changes	8-4
8.6	Carbon Stocks Quantified and Reported	8-5
8.7	Pest, Fire and Weather	8-5
8.8	Reporting Schedule and Methods	8-6
8.8.1	Reports Using Carbon-stable Accounting Approach	8-6
8.8.2	Reports Using Model-based Accounting Approach	8-6
8.8.2.1	Initial Report	8-7
8.8.2.2	Annual Reports	8-7
8.8.2.3	Final Report	8-8
8.9	Accounting for Variance in Sampling and Calculations of Growth	8-9
8.10	Proprietary Information	8-9
8.11	Verification and Auditing	8-10
8.12	Issuance and Surrender of Carbon Financial Instruments	8-10
8.13	Acquisition and Disposition of Forested Land	8-10
8.13.1	Acquisition of Forested Land	8-11
8.13.2	Disposition of Forested Land	8-11
8.13.3	Reporting Acquisitions and Dispositions	8-11
8.14	Limitations on Use of Carbon Financial Instruments Issued on the Basis of Net Changes in Carbon Stocks	8-12
8.14.1	Alternative Method for Defining Maximum Net Increases in Carbon Stocks	8-12
Appendix 8.1	*Protocol for Quantifying Net Changes in Carbon Stocks in Southern Pine Plantations*	*8-15*
Figure 8.1	*Summary of Required Reports for Members Using Model-based Accounting Approach*	*8-7*
Figure 8.2	*Summary of Annual Report*	*8-8*
Figure 8.3	*Summary of Final Report*	*8-8*
Appendix Figure 8.1	*Summary of Annual Report*	*8-16*
Appendix Figure 8.2	*Summary of Final Report*	*8-17*

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Section		Page
	Chapter 9: CCX Exchange Offsets and Early Action Credits	
9.0	Purpose	9-1
9.1	General Provisions	9-1
9.2	Rule Interpretation and Modifications	9-2
9.3	Project Registration, Aggregation, Verification and Reporting	9-2
9.3.1	CCX Aggregator	9-3
9.3.2	CCX Registered Offset Advisor	9-4
9.4	Offset Issuance	9-4
9.5	CCX Offset Project Terms and Conditions	9-5
9.6	Additional CCX-eligible Projects	9-7
9.7	Exchange Methane Offsets (XMOs)	9-7
9.7.1	Eligible Projects	9-7
9.7.2	XMO Project Registration, Verification and Project Reports	9-8
9.8	Exchange Forestry Offsets (XFOs)	9-8
9.8.1	General Provisions	9-8
9.8.2	Eligible Forestry Projects	9-9
9.8.2.1	Forestation	9-9
9.8.2.2	Conservation of Threatened Forests	9-10
9.8.2.3	Long-term Commitments	9-10
9.8.2.4	Sustainable Forest Management: XFOs Issued on the Basis of Sustainable Management of Overall Carbon Stocks Controlled by Project Owners	9-11
9.8.3	Included Carbon Pools	9-11
9.8.4	Forest Carbon Quantification Methods	9-11
9.8.5	Combined Forestation and Forest Conservation Projects	9-14
9.8.6	Forest Project Registration Filings and Project Reports	9-16
9.8.6.1	Forest Project Registration Filings	9-16
9.8.6.2	XFO Project Reports	9-17
9.8.7	Forest Carbon Reserve Pool	9-17
9.9	Exchange Soil Offsets (XSOs) (U.S.)	9-18
9.9.1	Eligible Projects and XSO Issuance Rates	9-18
9.9.1.1	Additional Regions for Exchange Soil Offsets	9-19
9.9.2	Soil Carbon Reserve Pool	9-19
9.9.3	Verification	9-20
9 10	Exchange Emission Reductions (XERs)	9-20
9.11	Exchange Early Action Credits (XEs)	9-21
9.12	CCX Offset Issuance for Electricity Produced by Renewable Energy	9-21
9 12.1	General Provision	9-21

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Section		Page
9.12.2	Eligible Entities	9-21
9.12.3	Facilities Eligible to Produce Offsets	9-21
9.12.4	Required Energy Contract Conditions	9-21
9.12.5	Offset Issuance Rate	9-22
Appendix 9.1	*Not Used*	*9-24*
Appendix 9.2A	*Protocol for Measuring and Verifying Greenhouse Gas Reductions from Landfills*	*9-25*
Appendix 9.2B	*Protocol for Quantifying Greenhouse Gas Reductions from Anaerobic Manure Digesters*	*9-35*
Appendix 9.3 A	*Not Used*	*9-43*
Appendix 9.3B	*Methods for Quantifying Carbon Accumulation for Urban and Suburban Tree Planting Programs*	*9-44*
Appendix Table 9.3B1	*Tree Types and Growth Rates Applied to Urban and Suburban Tree Plantings*	*9-45*
Appendix Table 9.3B2	*Annual CCX Carbon Accumulation Quantities for Urban and Suburban Tree Plantings (Metric Tons CO_2) per One Hundred Trees by Tree Type and Age*	*9-47*
Appendix 9.4A	*Zone A Counties That Qualify for Exchange Soil Offsets (XSOs)*	*9-48*
Appendix 9.4B	*Zone B Counties That Qualify for Exchange Soil Offsets (XSOs)*	*9-56*
Table 9.1	*Quantification of Baselines and Carbon Accumulation for Small, Medium-sized and Large CCX Forestation Projects*	*9-13*
Table 9.2	*States in Brazil in Which Combined Forestation and Forest Conservation Projects arePre-Qualified to Register as XFO Projects in CCX, Annual Avoided Deforestation Rates to be Applied in Quantifying Avoided Carbon Loss and XFO Offset Issuance*	*9-15*
Figure 9.1	*Additional Terms and Conditions associated with CCX Offset Projects and Exchange Offsets*	*9-6*
Figure 9.2	*Additional Terms and Conditions Associated with CCX Forestry Projects and Exchange Forestry Offsets*	*9-9*
	Chapter 10: Environmental Audits and Offset Project Verification	
10.0	Purpose	10-1
10.1	General Provisions	10-1
10.2	Rule Interpretation and Modifications	10-1
10.3	Emission Audits	10-1
10.4	Offset Project Verification and Audits	10-2
10.4.1	Project Verification	10-2

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Section		Page
10.4.2	Audit of Project Reports	10-3
10.4.3	Qualifications of Verifiers	10-3
	Chapter 11: Associate Members	
11.0	Purpose	11-1
11.1	General Provisions	11-1
11.2	Emissions	11-1
11.2.1	Included Emissions	11-1
11.2.2	Optional Emissions Inclusion	11-2
11.2.2.1	Non-U.S. Emissions	11-2
11.2.2.2	Employee Emissions	11-2
11.3	Reporting Procedure	11-2
11.3.1	Indirect Emissions Reporting Requirements	11-2
11.3.2	Prior Program Years Reporting Election	11-3
11.4	Emissions Audit	11-3
11.4.1	Surcharge on Metric Tonnes Reported	11-3
11.5	True-up	11-3
11.6	Acquiring Carbon Financial Instruments	11-4
11.7	CCX Registry Account	11-4
	Chapter 12: Other Participants	
12.0	Purpose	12-1
12.1	General Provisions	12-1
12.2	Liquidity Providers	12-1
12.3	Offset Providers and Offset Aggregators	12-1
12.4	Exchange Participants	12-1

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Chapter 1 Chicago Climate Exchange Objectives, Definitions

1.0 Introduction (2006)

Chicago Climate Exchange ("CCX") is a self-regulatory exchange that administers a voluntary Greenhouse Gas emission reduction and trading program for North America and other countries and regions as approved by CCX, with participation of Offset Providers from Brazil.

As determined by the Board of Directors, CCX may administer trading in other environmental markets.

1.1 Goals of Chicago Climate Exchange (2006)

The goals of the Exchange are to:

(a) demonstrate unambiguously that a cross-section of North American private and other countries and regions as approved by CCX and public sector entities can reach agreement on a voluntary commitment to reduce Greenhouse Gas emissions and implement a market-based emission reduction program;
(b) establish proof of concept by demonstrating the viability of a multi-sector and multi-national Greenhouse Gas emissions cap-and-trade program supplemented by Project-based emission offsets;
(c) establish a mechanism for achieving price discovery as well as developing and disseminating market information;
(d) allow flexibility in the methods, location and timing of emission reductions so that Greenhouse Gas emissions can be reduced cost-effectively;
(e) facilitate trading with low transaction costs;
(f) build market institutions and infrastructure and develop human capital in Greenhouse Gas emissions trading;
(g) encourage improved emissions management;
(h) harmonize and integrate with other international or sovereign trading regimes; and,
(i) develop a market architecture that rewards innovative technology and management and encourages sustainable farming and forestry practices.

1.2 Regulatory Status (2006)

CCX is an Exempt Commercial Market as defined in Section 2(h)(3) of the Commodity Exchange Act and in Part 36.3 of the regulations of the Commodity Futures Trading Commission (CFTC). The Exchange is not registered with, or recognized, designated, licensed or approved by the CFTC. The circumstances set forth in this paragraph are subject to change.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

An independent entity will at all times provide regulatory oversight of CCX. At the outset, the Exchange has contracted with NASD to provide these regulatory services. NASD will conduct audits of CCX Member emission baselines, periodic emission reports and annual True-up and will audit offset Project verification statements to be prepared by CCX-registered verification firms. The independent regulator will also undertake market surveillance of trading activity on the CCX Trading Platform.

Each CCX Member, Associate Member, Participant Member or Exchange Participant must be an Eligible Commercial Entity or an Eligible Commercial Participant as defined in the Commodity Exchange Act in order to be eligible for CCX Trading Platform access.

1.3 Definitions

"Above-ground Biomass" is that part of a plant's cellular substance that is above the ground, i.e. excluding the root system. (Appendix 8.3)

"Activity". See Emitting Activity. (Section 6.4)

"Aggregator" is a Participant Member that serves as an administrative representative, on behalf of Project Owners, of multiple CCX-qualifying Exchange Offset Projects. (Section 9.3) (2006)

"Avoided Deforestation Rate (ADR)" is an average annual rate of deforestation occurring in a recent period in a State of Brazil or Mexico. (Section 9.8.6) (2006)

"Applicable Law" refers to any statute, law, regulation, rule or ordinance of any federal, state or local governmental entity applicable to such party. (Section 2.5)

"Auction" is a periodic sale of CCX Exchange Allowances, conducted by CCX, for the purposes of assisting price discovery and facilitating trading. (Section 4.12)

"Authorized Trader" is either an employee or a contracted agent of a CCX Registry Account Holder that is authorized to receive access privileges to the CCX Trading Platform and CCX Registry as determined by the relevant Registry Account Holder. (Section 2.6.1)

"Banking" is the retention of a Carbon Financial Instrument in a CCX Registry Account for use or sale in a later year. (Section 4.3)

"Basal Area" is the total area, measured in square feet, occupied by tree trunks at Breast Height. (Appendix 8.4.1)

"Basal Area Factor" is a specification of the refractive power of a wedge prism. Every tree that appears in the lens of a wedge prism with a Basal Area Factor of 10 represents ten square feet of Basal Area. (Appendix 8.1) (2006)

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

"Baseline Adjustment" is a modification to a Member's Emission Baseline to reflect acquisition or disposition of facilities that are Emission Sources and were operated during the Baseline Period or otherwise have an Emission Baseline as defined by CCX. (Appendix 6.3B)

"Baseline Electricity Purchases." See Electricity Purchase Baseline. (Section 4.6)

"Bilateral Trades" are Transactions executed on the CCX Trading Platform by entities that have established each other as acceptable counterparties on the basis of creditworthiness. (Section 5.1)

"Block Trade" is a privately negotiated transaction between two parties, which must be cleared and settled through the CCX Trading Platform and will be reported to the Exchange and on the CCX Trading Platform within a specified amount of time. (Section 5.1)

"Breast Height" is the height at which forest inventory measurements are taken (four and one-half feet above the base of a tree). (Appendix 8.6.2)

"Carbon Accumulation Coefficients" are standard values for various tree species and locations that are used to quantify annual increases in Carbon Stocks for CCX Forestation Projects. (Appendix 9.3) (2006)

"Carbon Dioxide Equivalent" is a unit of measure used to convert emissions of non-CO_2 Greenhouse Gases (methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride) to a numeraire. (Section 5.3.2) (2006)

"Carbon Financial Instrument" (also referenced herein as "Carbon Financial Instrument" and "CFI") is a CCX Exchange Allowance ("XA"), Exchange Offset ("XO"), or Exchange Early Action Credit ("XE") which represents one-hundred metric tons of carbon dioxide and that is issued by CCX to the Registry accounts of CCX Members and are surrendered to the Exchange by Members to annually achieve compliance with the CCX Emission Reduction schedule. (Section 4.3)

"Carbon Sequestration" is the removal of carbon dioxide from the atmosphere and retention in a terrestrial system (e.g. forests and soils) or in a geologic formation. (Section 9.3)

"Carbon-stable Accounting Approach" is a forest carbon accounting procedure that allows a CCX Member with commercial forests in the United States (and other locations as may be approved by the Executive Committee) to quantify and report changes in Carbon Stocks associated with individual CCX-registered Exchange Forestry Offset projects on the condition that there is no net decrease in overall Carbon Stocks in the Member's commercial forest inventory. (Section 8.1).

"Carbon Stock" is a quantity of carbon stored in soils or biomass, expressed in metric tons carbon dioxide equivalent. (Section 8.0)

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

"Carbon Storage" is the retention of carbon in biomass, in soils, or in geologic formations. (Section 9.8.1)

"Cash Transaction" is a privately negotiated transaction between parties. (Section 5.9)

"CCX Associate Members" are entities or other parties recognized by the Exchange that have negligible or no direct emissions. (Section 11.1)

"CCX Clearing Mechanism" is the CCX mechanism for settling and assuring payment for transactions executed on the CCX Trading Platform. (Section 5.7) (2006)

"CCX Direct Emission Baseline" (also referenced herein as "Direct Emission Baseline," "Baseline Emissions" and "Emission Baseline") Each CCX Member's Direct Emission Baseline is defined as the annual average of its Included Emissions during the calendar years 1998, 1999, 2000 and 2001. (Section 6.1) (2006)

"CCX Emission Baseline Period" (also referenced herein as "Emission Baseline Period") is the time period covered by the calendar years 1998, 1999, 2000 and 2001. (Section 6.5.1)

"CCX Emission Reduction Schedule" is the quantitative schedule of direct emission reductions that each CCX Member commits to undertake. (Section 4.6) (2006)

"CCX Exchange Participants" are entities or natural persons that establish a CCX Registry Account for the purpose of acquiring CCX Carbon Financial Instruments. (Section 12.1)

"CCX Forest Carbon Baseline" (also referenced herein as "Forest Carbon Baseline") is the quantity of Carbon Stocks in the CCX-included carbon pools (expressed in metric tons carbon dioxide (CO_2) equivalent) in place on lands included in a CCX-registered Project at the time of the Project's inception. (Section 9.8.5) (2006)

"CCX Members" (also referenced herein as "Members") include corporations, municipalities and other Entities that emit Greenhouse Gases from facilities located in countries and regions approved by CCX and commit to the CCX Emission Reduction Schedule for the years 2003, 2004, 2005 and 2006. (Section 2.2.1) CCX Members are one of the four classes of CCX Registry Account Holders. (2006)

"CCX Participant Members" are Offset Providers, Aggregators. Liquidity Providers and intermediaries that trade or transact on CCX but do not have an Emission Reduction Schedule. (Section 12.1)

"CCX Market Period" is the time period during which CCX Registry Account Holders commit to the terms of this *Rulebook,* as amended from time to time. (Section 4.1) (2006)

"CCX Products" are trading instruments that CCX may offer from time to time.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

"CCX Registry" (also referenced herein as "Registry") is an electronic database that will serve as the official holder of record and transfer mechanism for Exchange Allowances (XAs), Exchange Offsets (XOs) and Exchange Early Action Credits (XEs) owned by CCX Registry Account Holders. (Section 4.5)

"CCX Registry Account" is a data file in the CCX Registry that provides a record of all holdings and Transfers of CCX Carbon Financial Instruments for each CCX Registry Account Holder. (Section 5.3.1)

"CCX Registry Account Holder" (also referenced herein as "Registry Account Holder") is a CCX Member, Associate Member, Participant Member or Exchange Participant. (Section 2.2)

"CCX Registry Retirement Account" (also referenced herein as "Registry Retirement Account") is an account for holding all CFIs that have been retired for compliance or other purposes. CFIs in this account cannot be sold or transferred. (Section 4.7) (2006)

"CCX Standing Committee" (also referenced herein as "Committees") is a Committee composed of CCX Members, Associate Members and Participant Members that provide oversight of particular CCX functions. (Section 3.7) (2006)

"CCX Trading Platform" is an electronic, internet-accessible system for posting and accepting bids to buy and offers to sell CCX Carbon Financial Instruments. (Section 5.4) (2006)

"Clean Development Mechanism" is one of the flexibility mechanisms established in Article 12 of the Kyoto Protocol to the United Nations Framework Convention on Climate Change to enable Greenhouse Gas emission mitigation Projects in developing countries to generate tradable emission offsets that may be used by industrialized countries as one means of meeting Greenhouse Gas emission reduction commitments. (Section 3.7.5)

"Co-Dominant Tree" is a tree that, along with other trees, stands head and shoulders above other trees in its vicinity, thus receiving most light from the top, while the light on the sides is somewhat blocked by the other Co-Dominant Trees. (Appendix 8.4.1)

"Combined Forestation and Forest Conservation Project" is a qualifying CCX Offset Project that involves both Forestation and protection of existing forests on contiguous sites. (Section 9.8.6)

"Compliance" is the status of being in conformance with the provisions established in this *Rulebook*. The term "in compliance" is also used to describe the status of a CCX Member or Associate Member that has surrendered Carbon Financial Instruments to CCX in an amount equal to its annual emissions. (Section 4.3)

"Compliance Year" is any calendar year during the period 2003, 2004, 2005 and 2006. (Section 4.7)

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

"Conservation Tillage" includes practices defined in the Natural Resources Conservation Service National Handbook of Conservation Practices. (Section 9.9.1) These practices are:

(1) No-till/Strip-till - Managing the amount, orientation, and distribution of crop and other plant residue on the surface year-round while growing crops in narrow slots or tilled or residue-free strips in soil previously untilled by full width inversion implements;
(2) Ridge-till - Managing the amount, orientation, and distribution of crop and other plant residue on the soil surface year-round while growing crops on preformed ridges alternated with furrows protected by crop residue.

"Continuous Emission Monitor (CEM)" is equipment required by section 412 of the Clean Air Act Amendments of 1990, that is used to sample, analyze, measure, and provide on a continuous basis, a quantification of emissions of carbon dioxide and other emissions (CAAA 1990, sec. 402 (7).) (Section 7.5)

"Crown" is the portion of the top of a tree that is harvested but that is not merchantable or weighed. (Appendix 8.5.3.1)

"Direct Emissions" are Greenhouse Gas emissions released on-site as a result of fuel combustion (e.g. use of fossil fuels in heating and cooling, production of electricity, vehicles), processing activities (e.g. production of adipic acid or cement) or fugitive emissions (e.g. gases leaked from joints or seals in electricity transmission equipment or gas pipelines) from facilities owned by a CCX Member. (Section 7.2.2) (2006)

"Dominant Tree" is a tree that stands head and shoulders above all other trees in its vicinity, thus receiving light on its crown from above and from the sides. (Appendix 8.1.4.1)

"Economic Growth Provision (EGP)" is a provision that limits the maximum increase in emissions above a Member's Emission Baseline that will be recognized in determining the annual True-up for each CCX Member. This Provision also applies to changes in Carbon Stocks on lands of CCX Members that are forest product companies. (Sections 4.8, 8.14) (2006)

"Electricity Purchase Baseline" is the annual average of a Member's Included Electricity Purchases during the calendar years 1998, 1999, 2000 and 2001, expressed in megawatt-hours (MWh). (Section 4.10.2) (2006)

"Electricity Purchase Reduction Schedule" is, for each CCX Member or Associate Member that elects the Electricity Purchase Opt-In Program, 1% below its Baseline Electricity Purchases in 2003, 2% below its Baseline Electricity Purchases in 2004, 3% below its Baseline Electricity Purchases in 2005, and 4% below its Baseline Electricity Purchases in 2006. (Section 4.10.1)

"Elemental Rate" is the intensity, measured in pounds per acre, of a particular constituent element in a chemical applied as a fertilizer or herbicide. (Appendix 8.1.4.1) (2006)

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

"Eligibility Criteria" are the standards applied in defining CCX Offset Projects. (Section 9.1)

"Eligible Commercial Entity" is an entity or person that meets the conditions established in paragraph 1(a)(11) of the U.S. Commodity Exchange Act. (Section 2.3) (2006)

"Eligible Projects" are Offset Projects that conform to CCX rules and thus can be registered with CCX, allowing the Project Owner to receive Exchange Offsets. (Section 9.0)

"Emergency" means any occurrence or circumstance which, in the opinion of the Board of Directors of the Exchange, requires immediate action and threatens or may threaten such matters as the fair and orderly trading in, or the liquidation of or delivery pursuant to, any agreements, contracts or transactions on the Exchange, including any manipulative or attempted manipulative activity; any actual, attempted, or threatened corner, squeeze, congestion, or undue concentration of positions; any circumstances which may materially affect the performance of agreements, contracts or transactions traded on the Exchange, including failure of the payment system or the bankruptcy or insolvency of any participant; any action taken by any governmental body, or any other board of trade, market or facility which may have a direct impact on trading on the Exchange; and any other circumstance which may have a severe, adverse effect upon the functioning of the Exchange. (Section 3.13)

"Emission Inventory" is the total quantity of a CCX Member's owned Greenhouse Gas emissions that are included by the Member in its Emission Reports. (Section 6.5.4) (2006)

"Emission Report" is a report of Direct Emissions and Electricity Purchases that is submitted to CCX by CCX Members or a report of indirect emissions submitted by Associate Members and is signed by a corporate officer or a designated representative (as defined in the 1990 Clean Air Act, as amended). Unless provided otherwise, such Reports shall be transmitted to CCX, using methods prescribed by CCX. (Section 6.1) (2006)

"Emission Source" is a facility, vehicle, or piece of equipment that is owned by a CCX Member and releases Greenhouse Gases. An Emission Source can be stationary, mobile, area or fugitive. (Section 6.4)

"Emitting Activity" is a specified category of actions involved in production, processing, transportation or service provision that causes the release of Greenhouse Gas emissions. An activity may be undertaken in multiple locations or by multiple facilities (e.g. operation of a fleet of heavy trucks or an oil pipeline). The total emissions from all pieces of equipment used to perform a functionally identical activity is used to determine that activity's status as a Large or Small Emission Source. (Section 6.6)

"Equity Ownership Percentage" is, for a facility that has multiple owners, the proportion of the total equity that is owned by a CCX Member or Associate Member. (Section 6.4)

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc.

"Exchange" means the Chicago Climate Exchange and its divisions, but is exclusive of its subsidiaries or affiliates. (2006)

"Exchange Allowance (XA)" is a tradable Carbon Financial Instrument issued (Section 4.6):

(1) to each CCX Member in accordance with its Emission Baseline and Emission Reduction Schedules;
(2) to a CCX Member that elects to include electricity purchases as a supplemental reduction objective if such Member reduces electricity purchases beyond the CCX Purchase Reduction Schedule; and,
(3) to CCX Members in the commercial forestry sector that realize net increases in Carbon Stocks using the model-based accounting approach. (2006)

"Exchange-cleared Trade" is a Transaction entered on the CCX Trading Platform and settled via the CCX Clearing Mechanism. (Section 5.1)

"Exchange Early Action Credit" ("XE") is a non-transferable, non-tradable Carbon Financial Instrument issued to certain Greenhouse Gas mitigation Projects undertaken from 1995 through 1998, on the basis of emission mitigation realized by the Project during the years 1995 through 2006. (Section 9.11)

"Exchange Emission Reduction" ("XER") is a Carbon Financial Instrument issued on the basis of mitigation achieved by CCX-eligible Projects undertaken in Brazil that are not methane or forestry Projects (e.g. fuel switching and renewable energy Projects). (Section 9.10)

"Exchange Forestry Offset" ("XFO") is an Exchange Offset issued to owners of Greenhouse Gas mitigation achieved by eligible forestry sequestration Projects. (Section 9.8)

"Exchange Methane Offset" ("XMO") is an Exchange Offset issued to owners of Greenhouse Gas emission reductions achieved by certain landfill and agricultural methane collection and combustion systems on or after January 1, 1999. (Section 9.7)

"Exchange Offset" ("XOs") is a tradable Carbon Financial Instrument generated by qualifying mitigation Projects and registered with CCX by CCX Members and CCX certain Participant Members. The categories of Exchange Offsets are: Exchange Forestry Offsets, Exchange Methane Offsets and Exchange Soil Offsets. (Section 9.0) (2006)

"Exchange Soil Offset" ("XSOs") is an Exchange Offset issued to owners of Greenhouse Gas mitigation produced by eligible agricultural soil carbon sequestration activities in designated areas of the U.S. (Section 9.9)

"Exempt Commercial Market" has the meaning given in Section 2(h)(3) of the U.S. Commodity Exchange Act and in Part 36.3 of the regulations of the U.S. Commodity Futures Trading Commission (CFTC). (Section 3.8)

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

"Forestation Project" is the establishment or enrichment of a forest or other actions to increase the stock of living trees (e.g. urban tree planting programs), via plantings and/or natural forest regeneration initiated on or after January 1, 1990, on land not forested, or on forest land that had been degraded on December 31, 1989. Forestation includes afforestation (planting of trees or passive generation of a forest on a site has historically not contained forests) or reforestation (planting of trees or passive forest regeneration on a site that historically been forested but had been converted to a different use). (Section 9.8.2.1)

"Forest Carbon Quantification Method" are direct measurement of forest carbon accumulation or use of reference values provided in Appendix 9.3. (Section 9.8.5)

"Forest Carbon Reserve Pool" is a pool of Exchange Forestry Offsets equal to 20% of the offsets earned by CCX-eligible Forestry Projects that provides a self-insurance pool for Forestry Projects. (Section 9.8.8)

"Forest Carbon Sequestration" is the removal of carbon dioxide from the atmosphere and retention in a forest system. (Section 8.8.2)

"Greenhouse Gases" are gases that cause radiative forcing when present in the earth's atmosphere. For CCX purposes, these gases are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). (Section 6.3.1)

"Included Emissions" are the Greenhouse Gas Emissions that are to be included in each CCX Member's Emission Baseline and Periodic Emission Reports. Emissions of all Greenhouse Gases are converted to metric tons carbon dioxide equivalent using the one-hundred year Global Warming Potential values established by the Intergovernmental Panel on Climate Change. (Section 6.3.1)

"Included Electricity Purchases" are, for CCX Members that elect to include purchased electricity as a Supplemental Reduction Objective, the electricity purchased from other entities. (Section 4.10)

"Indirect Emissions" are the emissions associated with production of electricity or steam when such electricity or steam is purchased by a CCX Member from an external supplier. (Section 11.1) (2006)

"Intra-company Transfers" are transactions between CCX Registry Accounts that are owned and controlled by a single Registry Account Holder. (2006)

"Jointly Owned Facilities" is the co-ownership of an Emission Source by a CCX Member with one or more other entities that may or may not be a CCX Member. (Section 6.4) (2006)

"Large Electricity Purchase Activities" are, for CCX Members that elect to Opt-in electricity purchases and have entity-wide Owned Electricity Purchases of 300,000 megawatt-hours per year or more, the Member's Owned Electricity Purchases associated with those facilities or

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

activities that are estimated to be 5% or more of the Member's total Owned Electricity Purchases. For CCX Members having entity-wide Owned Electricity Purchases of less than 300,000 megawatt-hours per year, Large Electricity Purchase Activities are the Owned Electricity Purchases associated with activities for which the Member's Owned Electricity Purchases are 15,000 megawatt-hours per year or more. (Section 6.4)

"Large Emission Sources" (Section 6.4) are:

(1) for CCX Members not primarily engaged in electricity production and have entity-wide Owned Direct Emissions of 200,000 tons CO_2 equivalent per year or more, those facilities and activities that release emissions owned by the Member that are estimated to be 5% or more of the Member's total owned emissions;
(2) for CCX Members having estimated entity-wide Owned Direct Emissions totaling less than 200,000 metric tons of CO_2 equivalent per year, Large Emission Sources are those facilities or activities that have Owned emissions of 10,000 metric tons of CO_2 equivalent per year or more; and,
(3) for CCX Members primarily engaged in electricity production, Large Emission Sources are defined as electric power generation facilities having a rated capacity of 25 megawatts or larger.

"Large Forestation Project" is a CCX Forestation Project for which the minimum annual gross increase in Carbon Stocks (during years 2003 through 2006) is expected to be more than 12,500 metric tons carbon dioxide (CO_2) equivalent per year. (Section 9.8.5)

"Liquidity Provider" is an entity or person who trades on the Exchange for reasons other than compliance with the CCX Emission Reduction Schedule. (Section 2.2.3)

"List Sampling" is a method for selecting particular tree Stands as sampling units through the use of a list of all Stands. A weighting methodology is employed when drawing up the list to ensure that the probability that a particular Stand will be selected as a sampling unit is in direct proportion to its size relative to other Stands. (Section 8.6.2)

"Market Efficiency" is a characteristic of a market that is competitive and not subject to price congestion. (Section 4.11) (2006)

"Market Maker" is a person or entity that assumes obligations to post continuous bids and offers and to execute transactions in order to provide continuous market liquidity and orderliness. (Section 2.15) (2006)

"Market Close" is the time at which a trading session on the Trading Platform ends. (Section 5.8.2) (2006)

"Market Open" is the time at which a trading session on the Trading Platform begins. (Section 5.8.2) (2006)

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

"Market Period" is the program period of 2003 through 2006.

"Market Surveillance Report" is a periodic report provided to CCX by the Provider of Regulatory Services designated by CCX. (Section 3.8)

"Maximum Recognized Emission Reduction" is a limitation on the reduction in CO_2 equivalent emissions that will be recognized in determining the quantity of surplus Exchange Allowances a CCX Member may sell or bank, as a result of the symmetric application of the Economic Growth Provision. (See also, "Super Reductions") (Section 4.11.2) (2006)

"Maximum Recognized Increase in Carbon Stocks" is, for CCX Members that are forest product companies, an increase in Carbon Stocks that may be sold, banked or used for compliance. (Section 4.11.2) (2006)

"Maximum Recognized Reduction in Electricity Purchases" is a limitation on the reduction in Electricity Purchases (which can be realized either through reductions in overall Electricity Purchases or through a substitution of electricity purchased from Renewable Electricity Production Systems for grid-purchased electricity) that will be recognized in determining the quantity of Exchange Allowances a CCX Member may be issued under the Electricity Purchase Opt-in Program. (See also, "Super Reductions") (Section 4.11.2)

"Medium-sized Forestation Project" is a CCX Forestation Project for which the minimum annual gross accumulation of Carbon Stocks (during years 2003 through 2006) is expected to be more than 2,000 but less than 12,500 metric tons CO_2 equivalent per year. (Section 9.8.5)

"Metric Tons Carbon Dioxide Equivalent" is the quantity of Greenhouse Gases, expressed in carbon dioxide equivalence, equal to 2,205 pounds. Metric tons of non-CO_2 greenhouse gases are converted using the IPCC 100 year global warming potential conversion factors. (Section 4.3)

"Minor Ownership Emissions" are:

(1) for entities not primarily engaged in electric power production, emissions from any facility in which the CCX Member's equity ownership share is less than 20% of the facility; and,
(2) for entities primarily engaged in electric power production, the Owned Emissions from any facility in which the CCX Member's Equity Ownership share is both less than 20% of the facility and represents less than 25 megawatts of generating capacity. (Section 6.7.2) (2006)

"Mitigation Tonnage" is a quantity of Greenhouse Gases, expressed in metric tons carbon dioxide equivalent, that is reduced, sequestered or avoided or otherwise offset through the purchase and surrender of Carbon Financial Instruments. (Section 9.4)

"Mobile Source" is a road, rail, airborne or waterborne vehicle that emits Greenhouse Gases. (Section 7.5.2)

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

"Model-based Accounting Approach" can be used by a Member from the commercial forestry sector to quantify changes in Carbon Stocks on its commercial forest land on the basis of projections made by growth and yield models, which estimate the volume by which the Above-Ground Biomass of different species of trees increases as the trees grow. (Section 8.1)

"New Electric Power Generating Units" are electricity generating units placed into commercial operation on or after January 1, 2002 by a CCX Member that is primarily engaged in electricity production. (Section 4.9)

"Offset Project" is a CCX-registered Project that is issued Exchange Offsets in reflection of the amount by which the Project reduces, sequesters or avoids Greenhouse Gas emissions. (Section 9.1)

"Offset Provider" may be a Project implementer or a CCX-registered Aggregator, that registers CCX-eligible Projects with the Exchange and can sell Exchange Offsets. (Section 2.2.3)

"Opt-in" is the election by a CCX Member to include in its Emission Baseline and Emission Inventory emissions from sources whose inclusion is not mandated as a condition of CCX membership. (Section 6.7) (2006)

"Owned and Operated Project" is a CCX-eligible Project that is operated by a CCX Member or Associate Member and for which Exchange Offsets and Exchange Early Action Credits may be issued. (Section 4.11.6)

"Owned Electricity Purchases" are electricity purchases associated with the activities undertaken by CCX Members or Associate Members, and are defined on the basis of the Member's or Associate Member's Equity Ownership Percentage of a Jointly Owned Facility that uses purchased electricity. (Section 6.7.3)

"Owned Emissions" are the direct Greenhouse Gas Emissions, expressed in metric tons carbon dioxide (CO_2) equivalent, associated with the activities undertaken at facilities the CCX Member owns and are defined on the basis of the Member's Equity Ownership Percentage of a Jointly Owned facility that releases Greenhouse Gases. (Section 6.4) (2006)

"Ownership" is generally defined on the basis of the CCX Member's Equity Ownership Percentage of facilities that release Direct Emissions or use purchased electricity. (Section 6.4) (2006)

"Pooled Projects" are the multiple Projects that are represented in CCX by a single Aggregator. (Section 9.8.1)

"Price Congestion" is a distortion in the price of Carbon Financial Instruments due to instability of or major imbalances in supply or demand. (Section 4.11.1)

"Prism Sampling" is a method of counting trees visible from a specific location through the use of a wedge prism, which is an optical instrument that refracts the light in such a way so that

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

objects that are viewed through the prism appear to be displaced toward the thin edge of the prism. The amount of displacement is related by a mathematical factor to Basal Area. (Appendix 8.6.2)

"Private Natural Heritage Reserve Status" is a legally protected status of forested land in Brazil. In Portuguese this status is termed "Reserva Particular do Patrimônio Natural" (RPPN). (Section 9.8.2.3)

"Program-wide Baseline Direct Emissions" are the sum of the Direct Emission Baselines of all CCX Members. (Section 4.10) (2006)

"Program-wide Direct Emissions" are the sum of the Direct Emissions of all CCX Members for a particular Compliance Year. (Section 4.11.3) (2006)

"Project" is a CCX-eligible action or facility that causes a reduction in Greenhouse Gas emissions or causes an increase in carbon storage in trees, forests or soils. A CCX-registered Project can encompass multiple locations, facilities or land parcels, provided such multiple sites are subject to functionally similar Project activities. (Section 9.1)

"Project Category" is a grouping of functionally similar Projects. The following are examples of CCX Project categories: Methane Projects; Forestry Projects, Soil Carbon Projects. (Section 9.3)

"Project Owner" is the entity that is the legal owner of Offsets produced by a CCX-eligible registered Project. A Project Owner may represent one or more ultimate owners of Exchange Offsets produced by one or more Projects. (Section 9.3)

"Project Registration Filing" is the act of submitting to CCX all documentation required in order to register a Project with the Exchange. (Section 9.3)

"Project Report" is a report submitted to CCX (either directly or through an Aggregator) for the purpose of notifying CCX of the ongoing effectiveness of a CCX-registered Project. In some cases a Project Report must include an attestation by a CCX-approved Verifier as to the quantity of mitigation effectiveness and Exchange Offset issuance prepared in conformance with the rules provided herein, and with the verification protocols prescribed by the Exchange. (Section 9.3)

"Provider of Regulatory Services" is an entity designated by the Exchange to: audit Emission Baselines, annual True-up and Offset Project verifications; provide market oversight and compliance procedures; and utilize market surveillance technologies to monitor trading activity and prevent fraud and manipulation. (Section 3.8) (2006)

"Registered Offset Advisor" is an academic or non-governmental organization with accepted expertise to provide advise to CCX on the suitability and reputation of offset projects. (Section 9.3.1) (1/21/2004)

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

"Renewable Electricity Production System" is a CCX-specified electricity production system that uses renewable fuels or non-emitting methods to produce electricity. (Section 4.10.1)

"Renewable Fuels" are wood, wood wastes and wood-derived fuels; agricultural residues and grasses; landfill and agricultural methane; and ethanol (bioalcohol). Emissions from these fuels are excluded from CCX Emission Baselines and Periodic Emission Reports. (Section 6.3.2)

"Single Firm Sales Limit" is a limit on net sales of Exchange Allowances by any single CCX Registry Account Holder to other Exchange Members or Associate Members. (Section 4.11.3) (2006)

"Site Index" is an indicator of the productivity of a tree Stand, determined by measuring the height (in feet) of the Dominant Tree or Co-Dominant Tree at a specific age. (Appendix 8.4.1)

"Small Emission Source" (Section 6.4) is:

(1) for CCX Members having entity-wide Owned Direct Emissions of 200,000 tons carbon dioxide (CO_2) equivalent per year or more, a facility or activity that releases emissions owned by the Member that are estimated to be less than 5% of the Member's total Owned Direct Emissions;
(2) for CCX Members or Associate Members having estimated entity-wide Owned Direct Emissions totaling less than 200,000 metric tons of CO_2 equivalent per year, those facilities or activities that have Owned Emissions of less than 10,000 metric tons of CO_2 equivalent per year; and,
(3) for CCX Members primarily engaged in electricity production, electric power generation facilities having a rated capacity of less than 25 megawatts.

"Small Forestation Project" is a CCX Forestation Project for which the minimum annual gross accumulation (during years 2003 through 2006) of Carbon Stocks on all sites enrolled in CCX by the Project Owner is expected to be less than 2,000 metric tons CO_2 equivalent per year. (Section 9.8.5)

"Soil Carbon Reserve Pool" is an entry in a CCX Registry Account into which each Exchange Soil Offset Project is required to place 20% of the Offsets it earns. (Section 9.9.2)

"Stand" is an easily defined area of forested land that is relatively uniform in age, species or composition and can be managed as a single unit. (Section 8.7)

"Statement of Included Emissions and Baselines" is a CCX form listing the CCX Member's Emission Sources (and, if applicable or elected, Emitting Activities) and electricity purchases (if Opted-in) that are to be included in CCX, as well as the Baselines associated with the Included Emissions and activities. (Section 6.4) (2006)

"Stationary Fossil Fuel Combustion" is fossil fuel combustion in a facility that is not mobile, often for the purpose of electricity or steam generation. (Section 7.5.1)

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc.

"Stationary Source" is a source of Greenhouse Gas emissions that is not mobile, such as electricity or steam generation facilities. (Section 7.5.1)

"Stratum" is a statistical grouping of all tree Stands that share specified common characteristics. (Appendix 8.3)

"Super Reductions" are Carbon Financial Instruments that represent emission reductions beyond the Maximum Recognized Emissions Reductions or increases in Carbon Stocks beyond the Maximum Recognized Increase in Carbon Stocks. Super Reductions may be sold to non-Members but are not usable for compliance by CCX Members. (Section 4.11.2) (2006)

"Supplemental Reduction Objective" is the adoption of an emission reduction objective that involves: the Opt-in inclusion of Emission Sources or Activities (e.g. electricity purchases) beyond those required by CCX rules; and/or the adoption of a reduction target that goes beyond the CCX Emission Reduction Schedule. (Section 4.10.1)

"Surrender" the process by which CCX Members and Associate Members annually forfeit Carbon Financial Instruments to achieve True-up. (Section 4.3)

"Thinning" is the removal of certain trees in a Stand to reduce competition for resources among the trees. (Section 8.8.2.2)

"Tillage" is one of various silvicultural activities that loosen the soil structure in a plantation with the aim of increasing rooting volume. (Appendix 8.4.1)

"Timber Cruise" is a systematic field measurement of trees for the purpose of establishing a timber inventory. (Appendix 8.4.1)

"Transaction" is a commercial agreement that provides for the transfer of Carbon Financial Instruments. (Section 5.1) The three categories of transactions that can be executed in CCX are:

(1) CCX Exchange-cleared Trades;
(2) Bilateral Trades; and,
(3) Block Trades.

"Transfer" is the movement of a CCX Carbon Financial Instrument from one CCX Registry Account to another. Transfer implies the conveyance from transferor to transferee of full legal title to all Greenhouse Gas reduction and mitigation rights associated with transferred Carbon Financial Instruments. (Section 4.4)

"True-up" is the annual Surrender by each CCX Member of Carbon Financial Instruments in an amount equal to a CCX Member's Owned Emissions during the Compliance Year or the annual Surrender of CFIs in an amount sufficient for a CCX Associate Member to fulfill its CCX commitments. (Sections 4.7 & 11.6)

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

"United States" ("U.S.") is the fifty states that comprise the United States of America as well as all U.S. territories (including Guam, Puerto Rico and the U.S. Virgin Islands). (Section 6.4.1)

"Verifier" is an entity that is approved by CCX to conduct verification of CCX Exchange Offset Projects. With the exception of certain small Projects, each Project Registration Filing and Periodic Project Report must be accompanied by a verification statement signed by a CCX-approved Verifier. (Section 9.3)

"Vintage" is the first Compliance Year for which a CCX Carbon Financial Instrument may be used in achieving Compliance with a CCX Member's or Associate Member's Emission Reduction Schedule or Electricity Purchase Reduction Schedule. (Section 4.3) (2006)

"WRI/WBCSD Protocols" are the Greenhouse Gas calculation tools contained in the "*Corporate GHG Accounting and Reporting: Corporate Inventory Module*," found at the website www.ghgprotocol.org, which was developed by the World Resources Institute in conjunction with the World Business Council for Sustainable Development. (Section 7.1.2)

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

NOTE: Chapter 2 is currently being revised. The revised version will be posted upon its completion. (March 2006)

Chapter 2 Exchange Membership

2.0 Purpose

This Chapter:

- defines CCX Members, Associate Members, Participant Members and Exchange Participants, all of which are CCX Registry Account Holders;
- establishes eligibility conditions and application procedures; and,
- describes membership privileges, duties and rules of conduct.

2.1 General Provisions

The Committee on Membership shall be responsible for interpretations of rules established in this Chapter except for those rules related to fees for membership and participation, which shall be administered by the Executive Committee. The Committee on Membership shall recommend to the Executive Committee appropriate modifications to the rules provided herein.

2.2 Classes of CCX Membership

The four classes of CCX Membership are CCX Members, CCX Associate Members, CCX Participant Members and CCX Exchange Participants. Together these are referred to as CCX Registry Account Holders. Each of these classes is described below.

2.2.1 CCX Members

CCX Members include corporations, municipalities and other entities that emit Greenhouse Gases from facilities in the United States, Canada or Mexico. Members will adopt Greenhouse Gas emission reduction commitments that apply during the years 2003, 2004, 2005 and 2006. Members may choose to extend the program beyond 2006, but have no obligation to participate beyond 2006.

2.2.2 CCX Associate Members

Entities meeting the following conditions may become CCX Associate Members:

(1) the entity has negligible direct emissions or no direct emissions; and,
(2) the entity commits to the CCX Emission Reduction Schedule for their indirect

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

- emissions or a Greenhouse Gas mitigation objective that surpasses the CCX Emission Reduction Schedule and/or encompasses a broader range of activities.

CCX Associate Members will be subject to the same external audit of compliance with their mitigation objectives that is conducted for CCX Members.

2.2.3 CCX Participant Members

CCX Participant Members include Offset Providers and Liquidity Providers. Offset Providers are entities such as Project Owners, Project implementers, registered Aggregators, Market Makers and entities selling Exchange Offsets produced by qualifying CCX-registered Offset Projects. Liquidity Providers are entities or individuals who trade on the Exchange for reasons other than compliance with the CCX Emission Reduction Schedule. These include entities such as Market Makers and proprietary trading groups.

2.2.3.1 Market Maker Program

The Board may adopt a program whereby one or more Registry Account Holders may be designated as Market Makers and assumes obligations in order to support market liquidity and orderliness in the Exchange. Any such program may contain:

(i) the qualifications to become a Market Maker, including without limitation any minimum net capital requirements;
(ii) the procedure by which Registry Account Holders may seek and receive designation as Market Makers;
(iii) the obligations of the Market Makers, including without limitation minimum bid and offer commitments; and/or,
(iv) the benefits accruing to Market Makers, including without limitation reduced transaction fees and/or the receipt of compensatory payments from the Exchange.

2.2.4 Exchange Participants

Exchange Participants are entities or natural persons that do not adopt Greenhouse Gas emission reduction commitments but do establish a CCX Registry Account for the purpose of acquiring CCX Carbon Financial Instruments.

2.2.5 Additional Membership Classes

Subject to the approval by the Board of Directors, the Executive Committee may create additional CCX Membership classes consistent with the goals and objectives of the Exchange.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

2.3 Eligibility

Any entity that satisfies the requirements provided in this Chapter and is found to be suitable by the CCX Executive Committee to assume the obligations and privileges of CCX membership or participation shall be eligible to become a CCX Member, CCX Associate Member or CCX Participant Member, provided that such entity meets the following specific standards:

(1) the entity shall be duly organized, existing and in good standing under the laws of its jurisdiction of organization; and,
(2) the entity shall qualify as an Eligible Commercial Entity as defined in paragraph 1a(11) of the U.S. Commodity Exchange Act.

Each Registry Account Holder that does not maintain an office in the United States responsible for preparing and maintaining financial and other reports required to be filed with the Exchange shall:

(1) prepare all required financial reports in U.S. dollars;
(2) reimburse the Exchange for any expense incurred in connection with examinations of the Registry Account Holder;
(3) ensure the availability of an individual who is knowledgeable in relevant technical and financial matters to assist representatives of the Exchange or the provider of regulatory services designated by CCX, acting in the course of their duties; and,
(4) identify an individual to receive service of process in the event the Commodity Futures Trading Commission or other government agency issues a subpoena.

2.4 Registry Account Holder Applications

2.4.1 General Provisions

Participation in CCX is expected to expand as additional entities seek to enroll. Expansion will be managed with a view to furthering the goals of the Exchange.

Each entity or person desiring to become a Registry Account Holder shall file with the Exchange an application for membership or participation in the form prescribed by the Exchange (together with an initiation fee in such amount as will be specified by the Exchange), and such financial documents and other information as the Exchange may request. The applicant shall be required to provide information to the provider of regulatory services designated by CCX, which shall assist the Exchange in the administration of applications.

A representative of the applicant shall appear personally before the Committee on Membership if so requested and shall furnish such additional information as the Committee on Membership may request.

After receiving all of the information it deems necessary or appropriate, the Committee on Membership shall recommend whether the Executive Committee shall grant or deny such

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

55

entity's application. The Executive Committee shall provide the applicant with notice of its decision within thirty business days of an application.

With respect to the approval of each new Registry Account Holder, the Exchange shall promptly notify all other Members, Associate Members and Participant Members thereof.

2.4.2 Maintenance of Eligibility

Each Registry Account Holder shall at all times meet the standards of eligibility set forth in Section 2.3.

Each Registry Account Holder shall immediately notify the Exchange in writing about any material change in any information contained in its Registry Account Holder application.

Each Registry Account Holder shall immediately notify the Exchange in writing upon becoming aware of any event that may impact its Registry Account Holder eligibility as stipulated in Section 2.3 or that could be used as causes for denial of membership or participation as specified in Section 2.5.

2.5 Causes for Denial of Membership or Participation

The Committee on Membership may recommend to the Executive Committee that it deny a Registry Account Holder application of any entity if such entity:

(i) has ever been denied registration in an exchange, or had a registration suspended, revoked, or conditioned by a governmental or regulatory authority;
(ii) has ever been denied membership or clearing privileges by any commodity or securities exchange/clearing organization or has had any membership or clearing privileges suspended, revoked, or conditioned;
(iii) has been convicted, pled guilty, entered a plea of "no contest," or entered into a voluntary settlement as to any violation of any criminal or penal code; or,
(iv) currently has any judgments, liens, attachments, or other encumbrances filed against it.

The Exchange may determine not to permit a Registry Account Holder to continue as a Registry Account Holder if the Registry Account Holder:

(i) fails to meet any of the standards of eligibility specified in Section 3.3 after approval thereof;
(ii) is subject to one of the causes for denial of membership or participation specified in this rule;
(iii) fails to meet any condition placed by the Exchange on such Registry Account Holder;
(iv) violates any agreement with the Exchange; or becomes subject to a statutory

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

disqualification under Applicable Law;

(v) engages in conduct that does not further the goals of the Exchange; or,

(vi) engages in conduct unbecoming of a Member.

2.6 Privileges

2.6.1 Authorized Traders

Each Registry Account Holder shall be provided access, consistent with the rules set forth herein, to the CCX Trading Platform for the purpose of posting, viewing and accepting bids and offers for tradable CCX Carbon Financial Instruments and to the CCX Registry for the purpose of viewing Registry balances and conducting intra-company Transfers.

Each Registry Account Holder may authorize any of its employees to act as Authorized Traders. Each Registry Account Holder may also authorize a contracted agent to act as Authorized Trader on its account. Trading must be authorized by an action of the Registry Account Holder's Board of Directors (or by the Registry Account Holder's senior executive if the Registry Account Holder does not have a Board of Directors). Each Authorized Trader shall have Trading Platform and Registry access privileges as determined by the relevant Registry Account Holder.

With respect to each Authorized Trader, the relevant Registry Account Holder shall:

(1) guarantee and assume financial responsibility for all activity related to the CCX Trading Platform and Registry used by such Authorized Traders and any account identifier and password assigned to such Authorized Traders; and,

(2) assist the Exchange in any investigation relating to an alleged violation of Applicable Law, regulations or rules of the Exchange, which assistance shall be timely and shall include using reasonable efforts to require such Authorized Trader to produce documents, answer questions by the Exchange or appear in connection with such investigation.

The Executive Committee may at any time revoke, suspend, limit, condition, restrict or qualify the Authorized Trader of any Registry Account Holder if, in the sole discretion of the Exchange, such action is in the best interest of the Exchange.

2.6.2 Voting

Each Member, Associate Member or Participant shall be eligible to nominate existing Members to any of the Standing Committees of the Exchange described in Section 4.8.

Each Member shall have an equal vote on resolutions and actions placed before the membership by the Executive Committee.

The Executive Committee, subject to approval of the Board of Directors, shall establish rules governing Committee Membership and voting privileges for Participant Members and Associate Members.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc.

2.6.3 No Delegation

No Registry Account Holder shall delegate to any other person or entity the rights and privileges of membership or participation without written permission of the CCX Executive Committee.

2.7 Duties and Obligations

2.7.1 General Provisions

Each Registry Account Holder shall abide by the provisions established in this *Rulebook*, as amended from time to time, and by all circulars, notices, directives or decisions adopted pursuant to or made in accordance with the rules of the Exchange. Each Registry Account Holder shall keep and maintain a current copy of the Exchange *Rulebook* in a readily accessible place.

Any violation of the rules of the Exchange by any employee of a Registry Account Holder shall constitute a violation of the rules by such Registry Account Holder.

New Registry Account Holders will be bound by the same terms and obligations as existing Registry Account Holders. Members or Associate Members that enroll after launch of the Exchange shall be required to achieve True-up for their Owned Emissions for all calendar years 2003 through 2006. Such Members or Associate Members shall not be allowed to sell or bank any surplus Carbon Financial Instruments they may have realized for years prior to their enrollment.

2.7.2 Emission Baselines, Monitoring, Reporting and Reduction Schedules

Each Member (and each Associate Member, unless specifically provided otherwise by the Executive Committee) shall establish an Emission Baseline in accordance with the provisions of Chapter 6, shall quantify and report its emissions and electricity purchases (if applicable) in accordance with the provisions of Chapter 7, and shall adopt an Emission Reduction Schedule in accordance with the provisions of Chapter 4 of this *Rulebook*.

Each Member shall, upon its accession to the Exchange, be issued Exchange Allowances for the four-year period 2003 through 2006 in an amount reflecting the Member's Emission Reduction Schedule. Subsequent to each Compliance Year, each Member shall surrender any combination of allowable Carbon Financial Instruments in an amount equal to the Member's Owned Emissions (in metric tons CO_2 equivalent) occurring during the Compliance Year (subject to the Economic Growth Provision and various limits outlined in Chapter 4, as well as provisions of the Electricity Purchase Opt-in Program, if applicable).[1]

[1] The rules governing environmental commitments of CCX Associate Members are to be determined by CCX

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

2.7.3 Fulfillment of Obligations

Each Registry Account Holder shall be fully responsible for the timely performance of all obligations and contracts entered into through the CCX Trading Platform.

2.7.4 Maintenance of Records

Each Registry Account Holder shall maintain adequate records of orders entered, transactions effected and positions carried on the Exchange as the Exchange may prescribe. Such records shall at all times be open to inspection by the Exchange and by the provider of regulatory services designated by CCX.

2.7.5 Addresses and Contact Information

Each Registry Account Holder shall file with the Exchange and keep current:

(1) an address where notices may be served; and,
(2) the name and contact details of an employee with primary responsibility for liaison with the Exchange. Registry Account Holders shall inform the Exchange of any change in the designated employee.

2.7.6 Provision of Information to the Exchange

Each Registry Account Holder shall make and file additional reports with the Exchange at such times and containing such information in such form as the Exchange may prescribe. Each Registry Account Holder shall, in a timely fashion, furnish such information as may from time to time be requested by any representatives of the Exchange or Provider of Regulatory Services designated by CCX, acting in the course of their duties.

2.7.7 Supervision of Employees

Each Registry Account Holder shall diligently supervise all activities of its employees relating to transactions effected on the Exchange or subject to the rules. Without limiting the generality of the foregoing:

(1) each Registry Account Holder shall continue to have at all times at least one senior officer who is responsible for such supervision and shall promptly advise the Exchange of any change in the name, title, address, phone number, fax number or e-mail address of each such officer;
(2) each Registry Account Holder shall be responsible for training its employees regarding these rules and the proper use of the CCX Trading Platform and Registry;

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

and,

(3) each Registry Account Holder shall furnish the Exchange on demand with a list of all Authorized Traders employed by such Registry Account Holder, giving the name, location and trader identification (as prescribed by the Exchange).

2.8 Fees and Payments

The Executive Committee shall have the sole power to set the dates and amounts of any dues, assessments or fees to be levied on Registry Account Holders, which dues, assessments or fees shall be paid to the Exchange when due. Such dues, assessments or fees shall include (but are not limited to):

- Initial Membership Fee
- Annual Dues
- Account Registration Fees
- Transaction Fees
- Offset Registration Fees
- Early Action Credit Registration Fees
- Inter-company Transfer Fees

The Executive Committee shall have the authority to waive any such dues, assessments or fees or to offer discounts for any defined class of Registry Account Holder. The Executive Committee may modify the fee structure from time to time at its discretion.

If a Registry Account Holder fails to pay any Exchange dues, assessments, installments or fees within thirty days after such assessment, the Registry Account Holder may be suspended until such assessment, or installments thereof, is paid. If such payment obligation remains unsatisfied for six consecutive months after its due date, the Exchange may terminate, suspend or otherwise limit the privileges of such Registry Account Holder.

2.9 Prohibited Conduct

No Registry Account Holder shall:

(1) disseminate any false, misleading or inaccurate information, including reports concerning any Carbon Financial Instrument traded on the Exchange or market information or conditions that affect or tend to affect the price of any instrument traded on the Exchange;

(2) manipulate, or attempt to manipulate, the price of any instrument traded on the Exchange;

(3) furnish false or misleading information to, or fail to furnish information when requested by, the Board, any representatives of the Exchange or provider of regulatory services designated by CCX, acting in the course of their duties;

(4) violate or fail to conform to the rules of the Exchange, or the Applicable Laws and

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc.

regulations;

(5) enter any bids, offers or transactions into the Exchange Trading Platform when such Registry Account Holder knows or should have known that it is insolvent, within the meaning of any applicable bankruptcy or insolvency laws, federal or state, domestic or foreign, without the prior written approval of the Exchange;

(6) violate, or fail to comply in a timely manner with, the terms of any agreement between the Registry Account Holder and the Exchange, or of any order or decision of the Exchange;

(7) enter bids or offers into the CCX Trading Platform other than in good faith for the purpose of executing transactions, or make any bid or offer for the purpose of establishing a market price which does not reflect the true state of the market;

(8) knowingly enter into a transaction on the Exchange that is a wash sale or a transaction entered into for the purpose of manipulating the market;

(9) engage in conduct or practices inconsistent with just and equitable principles of trade or conduct or practices detrimental to the best interests of the Exchange;

(10) engage in conduct that does not further the goals of the Exchange;

(11) disclose confidential information obtained in the course of proceedings of an Exchange Committee, hearing or investigation; or,

(12) behave among Members, Associate Members, Participant Members, Exchange Participants, CCX Officers, staff, vendors or Directors in any manner that is inconsistent with high standards of professional and personal decorum.

2.10 Exchange Rules Violations

A Registry Account Holder or a person associated with a Registry Account Holder who is alleged to have violated or aided and abetted a violation of any Applicable Laws or regulations, or any provision of the CCX rules or any interpretation thereof, or resolutions of the CCX Executive Committee regulating the conduct of business on the Exchange, shall be subject to the disciplinary jurisdiction of the Exchange under this chapter, and after notice and opportunity for a hearing may be appropriately disciplined in accordance with provisions of the chapter.

Instances of possible violations of CCX rules shall be reported to the CCX Office of General Counsel ("OGC"). The OGC will initiate a due process investigation that will be undertaken by the provider of regulatory services designated by CCX, in coordination with the appropriate Exchange Committees. Upon completion of each investigation a recommendation shall be submitted to the CCX Executive Committee.

In the event of an investigation, CCX shall notify the respondent, when practicable, before any investigation is initiated. If prior notice is not practicable, the respondent shall be notified at the earliest possible opportunity. The notification shall:

(1) state the nature of the investigation;

(2) briefly state the reasons for the investigation; and,

(3) state the effective time and date of next steps to be undertaken in the investigation.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

In conducting investigations of possible rule violations, the OGC, the provider of regulatory services designated by CCX and the appropriate Exchange Committees may require CCX Registry Account Holders to provide relevant information and may conduct interviews, hearings or other actions as necessary to complete a fair and accurate investigation.

The Standing Committee or Committees involved in an investigation shall forward a recommendation to the CCX Executive Committee. The CCX Executive Committee shall act upon each investigation recommendation as follows:

(1) The Registry Account Holder subject to investigation ("respondent") shall be given an opportunity for a subsequent hearing before the Executive Committee. The hearing shall be conducted in the following manner:
   (a) The hearing shall be held promptly after reasonable notice to the respondent. No member of the hearing body may serve on that body in a particular matter if that person or any person or firm with which that person is affiliated, has a financial, personal or other direct interest in the matter under consideration, excluding Exchange Registry Account Holders that may have an indirect interest by virtue of such status.
   (b) Formal rules of evidence need not apply, but the hearing shall not be so informal as to be unfair.
   (c) The appropriate Exchange staff and the provider of regulatory services designated by CCX shall be a party to the hearing and shall present the case on those matters that are the subject of the hearing.
   (d) The respondent shall be entitled to appear personally at the hearing and to be represented by counsel.
   (e) The respondent shall be entitled to cross-examine any person(s) appearing as witness(es).

(2) Within five business days following the conclusion of the hearing, the Executive Committee shall render a written decision based upon the weight of the evidence contained in the record of the proceeding and shall provide a copy to the respondent. The decision shall include:
   (a) a brief summary of the evidence produced at the hearing;
   (b) findings and conclusions;
   (c) a description of the disciplinary action taken; and,
   (d) the reasons for the disciplinary action.

2.11 Termination of Membership

Registry Account Holder status obtained by fraudulent representations or concealment shall be disposed of by the Executive Committee.

The membership of any Registry Account Holder may be terminated at any time by the Exchange, if the CCX Executive Committee determines that such termination is in the best interests of the Exchange.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Each Registry Account Holder may be required to withdraw from Membership status if the Exchange shall determine, after notice and an opportunity to be heard, that such Registry Account Holder no longer meets the eligibility standards as stipulated in Section 2.3 or that events have taken place that constitute causes for denial of membership as specified in Section 2.5.

Notwithstanding any termination of its membership or participation, each Registry Account Holder shall remain subject to the jurisdiction of the Exchange after the effective date of such termination as if such entity were still a Registry Account Holder with respect to any investigation or proceeding commenced by the Exchange against such entity or any claim in arbitration filed against such entity, provided that such investigation, proceeding or arbitration is commenced not more than six months after the effective date of such termination.

Each entity whose status as a Registry Account Holder has been terminated shall immediately notify the Exchange of any change in its address as most recently reported to the Exchange for a period of one year following the effective date of such termination.

The CCX Board of Directors is authorized to take summary action to suspend or terminate the membership of a Registry Account Holder pursuant to this rule, when immediate action is necessary to protect the best interests of the Exchange, without affording prior opportunity for hearing.

The following procedures shall apply to such actions:

(1) The respondent shall, when practicable, be notified before the action is taken. If prior notice is not practicable, the respondent shall be notified at the earliest possible opportunity. The notice shall:
    (a) state the action;
    (b) briefly state the reasons for the action; and,
    (c) state the effective time and date and the duration of the action.

(2) The respondent shall be given an opportunity for a subsequent hearing before the Committee on Membership. The hearing shall be conducted in accordance with the following requirements:
    (a) The hearing shall be held promptly after reasonable notice to the respondent. No member of the hearing body may serve on that body in a particular matter if that person or any person or firm with which that person is affiliated has a financial, personal or other direct interest in the matter under consideration.
    (b) Formal rules of evidence need not apply, but the hearing shall not be so informal as to be unfair.
    (c) The appropriate Exchange staff and the provider of regulatory services designated by CCX shall be a party to the hearing and shall present the case on those matters which are the subject of the hearing.
    (d) The respondent shall be entitled to appear personally at the hearing and to be represented by counsel.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

effective date thereof; *provided* that any failure of the Exchange to so publish a notice shall not affect the effectiveness of the addition or modification in question. For purposes of publication, it shall be sufficient (without limiting the discretion of the Exchange as to any other reasonable means of communication) if a notice is sent to each Registry Account Holder by mail, recognized courier service, facsimile or electronic mail (including by means of a hyperlink included in an electronic mail message), to the address, facsimile number or electronic mail address (as applicable) provided by such Registry Account Holder for such purpose.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

NOTE: Chapter 3 is currently being revised. The revised version will be posted upon its completion. (March 2006)

Chapter 3 Exchange Governance

3.0 Purpose

This chapter establishes:

- the Committee structure of the Chicago Climate Exchange;
- the responsibilities and membership of those Committees;
- the Exchange's decision-making procedures; and,
- various other aspects of the governance of the Exchange.

3.1 Name

The name of the Exchange shall be "Chicago Climate Exchange." The Exchange is also referred to by the acronym "CCX."

3.2 Principal Place of Business

The Exchange shall have its principal place of business in Chicago, Illinois.

3.3 Effectiveness of Rules

These rules, dated July 31, 2003, shall be effective hereof. Unless otherwise specified by the Board of Directors, all amendments to these rules shall become effective on the date determined and communicated by the Exchange.

3.4 Authorization

The Board of Directors and its Committees, as well as the Committees and Officers of the Exchange, shall be established, appointed or elected as described in this chapter, and shall have the rights, duties and responsibilities set forth herein. Notwithstanding anything in these rules to the contrary, the Board of Directors shall have the power and authority to call for review, and to affirm, modify, suspend or overrule, any and all decisions of its Committees and of the Committees and Officers of the Exchange.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

3.5 Board of Directors

3.5.1 Responsibilities

The business and affairs of the Exchange shall be managed by or under the direction of the Board of Directors, with all rights and powers generally conferred by law or otherwise provided herein.

3.5.2 Membership

The Board of Directors shall initially be composed of 12 Directors, as follows:

(a) The Chief Executive Officer (CEO);
(b) The President;
(c) Two Directors elected by holders of Series A Convertible Preferred Stock;
(d) Three Directors elected by Exchange Members; and,
(e) Five Outside Directors who shall not otherwise be affiliated with or employed by the Exchange or employed by any shareholder.

The Chief Executive Officer shall serve as Chairman of the Board of Directors. Two of the Outside Directors selected by the Chairman shall serve as Vice-Chairmen of the Board of Directors.

Notwithstanding the foregoing, the number and qualification of Directors described in this Section may be fixed or changed from time to time by action of the Board of Directors.

3.5.3 Tenure

One of the Directors elected by holders of Series A Convertible Preferred Stock shall hold office for an initial term of one year and one shall hold office for an initial term of two years, or until their death, resignation or removal, whichever occurs first, in a manner permitted by Applicable Law. The position of the Director that holds office for an initial term of one year will come up for election in 2004. The position of the Director that holds office for an initial term of two years shall come up for election in 2005. The newly elected Directors shall hold office for a term of three years, or until their death, resignation or removal, whichever occurs first, in a manner permitted by Applicable Law.

One of the Directors elected by Exchange Members shall hold office for an initial term of one year, one shall hold office for an initial term of two years and one shall hold office for an initial term of three years, or until their death, resignation or removal, whichever occurs first, in a manner permitted by Applicable Law. The position of the Director that holds office for an initial term of one year shall come up for election in 2004. The position of the Director that holds

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

office for an initial term of two years shall come up for election in 2005. The position of the Director that holds office for an initial term of three years shall come up for election in 2006. The newly elected Directors shall hold office for a term of three years, or until their death, resignation or removal, whichever occurs first, in a manner permitted by Applicable Law.

Outside Directors shall be elected by the shareholders in a majority vote. Two of the Outside Directors shall hold office for an initial term of three years, two shall hold office for an initial term of four years and one shall hold office for an initial term of five years, or until their death, resignation or removal, whichever occurs first, in a manner permitted by Applicable Law. The positions of the two Outside Directors that hold office for an initial term of three years shall come up for election in 2006. The positions of the two Outside Directors that hold office for an initial term of four years shall come up for election in 2007. The position of the Outside Director that holds office for an initial term of five years shall come up for election in 2008. The newly elected Outside Directors shall hold office for a term of three years.

The term of all Directors shall commence on the date of the first meeting of the Board of Directors.

In the event that any Director other than an Outside Director ceases to be qualified as a Director by virtue of a change in professional affiliation, the Director shall cease to be a Director and his or her office shall become vacant.

3.5.4 Meetings

A regular meeting of the Board of Directors shall be held quarterly. The Board of Directors may provide, by resolution, the time and place for the holding of additional regular meetings without notice other than such resolution.

Special meetings of the Board of Directors may be called by the Chief Executive Officer or any four Directors. The Directors calling a special meeting of the Board of Directors shall fix the time and place at which such meeting shall be held, and such time and place shall be specified in the notice of such meeting.

3.5.5 Quorum and Attendance

At all meetings of the Board of Directors, a majority of the Directors currently in office shall constitute a quorum for the transaction of business. An act of the Board of Directors requires an absolute majority of Directors present at the meeting. If a quorum is not present at any meeting of the Board of Directors, a majority of the Directors present at such meeting may adjourn it without notice other than announcement at such meeting, until a quorum is present.

Directors may attend meetings of the Board of Directors either in person or by electronic means, such as by telephone or video-conferencing. Any Director not physically present at a Board of

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Directors meeting but in continuous communication with such meeting shall be deemed to be present. Continuous communication shall exist when a member not physically present is able to communicate with each other member deemed present, and to participate in the proceedings of the meeting.

3.5.6 Procedures

Board of Directors meetings shall be conducted according to established business practices. A written record in the form of minutes shall be made of every meeting. In case of dispute, Robert's Rules of Order shall govern.

3.5.7 Vacancy, Resignation and Removal

A vacancy created because of the death, disability, resignation or removal of a Director shall be filled by the same method as used to appoint the Director who left the vacancy.[1] A Director appointed by holders of Series A preferred stock or elected by Exchange Members to fill such vacancy shall serve as a Director until the next annual election of Directors and until his or her successor is duly elected and qualified or until his or her death, resignation or removal, whichever occurs first, in a manner permitted by Applicable Law.

A Director may resign at any time by giving written notice to the Chief Executive Officer. A Director may be removed for cause by an act of the Board of Directors. For these purposes, "for cause" shall mean that the Director, in carrying out his or her duties, has been guilty of negligence or willful misconduct.

A Director appointed by holders of Series A preferred stock may be removed at any time by the holders of Series A preferred stock, effective immediately upon providing written notification to the remaining Directors. The termination of a person's duties as an Officer of the Board of Directors also shall terminate automatically such person's status as a Director.

3.5.8 Committees

The Board of Directors may designate one or more Committees, which shall be comprised of Members of the Exchange. Any such Committee shall have the authority and power to exercise the functions delegated to it by the Board of Directors.

There shall be an Executive Committee that will have the responsibilities established in Section 3.6 and elsewhere.

---

[1] A vacancy of an office of a Director elected by holders of Series A preferred stock shall be filled through a majority vote of such shareholders. A vacancy of an office of a Director elected by Exchange Members shall be filled through a majority vote of Exchange Members. A vacancy of an office of an Outside Director shall be filled through a vote of the shareholders in a majority vote.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

3.5.9 Officers

The Chief Executive Officer shall be selected by a majority vote of the Board of Directors. The CEO shall appoint other Officers of the Exchange, at his or her discretion. All Officers of the Exchange shall exercise such powers and perform such duties as may be determined from time to time by the Board of Directors. Any two or more offices may be held by the same person.

3.6 Executive Committee

3.6.1 Responsibilities

The Executive Committee shall have the following authorities:

(1) oversee the affairs of the Exchange;
(2) receive and act upon recommendations from other Committees;
(3) address any unresolved issues emerging from other Committees;
(4) establish rules governing Membership of Standing Committees and voting privileges for Participant Members and Associate Members; and,
(5) establish additional Committees as necessary.

3.6.2 Membership

The Executive Committee shall be composed of the following 7 members:

(a) the Chief Executive Officer;
(b) the President;
(c) one of the Vice-Chairmen of the Board of Directors selected by the Chairman of the Board of Directors; and,
(d) four Members of the Exchange.

For the first one-year term of service the four Executive Committee members that are representatives of Exchange Members shall be appointed by the Chairman of the Board of Directors and approved by the Board of Directors. For subsequent terms of service the four Executive Committee members that are representatives of Exchange Members shall be elected by the Members in a majority vote at a meeting of the Members and shall be subject to approval by the Board of Directors.

3.6.3 Tenure

Executive Committee Members shall serve one-year, renewable terms, or until their death, resignation or removal, whichever occurs first, in a manner permitted by Applicable Law.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

3.6.4 Meetings, Quorum and Attendance

The Executive Committee shall meet monthly or as required. There shall be a quorum when a majority of Executive Committee members currently in office is in attendance. All recommendations, decisions and other actions must be made by an absolute majority of voting members.

Executive Committee members may attend either in person or by electronic means, such as telephone or video-conferencing. Any Board of Directors member not physically present at a Board of Directors meeting but in continuous communication with such meeting shall be deemed to be present. Continuous communication shall exist when a member not physically present is able to communicate with each other member deemed present, and to participate in the proceedings of the meeting.

3.6.5 Procedures

Executive Committee meetings shall be conducted according to established business practices. A written record in the form of minutes shall be made of every meeting. In case of dispute, Robert's Rules of Order shall govern.

3.6.6 Vacancy, Resignation and Removal

A vacancy on the Executive Board of Directors, other than that of an Exchange executive or a Vice Chairman, created because of the death, disability, resignation or removal of an Executive Committee member elected by Members shall be filled through a majority vote of Members. The Committee member so appointed to fill such vacancy shall serve until the next annual election of Committee members and until his or her successor is duly elected and qualified or until his or her death, resignation or removal, whichever occurs first.

An Executive Committee member may be removed at any time by the act of the Board of Directors.

3.7 Standing Committees

3.7.1 Responsibilities

There shall initially be five Standing Committees of the Exchange for the purpose of providing oversight of specific market functions. The five Committees are the:

- Committee on Environmental Compliance;
- Committee on Forestry;
- Committee on Membership;
- Committee on Offsets; and,

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc.

- Committee on Trading and Market Operations.

Standing Committees shall forward recommendations to the Executive Committee, which shall retain all authority to enact such recommendations. The responsibilities of each Standing Committee are presented below. Standing Committees may also provide dispute resolution services in cases where two parties are in dispute over the application of Exchange rules. Additional Committees may be formed as necessary at the discretion of the Executive Committee.

3.7.2 Committee on Environmental Compliance

The CCX Committee on Environmental Compliance shall:

(1) recommend rules for and oversee implementation of Emission Baselines, Emission Reduction Schedules and emissions monitoring and verification;
(2) receive Periodic Market Surveillance Reports from the Provider of Regulatory Services designated by CCX;
(3) serve as a peer group to monitor compliance with such rules; and,
(4) evaluate violations of such rules and recommend a course of action to the Executive Committee.

The CCX Committee on Environmental Compliance may recommend changes in monitoring methods in consideration of, among other factors, the following:

(a) determination that a new or modified method represents a significant improvement over existing best practices;
(b) changes in data availability;
(c) changes in the ability of CCX Members and Associate Members to apply the prescribed methods; and,
(d) the ability of the affected CCX Members and Associate Members to completely implement the recommended changes.

3.7.3 Committee on Forestry

The CCX Committee on Forestry shall:

(1) recommend to the Executive Committee interpretations of rules relating to the quantification of Carbon Stocks in commercial forests owned by CCX Members and for forest sites where Members own Carbon Sequestration rights;
(2) recommend additional methods to be employed in quantifying Carbon Stocks in commercial forests;
(3) develop standards for independent verification of Carbon Stocks in commercial forests;

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

(4) receive notice from the Committee on Offsets of the latter Committee's votes on forestry projects;
(5) coordinate with the Committee on Offsets in any development of modifications of rules for Forestry Projects;
(6) provide expert guidance to the Executive Committee on the process for approving independent Verifiers for Carbon Stocks in commercial forests; and,
(7) coordinate with the Committee on Offsets to establish methods for ensuring that a CCX Member or Offset Provider is maintaining sustainable forestry practices on applicable lands.

3.7.4 Committee on Membership

The CCX Committee on Membership shall:

(1) define and administer all procedures relating to membership of CCX Registry Account Holders;
(2) respond to new membership applications with a view to furthering the goals of the Exchange and avoiding Price Congestion; and,
(3) recommend and approve new Registry Account Holders and, as needed, forward recommendations that the status of a Registry Account Holder be terminated.

3.7.5 Committee on Offsets

The CCX Committee on Offsets shall:

(1) review and vote on each proposed registration of a CCX Project, which initially can be:
    (a) Exchange Forestry Offsets (XFO) projects;
    (b) Exchange Methane Offsets (XMO) projects;
    (c) Exchange Soil Offsets (XSO) projects; and,
    (d) Exchange Emission Reductions (XER) projects;
(2) provide notice to the Committee on Forestry of its vote on forestry projects;
(3) coordinate with the Committee on Forestry in any development of modifications of rules for Forestry Projects;
(4) recommend additional mitigation Project types and locations for CCX eligibility and develop rules for such Projects;
(5) consider recommending automatic eligibility for approved Clean Development Mechanism projects to earn Exchange Offsets;
(6) provide guidance on the Project registration process;
(7) provide oversight for the registration of Projects undertaken in locations that are not initially eligible for Exchange Offsets;
(8) monitor the diversity of registered Project types and propose methods for maintaining diversity as necessary;

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

(9) develop methods for apportioning the use of registered Exchange Offsets and Exchange Early Action Credits by individual CCX Members and Associate Members if the total quantity of these Carbon Financial Instruments that Members and Associate Members wish to use for Compliance exceeds the quantities established by the market constraints described in Chapter 4 of this *Rulebook*; and,

(10) evaluate violations of Offset Project rules and recommend a course of action to the Executive Committee.

3.7.6 Committee on Trading and Market Operations

The CCX Committee on Trading and Market Operations shall:

(1) monitor trading market operations and identify actions that may be needed to enhance market performance and liquidity and avoid price congestion;

(2) oversee the periodic expansion of the market with a view to assuring efficient market performance; and,

(3) receive periodic market surveillance reports from the Provider of Regulatory Services designated by CCX.

3.7.7 Membership of Standing Committees

Each Standing Committee shall be comprised of representatives of a minimum of four voting CCX Members, Associate Members and Participant Members. All CCX Members, Associate Members and Participant Members may nominate representatives to serve on a Standing Committee. Nominations shall be evaluated by the Executive Committee, which shall elect such members of each Standing Committee and provide suitable written notice to nominees of the success of their nominations.

Each Standing Committee shall be served and aided by one or more Exchange staff. Each Standing Committee may invite outside experts and advisors to assist them in its deliberations, subject to approval by the Executive Committee.

3.7.8 Tenure

Members of Standing Committees shall serve a one-year term renewable through the standard nominating process.

3.7.9 Meetings

Each Standing Committee shall meet as necessary.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

3.7.10 Quorum and Attendance

At all meetings of Standing Committees, a majority of the Committee members shall constitute a quorum for the transaction of business. Decisions shall be taken by an absolute majority of all voting members of each Committee.

Standing Committee members may attend meetings of such Committees either in person or by electronic means, such as telephone or video-conferencing. Any Standing Committee member not physically present at a meeting but in continuous communication with such meeting shall be deemed to be present. Continuous communication shall exist when a member not physically present is able to communicate with each other member deemed present, and to participate in the proceedings of the meeting.

3.7.11 Procedures

Standing Committee meetings shall be conducted according to established business practices. A written record in the form of minutes shall be made of every meeting. In case of dispute, Robert's Rules of Order shall govern.

3.7.12 Resignation and Removal

A vacancy created because of the death, disability, resignation or removal of a Committee member shall be filled through the process of self-nomination and appointment by the Executive Committee. The Committee member so appointed to fill such vacancy shall serve until the next annual election of Committee members and until his or her successor is duly elected and qualified or until his or her death, resignation or removal, whichever occurs first.

A Committee member may be removed at any time by the act of the Executive Committee, subject to approval of the Board of Directors.

3.8 Regulation

CCX is an Exempt Commercial Market as defined in Section 2(h)(3) of the Commodity Exchange Act and in Part 36.3 of the regulations of the Commodity Futures Trading Commission (CFTC). The Exchange is not registered with, or recognized, designated, licensed or approved by the CFTC.

The Exchange shall designate an appropriate entity to provide regulatory services. The Provider of Regulatory Services designated by CCX shall:

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

(1) review applications of prospective Registry Account Holders to determine:
  (a) the completeness thereof;
  (b) the eligibility of the applicant to trade on the Exchange; and,
  (c) whether the eligibility criteria were met minimally, presenting a future risk of being insufficient;
(2) verify that Registry Account Holders have consented for the Provider of Regulatory Services designated by CCX to access their data to perform required reviews and investigations;
(3) audit the Emission Baselines of Members and Associate Member;
(4) perform annual financial reviews of Registry Account Holders to:
  (a) verify the continued eligibility of each Registry Account Holders to trade on CCX in its status as an exempt market; and,
  (b) highlight instances where the eligibility criteria were met minimally and present a future risk of being insufficient;
(5) conduct market surveillance and provide Market Surveillance Reports; and,
(6) conduct audits of:
  (a) annual emission reports submitted by Members; and,
  (b) verification reports on Offsets and net changes in Carbon Stocks.

In case of irregularities or matters worthy of further investigation, the Provider of Regulatory Services designated by CCX shall make recommendations to the Office of General Counsel of the Exchange. The General Counsel shall inform the relevant Committee of these concerns. The Provider of Regulatory Services designated by CCX shall then undertake further investigation and make recommendations for action to the Executive Committee. Each Registry Account Holder shall afford all necessary cooperation with the Provider of Regulatory Services designated by CCX and Standing Committee investigations.

The Exchange may from time to time enter into such agreements with domestic or foreign self-regulatory organizations, associations, boards of trade and their respective regulators providing for the exchange of information and other forms of mutual assistance for financial surveillance, routine audits, market surveillance, investigative, enforcement and other regulatory purposes as the Exchange may consider necessary or appropriate or as required by the appropriate regulatory body. The Chief Executive Officer, or his or her delegate, is authorized to provide information to any such organization, association, board of trade or regulator that is a party to an information sharing agreement with the Exchange, in accordance with the terms and subject to the conditions set forth in such agreement.

3.9 Indemnification

The Exchange shall, to the full extent to which it is empowered to do so by Applicable Law, indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that such person is or was a Director or Officer of the

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Exchange, or is or was serving at the request of the Exchange as a director or officer of another corporation, partnership, joint venture, trust or other enterprise, against all expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding and shall include the right to be paid by the Exchange the expenses incurred in defending any such proceedings in advance of its final disposition. In furtherance of the foregoing, the indemnification provisions contained in Applicable Laws, shall be deemed to be extended to the Officers of the Exchange.

Persons who are not covered by the paragraph above and who are or were employees or agents of the Exchange, or are or were serving at the request of the Exchange as employees or agents of another corporation, partnership, joint venture, trust or other enterprise, may be indemnified to the extent authorized from time to time by the Board of Directors.

The indemnification provided or permitted by this provision shall not be deemed exclusive of any other rights to which those indemnified may be entitled by law or otherwise, and shall continue as to any person who has ceased to be a Director, Officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such person.

3.10 Exchange Liability

Except as provided in Applicable Law, and except in instances where there has been a finding of willful or wanton misconduct, gross negligence, bad faith or fraudulent or criminal acts, in which case the party found to have engaged in such misconduct cannot invoke the protection of this provision, neither the Exchange nor any of its Directors, Officers, employees, agents or consultants shall have or incur any liability whatsoever to its members, any persons associated therewith, their customers or any third parties related thereto or their successors, assigns, or representatives, for any loss, damage, cost, claims or expense (including but not limited to indirect, incidental or consequential damages) that arise out of the use or enjoyment of the facilities or services afforded by the Exchange, any interruption in or failure or unavailability of any such facilities or services, any action taken or omitted to be taken with respect to the business of the Exchange or any information or data provided or withheld by the Exchange. Such limitation of liability shall apply to all claims, whether in contract, tort, negligence, strict liability or otherwise.

The Exchange makes no warranty, express or implied, as to the results to be obtained by any person or entity from the use of any data or information transmitted or disseminated by or on behalf of the Exchange. The Exchange makes no express or implied warranties of merchantability or fitness for a particular purpose or use with respect to any data or information transmitted or disseminated by or on behalf of the Exchange.

Subject to the limitations set forth above, neither the Exchange nor any of its Directors, Officers, employees, agents or consultants shall have or incur any liability whatsoever to its Registry Account Holders, their customers or any third parties associated therewith, or their successors, assigns, or representatives, for any loss, damage, cost or expense (including but not limited to

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

indirect, incidental or consequential damages) incurred by Registry Account Holders or customers as a result of any failure, malfunction, fault, delay, omission, inaccuracy, interruption or termination of service in connection with the furnishing, performance, operation, maintenance or use of or inability to use all or any part of any Exchange systems. Such limitation of liability shall apply regardless of the cause of such systems failure even if due to Exchange error, omission or negligence. Further, such limitation of liability shall apply to all claims, whether in contract, tort, negligence, strict liability or otherwise.

Additionally, the Exchange, its directors, officers, employees, agents or consultants shall have or incur absolutely no liability whatsoever for any errors or inaccuracies in information provided by any Exchange systems or for any losses resulting from unauthorized access or any other misuse of any Exchange systems by any person.

Membership or participation in the Exchange by an Exchange Member, Associate Member, Participating Member, Exchange Participant or customer shall be deemed acceptance by such party or parties of this Section 3.10.

3.11 Confidentiality

No member of the Board of Directors or any Committee established by the Board of Directors or the rules of the Exchange shall use or disclose any material non-public information obtained in connection with such member's participation in the Board of Directors or such Committee, for any purpose other than the performance of his or her official duties as a member of the Board of Directors or such Committee.

No Exchange Member, Associate Member, Participating Member, Exchange Participant or customer shall disclose any information regarding this *Rulebook* or disclose any portion of this *Rulebook*, all of which shall be treated as confidential information. This Section 3.11 is not intended and shall not be construed to replace, amend or modify any existing confidentiality agreement or non-disclosure agreement between any Exchange Member, Associate Member, Participating Member, Exchange Participant or customer and CCX.

No officer, employee or agent of the Exchange shall participate in the trading of Instruments on the Exchange.

3.12 Conflicts of Interest

No member of the Board of Directors, Executive Committee or any other committee of the Exchange shall participate in such body's deliberations and voting on any matter involving a person or entity that is identified by name as a subject of the matter ("named party in interest") where such member:

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

(a) is the named party in interest;
(b) has a family relationship with the named party in interest. A family relationship includes the member's spouse, former spouse, parent, stepparent, child, sibling, stepbrother, stepsister, grandparent, grandchild, uncle, aunt, nephew, niece or in-law;
(c) is an employer, employee, or fellow employee of the named party in interest; or,
(d) has a direct and substantial financial relationship with the named party in interest.

No member of the Board of Directors, Executive Committee or any other committee of the Exchange shall participate in such body's deliberations and voting on any significant action if such member knowingly has a direct and substantial financial interest in the result of the vote. For purposes of this clause, the term "significant action" means (A) any action or rule change that addresses a specific Emergency (as defined in Section 3.13) or (B) any action or change in rules that is designed to respond to extraordinary market conditions or that otherwise is likely to have a substantial effect on prices.

Notwithstanding the foregoing, no member of the Board of Directors, Executive Committee or any other committee of the Exchange shall be restricted from participating or voting on a matter concerning the Exchange solely because such member has a financial relationship with or ownership interest in the Exchange.

Each member who believes that he or she is subject to a conflict restriction of the types specified above shall disclose to the Chief Executive Officer, or his or her designee, the relevant information in connection with: a) the relationship with a named party in interest, or b) those financial interests which could be affected by the significant action.

The Chief Executive Officer or his or her designee shall determine whether recusal is required based on the information provided by the member. The Chief Executive Officer, or his or her designee, using whatever information is available to him or her, may also determine whether any member of the relevant deliberating body who does not choose to abstain from deliberations and voting is subject to a conflicts restriction under this Section. The Chief Executive Officer, or his or her designee, shall disqualify from deliberations and voting any member that he or she determines is subject to such a conflicts restriction.

Any member of the Board of Directors, Executive Committee or any other committee of the Exchange who would otherwise be required to abstain from deliberations and voting pursuant to the provision established above may participate in deliberations, but not voting, if the deliberating body, after considering the factors specified below, determines that such participation would be consistent with the public interest; provided, however, that before reaching any such determination, the deliberating body shall fully consider the information about the member's relationships with a named party in interest or substantial financial interest in the significant action that is being contemplated. In making its determination, the deliberating body shall consider:

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc.

(1) whether such member's participation in the deliberations is necessary to achieve a quorum; and,
(2) whether such member has unique or special expertise, knowledge or experience in the matter being considered.

The minutes of any meeting to which the conflicts determination procedures set forth in this provision apply shall reflect the following information:

(1) the names of all members of the relevant deliberating body who attended such meeting in person or who otherwise were present by electronic means;
(2) the name of any member of the relevant deliberating body who voluntarily recused himself or herself or was required to abstain from deliberations or voting on a matter and the reason for the recusal or abstention, if stated; and,
(3) information that was reviewed for each member of the relevant deliberating body.

No member of the Board of Directors, Executive Committee or any other committee of the Exchange shall be disqualified from participating in any meeting because of previous participation in a committee that had examined the issue under discussion.

3.13 Emergencies

The Board of Directors may adopt an Emergency resolution that shall supersede and supplant all contrary or inconsistent rules, resolutions or rulings. Notice of the adoption of an Emergency regulation or resolution shall be given promptly to all Exchange Members and Participant Members.

An Emergency regulation or resolution shall expire once the Board of Directors votes to rescind the Emergency regulation or resolution in the same manner as for its adoption or if legal or regulatory authorities fail to authorize the extension of the Emergency regulation or resolution within thirty (30) days after its adoption for a period not to exceed sixty (60) additional days.

All Exchange transactions and contracts shall be subject to the exercise of these emergency powers by the Board of Directors.

The term "Emergency" shall include all Emergency circumstances listed in the definitions of Emergency provided in Chapter 1 as well as circumstances now or hereafter referenced in Applicable Laws and regulations thereunder, and all other circumstances in which an Emergency can lawfully be declared by the Board of Directors.

In the event the physical functions of the Exchange are, or are threatened to be, severely and adversely affected by a physical emergency such as but not limited to fire or other casualty, bomb threats, substantial inclement weather, power failures, communications or automated system breakdowns, or transportation breakdowns, either the Chief Executive Officer, the President, or in their absence a member of the Board of Directors or another officer of the

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Exchange, is authorized to take such action as he or she shall deem necessary or appropriate to deal with such emergency, including but not limited to: suspending trading; temporarily extending, limiting or changing the hours of trading; and extending the last day of trading.

3.14 New Rules and Amendments

The Executive Committee may recommend to the Board of Directors rule changes and the adoption of new rules. The Board of Directors shall have discretion to accept, reject or amend the Executive Committee's recommendation, recognizing that certain rule changes and amendments may be of sufficient import in the sole determination of the Board of Directors to warrant a full vote of Exchange Members. In such case, rule changes and amendments shall be accepted if they receive the support of a majority of Exchange Members.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Chapter 4 CCX Emission Reduction Program and Operations

4.0 Purpose

This chapter:

- provides definitions of Chicago Climate Exchange Carbon Financial Instruments contracts;
- addresses the nature of trades;
- provides market rules and operational features; and,
- describes periodic auctions of Exchange Allowances (XAs) by CCX.

4.1 Not Used (2006)

4.2 Rule Interpretation and Modifications

Unless otherwise provided in this *Rulebook*, applicable CCX Committees shall be responsible for recommending interpretations and appropriate modifications of rules established in this Chapter to the Exchange. The CCX Environmental Compliance Committee is responsible to review all proposed interpretations and modifications and shall have final decision-making authority regarding this Chapter.

4.3 CCX Carbon Financial Instruments, Vintages and Banking (2006)

The tradable Carbon Financial Instruments contracts employed in CCX are:

(a) Exchange Allowances (XAs) issued to:
  (1) Exchange Members in accordance with each Member's Emission Baseline and Emission Reduction Schedule;
  (2) any CCX Member that elects to include electricity purchases as a supplemental reduction objective and such Member reduces electricity purchases beyond the CCX reduction schedule (as provided in the Electricity Purchase Opt-in Provision); and,
  (3) CCX Members in the commercial forestry sector that realize net increases in CCX-recognized Carbon Stocks when such Members employ the Model-based Accounting Approach;

(b) Exchange Offsets (XOs) generated by qualifying mitigation projects and registered with CCX by Exchange Participant Members; and,

(c) Other instruments that may be established by the Board of Directors.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

CCX Members who originally financed qualifying early action projects (as defined in Chapter 9 of this *Rulebook*) may use Exchange Early Action Credits (XEs) for Compliance (subject to provisions described in Section 4.11 below). XEs are CCX Carbon Financial Instruments that are not transferable among Registry Account Holders, unless so authorized by CCX.

Super Reductions are CCX Exchange Allowances that represent emission reductions that are beyond the maximum emission reductions recognized by CCX (as provided in Section 4.8 below). Super Reductions may be sold to non-Members but are not usable for Compliance in CCX, unless so authorized by CCX.

The unit of emissions measurement, reporting, price quotation and trading in CCX shall be metric tons carbon dioxide (CO_2) equivalent. Each CCX Carbon Financial Instrument represents one hundred metric tons of carbon dioxide (CO_2) equivalent and will reside in the CCX Registry in a manner that designates the CFIs annual Vintage. Each CFI will be recognized as equivalent when surrendered for Compliance. Carbon Financial Instruments may be used for Compliance in their designated Vintage year or banked for use in later years, subject to provisions in Section 4.11.4. CCX Carbon Financial Instruments may not be used in Compliance in years that precede the Vintage of an Instrument.

4.4 Nature of Transfers in CCX (2006)

Under CCX rules, issuance of Exchange Allowances and Exchange Early Action Credits to CCX Members, and issuance of Exchange Offsets to CCX Participant Members or Members, confers to the recipient legal ownership rights associated with Greenhouse Gas emission reductions and mitigation undertaken by CCX Members and Participant Members.

Every transfer of Carbon Financial Instruments among Registry Account Holders is the conveyance from seller to buyer of full legal title to all legal rights associated with Greenhouse Gas reduction and mitigation rights represented by CCX Carbon Financial Instruments transferred from transferor to transferee.

The terms and conditions that govern all transactions of CCX Carbon Financial Instruments are addressed further in Section 5.5 of this *Rulebook*.

4.5 Not used (2006)

4.6 CCX Emission Baselines, Emission Reduction Schedule and Exchange Allowance Allocations (2006)

As detailed in Chapter 6 of this *Rulebook*, each CCX Member's Direct Emission Baseline is defined as the annual average of its Included Emissions during the calendar years 1998, 1999, 2000 and 2001. As provided below, each Member's Emission Baseline is adjusted to reflect acquisition or sales of facilities that operated during the baseline period or otherwise has an

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

applicable CCX baseline. CCX shall provide notification, through Exchange notices, of changes in the Emission Baseline of a Member.

As applicable by a Member's election, each CCX Member's Baseline Electricity Purchases is defined as the annual average of included electricity purchases during the calendar years 1998, 1999, 2000 and 2001. (See Section 4.10)

Each CCX Member will be issued Exchange Allowances (XAs) at the inception of the program, for the four-year CCX Market Period in an amount reflecting the CCX Emission Reduction Schedule for direct emissions. The CCX Exchange Allowance Issuance Schedule is listed in Table 4.1.

Table 4.1 Exchange Allowance Issuance Schedule (CCX Emission Reduction Schedule)

Year	Emissions Reduction Schedule	Exchange Allowance Issuance Schedule[1]
2003	1% of Member's baseline	99% of Member's baseline
2004	2% of Member's baseline	98% of Member's baseline
2005	3% of Member's baseline	97% of Member's baseline
2006	4% of Member's baseline	96% of Member's baseline

4.7 True-up (2006)

Each CCX Member will undertake the emission monitoring and reporting procedures specified in Chapter 7 of this *Rulebook*. Subsequent to the end of each calendar year of the CCX Market Period, each CCX Member must True-up its emissions and Carbon Financial Instrument holdings in a manner prescribed by the Exchange. True-up is defined as the annual retirement by the Exchange of each CCX Member's Exchange Allowances, Exchange Offsets and Exchange Early Action Credits in an amount equal to that Member's owned CO_2 equivalent emissions during the Compliance Year.[2,3] CCX will notify each Member of the total quantity of Carbon Financial Instruments that must be surrendered for True-up, and each Member and Associate Member will then provide notice to the Exchange indicating which Carbon Financial Instruments

[1] These quantities but are not adjusted to reflect the quantity of Exchange Allowances that will be dedicated to the periodic CCX Auctions described in Section 4.12 below.

[2] The quantity of Carbon Financial Instruments to be retired upon true-up is also subject to: the Economic Growth Provision; constraints on the use of Exchange Offsets and Exchange Early Action Credits; and the exemption for New Electricity Generating Units.

[3] CCX Members not primarily engaged in electricity production who elect to include electricity purchases as a Supplemental Reduction Objective are required to surrender Carbon Financial Instruments if the Member fails to achieve the Electricity Purchase Reduction Schedule CCX commercial forestry companies must surrender Carbon Financial Instruments equal to decreases in Carbon Stocks when Carbon Stocks are included through use of the Model-based Accounting Approach (See Chapter 8)

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc.

it chooses to Surrender. CFIs that are Surrendered are transferred to the Registry Account Holder's Registry Retirement Account.

Members that enroll after the launch of the Exchange shall be required to achieve True-up for their Owned Emissions for all calendar years 2003 through 2006 and will be bound by the same terms and obligations as existing Registry Account Holders.

4.8 Economic Growth Provision (EGP) (2006)

The maximum CO_2 equivalent emissions that will be recognized for the purpose of True-up by each CCX Member will be 102% of that Member's Emission Baseline level during each of the years 2003 and 2004, and 103% of its Baseline during each of the years 2005 and 2006.

When combined with the CCX Emission Reduction Schedule, the Economic Growth Provision provides that the maximum amount of net purchases of Exchange Allowances and/or Exchange Offsets (and, if applicable, usage of Exchange Early Action Credits) required for Compliance is limited to 3% of each CCX Member's Emission Baseline during 2003, 4% of its baseline during 2004, 6% of its baseline during 2005 and 7% of its baseline during 2006. The Economic Growth Provision also applies separately to changes in biomass carbon stored on lands of CCX Members that are forest product companies that include forest Carbon Stocks by using the Model-based Accounting Approach. The Maximum Recognized Reduction in Carbon Stock for such Members is limited to 3% of each CCX Member's Direct Emission Baseline during 2003, 4% of its Direct Emission Baseline during 2004, 6% of its Direct Emission Baseline during 2005 and 7% of its Direct Emission Baseline during 2006. As provided in Section 4.11 below, this Provision is applied symmetrically, and such application establishes for each Member a Maximum Recognized Emission Reduction (as defined in Section 4.11.2) below each Member's Emission Reduction Target.

4.9 Exemption of Emissions from Certain New Electric Power Generating Units (2006)

New Electric Power Generating Units, or Units, are defined as units placed into commercial operation on or after January 1, 2002. Each CCX Member that operates a new electric power generating unit is allowed to exempt annually a quantity of emissions up to 895,425 metric tons CO_2 equivalent, which is equivalent to the annual CO_2 emissions of a 500 megawatt capacity natural gas combined cycle electricity generating plant operated at 55% of capacity and having a heat rate of 7,000 btu/kWh. The exempt emissions are not allowed to be greater than the emissions from the New Electric Power Generating Unit. Emissions from New Electric Power Generating Units that are in excess of 895,425 metric tons CO_2 per year will be included in the CCX Member's Emission Inventory to the extent that such emissions are also in excess of the CO_2 emissions that would be produced by a gas combined cycle electric power generating unit that is representative of such units that are placed into service after January 1, 2002. (9/15/2003)

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc.

4.10 Electricity Purchase Opt-in Program (EPOP)

4.10.1 Operation (2006)

Each CCX Member not primarily engaged in the production of electricity may elect to include its purchased electricity as a Supplemental Reduction Objective i.e. "Opt-in" purchased electricity. Chapters 6 and 7 of this *Rulebook* provide details on Included Electricity Purchases and monitoring and reporting protocols.

For each CCX Member that elects the Opt-in, the Electricity Purchase Reduction Schedule is identical to the CCX Emission Reduction Schedule (1% below Baseline Electricity Purchases in 2003, 2% below Baseline in 2004, 3% below Baseline in 2005, 4% below Baseline in 2006). Each Member's Baseline Electricity Purchases is defined as the annual average of its included electricity purchases during the calendar years 1998, 1999, 2000 and 2001, expressed in megawatt-hours (mwh).

Each CCX Member who elects the Opt-in will be issued Exchange Allowances annually when the Member's annual actual electricity purchases are below the quantity associated with the Electricity Purchase Reduction Schedule. In such cases the Member will be issued Exchange Allowances (XAs) at the rates listed in Table 4.2 for each megawatt-hour by which actual electricity purchases are below the reduction schedule, subject to the limitations provide in Section 4.10.2. The vintage of such XAs shall correspond to the year in which the Member's annual actual electricity purchases are below the quantity associated with the Electricity Purchase Reduction Schedule.

Table 4.2 Electricity Purchase Conversion Table

Location	CO2 Metric Tons per Megawatt-hour
U.S.	.61
Canada	.20
Mexico	.59

When a CCX Member elects to include its electricity purchases and its actual electricity purchases are above the quantity associated with the Electricity Purchase Reduction Schedule, the Member must, in the corresponding True-up period, Surrender Exchange Allowances, Exchange Offsets and/or Exchange Early Action Credits. In such cases the Member must Surrender Carbon Financial Instruments at the rates listed in Table 4.2 per megawatt-hour by which actual electricity purchases are above the Electricity Purchases Reduction Schedule, subject to the limitations provide in Section 4.11. CCX will notify each Member of the total quantity of Carbon Financial Instruments that must be retired for True-up, and each Member will then provide notice to the Exchange indicating which Carbon Financial Instruments it chooses to Surrender.

Electricity produced using specified renewable energy sources can be treated as zero emission electricity by a CCX Member that elects to Opt-in electricity purchases. Each CCX Member that

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

elects to Opt-in electricity purchases may exclude from its Electricity Purchases Baseline and Periodic Electricity Purchase Reports electricity acquired from CCX-specified Renewable Electricity Production Systems, provided the Member provides documentary evidence that the electricity is produced solely for the Member or is otherwise dedicated to the Member. Electricity produced by the following Renewable Electricity Production Systems shall qualify under this provision:

- solar;
- hydropower;
- wind; and,
- renewable fuels, which, for CCX purposes are:
    - wood, wood wastes and wood-derived fuels[4];
    - agricultural residues and grasses;
    - landfill and agricultural methane[5]; and,
    - ethanol (bioalcohol).

Documentary evidence that electricity is produced solely for the Member or is otherwise dedicated to the Member may consist of copies of power plant ownership documents, power purchase contracts, and, as specified by CCX, certain renewable energy certificates.

4.10.2 Application of the Economic Growth Provision to Electricity Purchases (2006)

If a CCX Member elects to include its electricity purchases, the maximum quantity of electricity purchases that will be recognized in determining True-up for each CCX Member will be 102% of that Member's Electricity Purchase Baseline during each of the years 2003 and 2004, and 103% of that Member's Electricity Purchase Baseline during each of the years 2005 and 2006.

4.11 Market Efficiency

4.11.1 Objectives

The purpose of CCX Market Efficiency rules are to facilitate the CCX Market and preventing market instability and Price Congestion. CCX will, on a regularly scheduled basis, issue Exchange notices to report to CCX Registry Account Holders the specific quantitative limitations, expressed in metric tons of CO_2, associated with the constraints listed below and will conduct ongoing monitoring of net sales positions for each CCX Member.

[4] As provided in Section 6.7 of this *Rulebook*, CCX Members may elect to include N_2O and CH_4 emissions associated with fossil fuel and biomass combustion.

[5] As provided in Section 9.7 of this *Rulebook*, the issuance of Exchange Offsets to CCX-qualifying methane collection and combustion systems will be based on the net greenhouse gas reduction benefits of such projects. The net issuance rate will be 18.25 metric tons of CO_2 per ton of methane combusted. This value reflects the gross GHG reduction benefit of 21 metric tons of CO_2 per ton of methane combusted, minus 2.75 metric tons of CO_2 emitted upon combustion of methane.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

4.11.2 Maximum Recognized Emission Reductions, Electricity Purchase Reductions and Super Reductions (2006)

The Maximum Recognized Emission Reduction below each Member's Emission Reduction Target will be limited to 3% of the Member's Emission Baseline during 2003, 4% of its baseline during 2004, 6% of its baseline during 2005 and 7% of its baseline during 2006. This provision shall apply to CCX Members that have an Emission Baseline in excess of 500,000 metric tons carbon dioxide (CO_2) equivalent upon enrollment in the Exchange. For CCX Members with an Emission Baseline of 500,000 metric tons CO2 or less, the sales and banking of CFIs will be constrained only by the Single Firm Sales Limit. (2/16/2004)

The Maximum Recognized Reduction in Electricity Purchases is defined as the maximum CCX-recognized quantity by which the Member's actual electricity purchases are below its Electricity Purchase Reduction Target. That quantity of electricity purchases is defined to be 3% of the Member's Electricity Purchase Baseline during 2003, 4% of its baseline during 2004, 6% of its baseline during 2005 and 7% of its baseline during 2006.

Carbon Financial Instruments associated with reductions in excess of the lower boundaries described above are defined as Super Reductions, are marketable, but are not usable for Compliance in CCX[6]. Unless so authorized by CCX, all sales of such Carbon Financial Instruments must occur in a manner prescribed by the Exchange and be accounted for in the CCX Registry.

CCX shall maintain a record of each Member's actual emissions. Super Reductions shall be established in the Registry for a CCX Member only to the extent that the Member's excess emission reductions are quantitatively larger than the amount by which that Member's emissions in other years exceed the quantities associated with the application of the Economic Growth Provision to that Member.

4.11.2.1 Super Reduction Transactions (2006)

Members are required to report any sales of Super Reductions made in a manner prescribed by the Exchange. At the time of the sale, the Member must inform any non-member that the Exchange will establish a Registry Account in the name of the non-member, if one does not exist, in order to hold the Super Reductions. The Member will be responsible for submission to the Exchange of all transaction fees and administrative costs associated with the sale of Super Reductions to a non-member. For the purposes of this Rule 4.11.2.1, the term "Member" applies to CCX Members, Associate Members, Member Participants and Exchange Participants.

[6] Super Reductions associated with registered Exchange Offsets and increased Carbon Stocks in Commercial Forestry operations and are addressed in sections 4.11.6 and 8.14 respectively.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

A Member shall only market that amount of Super Reductions that are in excess of the cumulative total of the levels that previous years' Direct Emissions and Electricity Purchases were in excess of the Economic Growth Provisions and previous years' decreases in Carbon Stocks. (2006)

4.11.3 Single Firm Sales Limit (2006)

Net sales of Exchange Allowances by any single CCX Member to other CCX Members Associate Members or Participant Members during the market will be limited to 0.5% of the CCX Program-wide Direct Emissions Baseline, apportioned over 2003, 2004, 2005 and 2006 Vintage Exchange Allowances according to the schedule provided in Table 4.3.

Table 4.3 Single Firm Sales Limit

Exchange Allowance Vintage	Net Exchange Allowance sales limit: percent of Program-wide Baseline Direct Emissions that can be sold by a single Member
2003	0.05%
2004	0.10%
2005	0.15%
2006	0.20%
Total	0.50% of Program-wide Baseline Direct Emissions

Appendix 4.1 provides a hypothetical example that illustrates the Single Firm Sales Limit and demonstrates an increase in the limit as CCX Program-wide Baseline Direct Emissions increase due to entrance of new CCX Members.

Net allowed sales by a single firm will not be reduced if the Program-wide Direct Emissions Baseline decreases. If the Program-wide the Direct Emissions Baseline decreases and subsequently increases, the level of net allowed sales by a single firm may be escalated proportionately, but only when the Program-wide Direct Emissions Baseline rises above the level used to determine the current net allowed sales by a single firm. The net allowed sales by a single firm will be escalated proportionately based on the increase in the Program-wide Direct Emissions Baseline above the level used to determine the current net allowed sales by a single firm. Appendix 4.1 provides a hypothetical example of this escalation mechanism. (6/22/2005)

Net allowed sales by a single firm will be escalated proportionately if Program-wide Emissions rise above baseline levels. Should Program-wide Emissions rise above the CCX Program-wide

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

88

Baseline Direct Emissions, the allowed sales by any single CCX Member to other CCX Members, Associate Members and Participant Members will be increased by the same percentage by which Program-wide Emissions rise above Program-wide Baseline Direct Emissions. Appendix 4.2 provides a hypothetical example of this escalation mechanism.

4.11.4 Limitation on Banking Exchange Allowances and 2003 Special Reserve (2006)

During 2003, each CCX Member is allowed to undertake a combination of net sales and Banking[7] of Exchange Allowances that is, for each CCX Member, the lesser of the quantities established by:

(1) surplus Exchange Allowances as defined by the Maximum Recognized Emission Reduction (as determined for each Member's Direct Emissions Baseline and, separately, the Member's Electricity Purchase Baseline, when applicable); and
(2) the quantity of Exchange Allowances that can be sold as defined by the Single Firm Sales Limit.[8]

If, during 2003, the Single Firm Sales Limit is less than the quantity determined by the Maximum Recognized Emission Reduction (and, as applicable, the Maximum Recognized Reduction in Electricity Purchases), then the difference between those two quantities shall be placed in a Special Reserve for each respective CCX Member for possible future release. CCX may allow Exchange Allowances held in this Special Reserve to be used in Compliance during the CCX Market Period or in subsequent phases of CCX.

During 2004, 2005 and 2006 each CCX Member is allowed to sell and/or bank the quantity of Exchange Allowances that is the lesser of the quantities determined by the Maximum Recognized Emission Reduction (and, as applicable, the Maximum Recognized Reduction in Electricity Purchases) and the Single Firm Sales Limit. During 2004, 2005 and 2006 each CCX Member may also bank the amount by which the quantity established by the Economic Growth Provision exceeds the quantity established by the Single Firm Sales Limit.

The level of net purchases of Carbon Financial Instruments in any Vintage will be added to a CCX Member's Banking level for the applicable Vintage. (9/13/2005)

Appendix 4.3 provides a hypothetical example of the operation of this provision. The Appendix illustrates the Member-level application of the Maximum Recognized Emission Reduction as well as the generation of Super Reductions (i.e. the quantity of emission reductions that are in

[7] Retention of a Carbon Financial Instrument in a CCX Member's Registry Account for use or sale in later years.
[8] For some CCX Members the binding constraint under this provision will be the Single Firm Sales Limit. As a hypothetical example, if the CCX Program-wide Emission Baseline is 250,000,000 metric tons CO_2, then the Single Firm Sales Limit in 2003 (0.05% of the Program-wide Emission Baseline) is 125,000 metric ton CO_2 In 2003 the symmetric application of the Economic Growth Provision limits net sales by each CCX Member to 3% of its Baseline (which could be realized if its emission fell to 96% of Baseline, i.e. 3% below target). In this scenario the symmetric application of the Economic Growth Provision will represent a lesser quantity than the Single Firm Sales Limit for all CCX Members having Baseline emissions of less than 4,166,666 metric tons CO_2

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

excess of the quantity recognized by CCX due to the Maximum Recognized Emission Reduction).

4.11.5 Use of Exchange Offsets and Exchange Early Action Credits

During 2003, program-wide use of Exchange Offsets for Compliance will be allowed in an amount equal to 0.5% of the total CCX Program-wide Baseline Direct Emissions. Exchange Early Action Credits may be used for Compliance starting in 2004. During years 2004, 2005 and 2006, program-wide use of Exchange Offsets plus Exchange Early Action Credits will be allowed in an amount no more than 5.0% of the total Program-wide Baseline Direct Emissions, apportioned over 2004-2006 according to the schedule provided in Table 4.4.

Table 4.4 Total Allowed Use for Compliance of Exchange Offsets (XOs) plus Exchange Early Action Credits (XEs)

Year	Total allowed use of Exchange Offsets plus Exchange Early Action Credits for Compliance (as a percent of Program-wide Baseline Direct Emissions)
2003	0.5% (XOs only)
2004	1.0%
2005	1.5%
2006	2.0%
Total	5.0% of Program-wide Baseline Direct Emissions

The total program-wide quantity of Exchange Early Action Credits used for Compliance during 2004, 2005 and 2006 will not exceed 50% of the total quantity of Exchange Offsets plus Exchange Early Action Credits used for Compliance.

Total allowed use for Compliance of Exchange Offsets during 2003 and Exchange Offsets plus Exchange Early Action Credits during 2004, 2005 and 2006 will be escalated proportionately to reflect the extent to which CCX Program-wide Direct Emissions rise above Baseline levels.[9]

CCX will prescribe a *pro rata* method for apportioning the use of registered Exchange Offsets and Exchange Early Action Credits by individual CCX Members if the total quantity of these

[9] While the associated quantities differ, the operation of this escalation mechanism is functionally identical to the escalation mechanism for the single-firm sales limit, which is illustrated in Appendix 4-2.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Carbon Financial Instruments that Members wish to use for Compliance exceeds the quantities established by the market constraints described above.

4.11.6 Exchange Offsets from Owned and Operated Facilities (2006)

For each CCX Member, total net sales to CCX Members, Associate Members and Participant Members plus use for Compliance of Exchange Offsets produced by facilities that it owns and/or operates (such as Exchange Landfill Offsets, Forestry Projects undertaken by CCX Members in the commercial forestry sector) will be allowed in an amount equal to no more than 0.5% of the total CCX Program-wide Baseline Direct Emissions, apportioned over 2003 through 2006 according to the schedule provided in Table 4.5.

Table 4.5 Total Net Sales and Use of Exchange Offsets from CCX Member Owned and Operated Facilities

Year	Total Net Sales plus use for Compliance of Exchange Offsets generated from a CCX Member's Owned and Operated facilities
2003	0.05%
2004	0.10%
2005	0.15%
2006	0.20%
Total	0.50% of Program-wide Baseline Direct Emissions

Allowed sales plus use for Compliance by a single CCX Member under this provision will be escalated proportionately to reflect the extent to which Program-wide Direct Emissions exceed Program-wide Baseline Direct Emission levels.[10]

4.12 CCX Auctions (2006)

CCX Auctions of current Vintage and future Vintage Exchange Allowances may be conducted up to a maximum of four times per year. Prior to an Auction, CCX may create an auction pool of Exchange Allowances to be established by retaining a quantity equal to a percentage of the aggregate of each CCX Member's initial allocation of the specific Vintage(s) of Exchange

[10] The quantity of Offsets that are verified and registered in an amount that exceeds the Total Net Sales plus Use for Compliance of Exchange Offsets generated from a CCX Member's Owned and Operated Facilities, as established in this section, are marketable to non-Members of CCS as per the provisions of Super Reductions defined in section 4.11.2.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Allowances to be auctioned. Proceeds from each Auction will be distributed to each CCX Member *pro rata*, reflecting each CCX Member's percentage share of the total quantity of Exchange Allowances in the initial pool.

Such Auctions shall be conducted through a sealed-bid process. CCX shall establish rules governing the implementation of these auctions, including schedules, bidding methods, and auction style.

4.13 Donations of CCX Carbon Financial Instruments

Registry Account Holders, excluding Exchange Participants, may donate CFIs to not-for-profit institutions. Registry Account Holders, excluding Exchange Participants, shall also be able to donate CFIs to any not-for-profit Registry Account Holder for compliance purposes provided that the donated CFIs be used only for compliance or retirement in CCX and cannot be traded or sold out of the Registry Account of the recipient.

All categories of CFIs may be donated, including Exchange Allowances, Exchange Offsets, Certified early Action credits, Special Reserves and Super Reductions. Such donations can only take place after the CFIs have actually been issued. Offset projects, project verification and issuance of associated CFIs must be completed before the CFIs can be donated.

Non-member recipients shall open a Registry Retirement Account into which the CFIs can be transferred and from which they cannot be removed. If a recipient chooses not to open a Registry Retirement Account, the CFIs will be retired to the donor's Registry Retirement Account.

In addition to being not-for-profit, recipients must be individuals or organizations that are financially and legally independent of the donor Registry Account Holder. Recipients do not have to meet the eligibility criteria for trading as retirement transactions do not take place though the CCX Trading Platform. CCX shall execute the transfer on behalf of the parties.

CFI Donations shall not affect the sales and banking limits of the donor.
(3/5/2004)

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange Inc

APPENDICES

TO

CHAPTER 4

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Appendix 4.1 Hypothetical Example of the Single Firm Sales Limit and Increases in the Limit as the Program-wide Baseline Increases

Scenario:

Initial CCX Program-wide Emission Baseline is 250,000,000 metric tons CO_2 equivalent.

Upon expansion of CCX Membership during 2003, the Program-wide Emission Baseline rises to 300,000,000 metric tons CO_2 equivalent.

Percentage increase factor = 300,000,000/250,000,000
= 1.2 (i.e. 20% escalation of allowed net sales)

Year	Net Exchange Allowance (XA) sales limit: percent of Program-wide Emission Baseline that can be sold to CCX Members by a single Member	Initial quantity of net sales allowed for any single Member for each Vintage (Program-wide Emission Baseline is 250,000,000 metric tons)	Post-expansion quantity of net sales allowed for any single firm for each Vintage (Program-wide Emission Baseline is 300,000,000 metric tons)
2003	0.05%	125,000	150,000
2004	0.10%	250,000	300,000
2005	0.15%	375,000	450,000
2006	0.20%	500,000	600,000
	total: 0.50% of Program-wide Baseline Direct Emissions	total: 1,250,000	total: 1,500,000

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc.

Appendix 4.2 Hypothetical Example of Escalation of the Single Firm Sales Limit as Program-wide Emissions Rise above Baseline Levels

Scenario:

Initial CCX Program-wide Emission Baseline is 250,000,000 metric tons CO_2 equivalent.

During 2004, the single-firm sales limit of 0.10% of Program-wide Emission Baseline is 250,000 metric tons CO_2 equivalent (or 2,500 exchanges allowances).

Assumption: During 2004, actual CCX program-wide emissions rise to 255,000,000 metric tons CO_2 equivalent.

The Single Firm Sales Limit is escalated by the following factor:

Single Firm sales limit X (255,000,000/250,000,000) =

Single Firm sales limit X (1.02) = 250,000 metric tons CO_2 equivalent x 1.02 = 255,000 metric tons CO_2 equivalent (or 2,550 exchanges allowances)

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Appendix 4.3 Hypothetical Example: Limitation on Banking During 2003, Maximum Recognized Emission Reductions and Super Reductions

Hypothetical Program-wide emission baseline: **250,000,000 metric tons CO2**

	2003	2004	2005	2006
1 Program-wide emission targets under CCX 1-2-3-4% reduction schedule	247,500,000	245,000,000	242,500,000	240,000,000
2. Program-wide emission reductions	2,500,000	5,000,000	7,500,000	10,000,000
Example: hypothetical CCX Member with 10,000,000 ton baseline				
3 Assumed annual emissions of the CCX Member (5% below its baseline)	9,500,000	9,500,000	9,500,000	9,500,000
4. CCX Member's allowance allocation with CCX 1-2-3-4% reduction schedule	9,900,000	9,800,000	9,700,000	9,600,000
5. CCX Member's unconstrained allowance position (line 4 minus line 3)	400,000	300,000	200,000	100,000
6 Maximum Recognized Emission Reduction (i e reductions beyond annual targets)	300,000	400,000	600,000	700,000
(% of Member's baseline)	(3%)	(4%)	(6%)	(7%)
7. Actual recognized reductions for sale or banking (Lesser of unconstrained allowance position (line 5) or maximum recognized recognized emission reductions (line 6))	300,000	300,000	200,000	100,000
8 Maximum allowed sales by any single firm	125,000	250,000	375,000	500,000
as per Single Firm Sales Limit (% of program-wide baseline)	(0 05%)	(0 10%)	(0.15%)	(0 20%)
9 Binding sales constraint (lesser of line 7 or 8)	125,000	250,000	200,000	100,000
10 Actual sales (assumes 80% of binding sales constraint is sold)	100,000	200,000	160,000	80,000
	BANKING LIMITATION APPLIES	*NO BANKING LIMITATION*		
11 Banked amount (this value is line 9 minus line 10 during 2003, and is line 7 minus line 10 during 2004, 2005, 2006; banked allowances can be sold in subsequent years)	*25,000*	100,000	40,000	20,000
12. Amount placed in reserve for possible future release (line 6 minus {line 10 + line 11})	*175,000*			
13. "Super Reductions": quantity by which actual reductions beyond the CCX reduction schedule (Line 5) exceeds the maximum recognized emissions reductions (Line 6) (these surplus instruments may be marketed outside CCX)	*100,000*			

Final disposition of 400,000 mton surplus:		
	sold:	100,000 tons
	banked:	25,000 tons
	future reserve:	175,000 tons
	Super Reductions	100,000 tons

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Chapter 5 CCX Registry, Trading Platform, Clearing and Settlement Systems

5.0 Purpose

This Chapter describes the purpose and operation of the CCX Registry, Trading Platform, Block Trades, Cash Transactions and Clearing and Settlement Systems.

5.1 General Provisions

The CCX Registry is an electronic database that will serve as the official holder of record and Transfer Mechanism for Exchange Allowances (XAs), Exchange Offsets (XOs) and Exchange Early Action Credits (XEs) owned by CCX Members, Associate Members, Participant Members and Exchange Participants.

The CCX Trading Platform is an internet-accessible marketplace that is intended to be used to execute trades among CCX Registry Account Holders (including Liquidity Providers and Offset Providers), as well as other classes of CCX Members as may be designated by the Board, and to complete and post trades having terms that are established through private negotiations off-system.

Three categories of Transactions can be executed in CCX; these categories may be revised from time to time by CCX as it deems necessary. CCX Trading Platform Trades and are settled via the CCX Clearing Mechanism. Bilateral Trades are executed on the CCX Trading Platform by entities that have established each other as acceptable counterparties on the basis of creditworthiness. Block Trades and Cash Transactions are Transactions that are privately negotiated between the parties outside the CCX Trading Platform. Block Trade terms are reported to and posted on the CCX Trading Platform.

All CCX Trading Platform Trades will be cleared and settled through the CCX Clearing Mechanism whereby payment by the buyer is made and the seller will be paid. Cash Transactions are settled between the applicable parties. All Trading Platform Trades and Cash Transactions shall require delivery of exchanged Carbon Financial Instruments in the CCX Registry and payment by the buyer to the seller through the CCX clearing process. CCX shall effect delivery through the CCX Registry by the day following the Trade or Cash Transaction. Nonpayment by the buyer shall cause the CCX Clearing Mechanism to activate the payment guarantee mechanism and to initiate collection of unpaid transaction proceeds from the buyer.

5.2 Rule Interpretation and Amendments

Unless provided otherwise, the CCX Committee on Trading and Market Operations shall be responsible for recommending modifications to or interpretations of rules in this Chapter 5 or new rules.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc.

5.3 CCX Registry

5.3.1 Function of the Registry (2006)

The CCX Registry is an electronic database that will serve as the official holder of record and transfer mechanism for Exchange Allowances (XAs), Exchange Offsets (XOs) and Exchange Early Action Credits (XEs) owned by CCX Members, Associate Members, and Participant Members and acquired by CCX Exchange Participants.

Each CCX Registry Account Holder will be assigned a Registry Account and may establish additional Accounts and/or Sub-accounts as may be needed to facilitate management of Carbon Financial Instruments. Information contained in each Registry Account will be accessible only by parties authorized by the Registry Account Holder. CCX will publicly report certain aggregate information on Transfers across Registry Accounts, but shall not publicly report Registry activity of any single Registry Account Holder.

All Exchange Allowances and Exchange Offsets will be listed in each Registry Account by Carbon Financial Instrument Vintage. Exchange Offsets will be identified by Project type (i.e. Exchange Methane Offsets - XMOs, Exchange Foresty Offsets - XFOs, Exchange Soil Offsets-XSOs, Exchange Emission Reductions - XERs). Transfers of Carbon Financial Instruments shall be undertaken by CCX by the first business day subsequent to execution of transactions on the CCX Trading Platform.

As provided in Chapter 4 of this *Rulebook*, True-up occurs when each Member or Associate Member designates CCX Carbon Financial Instruments to be Surrendered in an amount equal to the total annual emissions of that Member. Subject to restrictions on banking 2003 Vintage Exchange Allowances (as set forth in Chapter 4), Carbon Financial Instruments that remain unused and unsold subsequent to True-up are automatically banked by retaining the Carbon Financial Instruments in the Registry Account.

CCX or CCX Registry Account Holders may lend or borrow CCX Carbon Financial Instruments to or from other Registry Account Holders in a manner(s) prescribed by CCX from time to time.

5.3.2 Account Structure (2006)

Each Registry Account Holder's CCX Registry Carbon Financial Instrument Holdings File lists its own Carbon Financial Instrument holdings. The unit of emissions measurement, reporting, price quotation and trading in CCX shall be metric tons carbon dioxide equivalent. Each CCX Carbon Financial Instrument will represent one hundred metric tons of carbon dioxide (CO_2) equivalents and will reside in the CCX Registry in a manner that designates its annual Vintage.[1]

[1] The Vintage of a Carbon Financial Instrument is defined as the first year the designated Carbon Financial Instrument may be used for Compliance with the CCX Emission Reduction Schedule, or, as applicable, the CCX Electricity Purchase Reduction Schedule

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

5.3.3 User Access and Operations

Each CCX Registry Account can be viewed only by parties authorized by the Registry Account Holder.

Each Registry Account Holder shall be responsible for controlling and monitoring log-in and password protocols. Further terms and condition governing access and usage of the CCX Registry are provided in the CCX Systems User Agreement, which is provided in Appendix 5.1.

5.3.4 Management of Multiple Registry Accounts

CCX Registry Account Holders may establish and utilize multiple accounts in the CCX Registry.

5.3.5 Transfer Instructions and Confirmations (2006)

Transfers of CCX Carbon Financial Instruments across CCX Registry Accounts may only be conducted on the Trading Platform or by conveyance of appropriate Registry Transfer instructions to CCX. For Transfers of Carbon Financial Instruments across Registry Accounts that are not controlled by the same CCX Registry Account Holder, all Registry Transfer instructions shall be generated automatically by the CCX Trading Platform upon execution of a Transaction on the CCX Trading Platform. For Transfers of Carbon Financial Instruments between Accounts controlled by the same CCX Registry Account Holder such Account Holder shall submit appropriate Registry Transfer instructions to CCX..

Registry Transfer for Cash Transactions are addressed in Section 5.9 of this chapter.

5.3.6 Fees and Fee Payments (2006)

Fees associated with Trading Platform Trades, Cash Transactions, Offsets and Credits registration and other activities affecting the registration will be communicated to Registry Account Holders. All fees shall be set by the Exchange and shall be subject to change upon vote of the CCX Board of Directors.

5.4 CCX Trading Platform

5.4.1 CCX Trading Platform Overview (2006)

The CCX Trading Platform is an anonymous, fully electronic system for posting and accepting bids to buy and offers to sell CCX Products, including Carbon Financial Instruments. See Appendix 5.2 for Carbon Financial Instruments contract specifications. All purchases and sales executed on the Trading Platform will be cleared and settled through the Clearing Mechanism and will be transferred accordingly between Registry Accounts.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

5.4.2 Authorized Traders (2006)

Eligible Registry Account Holder shall be provided access, consistent with the rules set forth herein, to the CCX Trading Platform for the purpose of posting, viewing and accepting bids and offers for tradable CCX Carbon Financial Instruments. (See Rule 2.6.1)

An eligible Registry Account Holder may authorize any of its employees and / or contracted agents to act as Authorized Traders in a manner prescribed by CCX. Each Authorized Trader shall have Trading Platform and Registry access privileges as determined by the relevant Registry Account Holder.

With respect to each Authorized Trader, the relevant Registry Account Holder shall:

(1) guarantee and assume financial responsibility for all activity related to the CCX Trading Platform and Registry used by such Authorized Traders and any account identifier and password assigned to such Authorized Traders; and,
(2) assist the Exchange in any investigation relating to an alleged violation of Applicable Law, regulations or rules of the Exchange, which assistance shall be timely and shall include using reasonable efforts to require such Authorized Trader to produce documents, answer questions by the Exchange or appear in connection with such investigation.

The Exchange may at any time revoke, suspend, limit, condition, restrict or qualify the Authorized Trader of any Registry Account Holder if, in the sole discretion of the Exchange, such action is in the best interest of the Exchange.

Each CCX Registry Account Holder shall manage access to the CCX Trading Platform by its Authorized Traders in conformance with the terms provided in the Chicago Climate Exchange Trading Platform and Registry and Registry Account Holder Agreement. That Agreement is presented in Appendix 5.1.

5.4.3 Public Dissemination of Summary Price and Transaction Information

CCX will disseminate summary information on prices, transactions and volumes on the CCX webpage. The terms and parties to individual transactions in CCX are confidential and shall not be disclosed unless necessary pursuant to an Exchange investigation or judicial action.

5.4.4 Daily Trading Limits and Closing Prices (2006)

CCX may establish daily trading limits for its products. CCX will take reasonable measures to communicate daily trading limits to its Registry Account Holders prior to implementation.

Daily closing prices will be determined in accordance with the specific CCX Product specifications.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

5.5 CCX Terms and Conditions to Govern All Transactions (2006)

The terms and conditions contained in Figure 5.1 shall apply to all transactions entered into among CCX Registry Account Holders. Additional terms and conditions apply to CCX Offset Projects. Such additional terms and conditions are listed in Chapter 9 of this *Rulebook*.

Figure 5.1 CCX Transaction Terms and Conditions

(1) Every transfer of Carbon Financial Instruments among CCX Registry Account Holders is the conveyance from seller to buyer of full legal title to all legal rights associated with Greenhouse Gas reduction and mitigation rights represented by CCX Carbon Financial Instruments transferred from transferor to transferee.

(2) Every transaction entered into by a CCX Registry Account Holder is governed by the provisions contained in this *Rulebook*.

(3) CCX makes no representation as to the marketability or market value of CCX Carbon Financial Instruments or other CCX Products.

(4) Clearing, settlement and payment and delivery procedures prescribed by CCX from time to time shall apply to all transactions on the CCX Trading Platform and other transaction types allowed by CCX.

(5) Failure to conform to the rules provided herein may result in disciplinary action(s) including termination of membership in CCX and prohibition from all further participation in CCX.

5.6 Market Surveillance

The Provider of Regulatory Services designated by CCX shall conduct ongoing surveillance of all trading and Registry activity. In the event that the Provider of Regulatory Services designated by CCX identifies trading and Registry activity that may be in violation of CCX rules, it shall report such observations to the CCX Office of General Counsel, which may refer the matter to the CCX Trading and Market Operations Committee or other CCX Committees as appropriate.

5.7 CCX Clearing Mechanism (2006)

The CCX Trading Platform has been designed to function in the following manner:

(1) all Exchange-cleared transactions executed on the CCX Trading Platform are to be

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc.

cleared and settled in accordance with the provisions as prescribed from time to time by the Exchange;

(2) the CCX Clearing Mechanism is to provide for no later than next-day delivery in the CCX Registry and next-day payment by buyer, to the account specified by CCX; and,

(3) for Exchange-cleared transactions, seller is to receive payment for delivered Carbon Financial Instruments from the CCX Clearing Mechanism account upon submission to CCX of suitable Carbon Financial Instrument delivery instructions, if applicable.

In the event of failure by buyer to transfer appropriate funds to the CCX-specified Clearing Account, CCX may initiate other collection procedures in accordance with the provisions as prescribed from time to time by the Exchange.

In the event of failure by seller to submit appropriate Carbon Financial Instrument Transfer instructions to CCX, CCX may initiate delivery failure procedures as prescribed from time to time by the Exchange.

5.8 Block Trades (July 2006)

5.8.1 Eligibility

Members that are parties to the Block Trade must have Trading Platform access and must be logged into the Trading Platform when the Block Trade is submitted to CCX.

5.8.2 Negotiations and Reporting

All Block Trades must be submitted to the CCX within thirty minutes after the negotiations have been completed. If the Block Trade negotiations are completed after the Market Close on a trade day and more than thirty minutes prior to the Market Open on the following trade day, the Block Trade details must be submitted no later than the Market Open of the following trade day.

The Members to a Block Trade must each submit the Block Trade details on a CCX approved form with signature and submit the Block Trade form in a manner prescribed by CCX.

CCX will review the information submitted for the proposed Block Trade to determine if the trade details have satisfied CCX Block Trade requirements. When the requirements are satisfied, CCX will report the Block Trade to the market place by electronic means to the Trading Platform identifying the contract to be traded and the quantity of the Block Trade. (See Section 5.8.4)

Block Trades that are submitted within a time period prior to the Market Close as stipulated by CCX will be reported to the market place at the Market Open of the following trade day.

CCX will reject a Block Trade if it does not satisfy the Block Trade requirements or if either Member submits incomplete trade detail or if the trade detail does not agree between the submitted Block Trade forms.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

5.8.3 Fair Price

When negotiating a Block Trade, the Members must ensure the price for the Block Trade represents a fair price. The Members should consider the prevailing price and volume currently available through the Trading Platform for the specific product, liquidity and general market conditions.

5.8.4 Market Participation in Block Trades

When a Block Trade has been properly reported to CCX in accordance with Section 5.8.2, CCX will issue an electronic message through the Trading Platform informing the membership that a Block Trade is to be approved and that the quantity of the Block Trade is being made available to the membership for a specified time.

From the time that CCX issues the message regarding the Block Trade volume until the time period as specified in the message has expired, the Members that are parties to the Block Trade must be logged onto the Trading Platform and:

1. the buyer of the Block Trade must execute against offers equal to or better than the Block Trade price up to the Block Trade volume; and
2. the seller of the Block Trade must execute against bids equal to or better than the Block Trade price up to the Block Trade volume.

Neither party to the Block Trade is permitted to have any bids or offers on the Trading Platform for the contract(s) that is the subject of the Block Trade whose prices are better than the Block Trade price at the time the Block Trade is reported to the market place.

5.8.5 Block Trade Approval

After the specified time has expired for participation by the market place in the Block Trade, CCX will approve the Block Trade at the Block Trade price for a volume level that is the net of the submitted Block Trade volume less any volume executed on the Trading Platform in which the parties to the Block Trade were participants and less any volume that could have been executed at the Block Trade price or better during the specified time up to the Block Trade volume.

5.8.6 Settlement and Delivery

Block Trades will be settled and delivered in the same manner as a Trading Platform trade.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

5.9 Cash Transactions (2006)

5.9.1 Eligibility

The buying party to a Cash Transaction must be a party that does not qualify as an Eligible Commercial Entity or Eligible Commercial Participant, as defined in paragraphs 1a (11) and (12) of the U.S. Commodity Exchange Act, and does not have access to the CCX Trading Platform. The seller must be a Registry Account Holder that qualifies as an Eligible Commercial Entity or Eligible Commercial Participant as defined in paragraphs 1a(11) and (12) of the U.S. Commodity Exchange Act.

5.9.2 Negotiations and Reporting

All Cash Transactions must be submitted to CCX within thirty minutes after the negotiations have been completed. If the Cash Transaction negotiations are completed after the Market Close on a trade day and more than thirty minutes prior to the Market Open on the following trade day, the Cash Transaction must be submitted no later than the Market Open.

5.9.3 Submission and Approval

Both parties to a Cash Transaction must submit the Cash Transaction details on a CCX approved form with signature and submit the form in a manner directed by CCX.

The price of the cash transaction is negotiated between the parties, however, it should be a fair and reasonable price which takes into consideration existing market conditions.

CCX will review the information submitted for the proposed Cash Transaction and if the trade details have satisfied the requirements of the CCX rules relating to Cash Transactions, CCX will approve the Cash Transaction.

CCX will reject a Cash Transaction if it does not satisfy the requirements of the CCX rules relating to Cash Transactions or if either party submits incomplete details or if the detail does not agree between the submitted forms.

5.9.4 Settlement and Delivery

The buyer of an approved Cash Transaction is directly responsible to the seller for the value of the Cash Transaction which is the CFI quantity multiplied by the price per metric ton.

CCX will transfer the appropriate CFI(s) from the seller's Registry Account to the buyer's Registry Account for an approved Cash Transaction.

5.9.5 Restrictions on CFIs Acquired Through Cash Transactions

CFIs that are acquired through a Cash Transaction are not permitted to then be sold through another CCX Cash Transaction nor on the Trading Platform .

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

5.10 Other Transactions (11/22/2003)

All privately negotiated transactions that have CCX Products as an underlying value, including option contracts, forward contracts, swap agreements and other agreements that may be executed on a bi-lateral basis off-exchange regardless of whether or not such transactions result in the eventual delivery of CCX Products, must be reported to by all parties to the transactions within thirty minutes of completion of written agreement of the terms of the transactions in a manner required by CCX.

5.11 Market Maker Program

CCX may adopt a Market Maker program whereby one or more Registry Account Holders may be designated as Market Makers and assume obligations in order to support market liquidity and orderliness in the Exchange.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc.

APPENDICES

TO

CHAPTER 5

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Appendix 5.1 Chicago Climate Exchange Trading Platform and Registry System Agreement for Registry Account Holders

This Agreement ("Agreement") sets out the terms on which Chicago Climate Exchange, Inc. ("CCX"), which, pursuant to a license agreement with IntercontinentalExchange, Inc. ("Intercontinental"), operates Chicago Climate Exchange Registry and Trading Platform (the "Systems"), which are comprised of the CCX Trading Platform, an electronic system for the (i) execution ("Execution") of transactions ("Exchange Transactions" or "Transactions"), (ii) the matching ("Confirmation") of all executed trades ("Trade Confirmations" or "Trades") with other Registry Account Holders (iii) the use of other services ("Other Services") involving the Carbon Financial Instruments being offered (collectively, the "Products"), and the CCX Registry, which is an electronic database that will serve as the official holder of record and Transfer Mechanism for all CCX Carbon Financial Instruments, has agreed to provide the party identified below (the Registry Account Holders, as applicable) with access to the Systems. For the purposes of this Agreement, Trades submitted by Registry Account Holder for Confirmation or Other Services may include either or both Exchange Transactions (executed on the Exchange) and Non-Exchange Transactions (executed through private negotiation).

1) **ACCESS TO SYSTEMS.** Pursuant to its agreement with Intercontinental, CCX hereby grants Registry Account Holder a non-exclusive, non-transferable, revocable license to access the Systems as they may exist from time to time and to utilize (but not copy) any hardware, software, systems and/or communications links furnished by CCX to Registry Account Holder, from time to time (collectively, the "Trading Platform and Registry System") in accordance with the Terms (as defined below), solely for the purpose of allowing Registry Account Holder to electronically post bids, offers and requests for quotations (and responses to any such requests) for Exchange Transactions in the Products, to enter into Exchange Transactions with other Registry Account Holders, to match and confirm Trades with other Registry Account Holder and to use the Other Services on the Exchange.

2) **TERMS OF ACCESS.** This Agreement, taken together with (i) the CCX Service and Pricing Schedules (the "Schedules"), (ii) any other Annexes to this Agreement and (iii) the Transaction Procedures, Product, and User Guides governing Execution, and (iv) the Confirmation Procedures, Product, and User Guides governing Confirmation, are collectively referred to herein as the "Terms" and will govern Registry Account Holder's, access to and use of the Systems and the Exchange and any and all Exchange Transactions, Trade Confirmations, and Other Services utilized by Registry Account Holder. CCX may amend the Terms at any time by posting amendments on the Exchange, and any such amendments will be prospectively binding on a Registry Account Holder, provided that CCX will provide prior notice of any such amendments on the Exchange and provided further that CCX will provide at least two weeks' prior notice, through electronic or other direct communication with a Registry Account Holder, of any such amendments that are likely to materially and adversely affect a Registry Account Holder, its rights, or obligations hereunder. Registry Account Holder's use of the Exchange after the effective date of any such amendment shall

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

constitute its ratification of and agreement to any such amendment. If CCX elects to require a Registry Account Holder to acknowledge and agree to an amendment, such amendment will not become effective until the Registry Account Holder has done so in the manner specified by CCX.

3) <u>REGISTRY ACCOUNT HOLDER'S, WARRANTIES AND COVENANTS.</u> Registry Account Holder hereby represents, warrants and covenants as follows:
   a. For the purposes of Execution of Exchange Transactions, Registry Account Holder is and will continue to be an "eligible commercial entity" as defined in Section 1a of the U.S. Commodity Exchange Act (as amended) and/or under relevant Commodity Futures Trading Commission Notices or Regulations unless and until Registry Account Holder notifies CCX otherwise. A summary of the definition of the term "Eligible Commercial Entity" is provided in Chapter 1 of this *Rulebook*. This is only a summary and Registry Account Holder should direct any questions to its legal advisors.
   b. Registry Account Holder will enter into Exchange Transactions solely as principal.
   c. Registry Account Holder acknowledges that the Exchange, the Systems and all information and content (including price and trading data) displayed and distributed thereon or in any way related to Exchange Transactions, Trade Confirmations, or Other Services (such information or content and information derived therefrom being referred to collectively herein as "Exchange Data") are, except as set forth in the final sentence of this Section 3(c), the exclusive proprietary and intellectual property of either CCX or Intercontinental constituting, *inter alia*, copyrights and trade secrets of either CCX or Intercontinental. Registry Account Holder has been granted a limited license to use the Systems, the Exchange, the Trading Platform and Registry System and the Exchange Data solely for the purposes set forth herein, and Registry Account Holder will have no other rights with respect to the Systems, the Exchange, or the Exchange Data. Without limitation of the foregoing, Registry Account Holder will access and utilize the Systems, the Exchange, the Trading Platform and Registry System and the Exchange Data solely for its own internal business activities in accordance with the Terms. Registry Account Holder agrees that it will not copy, modify, reverse engineer, reverse assemble or reverse compile the Systems, or any of the Exchange Data displayed on or issued by the Exchange, that it will not distribute, rent, provide access to, sell, retransmit, redistribute, release or license the Systems, any Exchange Data, or any part thereof to any third party (other than to its affiliates and agents subject to and in accordance with this Agreement). Registry Account Holder, further agrees that it will not, without limitation (other than for its own internal use in accordance with this Agreement), communicate, redistribute, or otherwise furnish, or permit to be communicated, redistributed or otherwise furnished, all or any portion of the Exchange Data, in any format, to any third party or in constructing or calculating the value of any index or indexed products. Registry Account Holder's partners, officers, directors, employees and agents shall maintain sole control and possession of, and sole access to, Exchange Data obtained through Registry Account Holder's access to the Systems. Notwithstanding the foregoing, it is understood and agreed that any and all data submitted to the Exchange by Registry Account Holder (including but not limited to bids and offers for Exchange Transactions, Exchange Transactions from Execution, and Trades to be matched for Confirmation) and all information related to Transactions entered into by Registry Account Holder through the

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Exchange as well as all Trade data submitted to the Exchange shall be jointly owned by CCX and Registry Account Holder and each party shall have the right to use, sell, license, copy, retransmit or redistribute such information, subject to the provisions of Section 8 hereof, without accounting to the other. Any assignments necessary to confer such joint ownership rights are hereby made.

d. Registry Account Holder will comply with the Terms and any and all laws, rules, regulations or orders applicable to Member's, Associate Member's, or Participant Member's access to and use of the Systems, the Exchange, and the Exchange Data.

e. Registry Account Holder acknowledges and accepts that it shall be solely responsible for any and all costs or expenses associated with its accessing and utilizing the Exchange.

f. Registry Account Holder acknowledges that CCX may, in its sole discretion, with or without cause or prior notice to Member, Participant Member, Associate Member, temporarily or permanently cease to operate the Exchange, the Systems temporarily or permanently cease to make certain Products or Transactions or Other Services or Exchange Data available or suspend, terminate or restrict Member's, Associate Member's, or Participant Member's access to and utilization of the Exchange and the Systems. Registry Account Holder acknowledges that its access to and utilization of the Exchange may be monitored by each of CCX, NASD and Intercontinental for its own purposes (including, without limitation, for purposes of monitoring levels of activity in categories of Exchange Transactions, Trade Confirmations, and Other Services and for purposes of maintaining the functional and operational integrity of the System and for purposes of complying with applicable laws and regulations) and not for the benefit of Registry Account Holder.

g. Registry Account Holder has all necessary power and authority to execute and perform the terms and conditions of this Appendix, and these terms and conditions are its legal, valid and binding agreement, enforceable against Registry Account Holder in accordance with its terms. Neither the execution of nor performance under these terms and conditions by Registry Account Holder violates any law, rule, regulation or order, or any agreement, document or instrument, binding on or applicable to Registry Account Holder.

h. Registry Account Holder agrees to provide information related to Registry Account Holder's, use of the Systems and the Exchange that is reasonably requested by CCX or Intercontinental, if such information is reasonably necessary in order to enable CCX or Intercontinental to maintain the integrity of the Systems or to comply with applicable laws or regulations, and such information will be accurate and complete in all material respects and subject to the Confidentiality provisions of Section 8. Should Registry Account Holder refuse to provide information, or if the information demonstrates a potential violation of the terms and conditions of this Agreement, then CCX, Intercontinental or their designated agents shall have the right, upon five (5) days notice, to conduct an on-site audit during regular business hours of Registry Account Holder's, compliance with this Agreement. Such audit may include inspection of, among other things, any use of the Systems, the Exchange and the Exchange Data. The rights of inspection shall extend only so far as may be necessary to ensure compliance by Registry Account Holder with the provisions of this Agreement.

i. Registry Account Holder acknowledges that portions of the Systems and related technical information, documents and materials are subject to export controls under the U.S.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc.

Export Administration Regulations. Registry Account Holder will (1) comply with all legal requirements established under these controls, (2) cooperate fully with each of CCX, NASD, and Intercontinental in any official or unofficial audit or inspection that relates to these controls and (3) not export, re-export, divert or transfer, directly or indirectly, any such item or direct products thereof to Cuba, Iran, Iraq, Libya, Sudan, Syria, the Taliban, Afghanistan, or any national thereof or to any country or national thereof that is embargoed by Executive Order. Registry Account Holder represents and warrants that it will not use the System in any such country nor will it permit any national of any such country to use the Systems for any purpose at any time. Upon notice to Registry Account Holder CCX may modify the list of such countries to conform to changes in the U.S. Export Administration Regulations.

4) **USER IDs AND PASSWORDS.** CCX shall issue to Registry Account Holder, through its employees designated as Authorized Trader(s) with respect to Registry Account Holder's use of the Systems ("Registry Account Holder Authorized Trader"), one or more user IDs and passwords (collectively, the "Passwords") for use exclusively by employees ("Authorized Traders") of Registry Account Holder. The initial Registry Account Holder's Authorized Trader(s) for Exchange Transactions, if applicable, and for Trade Confirmations, if applicable, are identified, respectively, on the signature page hereof and Registry Account Holder will notify CCX promptly of any change in its Registry Account Holder Authorized Trader(s). Registry Account Holder will be solely responsible for controlling and monitoring the use of the Passwords, will provide the Passwords only to its Authorized Traders, and will not provide the Passwords to any third party. Registry Account Holder will immediately notify CCX of any unauthorized disclosure or use of the Passwords or access to the Exchange or of the need to deactivate any Passwords. Registry Account Holder acknowledges and agrees that it will be bound by any actions taken through the use of its Passwords (except through the fault or negligence of CCX), including the Execution of Transactions, the Confirmation of Trades, and the use of Other Services, whether or not such actions were authorized. Registry Account Holder will only use the Passwords to access and use the Exchange from the jurisdictions specified by Registry Account Holder and accepted by CCX. The Registry Account Holder User Administrator shall be responsible for all communications between CCX and Registry Account Holder, and any notices or other communications sent to the Registry Account Holder User Administrator by CCX shall be binding on Registry Account Holder.

5) **TERM.** This Agreement will commence as of the date hereof and will continue thereafter through the life of the CCX Market Period (which, unless extended by mutual agreement of the parties, shall be the period 2003 through 2006, with provision made to allow final true-up trading to occur during the first two calendar quarters of 2007), provided that this Agreement shall remain in effect with respect to any Exchange Transactions or Trade Confirmations effected prior to the end of the CCX Market Period (and early 2007 trading period). Termination of this Agreement shall terminate all services provided by CCX to Registry Account Holder including Execution, Confirmation, and Other Services. Each party's continuing obligations under this Agreement and the Terms, including, without limitation, those relating to "Indemnification" and "Confidentiality", will survive the termination of this Agreement.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc.

6) **EXECUTION OF TRANSACTIONS.**

a. Upon the Execution of a binding Transaction in accordance with the Terms, Registry Account Holder agrees that: (i) it will be obligated to pay to CCX the fees due on such Transaction, in accordance with the CCX Fee Schedule as then in effect regardless of whether the Transaction is performed, settled or otherwise completed by Registry Account Holder and its counterparty; and (ii) the resulting Transaction will constitute a legally binding obligation of Registry Account Holder, with respect to its counterparty, to complete the Transaction in accordance with its terms and subject to the terms of the CCX Transaction Terms and conditions between Registry Account Holder and its counterparty, provided that for bilaterally negotiated trades, CCX shall have no involvement in and no responsibility or liability for any matters related to the Transaction or the completion or documentation of the Transaction subsequent to its Execution through the Exchange, including but not limited to the creditworthiness of any participant, all of which shall be the sole responsibility of Registry Account Holder and/or its counterparty, as applicable. Registry Account Holder acknowledges and agrees that for bilaterally negotiated trades the counterparty to any Transaction may rely on Registry Account Holder's agreements hereunder as to the binding nature of such Transaction and agrees that the counterparty may directly enforce Registry Account Holder's obligations under such Transaction against Registry Account Holder.

b. Registry Account Holder agrees that Transactions Executed through the Exchange shall be deemed to be "in writing" and to have been "signed" for all purposes and that any record of any such Transaction will be deemed to be in "writing". Registry Account Holder will not contest the legally binding nature, validity or enforceability of any Transaction Executed through the Exchange based on the fact that it was entered and Executed electronically and expressly waives any and all rights it may have to assert any such claim.

c. All fees incurred by Registry Account Holder hereunder shall be paid by Registry Account Holder in accordance with the provisions of the CCX Fee Schedule.

d. Registry Account Holder shall be liable for all taxes and duties (other than franchise and income taxes owed by CCX) arising out of this Agreement or any Exchange Transactions, Trade Confirmations, or Other Services utilized by Registry Account Holder through the Exchange, including, without limitation, taxes and duties levied by non-U.S. jurisdictions.

7) **LIMITATION OF LIABILITY; INDEMNITY.**

a. REGISTRY ACCOUNT HOLDER ACKNOWLEDGES, UNDERSTANDS AND ACCEPTS THAT NEITHER CCX NOR INTERCONTINENTAL MAKES ANY WARRANTY WHATSOEVER TO REGISTRY ACCOUNT HOLDER AS TO THE SYSTEMS, EXCHANGE TRANSACTIONS, TRADE CONFIRMATIONS, OTHER SERVICES OR THE EXCHANGE, EXPRESS OR IMPLIED, AND THAT THE SYSTEMS, THE TRADING PLATFORM AND REGISTRY SYSTEM, EXCHANGE TRANSACTIONS, TRADE CONFIRMATIONS, OTHER SERVICES

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

AND THE EXCHANGE ARE PROVIDED ON AN "AS IS" BASIS AT REGISTRY ACCOUNT HOLDER'S, SOLE RISK. EACH OF CCX AND INTERCONTINENTAL EXPRESSLY DISCLAIMS ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR OF NON-INFRINGEMENT. CCX, INTERCONTINENTAL, AND THEIR RESPECTIVE MANAGERS, OFFICERS, AFFILIATES, SUBSIDIARIES, SHAREHOLDERS, EMPLOYEES AND AGENTS MAKE NO WARRANTY WITH RESPECT TO, AND NO SUCH PARTY SHALL HAVE ANY LIABILITY TO REGISTRY ACCOUNT HOLDER (i) FOR THE ACCURACY, TIMELINESS, COMPLETENESS, RELIABILITY, PERFORMANCE OR CONTINUED AVAILABILITY OF THE SYSTEM OR THE EXCHANGE, (ii) FOR DELAYS, OMISSIONS OR INTERRUPTIONS THEREIN, (iii) FOR THE CREDITWORTHINESS OF ANY OTHER REGISTRY ACCOUNT HOLDER, OR (iv) FOR THE INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS, NEITHER CCX NOR INTERCONTINENTAL SHALL HAVE ANY DUTY OR OBLIGATION TO VERIFY ANY INFORMATION DISPLAYED ON THE EXCHANGE. REGISTRY ACCOUNT HOLDER ACKNOWLEDGES AND AGREES THAT THE EXCHANGE DOES NOT AND SHALL NOT SERVE AS THE PRIMARY BASIS FOR ANY DECISIONS MADE BY REGISTRY ACCOUNT HOLDER AND THAT CCX IS NOT AN ADVISOR OR FIDUCIARY OF REGISTRY ACCOUNT HOLDER.

b. Subject to Section 7(c) of this Agreement, Registry Account Holder shall indemnify, protect, and hold harmless CCX, Intercontinental and their respective directors, officers, affiliates, employees and agents from and against any and all losses, liabilities, judgments, suits, actions, proceedings, claims, damages, costs (including attorney's fees) resulting from or arising out of any act or omission by any person obtaining access to the Exchange through the Passwords (other than through the fault or negligence of CCX or Intercontinental), whether or not Registry Account Holder has authorized such access.

c. IN NO EVENT WILL ANY PARTY BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES, EVEN IF IT HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

d. Notwithstanding the terms of Section 7(a), in the event that CCX or Intercontinental is determined to be liable to Registry Account Holder for any cause, Registry Account Holder expressly agrees that in entering into this Agreement, the aggregate joint liability of CCX and Intercontinental, for all causes of action, will not exceed the total fees and other amounts (excluding any applicable taxes or duties) paid to CCX by Registry Account Holder in the previous six months from the date of the occurrence of the liability.

8) **CONFIDENTIALITY.**

a. Any and all non-public information in any form obtained by either party or its employees from the other arising out of or related to the provision or use of the Systems or the Exchange, including but not limited to trade secrets, processes, computer software and other proprietary data, research, information or documentation related thereto, shall be deemed to be confidential and proprietary information

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc.

("Confidential Information"). Each party agrees to hold such Confidential Information in strict confidence and not to disclose such Confidential Information to third parties (other than to its employees, its affiliates and their employees or its agents) or to use such Confidential Information for any purpose whatsoever other than as contemplated by this Agreement and to obligate and advise each of its employees, affiliates and agents who may be exposed to such Confidential Information to keep such Confidential Information confidential. Registry Account Holder agrees and acknowledges that the Systems and the Exchange Data constitute Confidential Information of Intercontinental and CCX. The obligations of this Paragraph 8(a) shall survive expiration or termination of this Agreement.

b. Confidential Information shall not include information which is: (i) in or becomes part of the public domain other than by disclosure by such party in violation of this Agreement; (ii) known to or obtained by such party previously without an obligation of confidentiality; (iii) independently developed by such party outside of this Agreement; (iv) required to be disclosed by applicable law or regulation, or pursuant to a subpoena or order of a court or regulatory, self-regulatory or legislative body of competent jurisdiction, or in connection with any regulatory or self-regulatory request for information; (v) information submitted by Registry Account Holder that is displayed by CCX on the Exchange or otherwise distributed or sold by CCX, regarding bids, offers, Exchange Transactions, Trade Confirmations in accordance with its standard policies and procedures, provided that such displays will not identify Registry Account Holder.

9) **NOTICES.** All notices delivered with respect to this Agreement shall be in writing and either (i) hand delivered or forwarded by registered or certified mail; or (ii) sent via electronic mail, in either case to the relevant address provided by a party for such purpose.

10) **THIRD PARTY BENEFICIARIES.** Notwithstanding anything in this Agreement to the contrary, CCX and Registry Account Holder agree that Intercontinental is a third party beneficiary with respect to this Agreement and may rely upon its provisions in enforcing its rights and remedies hereunder. Except as provided in the foregoing sentence, nothing in this Agreement shall be considered or construed as conferring any right or benefit on a person not a party to this Agreement or imposing any obligations on CCX or Registry Account Holder to persons not a party to this Agreement (other than (i) the right of a counterparty (Registry Account Holder) to a Transaction under Section 6(a) of this Agreement, (ii) the right of another counterparty (Registry Account Holder) with regard to a Transaction under Section 6(a) of this Agreement.

11) **FORCE MAJEURE.** Neither CCX, Intercontinental nor any Registry Account Holder shall be deemed to be in default of any provision hereof or be liable for any delay, failure in performance, or interruption of service resulting directly or indirectly from acts of God, civil or military authority, civil disturbance, war, strikes, fires, other catastrophes, power failure or any other cause beyond its reasonable control.

12) **WAIVER.** No waiver by either party of any default by the other in the performance of any provisions of this Agreement shall operate as a waiver of any continuing or future default,

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc.

- whether of a like or different character.

13) **ASSIGNMENT.** This Agreement may not be assigned by either party without the other party's express prior written consent; provided, however, that either party may assign this Agreement to any entity (i) controlling, controlled by, or under common control with such party, or (ii) which succeeds to all or substantially all of the assets and business of such party, provided that, in the case of any such assignment by Registry Account Holder, the assignee agrees in writing to assume the assignor's obligations under, and to be bound by the provisions of, this Agreement (as it may be amended from time to time). This Agreement shall be binding upon and shall inure to the benefit of the parties and their respective successors and permitted assigns in accordance with its terms.

14) **GOVERNING LAW.** Unless otherwise specified in an annex, this Agreement is deemed entered into in Chicago, Illinois and shall be governed and construed in all respects by the laws of the State of Illinois, without giving effect to principles of conflict of law.

15) **DISPUTE RESOLUTION.** Unless otherwise specified in an annex, any dispute, claim or controversy between the parties relating to this Agreement shall be resolved through binding arbitration conducted in accordance with the Arbitration Rules of the American Arbitration Association. Any such arbitration shall be conducted in Chicago, Illinois or at such other location as may be agreed to by the parties and the arbitrators. For the avoidance of doubt, this arbitration clause only applies to CCX and the Registry Account Holder and does not apply to any disputes arising between Registry Account Holder on the Exchange or any other disputes between parties other than CCX and the Registry Account Holder. Notwithstanding the foregoing, each party acknowledges that a breach of this Agreement may cause the other party irreparable injury and damage and therefore may be enjoined through injunctive proceedings in addition to any other rights and remedies which may be available to such other party at law or in equity, and each party hereby consents to the jurisdiction of any federal or state courts located in Chicago, Illinois with respect to any such action. The parties expressly waive their right to trial by jury in any such action.

16) **HEADINGS.** The headings in this Agreement are intended for convenience of reference and shall not affect its interpretation.

17) **SEVERABILITY.** If any provision of this Agreement (or any portion thereof) shall be invalid, illegal or unenforceable, the validity, legality or enforceability of the remainder of this Agreement shall not in any way be affected or impaired thereby.

18) **COUNTERPARTS.** This Agreement may be executed in multiple counterparts, each of which shall be deemed an original, but all of which together shall constitute one agreement binding on the parties hereto.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Appendix 5.2 Carbon Financial Instrument Contract Specifications

Product Type	Cash Product
Contract Size	100 metric tonnes
Quotation	US dollars
Minimum Tick Increment	$.05 per tonne = $5.00 per contract
Symbol	CFI
Trading Hours	8:30 a.m. – 2:00 p.m. Central Time
Products Offered	Vintages for 2003 - 2010
Product Availability	All vintages offered are eligible for trading.
Transaction Methods	Transaction participation eligibility is limited to CCX members who qualify as eligible commercial entities. 1 CCX offers an internet-based, electronic trading system for submission of bids and offers for anonymous, cleared agreements executed on price and time priority. 2. Electronic bilateral agreements between members 3 Pre-negotiated block trades and cash transactions may be negotiated at any time, but must be reported to CCX in accordance with its rules
Deliverable Instruments	CCX Carbon Financial Instruments
Delivery Process	All transactions are delivered through the CCX Clearing System and are held by the CCX Registry on the trade day. Earlier dated vintages may be delivered against later vintage trades.
Clearing Process	Transactions (with exception of bilateral agreements) are cleared on trade day. Full contract value settlement occurs on the next business day. CCX substitutes as a counter party to all transactions and guarantees performance until settlement is completed. Bilateral agreement financial arrangements are settled by the participating parties.
Closing Price	For each Vintage, the closing price will be based on the following criteria. a. The last transaction executed on the Trading Platform during a trading session. b. If at the close the best bid is above the last trade price or the best offer is below the last trade price, then the closing price will be the best bid / best offer price c. If no trades occur in the trading session, the closing price is the previous day's closing price unless the best bid is above the previous day's closing price or the best offer is below the previous day's closing price, then the closing price will be the best bid / best offer price d. The Exchange reserves the right to take into account other factors in determining closing prices. A block trade price will not serve as a closing price.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc.

Price Limits	20% up and down from the previous trading day's closing price If the daily limit calculation results in a value that is not equal to a $ 05 increment, the minimum daily trading limit will be rounded down to the next $ 05 increment and the maximum trading limit will be rounded up to the next $.05 increment.

This contract specification is only intended to present limited features of the CCX product. For details, consult the CCX Rulebook and CCX Notices.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Chapter 6 CCX Member Emission Baselines, Purchased Electricity Baselines and Opt-ins

6.0 Purpose (2006)

This chapter establishes the rules and procedures for calculating the Greenhouse Gas Emission and Electricity, if applicable, Baselines, Emission Reduction Schedule and allocation of Exchange Allowances for each Exchange Member.

6.1 General Provisions (2006)

Subject to the provisions established in this Chapter, each CCX Member's and Associate Member's Emission Baseline should represent entity-wide average Greenhouse Gas emissions during calendar years 1998, 1999, 2000 and 2001. Each CCX Member's and Associate Member's Emissions Baseline is to be determined in a manner that is consistent, in terms of calculation method and sources included, with the information provided in Periodic Emission Reports to be submitted to CCX for the year 2003, 2004, 2005 and 2006. The Baseline is to be calculated using data and methods that are replicable, transparent, credible and in conformance with the provisions provided in this Chapter and in other related Chapters in this *Rulebook* in a manner and time frame prescribed by the Exchange.

Baselines are to be adjusted to reflect facility acquisitions and sales, and shall exclude emissions associated with combustion of Renewable Fuels. Baseline changes due to facility acquisition or sales that occur subsequent to the initial allocation of Exchange Allowances from CCX shall cause a modification to the CCX Member's and Associate Member's allocation of Exchange Allowances. Section 7.1 of this *Rulebook* addresses changes in emissions monitoring methods.

6.2 Rule Interpretation and Modifications

Unless provided otherwise, the CCX Environmental Compliance Committee shall be responsible for recommending interpretations and modifications of rules established in this Chapter to the CCX, which in its discretion, shall have final decision-making authority.

6.3 Included Emissions and Renewable Fuels

6.3.1 Included Emissions (2006)

Emissions of the following Greenhouse Gases will be reflected in each Member's and Emission Baseline and Periodic Emission Reports:

- carbon dioxide (CO_2)
- methane (CH_4)
- nitrous oxide (N_2O)

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

- hydrofluorocarbons (HFCs)
- perfluorocarbons (PFCs)
- sulfur hexafluoride (SF_6)

Emissions of all Greenhouse Gases will be converted to metric tons carbon dioxide equivalent using the one-hundred-year Global Warming Potential values established by the Intergovernmental Panel on Climate Change. These values are listed in Chapter 7, Emissions Monitoring and Reporting. Emissions monitoring and reporting will be conducted pursuant to Chapter 7.

6.3.2 Renewable Fuels (2006)

Greenhouse Gas emissions associated with combustion of Renewable Fuels, as defined herein, shall be excluded from Emission Baselines and Periodic Emission Reports. Renewable Fuels for CCX purposes are:

- wood, wood wastes and wood-derived fuels[1]
- agricultural residues and grasses
- landfill and agricultural methane[2]
- ethanol (bioalcohol)

If Renewable Fuels are combusted at facilities included in a CCX Member's baseline and such facilities utilize continuous emissions monitors (CEMs), CCX Members shall subtract the CO_2 emissions associated with combustion of Renewable Fuels from the total CO_2 emissions as measured and quantified by CEMs and reported to CCX. The quantity of CO_2 emissions associated with combustion of Renewable Fuels shall be determined using emission coefficients provided in the WRI/WBCSD Protocols.

6.4 Included Emission Sources (2006)

Each CCX Member is to include in its Emission Baseline and Periodic Emission Reports its Owned Emissions from all Large Emission Sources in which the CCX Member's Equity Ownership Percentage is greater than or equal to 20%. Exceptions to this requirement may be recommended, on a case-by-case basis, by the CCX Environmental Compliance Committee if a CCX Member's Equity Ownership Percentage of a Large Emission Source or Large Electricity Purchase Activities is less than or equal to 50% and data on emissions or electricity purchases from the jointly owned facility are not accessible to the CCX Member. (2/2/2004)

---

[1] As provided in Section 6.7 of this *Rulebook* CCX Members may elect to include N_2O and CH_4 emissions associated with fossil fuel and biomass combustion

[2] As provided in Section 9.7 of this *Rulebook*, the issuance of Exchange Offsets to CCX-qualifying methane collection and combustion systems will be based on the net Greenhouse Gas reduction benefits of such Projects.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Each CCX Member primarily engaged in electric power generation shall include its Owned Emissions from all facilities in which the CCX Member's Equity Ownership Percentage represents 25 megawatts or more of nameplate generating capacity.

In the case of Jointly Owned Facilities, Owned Emissions are defined on the basis of a Member's Equity Ownership Percentage. Appendix 6.1 provides example calculations of a CCX Member's Owned Emissions in cases of Jointly Owned Facilities.

Upon enrollment in the Exchange, each CCX Member may elect to Opt-in the following emission sources for the duration of the Market Period[3], which shall be included in the Member's Emission Baseline, Emission Reduction Schedule and Periodic Emission Reports:

(1) direct emissions from Small Emission Sources;
(2) direct emissions from activities in which the CCX Member holds a minor ownership percentage (Minor Ownership Emissions);
(3) emissions associated with activities in Canada, Mexico; and
(4) non-CO_2 emissions associated with fossil fuel combustion (N_2O and CH_4).

As provided in Section 4.10 of this *Rulebook*, each CCX Member not primarily engaged in electric power generation may elect to include electricity purchases as a Supplemental Reduction Objective, subject to the same Baseline rules, Emission Reduction Schedule and Market Efficiency provisions applied to Direct Emissions.

Upon enrollment in CCX, each Exchange Member will submit to CCX a Statement of Included Emissions and Emission Baseline in a manner prescribed by the Exchange.[4] Each CCX Member shall report Baseline emissions by facility, and may also report by Emitting Activity[5] but must do so for activities involving multiple locations, such as vehicle fleets. Each CCX Member will also notify the Exchange of facilities acquisitions and sales, and Opt-in information. All such data will be subject to audit by the Provider of Regulatory Services designated by CCX.

6.4.1 Included Emissions and Baselines for CCX Members That Own Large Emission Sources in the United States (2006)

Each CCX Member that owns Large Emission Sources in the United States shall include in its CCX Emission Baseline and Periodic Emission Reports its Owned Emissions associated with all such activities in the United States and its territories, subject to rules governing Included Emissions and Jointly Owned Facilities as listed in this Chapter. Each CCX Member that owns

[3] Opt-in of emission from facilities in Canada and Mexico by Members that own U.S. emission sources may occur through the end of calendar year 2003.

[4] When applicable, a CCX Member in the commercial forestry sector will submit baseline information on carbon stored in its commercial forest parcels. See Chapter 8

[5] Activities include, but are not limited to, the following: electric power and steam generation; space heating and cooling; water heating and cooling; catalytic and thermal oxidizers; catalytic cracking and hydrogen plants used in crude oil refining; operation of a heavy vehicle fleet; manufacture of adipic acid; manufacture of semiconductor wafers; operation of lime kilns, calciners and dryers; and operation of tree harvesting equipment.

Reproduction or quotation is expressly prohibited without written convent of Chicago Climate Exchange, Inc

Large Emission Sources in the U.S. and is domiciled in another country shall also include Large Emission Sources in its home country.

6.4.2 Included Emissions and Baselines for CCX Members That Own Large Emission Sources Only in Canada

Each CCX Member that owns Large Emission Sources exclusively in Canada shall include in its Emission Baseline and Periodic Emission Reports its Owned Emissions from all such activities, subject to CCX rules governing Included Emissions and Jointly Owned Facilities.

6.4.3 Included Emissions and Baselines for CCX Members That Own Large Emission Sources Only in Mexico

Each CCX Member that owns Large Emission Sources exclusively in Mexico shall include in its Emission Baseline and Periodic Emission Reports its Owned Emissions from all such activities, subject to CCX rules governing Included Emissions and Jointly Owned Facilities.

6.4.4 Opt-In Small Emissions Sources in Canada and Mexico (2006)

Each CCX Member that chooses to Opt-in Owned Emissions from Large Emission Sources in Canada or Mexico may also Opt-in Small Emission Sources, Minor Ownership emissions, non-CO_2 emissions and, provided the Member is not primarily engaged in electric power generation, electricity purchases in those countries in a manner consistent with the rules provided herein.

6.4.5 Included Emissions and Baselines for CCX Members with Other Geographic Conditions

Should a CCX Member own Large Emission Sources in geographic areas not included in CCX rules, the CCX Environmental Compliance Committee will consider recommendations to amend Included Emissions..

Table 6.1 summarizes the nature of the facilities inclusion, Opt-in and geographic provisions applied to CCX Members.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Table 6.1 CCX Facilities Inclusion, Opt-in and Geographic Provisions

CCX Member's U.S. facilities and domicile: Country of CCX Member Operations		CCX Member owns Large Emission Sources in the U.S.	CCX Member is domiciled in Non-U.S. Location and owns Large Emission Sources in the U.S.	CCX Member's Owned Emissions are exclusively in Non-U.S. Location
Direct emissions	**U.S**	Must include these sources	Must include its large U S sources	N A.
	U.S. Small Emission Sources	May Opt-in on an activity-wide basis	May Opt-in these sources on an activity-wide basis	N.A
	U.S. Minor Ownership emissions	May Opt-in on an activity-wide basis	May Opt-in these sources on an activity-wide basis	N A
	U.S. non-CO_2 emissions	May Opt-in on an activity-wide basis	May Opt-in these sources on an activity-wide basis	N.A.
	Canada and Mexico	May Opt-in all Large Emission Sources in Canada, and/or Mexico; may Opt-in categories of Small Sources, Minor Ownership and non-CO_2 if large sources Opted-in	Must include all home country Large Emission Sources; may Opt-in categories of Small Sources, Minor Ownership and non-CO_2 in non-U.S./ non-home locations	Must include all Large Emission Sources in approved Non-U.S Locations; may Opt-in categories of Small Sources, Minor Ownership and non-CO_2
	Other Non-U.S. Locations	May Opt-in all Large Emission Sources in approved Other Non-U S. Locations; may Opt-in categories of Small Sources, Minor Ownership and non-CO_2 if large sources Opted-in	Must include all home country Large Emission Sources; may Opt-in categories of Small Sources, Minor Ownership and non-CO_2 in non-U S / non-home locations	Must include all Large Emission Sources in approved Non-U.S. Locations; may Opt-in categories of Small Sources, Minor Ownership and non-CO_2
Electricity purchases*	U S	May Opt-in its U S. Electricity Purchases: if elected, must Opt-in all Large Electricity Purchases; may include total electricity purchases	May Opt-in its U S. electricity purchases: if elected, must Opt-in all Large Electricity Purchases; may include total electricity purchases	N.A.
	Canada	May Opt-in Large Electricity Purchases (or total purchases) in Canada *only if* its Large direct emission sources in Canada are opted-in	May Opt-in Large Electricity Purchases (or total purchases) in non-U.S /non-home locations *only if* its Large Direct Emission sources in that country are opted-in	May Opt-in Large Electricity Purchases (or total purchases) in non-U.S /non-home locations *only if* its Large Direct Emission sources in that country are opted-in

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

-	Mexico	May Opt-in Large Electricity Purchases (or total purchases) in Mexico *only if* its Large Direct Emission Sources in Mexico are opted-in	May Opt-in Large Electricity Purchases (or total purchases) in non-U.S /non-home locations *only if* it Opts-in its Large Direct Emission Sources in that country	May Opt-in Large Electricity Purchases (or total purchases) in non-U.S./non-home locations *only if* its Large Direct Emission sources in that country are opted-in
	Other Non-U.S Locations	May Opt-in Large Electricity Purchases (or total purchases) in approved Other Non-U.S. Locations *only if* its Large Direct Emission Sources are opted-in	May Opt-in Large Electricity Purchases (or total purchases) in non-U.S./non-home locations *only if* it Opts-in its Large Direct Emission Sources in that country	May Opt-in Large Electricity Purchases (or total purchases) in non-U S /non-home locations *only if* its Large Direct Emission sources in that country are opted-in

*Applies only to entities not primarily engaged in electric power production

6.5 Determination of Emission Baselines

6.5.1 General Provisions (2006)

Each CCX Member's Emission Baseline will be the annual average of its Owned Emissions during years 1998, 1999, 2000 and 2001. Baselines reported to CCX are to be rounded off to the nearest one hundred tons. When applicable, Electricity Purchase Baselines are to be rounded to the nearest one hundred megawatt-hours.

6.5.2 Determination of Emission Baselines for Facilities Placed Into Service During the Baseline Period

The CCX Emission Baseline for facilities placed into service after January 1, 1998 but before January 1, 2001 will be the annual average of emissions for the facility's first two complete calendar years of operation. The CCX Emission Baseline for facilities placed into service on or after January 1, 2001 and before January 1, 2002 will be the emissions of such facilities during the first complete calendar year of operation.[6]

6.5.3 Baseline Treatment for Facilities Permanently Shut Down by the Member During or After the Baseline Period (2006)

The Baseline Period emissions for facilities that were shut down during the Baseline Period are included in each CCX Member's Emission Baseline. The total emissions released by the facility during the Baseline period (in metric tons carbon dioxide (CO_2)) divided by four (4) are to be added to the Emission Baseline calculated for all other Included Emissions.

[6] As provided in Section 4.9 of this *Rulebook*, emissions of New Electricity Generating Facilities are subject to exemptions

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

When applicable, the same method shall be used to calculate Electricity Purchase Baselines associated with facilities that were shut down during the Baseline Period.

An example of this process is provided in Appendix 6.3A.

Facility closure after the Baseline Period does not require adjustment of the Member's Emission Baseline or allowance allocation.

6.5.4 Baseline Modification Due to Facility Acquisition (2006)

In the case of acquisition of an emitting facility by a CCX Member, the Baseline emissions of that facility will be added to the Member's pre-acquisition Baseline. Each CCX Member whose Baseline is increased due to acquisition of facilities will be allocated additional Exchange Allowances in an amount corresponding to the Emission Baseline and CCX Emission Reduction Schedule associated with the acquired facility.

During the annual reporting and True-Up periods, each CCX Member shall notify the CCX Compliance Office of facility sales using standard documentation provided by the Exchange. When a facility acquisition occurs during a calendar year, emissions from that facility are to be included in the CCX Member's Emission Inventory as soon as practicable. The Member's increased allocation of Exchange Allowances will be calculated on a *pro-rata* basis in correspondence with the portion of the year for which the acquired facility's emissions are included in the Member's Emission inventory.[7]

An example of this process is provided in Appendix 6.3B.

6.5.5 Baseline Modification in the Case of Facility Sale (2006)

In the case of sale by a CCX Member of an operating facility that is included in the Member's Emissions Baseline, the Emission Baseline of that facility will be subtracted from the Member's overall Baseline.

When a CCX Member's Baseline is reduced due to sale of a facility that was included in the Member's Baseline, CCX will retire, on a *pro rata* basis, the Exchange Allowances that were issued on the basis of emissions from the facility that was sold by the CCX Member.

[7] For example, if a CCX Member includes emissions from an acquired facility as of October 1, 2003, that Member would be allotted additional Exchange Allowances pro-rata in an amount equal to the acquired facility's Emission Baseline multiplied by {.99 x (92/365)} as the facility would be owned by the CCX Member for 92 days of year 2003. In this case the increased allocation of Exchange Allowances for years 2004, 2005 and 2006 would be in an amount equal to 98%, 97% and 96% of the acquired facility's Baseline emissions, respectively.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

During the annual reporting and True-Up periods, each CCX Member shall notify the CCX Compliance Office of facility acquisitions using standard documentation provided by the Exchange. When a facility sale occurs during a calendar year, emissions from that facility are to be included in the CCX Member's Emission Inventory up to a proximate date of sale, but no later than the actual transfer of control of the facility. The Member's decreased allocation of Exchange Allowances will be calculated on a pro-rata basis in correspondence with the portion of the year for which the disposed facility's emissions are no longer included in the Member's inventory.[8]

An example of this process is provided in Appendix 6.3C.

6.5.6 Baseline Adjustments (2006)

Adjustments to a CCX Member's Baseline and Exchange Allowance allocations as a result of facility acquisitions and dispositions shall be administered in the CCX Registry on an annual basis during the pre-True-up period. The Exchange's timing for posting CCX Registry adjustments does not alter a CCX Member's requirement to report facility acquisitions and dispositions in a timely manner as required in Rulebook Sections 6.5.4 and 6.5.5.

6.6 Determination of Baselines when Baseline Period Emissions Data Is Missing (2006)

The methods prescribed in this section are to be employed in instances when data on Owned Emissions and, as applicable, electricity purchases are not available for a portion of the CCX Baseline Period. A statement attesting that the data are unavailable in suitable form shall be signed by a corporate officer (or by a designated representative for each CCX Member that operates U.S. electric power plants regulated under the 1990 Clean Air Act Amendments). The documentation and methods prescribed in this section shall be subject to audit by the Provider of Regulatory Services designated by CCX and will be reviewed by the CCX Environmental Compliance Committee.

Emissions for periods of missing data must be calculated using available emissions data that best correspond to the activities for which data are missing. If data from a particular facility or activity are incomplete, the CCX Member must use available emissions data from that facility or activity to estimate emissions for the period for which data are missing.

In cases where emissions data are entirely or nearly entirely missing for the years 1998, 1999, 2000 and 2001 (e.g. if emissions data for a particular activity or facility are entirely unavailable

[8] For example, if a CCX Member sells a facility having Member-Owned Emissions and relinquishes control of that facility as of September 16, 2004, logistical considerations may make it impractical for the Member to include emissions from that facility as of September 1, 2004. In such case, the Member's allocation of Exchange Allowances would be reduced pro-rata in an amount equal to the disposed facility's Emission Baseline multiplied by {.98 x (122/365)} as the facility would not be owned by the CCX Member for 122 days of year 2004 The reduced allocation of Exchange Allowances for years 2005 and 2006 would be in an amount equal to 97% and 96% of the sold facility's emissions, respectively

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange Inc

or are available for one year or less of the Baseline Period), or where the appropriate treatment of the CCX Member's particular circumstances are not clearly addressed by the rules provided herein, the CCX Member shall notify CCX and shall work jointly with the CCX Environmental Compliance Committee to develop a method for addressing such data gaps.

Figure 6.1 summarizes the methods to be used for various missing Baseline data conditions.

Figure 6.1 Methods to be Used to Calculate Baseline Period Annual Emissions or Electricity Purchases in Cases of Missing Data

Missing data time period	Data availability	Method to be employed to calculate annual emissions
Portions of any year 1998, 1999, 2000 or 2001	Emissions or electricity purchase data are available for less than a full year but are available for 220 days or more in that year.	Annualize the available data.
1999 or 2000	Data unavailable or available for less than 220 days.	Interpolate by computing the average from data for the surrounding years.
1998 or 2001	Data unavailable or available for less than 220 days.	Extrapolate from adjacent year using 1% growth rule.
1998, 1999, 2000 or 2001	Data are unavailable or available for less than 220 days for any three years.	CCX Member shall work with the CCX Environmental Compliance Committee to jointly develop a recommended method.

6.6.1 Emissions Data Missing for a Portion of Any Single Year of the Baseline Period

The following methods are to be used if emissions or electricity purchase data are missing for portions of any year during the CCX Baseline Period (years 1998, 1999, 2000 and 2001).

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

If emissions data for a particular facility or activity are available for a period of more than 60% of a year (i.e. 220 days or more of emissions are covered), the available data are to be annualized by applying the following multiplication process:

(1) for data missing during years 1998, 1999 and 2001: multiply {365/(covered days)} by (emissions from covered days); and,
(2) for data missing during 2000: multiply {366/(covered days)} by (emissions from covered days).

The term "covered days" means days for which emissions data are available. If less than 220 days of emissions data are available, methods described in Section 6.6.2 below are to be applied, using year-long emissions data from surrounding and/or adjacent years (as applicable).

An example is provided in Appendix 6.5A.

6.6.2 Emissions Data Missing for an Entire Year or Available for Less Than 220 Days in Any Year

6.6.2.1 Emissions Data Missing for an Entire Year or Available for Less Than 220 Days in Years 1999 or 2000

When emissions data are missing for an entire year or are available for less than 220 days in either 1999 or 2000, the imputed emissions for that year are determined by interpolation by forming an average of the emission quantities from the prior and subsequent years.

An example is provided in Appendix 6.5B.

6.6.2.2 Emissions Data Missing for an Entire Year or Available for Less Than 220 Days in 1998 or 2001

When emissions data are missing for an entire year or are available for less than 220 days in 1998 or 2001, imputed emissions for that year are determined by applying a 1% per year emissions growth rate protocol. When emissions data are absent for 1998, the imputed emissions for 1998 are defined as: 0.990099 x year 1999 emissions. When emissions data are absent for 2001, the imputed emissions for 2001 are defined as: (1.01) x (year 2000 emissions).

6.6.2.3 Emissions Data Missing or Available for Less Than 220 Days for Any Three Years of the Baseline (2/23/2004)

When emissions data are unavailable or available for less than 220 days for any three years of the baseline, imputed emissions for these years are determined by applying a 1% per year back calculation protocol. For example if data is absent for 2001, but available in 2002, the imputed emissions for 2001 are defined as: (0.990099) x (year 2002 emissions).

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

6.7 Opt-in Programs (2006)

Each CCX Member may elect to include as a Supplemental Reduction Objective additional activities through the following Opt-in programs:

(a) Small Emission Source Opt-in (Direct Emissions);
(b) Minor Ownership Opt-in;
(c) Electricity Purchase Opt-in (for CCX Members not primarily engaged in electricity production);
(d) geographic Opt-in (direct emissions and electricity purchases in NAFTA countries); and,
(e) non-CO_2 emissions Opt-in.

Unless otherwise provided herein, all Opt-in elections shall be made upon enrollment in the Exchange by the CCX Member. With the exception of the geographic Opt-in provision, all Opt-in elections shall apply for the entire term of the CCX Market Period (years 2003, 2004, 2005 and 2006).

6.7.1 Small Emission Source Opt-in

Each CCX Member may choose to Opt-in Owned Emissions from Small Emission Sources. Such elections shall be for any entire Activity, i.e. shall include all emissions from functionally similar Activities. Each Member shall be required to submit a statement of total emissions, explaining its estimate of emissions, including an account of the method used to make the estimate, from excluded small sources and providing reasons why such small sources should be excluded. This statement must be certified by an officer of the Member. Members may not be required to provide evidence for their estimates of the size of the small sources. (2/23/2004)

6.7.2 Minor Ownership Emissions Opt-in (2006)

Each CCX Member may Opt-in Owned Emissions associated with facilities for which the Member's Equity Ownership Percentage is less than 20%. For each CCX Member primarily engaged in electricity production, the 20% Equity Ownership Percentage also represents less than 25 megawatts rated capacity. If such election is made, the Member must include emissions from all the functionally similar facilities for which its Equity Ownership Percentage is less than 20%.

6.7.3 Electricity Purchase Opt-in (2006)

Each CCX Member not primarily engaged in electric power generation may choose to Opt-in all its Large Electricity Purchases or its total electricity purchases as a Supplemental Reduction

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Objective. Operation of the Electricity Purchase Opt-in Program is described in Section 4.10 of this *Rulebook*.

Electricity produced using specified renewable energy sources can be treated as zero emission electricity by a CCX Member that elects to Opt-in electricity purchases. Each CCX Member that elects to Opt-in electricity purchases may exclude from its Electricity Purchase Baseline (defined below) and periodic electricity purchase reports electricity acquired from CCX-specified Renewable Electricity Production Systems, provided the Member demonstrates that the electricity is produced solely for the Member or is otherwise dedicated to the Member. Electricity produced by the following Renewable Electricity Production Systems shall qualify under this provision:

- Solar
- Hydropower
- Wind
- Renewable Fuels, which, for purposes of CCX are:
    - wood, wood wastes and wood-derived fuels[9]
    - agricultural residues and grasses
    - landfill and agricultural methane
    - ethanol (bioalcohol)

Each CCX Member that elects to include its electricity purchases as a Supplemental Reduction Objective shall determine its Baseline Electricity Purchases by calculating the simple average of such electricity purchases, expressed in megawatt-hours, during the calendar years 1998, 1999, 2000 and 2001.

The Electricity Purchase Baseline for facilities associated with electricity purchases that are placed into service after January 1, 1998 but before January 1, 2001 will be the annual average of the CCX Member-Owned Electricity Purchases associated with those facilities during the first two years of the facility's operation. The Electricity Purchase Baseline for facilities associated with electricity purchases that are placed into service on or after January 1, 2001 and before January 1, 2002 will be the CCX Member-Owned Electricity Purchases associated with those facilities during the first complete calendar year of operation. Baseline Electricity Purchases will be adjusted to reflect acquisition or sale of facilities that are associated with electricity purchases by applying the provisions contained in Sections 6.5.4 and 6.5.5.

6.7.4 Not Used (2006)

[9] CCX Members may elect to include N_2O and CH_4 emissions associated with fossil fuel and biomass combustion.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

6.7.5 Non-CO_2 Emissions Opt-in

Each CCX Member may elect to include N_2O and CH_4 emissions associated with combustion of fossil and biomass fuels. Each CCX Member that operates electricity transmission and distribution equipment may Opt-in Owned Emissions of SF_6 from such equipment.[10] Opt-in of such emissions will require the CCX Member to include such emissions in its Emission Inventory from all functionally similar activities for the entire CCX Market Period (2003, 2004, 2005 and 2006).

6.7.6 Purchased Steam Opt-in (9/22/2003)

A Member may elect to Opt-in emissions associated with production of purchased steam, which shall be quantified on the basis of the fuel combusted in production of the purchased steam.

[10] For certain CCX Members activities that release SF_6 emissions may constitute a Large Emission Source In such cases these emissions must be included in the Member's CCX Emission Inventory and Reduction Objective.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

APPENDICES

TO

CHAPTER 6

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Appendix 6.1 Examples: Emissions Ownership in Cases of Jointly Owned Facilities

Example 6.1.1

Scenario 1: Company A is a manufacturer and owns 60% of the equity of a production plant (40% is owned by another entity). The plant emits a total of 80,000 metric tons of CO_2 per year.

Company A owns .60 x 80,000 tons = 48,000 tons metric tons of CO_2 and includes 60% of the plant's annual emissions in its company-wide Emission Baseline and Periodic Emission Report.

Scenario 2: Company A is a manufacturer and owns 13% of the equity of a production plant (87% is owned by another entity). The facility emits a total of 80,000 metric tons of CO_2 per year.

Company A owns .13 x 80,000 tons = 10,400 tons metric tons of CO_2. Its Equity Ownership Percentage is below 20%. Company A can either:

(i) exclude the emissions of this plant from its company-wide Emission Baseline and Periodic Emission Reports; or,
(ii) under the minor ownership Opt-in provision, Company A may include the emissions from this plant in its Emission Baseline and Periodic Emission Reports if (and only if) it includes the emissions from all the functionally similar activities for which its Equity Ownership Percentage is less than 20%.

Scenario 3: Company A is a manufacturer and owns 40% of the equity of a production plant (60% is owned by another entity). The facility emits a total of 80,000 metric tons of CO_2 per year. However, Company A cannot readily access the information needed to determine the CO_2 emissions released by the plant.

Solution: upon a case-specific decision by the CCX Environmental Compliance Committee, Company A can have the emissions associated with the production plant excluded from its Emissions Inventory.

Example 6.1.2

Company A owns three power production units (Unit 1, Unit 2, and Unit 3) at one plant site. Each unit has a rated capacity of 100 megawatts. CO_2 emissions from each of the three units are 600,000 metric tons per year.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Scenario 1. Company A owns 100% of units 1 and 2, and 40% of unit 3.

Company A's emission ownership is:

Unit 1 = 600,000 metric tons
Unit 2 = 600,000 metric tons
Unit 3 – 40% ownership represents 40mw of capacity, Company A must include its share of unit 3's emissions; therefore,

Unit 3 = .40 x 600,000 = 240,000 metric tons

Company A total: = 1,440,000 metric tons.

Scenario 2. Company A owns 100% of units 1 and 2, and 15% of unit 3

Company A's ownership of Unit 3 *is* less than 20% and that ownership percentage (15 megawatts of capacity) is less than 25 megawatts of capacity. Therefore, Company A can choose to either:

(i) elect to include in its inventory 15% of the emissions from unit 3; or,
(ii) exclude the emissions from unit 3 in its inventory.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Appendix 6.2 Not Used

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Appendix 6.3A Example: Baseline Treatment for a Facility That was Permanently Shut Down by the Member During the Baseline Period

The CCX Member operated Plant 1 for a portion of the Baseline Period and the plant was permanently shutdown by the Member on March 31, 1999. In such cases, the following quantity is to be added to the Baseline calculated for all other Included Emissions:

total emissions released by the facility during the Baseline Period (in metric tons CO_2) divided by four (4)

	1998 Emissions	1999 Emissions	2000 Emissions	2001 Emissions	Total Emissions During the Baseline Period	CCX Baseline (total Baseline Period emissions divided by four)
Plant 1	50,000	12,500 (through March 31)	0	0	62,500	15,625
Plant 2	50,000	90,000	85,000	92,000	317,000	79,250
Total	**100,000**	**102,500**	**85,000**	**92,000**	**379,500**	**94,875**

Plant 1 Baseline calculation:

(50,000 +12,500)/4 = 15,625

Plant 2 Baseline calculation = (50,000 + 90,000 + 85,000 + 92,000)/4 = 79,250

Total Baseline: 15,625 + 79,250 = 94,875 (94,900 rounded to nearest hundred)

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Appendix 6.3B Example: Baseline Adjustments in the Case of Acquisition of a Facility That was Operated During the Baseline Period

Scenario: Company A's Emission Baseline is 1,000,000 metric tons CO_2, comprised of emissions from three sources:

Facility 1 = 300,000 metric tons CO_2 (30% of total Baseline)

Facility 2 = 500,000 metric tons CO_2 (50% of total Baseline)

Facility 3 = 200,000 metric tons CO_2 (20% of total Baseline)

Total XA allocation to Company A:

Year	XA Allocation
2003	990,000
2004	980,000
2005	970,000
2006	960,000

Assumption: Company A acquires another facility ("Facility 4") on June 21, 2003, and includes the emissions of Facility 4 in its Emission Inventory as of July 1, 2003. Facility 4 is assumed to have Baseline Emissions of 200,000 tons. Facility 4's emissions are included in Company A's emissions for a total of 184 days of 2003.

Company A's Baseline is adjusted to reflect the addition of Facility 4 on a weighted average basis for 2003 and fully for years 2004 – 2006.

Facility 4 weighted average baseline for 2003 = 200,000 x (184/365) = 100,822

Year	Original Baseline	Adjusted Baseline
2003	1,000,000 mt CO_2	1,100,822 mt CO_2
2004	1,000,000 mt CO_2	1,200,000 mt CO_2
2005	1,000,000 mt CO_2	1,200,000 mt CO_2
2006	1,000,000 mt CO_2	1,200,000 mt CO_2

The Allocation of XAs to Company A for years 2003, 2004, 2005 and 2006 is increased in the following manner:

Additional allocation for 2003 = 200,000 x .99 x (184/365) = 99,814
Additional allocation for 2004 = 200,000 x .98 = 196,000
Additional allocation for 2005 = 200,000 x .97 = 194,000

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Additional allocation for 2006 = 200,000 x .96 = 192,000

Year	Original Allocation	Additional Allocation	Post-acquisition Allocation
2003	990,000	99,814	1,089,814
2004	980,000	196,000	1,176,000
2006	970,000	194,000	1,164,000
2006	960,000	192,000	1,152,000

These adjustments are made by adding to the CCX Member's Account 99,814 Vintage 2003 XAs, 196,000 Vintage 2004 XAs, 194,000 Vintage 2005 XAs and 192,000 Vintage 2006 XAs.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Appendix 6.3C Example: Baseline Adjustments and Reduced Exchange Allowance Allocations in the Case of the Sale of a Facility That Was Operated During the Baseline Period

Scenario: Company A's Emission Baseline is 1,000,000 metric tons CO_2, comprised of emissions from three sources:

Facility 1 = 300,000 metric tons CO_2 (30% of total Baseline)

Facility 2 = 500,000 metric tons CO_2 (50% of total Baseline)

Facility 3 = 200,000 metric tons CO_2 (20% of total Baseline)

Total XA allocation to Company A:

Year	XA Allocation
2003	990,000
2004	980,000
2005	970,000
2006	960,000

Assumption: Facility 3 is sold at the end of 2004. The Baseline and Allocation of XAs to Company A for years 2005 and 2006 is reduced by 20% (reflecting Facility 3's share of total Baseline Emissions) to:

Year	Original Baseline	Post-sale Baseline
2005	1,000,000 mt CO_2	800,000 mt CO_2
2006	1,000,000 mt CO_2	800,000 mt CO_2

Year	Original Allocation	Post-sale Allocation
2005	970,000	776,000
2006	960,000	768,000

These adjustments are made by removing from the CCX Member's Account 194,000 Vintage 2005 XAs and 192,000 Vintage 2006 XAs.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Appendix 6.4 Not Used

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Appendix 6.5A Examples of the Application of the Method to be Employed for Emissions Data Missing for a Portion of Any Single Year of the Baseline Period

Situation 1:	emissions data are available for 245 days of 1998, but are missing for 120 days;
Facts:	data are available for 220 days or more; total emissions from the facility for the 245 day period are 245,000 metric tons CO_2.
Applicable method:	annualize the data using the following method: Imputed 1998 emissions = (365/245) x 150,000 = 223,469 metric tons CO_2.
Situation 2:	emissions data are available for 91 days of 1999
Applicable method:	data are available for less than 220 days; apply methods provided in Section 6.5

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Appendix 6.5B Examples of the Application of the Method to be Employed When Emissions Data are Missing for an Entire Year or Available for Less Than 220 Days in Years 1999 or 2000

Example

Situation: emissions data for a particular facility are not available for 2000 (or are available for less than 220 days).

Applicable method: year 2000 emissions for the facility are imputed by interpolating on the basis of emissions data from that facility for years 1999 and 2001.

Hypothetical example:

Year	Measured emissions	Emission quantification for missing data period
1998	100,000 metric tons CO_2	
1999	103,000 metric tons CO_2	
2000	*Data missing*	*Imputed year 2000 emissions = (103,000 + 105,000)/2 = 104,000 mtCO₂*
2001	105,000 metric tons CO_2	
CCX Emission Baseline = (100,000 + 103,000 + *104,000* + 105,000)/4 = 103,000mtCO₂		

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Chapter 7 Emissions Monitoring and Reporting

7.0 Purpose (2006)

This Chapter provides the methods to be used by Chicago Climate Exchange Members to quantify Greenhouse Gas emissions and the protocols for reporting emissions and electricity purchases (when applicable) to CCX.

7.1 General Provisions

7.1.1 Rule Interpretation and Modifications

Unless otherwise provided in this *Rulebook*, applicable CCX Committees shall be responsible for recommending interpretations and appropriate modifications of rules established in this Chapter to the Exchange. The CCX Environmental Compliance Committee is responsible to review all proposed interpretations and modifications and shall have final decision-making authority regarding this Chapter.

7.1.2 Use of Prescribed Methods (2006)

CCX Members shall employ the emission monitoring and reporting methods and procedures described in this Chapter.

Some of the prescribed emissions monitoring methods are based on the calculation tools contained in the "*Corporate GHG Accounting and Reporting: Corporate Inventory Module*" developed by the World Resources Institute in conjunction with the World Business Council for Sustainable Development. These tools are hereinafter referred to as the "WRI/WBCSD Protocols".[1]

7.1.3 Changes in Methods Employed (2006)

The CCX Environmental Compliance Committee may recommend modification of monitoring methods.

A CCX Member may request the Environmental Compliance Committee to adopt alternative emission monitoring, reporting methods and or procedures. The CCX Member must at a minimum demonstrate that the methods and procedures described in this Chapter do not enable it to properly report its emissions before consideration by the Environmental Compliance Committee.

[1] CCX has received permission for Exchange Members to use the WRI/WBCSD Protocols. However, CCX Members are responsible for their use of these tools. WRI maintains the intellectual property rights to the Protocols and CCX Members must comply with the applicable intellectual property laws in using these Protocols.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Modified monitoring methods shall not be applied retroactively, except upon express approval of the Exchange.

7.1.4 Baseline and Annual Emissions Reporting for New Members

A CCX Member must submit Baseline emissions reports and annual emissions reports for previous program years within ninety calendar days of the date that CCX approves the membership.

7.1.5 Monitoring for Exchange Offset Projects, Exchange Early Action Credit Projects and Commercial Forestry Biomass Carbon Sequestration

Monitoring methods to be employed in CCX-registered Offset Projects are provided in Chapter 9 of this *Rulebook*. Monitoring methods for biomass carbon for Member companies with commercial forests are provided in Chapter 8.

7.2 Emissions Reporting

7.2.1 General Provisions (2006)

Each CCX Member shall submit to CCX, on an annual basis (unless specified otherwise), emissions and electricity purchases using standard reporting forms provided by CCX. Emissions shall be reported for each included Greenhouse Gas, and total emissions shall be reported in metric tons carbon dioxide (CO_2) equivalent. Reported emissions are to be rounded to the nearest whole number of tons. Rounding to the nearest hundred should only happen when calculating the final total for emissions. Conversion factors should be accurate to two decimal places. Final reported entity-wide electricity purchases are to be rounded to the nearest whole number of megawatt-hours. Rounding to the nearest hundred megawatt-hours should only happen when calculating the final total for electricity purchases. (2/4/2004, 6/22/2005)

As applicable, each CCX Member is to assemble data for the CCX reporting forms by preparing summaries of data from Continuous Emissions Monitors or through use of the WRI/WBCSD Protocols, unless otherwise notified by CCX.

CCX Members are to maintain records that can be promptly accessed by the Provider of Regulatory Services designated by CCX. Such records shall contain the data, calculations, emission coefficients, spreadsheets and other information that provide the basis for substantiating emissions and electricity purchases reported to CCX.

Underlying data and calculations prepared in accordance with CCX-prescribed emissions monitoring methods shall be subject to external audit by the Provider of Regulatory Services designated by CCX.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

7.2.2 Reporting Direct Emissions and Opted-in Electricity Purchases (2006)

Each CCX Member is required to report in its Baseline and Emission Reports its Owned Emissions associated with combustion, processes and fugitive emissions.

If a CCX Member not primarily engaged in electricity production elects to participate in the CCX Electricity Purchase Opt-in Program it shall report its Owned Electricity Purchases in its Baseline and Emission Reports.

7.2.3 Emissions Reporting Procedures (2006)

Each CCX Member shall submit its Emission Reports to the Exchange using forms provided by CCX. Emission Reports are to be submitted to CCX in a manner and time prescribed by the Exchange. Each CCX Member must report emissions by facility. Members may also report emissions by activity, but must do so when the activity occurs at non-fixed locations (e.g. emissions from vehicle fleets) as applicable.

For CCX Members primarily engaged in electric power production, CCX emission reports must be signed by the Member's designated representative as defined in Title IV of the 1990 Clean Air Act, as Amended (P.L. 101-549). For other CCX Members, each Emission Report must be signed by a corporate officer.

Each CCX Member in the commercial forest sector that utilizes the Model-based Accounting Approach as described in Chapter 8 of this *Rulebook* will annually report changes in Carbon Stocks on its included commercial forest lands. Verification of these reports, the associated estimation procedures and underlying data will be made by third party entities approved by CCX and will be subject to audit by the Provider of Regulatory Services designated by CCX. (Monitoring protocols for biomass carbon in commercial forests are provided in Chapter 8 of this *Rulebook*.)

7.3 Included Gases (2006)

Emissions of the following Greenhouse Gases owned by each CCX Member will be included in its Emission Baselines and Emission Reports, as applicable:

- carbon dioxide (CO_2)
- methane (CH_4)
- nitrous oxide (N_2O)
- hydrofluorocarbons (HFCs)
- perfluorocarbons (PFCs)
- sulfur hexafluoride (SF_6)

All Greenhouse Gases will be converted to metric tons of carbon dioxide (CO_2) equivalent using

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

the one-hundred-year Global Warming Potential values listed in Table 7-1.

As provided in Section 6.6 of this *Rulebook*, each CCX Member has the option to include the non-CO_2 emissions (N_2O and CH_4 emissions) associated with fossil fuel and biomass combustion in its Emission Baseline and Emission Reports, provided such inclusion is applied consistently during the Emission Baseline Period and the years 2003, 2004, 2005 and 2006.

7.4 Emissions Monitoring Principles (2006)

Each CCX Member shall quantify and report Greenhouse Gas emissions in units of metric tons of carbon dioxide (CO_2) equivalent, rounded to the nearest one hundred metric tons.

Table 7.1 Factors to be Used in CCX to Convert Greenhouse Gases to Carbon Dioxide Equivalence (One-hundred Year Global Warming Potential of Greenhouse Gases Relative to Carbon Dioxide (CO_2))

Gas	Global Warming Potential IPCC 1995	Global Warming Potential IPCC 2001
Carbon dioxide (CO_2)	1	1
Methane (CH_4)	21	23
Nitrous Oxide (N_2O)	310	296
HFC-23	11,700	12,000
HFC-32	650	550
HFC-41	150	97
HFC-43-10mee	1,300	1,500
HFC-125	2,800	3,400
HFC-134	1,000	1,100
HFC-134a	1,300	1,300
HFC-152a	140	120
HFC-143	300	330
HFC-143a	3,800	4,300
HFC-227ea	2,900	3,500
HFC-236fa	6,300	9,400
HFC-236ea	100	1,200
HFC-245fa	790	950
HFC-245ca	560	640
CF_4	6,500	5,700
C_2F_6	9,200	11,900
C_3F_8	7,000	8,600
C_4F_{10}	7,000	8,600
c-C_4F_8	8,700	10,000
C_5F_{12}	7,500	8,900
C_6F_{14}	7,400	9,000
NF_3	8,000	10,800
SF_6 (Sulfur hexafluoride)	23,900	22,200
$C_4F_9OCH_3$	500	390
$C_4F_9OC_2H_5$	100	55

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Sources: Intergovernmental Panel on Climate Change (IPCC), Second and Third Assessment Reports; Emissions of Greenhouse Gases in the United States, U.S. Energy Information Administration

CCX Members and Associate Members may elect to use either the IPCC's 1995 Global Warming Potentials or 2001 Global Warming Potentials provided that only the 1995 Global Warming Potentials or only the 2001 Global Warming Potentials are used for all relevant emissions and are applied consistently for the baseline and 2003 – 2006 period. (6/22/2005)

The methods prescribed herein rely on direct monitoring and conversion of directly observed activity data that are converted to emissions using emission coefficients in the WRI/WBCSD Protocols. When more than one method consistent with these provisions is available, the CCX Member's Emission Reports shall indicate which method is used. The selected methods shall be used consistently throughout the Baseline Period and for each Emission Report to CCX.

If a CCX Member chooses to use as an input to its emission calculations a measure of the energy content of consumed fuels (e.g. gigajoules, million Btu), it must calculate its emissions by applying the emission coefficient associated with the higher heating value of such fuels. The Member must remain consistent in applying this value to the calculation of its emissions during the baseline period and in the preparation of its Emission Reports to CCX.

7.5 Emissions Monitoring Methods (Except Entities Primarily Engaged in the Electric Power Production and Oil and Gas Sectors)

If a CCX Member's emitting facilities are equipped with continuous emission monitors, those monitors shall be used to quantify emissions from those facilities provided that such monitors are inspected and calibrated in accordance with best practices unless provided otherwise by CCX rules. When applicable, the emissions quantified through use of CEMs shall be adjusted to reflect the CO_2 emissions resulting from combustion of Renewable Fuels, as defined in Section 6.3.2.

If a CCX Member's emitting facilities are not equipped with continuous emission monitors, CCX Members will quantify the emissions listed in this Section 7.5 using the WRI/WBCSD Protocols.

7.5.1 CO_2 Emissions from Stationary Combustion (2006)

Except for combustion of fuels in electric power and steam generation devices operated by CCX Members primarily engaged in electric power production (see Section 7.8 below), CCX Members that own emissions from facilities not equipped with continuous emission monitors will use the WRI/WBCSD Protocols to calculate CO_2 emissions from stationary combustion.

The relevant sections of the protocols can be found at:

- Guidance section: http://www.ghgprotocol.org/standard/stationarycombustion.doc

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

- Automated worksheets: http://www.ghgprotocol.org/standard/stationary.xls

CCX Members should use GHG Protocol Worksheet 1 (Direct Emissions) only, subject to the conditions and amendments listed in the subsections below.

7.5.1.1 Weight, Volume and Heat Content Bases (2006)

Each CCX Member may use any of the fuel weight, fuel volume or heat content measures and associated emission coefficients provided in the WRI/WBCSD Protocols to determine the quantity of its total CO_2 emissions.

7.5.1.2 Emissions from Combustion of Municipal Solid Waste (2006)

Solid waste incinerators and waste-to-energy facilities that have continuous emissions monitors for CO_2 in place shall quantify gross emissions using the CEMs. The net CO_2 emissions from such facilities that are to be included under CCX rules shall be determined by subtracting from gross emissions the emissions associated with combustion of Renewable Fuels as defined in Section 6.3.2.

Solid waste incinerators and waste-to-energy facilities that do not have in place CO_2 continuous emissions monitors will determine net CO_2 emissions by multiplying an emissions coefficient by the quantity of combusted solid waste. In such cases CCX Members may apply site-specific emissions coefficients that are based on documented evidence of the composition of the combusted waste (i.e. reflecting the proportion of the waste stream that is Renewable Fuels) or by applying standard emission coefficients prescribed by the CCX Environmental Compliance Committee.

7.5.2 CO_2 Emissions from Mobile Combustion (2006)

CO_2 emissions from vehicles operated by each CCX Member are Included Emissions sources if they represent Large Emission Sources (as defined in Section 1 of this *Rulebook*) and they represent an integral part of the Member's operations, or the Member elects to Opt-in such emissions. Vehicle emissions will be quantified using the WRI/WBCSD Protocols for calculating CO_2 emissions from mobile combustion.

The relevant sections of the protocols can be found at:

- Guidance section: http://www.ghgprotocol.org/standard/mobile.doc
- Automated worksheets: http://www.ghgprotocol.org/standard/mobile.xls

Unless otherwise provided by CCX, application of the WRI/WBCSD Protocols must base calculations of CO_2 emissions on fuel consumption data. Should this not be practicable for any CCX Member, the Member shall prepare, subject to CCX approval, a proposed alternative

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

method that is consistent with the principles presented in Section 7.4 above.

The prescribed CCX methods for mobile source emissions are contained in WRI/WBCSD Protocols sections IVA. Step 1 and Step 2. Application of such steps shall not employ distance traveled procedures unless use of such method by an individual CCX Member is specifically sanctioned by the Exchange as an alternative calculation methodology.

CCX Members are to use fuel receipts, fuel expenditure records and direct measurement methods to quantify fuel consumption. Records of these quantification methods are to be maintained by the Member for audit by the Provider of Regulatory Services designated by CCX.

7.5.3 N_2O Emissions from the Production of Adipic Acid and Nitric Acid (and Conversion of N_2O to CO_2 Equivalence) (2006)

CCX Members engaged in the production of adipic acid and/or nitric acid must either quantify N_2O emissions:

(i) through use of continuous emission monitors (CEMs) provided such monitors are inspected and calibrated in accordance with best practices; or,
(ii) through application of the WRI/WBCSD Protocols for calculating N_2O emissions from the production of adipic acid.

The relevant sections of the protocols for adipic acid can be found at:

- Guidance section: http://www.ghgprotocol.org/standard/adipic.doc
- Automated worksheets: http://www.ghgprotocol.org/standard/adipic.wf.3.15.02.xls

The relevant sections of the WRI/WBCSD protocols for calculating N_2O emissions from the production of nitric acid can be found at:

- Guidance section: http://www.ghgprotocol.org/standard/nitricacid.doc
- Automated worksheets: http://www.ghgprotocol.org/standard/nitricacid.xls)

If the CCX Member employs site-specific emission factors instead of the WRI/WBCSD Protocol default emission factors, the Member must maintain documentation describing laboratory tests or other methods used to determine such site-specific emission factors for CCX audit purposes. CCX Members shall also maintain documentation describing the underlying parameters employed in the WRI/WBCSD Protocol calculations, including production data and continuous emission monitor and abatement equipment effectiveness and usage data for CCX audit purposes.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

7.5.4 PFC Emissions from the Production of Semi-conductor Wafers (and Conversion of PFCs to CO_2 Equivalence) (2006)

Each CCX Member engaged in the production of semiconductor wafers must quantify PFC emissions, which are converted to metric tons of CO_2 equivalent through use of one of the following three methods:

(i) through use of continuous emission monitors, provided such monitors are inspected and calibrated in accordance with best practices;

(ii) through application of the WRI/WBCSD Protocols for Calculating PFC emissions from the production of semi-conductor wafers[2].

The relevant sections of the protocols can be found at:

- Automated worksheet: http://www.ghgprotocol.org/standard/semiconductors.xls);

or,

(iii) through application of the methods provided by the Intergovernmental Panel on Climate Change, "PFC, HFC, SF6 Emissions From Semiconductor Manufacturing (which is Section 3.6 of *IPCC Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories*, which can be found at www.ipcc-nggip.iges.or.jp/public/gp/gpgaum.htm).

Each CCX Member engaged in the manufacture of semi-conductor wafers shall maintain all documentation describing the underlying parameters employed in its emission calculations, including production data and abatement equipment effectiveness and usage data for CCX audit purposes.

7.5.5 CO_2 Emissions from the Production of Cement (2006)

Each CCX Member engaged in the production of cement shall calculate CO_2 emissions using the WRI/WBCSD Protocols for the cement industry.

The relevant sections of the protocols can be found at:

- Guidance section: http://www.ghgprotocol.org/standard/cement_climatewise.doc
- Automated worksheet: http://www.ghgprotocol.org/standard/cement_based_tool.8.20.02.PB.xls

[2] These calculation guidelines have been prepared by World Semiconductor Council (WSC), which retains all intellectual property rights.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

CCX Members shall not apply the WRI/WBCSD Protocols provision under Section 3.4 of the Cement CO_2 Protocol Guidance document that relates to "Indirect GHG savings through utilization of AFR". As per item 7.2.2 above, each CCX Member in the cement industry shall not include indirect CO_2 emissions in its Emission Baseline or Periodic Emission Reports (as discussed in Sections 4 and 5 in the WRI/WBCSD Cement CO_2 Protocol Guidance document). For CCX purposes, ownership of emissions at Jointly Owned Facilities shall be determined on the basis of provisions in Chapter 6 of this *Rulebook*.

Each CCX Member engaged in manufacture of cement shall maintain all documentation describing the underlying data and parameters employed in its emission calculations for CCX audit purposes.

7.5.6 CO_2 Emissions from the Production of Iron and Steel

CCX Members engaged in the production of iron and steel shall calculate CO_2 emissions using the WRI/WBCSD Protocols for calculating CO_2 emissions from the production of iron and steel.

The relevant sections of the protocols can be found at:

- Guidance section: http://www.ghgprotocol.org/standard/iron.doc
- Automated worksheets: http://www.ghgprotocol.org/standard/cement.xls

CCX Members shall apply Method A of the WRI/WBCSD Protocols, which requires the Member to use data on the quantity of reduction agent used in production.

CCX Members engaged in production of iron and steel shall maintain all documentation describing the underlying parameters employed in the WRI/WBCSD Protocol calculations, including materials usage data and data used in establishing custom emission factors for CCX audit purposes.

7.5.7 CO_2 Emissions from the Production of Lime (2006)

CCX Members engaged in the production of lime shall employ the WRI/WBCSD Protocols for Calculating CO_2 emissions from the Production of Lime.

The relevant sections of the protocols can be found at:

- Guidance section: http://www.ghgprotocol.org/standard/lime.doc
- Automated worksheets: http://www.ghgprotocol.org/standard/lime_spread.pb.3.15.03.xls

CCX Members engaged in the production of lime shall maintain all documentation describing the underlying parameters employed in the WRI/WBCSD Protocol calculations, including

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

production data, stoichiometric ratio data and lime content data for CCX audit purposes.

7.5.8 CO_2 Emissions from the Production of Ammonia (2006)

CCX Members engaged in the production of ammonia may quantify CO_2 emissions through use of continuous emission monitors (provided such monitors are inspected and calibrated in accordance with best practices) or through application of the WRI/WBCSD Protocols for Calculating CO_2 emissions from ammonia production.

The relevant sections of the protocols can be found at:

- Guidance section: http://www.ghgprotocol.org/standard/ammonia.doc
- Automated worksheets: http://www.ghgprotocol.org/standard/ammonia.wf.3.15.02.xls)

CCX Members engaged in manufacture of ammonia shall maintain all documentation describing the underlying parameters employed in the WRI/WBCSD Protocol calculations, including fuel purchase records, production data and any data used to form a plant-specific emission factor for CCX audit purposes.

7.5.9 HFC-23 Emissions from the Production of HCFC-22 (and Conversion to CO_2 Equivalence) (2006)

CCX Members engaged in the production of HCFC-22 must either quantify HFC-23 emissions through use of continuous emission monitors (CEMs), provided such monitors are inspected and calibrated in accordance with best practices, or through application of the WRI/WBCSD Protocols for calculating HFC-23 emissions associated with production of HCFC-22.

The relevant sections of the protocols can be found at:

- Guidance section: http://www.ghgprotocol.org/standard/hcfc22.doc
- Automated worksheets: http://www.ghgprotocol.org/standard/hcfc22wf.pb.3.15.02.xls)

CCX Members shall to use Approach 1 or Approach 2 of the WRI/WBCSD Protocols, if practicable. Should this not be practicable, the CCX Member will consult with the CCX Environmental Compliance Committee to develop appropriate alternatives as described in Section 7.1.3.

CCX Members engaged in HFC-22 production shall maintain all documentation describing the underlying parameters employed in the WRI/WBCSD Protocol calculations, including data from instantaneous measurements of emission flows and concentrations and data supporting the calculation of aggregate emissions based on periodic gas samples for CCX audit purposes.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

7.5.10 CO_2 Emissions from Silicon Smelting

CCX Members shall quantify GHG emissions from silicon smelting by calculating the difference in weight between carbon inputs to the process from non-renewable sources and the carbon waste left at the end of the process. It is assumed that the difference between these two figures represents the weight of carbon from non-renewable sources oxidized (i.e., converted to carbon dioxide) in the process. This can be converted into the weight of carbon dioxide emitted by multiplying the weight of carbon oxidized by 44/12, the conversion factor to convert carbon into carbon dioxide.

The calculation is as follows:

> CO_2 process emissions from silicon smelting = (carbon inputs from non-renewable sources) – (carbon waste produced) * 44/12.

The non-renewable inputs of carbon into the silicon smelting process are coal, coke and carbon anodes. The renewable inputs of carbon include charcoal from wood and wood chips which are not counted as GHG emissions. The carbon waste remaining at the end of the process includes those parts of the anodes not consumed as well as other waste. To obtain the weight of carbon in the inputs and waste, their weight must be multiplied by their carbon content. These figures are all auditable. Therefore:

> CO_2 emissions from silicon smelting = ((weight of carbon inputs from non-renewable sources* carbon content) – (weight of carbon waste * carbon content)) * 44/12.

7.6 Greenhouse Gas Emissions from Primary Aluminum Metal Production (2006)

CCX Members engaged in production of primary aluminum shall quantify emissions of CO2, PFCs and SF6 through application of the WRI/WBCSD Protocols for calculating direct greenhouse gas emissions from primary aluminum metal production.

The relevant sections of the protocols can be found at:

- Guidance section: http://www.ghgprotocol.org/standard/IAI_WRI_AluminumToolGuideanceJune2003.doc
- Automated worksheets: http://www.ghgprotocol.org/standard/aluminum_Tool_06-03.xls

CCX Members engaged in primary aluminum production shall maintain all documentation describing the underlying parameters employed in the WRI/WBCSD Protocol calculations, including information on potline types, production quantities, values used for pitch and coke usage in anode formulation for CCX audit purposes.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

7.7 Emissions Monitoring for the Forest Products Sector

7.7.1 Direct Emissions Monitoring (2006)

CCX Members in the forest products sector shall calculate GHG emissions using the WRI/WBCSD Protocols for the pulp and paper sector.

The relevant sections of the protocols can be found at:

- Guidance section: http://www.ghgprotocol.org/standard/pulp_paper_report.pdf
- Automated worksheets: http://www.ghgprotocol.org/standard/pulp_&_paper_workbook.xls

The emissions to be included in CCX Emission Baselines and Periodic Emission Reports are:

(1) CO_2 emissions from stationary fossil fuel combustion, kraft mill lime kilns and calciners (pursuant to the Opt-in provisions in Section 6.7.5 of this *Rulebook*, CCX Members may elect to include CH_4 and N_2O emissions from combustion of fossil fuels and biomass fuels);
(2) CO_2 emissions from make-up $CaCO_3$ or Na_2CO_3 used in the pulp mill (provided such make-up chemicals are of fossil origin; its make-up chemicals are of biomass origin the CO_2 released when they are used is treated as zero emission);
(3) CO_2 emissions from on-site vehicles and machinery and emissions from other core operations (as applicable under the included emissions provisions provided in Section 6.3.1 of this *Rulebook*); and,
(4) imports of CO_2.

CCX Members in the forest products sector shall maintain all documentation describing the underlying parameters employed in the WRI/WBCSD Protocol calculations for CCX audit purposes.

7.8 Emissions Monitoring in the Electric Power and Steam Generation Sector

7.8.1 CO_2 Emissions from Electric Power and Steam Generation Equipment

Electric power generating units shall quantify CO_2 emissions using data from continuous emission monitors (CEMs) as reported to the U.S. Environmental Protection Agency or other regulatory agencies as applicable. If CEMs data are not available, Members will quantify CO_2 emissions by using the fuel consumption methods contained in the U.S. Code of Federal Regulations 40 CFR Part 75 or equivalent methods. Application of these methods shall include documentation of the nature and frequency of relevant laboratory tests of fuel carbon content.

For combustion of natural gas or liquid fuels CCX Members may use either the WRI/WBCSD Protocols for stationary combustion or CEMs, as described in Section 7.5.1.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

7.8.2 Sulfur Hexafluoride (SF_6) Emissions from Electrical Transmission Equipment (2006)

SF_6 emissions from electric power transmission equipment will be quantified using forms as prescribed by the Exchange from time to time.

7.9 Electricity Purchases

Each CCX Member not primarily engaged in electricity generation that elects to participate in the Electricity Purchase Opt-in Program shall establish its Electricity Purchase Baseline and formulate its reported Electricity Purchases reports using electricity purchase receipts, invoices and other auditable records, as applicable.

7.10 Emissions Monitoring for the Oil and Gas Sector

7.10.1 Exploration, Production and Refining

CCX Members with emissions resulting from exploration, production, refinement and transportation of oil and gas must quantify emissions from these activities using methods that are publicly accessible, such as e.g. methods published by the American Petroleum Institute.

CCX Members in the oil and gas sector must annually submit to CCX an emissions audit report prepared by a third party entity approved by CCX. Such reports will be subject to review by CCX. The CCX Environmental Compliance Committee shall consider proposals for enhancing the quality and practicality of the Periodic Emission Reports and the audit process.

7.10.2 Transport (Except Gas Pipelines) and Stationary Combustion of Conventional Fuels

Methods described in Section 7.5.1 (CO_2 emissions from stationary combustion) and Section 7.5.2 (CO_2 emissions from mobile combustion) are to be employed to quantify Greenhouse Gas emissions, as applicable, from included facilities and vehicles used in the oil and gas sector.

7.10.3 Emissions Monitoring for Natural Gas Pipelines

The CCX Environmental Compliance Committee shall oversee the development of methods for quantifying greenhouse gas emissions from natural gas pipeline systems. The methods will address emissions from fuel combustion (e.g. at compressor stations) as well as fugitive emissions from routine operations and maintenance and audit activities.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Chapter 8 Commercial Forestry Sector

8.0 Purpose (2006)

This chapter:

- provides definitions and rules governing the quantification and reporting of changes in Carbon Stocks for the commercial forestry sector and the associated rules governing issuance and Surrender of Carbon Financial Instruments; and,
- establishes the conditions that a CCX Member in the commercial forestry sector must meet in order to be issued Exchange Allowances on the basis of increases in Carbon Stocks as quantified using the Model-based Accounting Approach or to use the Carbon-stable Accounting Approach for Carbon Stocks on its commercial forest land.

CCX Members in the commercial forestry sector may also earn Exchange Offsets on the basis of increased Carbon Stocks in CCX-registered Exchange Forestry Offset Projects on land that is not part of its commercial forest inventory. The rules and eligibility criteria governing Exchange Forest Offset projects are separate from those presented in this chapter and are presented in Chapter 9 of this *Rulebook*.

8.1 General Provisions (2006)

There are two CCX-approved approaches for quantifying changes in Carbon Stocks on a Member's commercial forest land:

- Carbon-stable Accounting Approach; or,
- Model-based Accounting Approach.

At the outset of the Market Period, each Member shall elect to report the Carbon Stocks on its commercial forest land using either the Model-based Accounting Approach or the Carbon-stable Accounting Approach. The approach selected shall remain the basis for the Member's reports on changes in Carbon Stocks for the duration of the Market Period.

Each Member shall issue a non-binding statement of intent at the outset of the Market Period to respect the principle of permanence, excluding catastrophic events and land sales, to maintain beyond 2006 the quantity of Carbon Stocks it maintained during the Market Period.

The quantity of Exchange Allowances issued on the basis of increases in Carbon Stocks that can be sold to CCX Members and Associate Members for use in Compliance is limited by provisions in Section 8.14 of this chapter.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

8.2 Rule Interpretation and Modifications (2006)

Unless otherwise provided in this *Rulebook*, applicable CCX Committees shall be responsible for recommending interpretations and appropriate modifications of rules established in this Chapter to the Exchange. The CCX Forestry Committee is responsible for reviewing all proposed interpretations and modifications and shall have final decision-making authority regarding this Chapter, except for matters that may directly benefit the majority of Committee Members. Such matters may also be reviewed by another CCX Committee for final disposition.

All figures, formulae, coefficients, and statistical and quantification methods and procedures contained in this chapter and the attached Appendix 8.1 are subject to revision by the CCX Forestry Committee.

All references in this chapter to the rights and obligations of Members shall refer only to those CCX Members from the commercial forestry sector.

8.3 Carbon-stable Accounting Approach (2006)

A Member with commercial forests in the United States may quantify and report changes in Carbon Stocks associated with individual CCX-registered Exchange Forestry Offset Projects on the condition that there is no net decrease in overall Carbon Stocks in the Member's commercial forest inventory.

Each Member electing to use the Carbon-stable Accounting Approach shall:

(1) obtain certification from the Sustainable Forest Initiative, Forest Stewardship Council or another similar reputable third-party verification program that the Member's commercial forest lands are managed in a sustainable fashion; and,
(2) provide a warranty signed by a corporate officer that, excluding land sales and catastrophic events, there will be no net decrease in overall Carbon Stocks held in the Member's commercial forestry inventory during the Market Period.

Each Member electing to use the Carbon-stable Accounting Approach shall be required annually to submit evidence that it has maintained certification of sustainable forest management and shall provide annual confirmation, signed by a corporate officer, that there will be no net decrease in overall Carbon Stocks held in the Member's commercial forestry inventory during the Market Period.

The statement that there is no decrease in overall Carbon Stocks held in a Member's commercial forestry inventory during the Market Period is subject to audit by CCX.

If a Member elects to report using the Carbon-stable Accounting Approach, it shall not be issued Carbon Financial Instruments on the basis of changes in Carbon Stocks associated with its

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

commercial forest inventory for the duration of the Market Period. However, such Members may be eligible for issuance of Exchange Offsets for approved forest offset projects on land that is not part of their commercial forestry inventory for the duration of the Market Period. Rules governing issuance of Carbon Financial Instruments for members reporting changes in Carbon Stocks associated with Exchange Forestry Offset Projects are specified in Chapter 9 of this *Rulebook*.

Exchange Forestry Offset Projects owned by Members in the commercial forestry sector shall be considered as Owned and Operated facilities. The sale and use for Compliance of Exchange Offsets issued on the basis of Owned and Operated facilities are subject to limits specified in Section 4.11.6 of this *Rulebook*.

8.4 Model-based Accounting Approach (2006)

A Member may use the Model-based Accounting Approach to quantify and report net changes in Carbon Stocks in its commercial timber inventory. The net change in Carbon Stocks is defined by the equation:

> Net change in Carbon Stocks = (increases in Carbon Stocks due to growth) minus (the quantity by which Carbon Stocks decreased due to harvest, pest, fire and adverse weather events).

There are currently two recognized methods for quantifying net changes in Carbon Stocks in a Member's commercial inventory using the Model-based Accounting Approach:

- proprietary timber inventory techniques; and,
- publicly available growth and yield models.

Members electing to use the Model-based Accounting Approach must report changes in their commercial forest inventory on an annual basis. Exchange Allowances will be issued to a Member if for the calendar year the Member reports net increases in Carbon Stocks from the previous calendar year. If a Member reports for the calendar year a net decrease in Carbon Stocks from the previous calendar year the Member must Surrender Carbon Financial Instruments in an amount reflecting net decreases in Carbon Stocks from the previous year.

Rules governing issuance and Surrender of Carbon Financial Instruments for companies using the Model-based Accounting Approach are specified in Section 8.12 of this chapter.

8.4.1 Proprietary Timber Inventory Techniques (2006)

Each Member may quantify changes in Carbon Stocks in its total commercial forestry inventory using its own proprietary growth and yield models subject to the following conditions:

(1) that such models can be audited; and,

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

(2) that any information that might affect the net supply of Carbon Financial Instruments associated with changes in the Member's Carbon Stocks– including annual projections of net changes in Carbon Stocks, details of acquisitions or dispositions of land, records of catastrophic damage, and other records and information determined by the CCX Forestry Committee to be of specific relevance for determining the net supply of Carbon Financial Instruments– shall be made public to ensure market transparency and to avoid Price Congestion.

In addition, the proprietary timber inventory techniques shall include a plan for direct measurement of tree growth and a method for calculating the variance of estimates of increases in Carbon Stocks due to tree growth in a transparent and statistically valid manner.

8.4.2 Publicly Available Growth and Yield Models (2006)

Each Member may quantify changes in Carbon Stocks in its commercial forestry inventory using CCX-approved publicly available growth and yield models. A detailed protocol for the quantification of net changes in southern pine Carbon Stocks based on the GaPPS[1] model is provided in Appendix 8.1. The CCX Forestry Committee may develop protocols based on publicly available growth and yield models for other species, such as mixed hardwoods, red pine and fir/spruce, at its discretion.

Each Member using publicly available growth and yield models to quantify changes in Carbon Stocks shall submit reports for all land for which appropriate quantification methods and procedures have been approved by the CCX Forestry Committee. If no such method or procedure is available, a Member may either:

(i) exclude such land from its reports, on the condition that the Member obtains reputable third-party certification that the rest of its commercial forest lands are managed sustainably and that it provides a warranty that, excluding land sales and catastrophic events, there will be no net decrease in Carbon Stocks on the rest of the Member's commercial forestry inventory during the Market Period; or,

(ii) propose an alternative method or procedure for review by the CCX Forestry Committee. Such method or procedure shall conform to the standards of public accessibility, verification and auditing specified in Section 8.5 of this chapter.

8.5 General Standards for Quantifying and Reporting Changes

All methods and procedures approved by CCX for quantifying and reporting changes in Carbon Stocks shall conform to the following standards:

[1] GaPPS (Georgia Pine Plantation Simulator) is a tool for modeling growth and yield of slash pine (Pinus elliottii Engelm.) and loblolly pine (Pinus taeda L.) plantations and evaluating the effects of various intensive management treatments.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

(1) relevant mathematical and statistical formulae and models shall be publicly accessible (excluding exemptions granted under provisions of Section 8.10 of this chapter);
(2) protocols for measuring and monitoring inventories and calculating variances of the estimates shall be publicly accessible (excluding exemptions granted under provisions of Section 8.10 of this chapter);
(3) all aspects of the quantification of changes in the Member's Carbon Stocks shall be subject to verification by independent CCX-approved entities at the Member's expense; and,
(4) the verified data and quantification methods are subject to audit by CCX.

8.6 Carbon Stocks Quantified and Reported (2006)

Net changes in Carbon Stocks shall be quantified only on the basis of the wood in the main stem of the tree up to the terminal bud, excluding carbon sequestered in root systems and the branches. Quantifications of Carbon Stocks reduced through harvest shall also include only the main stem of the tree.

Each Member shall retain full legal rights to the increases in its Carbon Stocks that are not currently quantified and reported for CCX purposes, e.g. in roots, litter and soil.

8.7 Pest, Fire and Weather

In cases of adverse weather events or outbreaks of fire and pest damage that do not reduce the quantity of Carbon Stocks on a parcel of forested land to levels below those documented for January 1, 2003, the Member shall document the quantity of timber destroyed by the fire, pest or adverse weather event and Surrender an equivalent amount of Carbon Financial Instruments. The Member shall continue to quantify and report subsequent increases and decreases in Carbon Stocks on that land and shall be issued or must Surrender Carbon Financial Instruments accordingly.

In cases of catastrophic weather events or outbreaks of fire and pest damage that reduce the quantity of Carbon Stocks on a parcel of forested land to levels below those documented for January 1, 2003, the Member shall document the quantity of timber destroyed by the fire, pest or adverse weather event. The Member shall Surrender Carbon Financial Instruments in an amount equivalent to the quantity of Exchange Allowances issued to that Member in previous years on the basis of the increase in Carbon Stocks on the affected land. Those Stands shall be excluded from future projections of annual changes in Carbon Stocks until the quantity of Carbon Stocks in those Stands reaches the reported quantities for January 1, 2003.

All reports of significant damage caused by pest, fire and adverse weather events shall be subject to review by the CCX Forestry Committee.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc.

8.8 Reporting Schedule and Methods (2006)

Reports must be submitted in accordance with the CCX True-up scheduling process that is set out in Section 7.2.3 of this *Rulebook*. All changes in Carbon Stocks must be quantified and reported in metric tons of carbon dioxide equivalent.

Each Member shall specify in its reports which methods or procedures for quantifying changes in Carbon Stocks it has employed and shall identify and explain any modifications made to the CCX-approved methods or procedures. Such changes must be approved by the CCX Forestry Committee. When more than one method consistent with these provisions is available, the Member's annual reports shall indicate which method was used.

Each Member using more than one method to calculate changes in Carbon Stocks (e.g. a Member that uses a proprietary growth and yield model for its hardwood forests and the GaPPs-based model for its southern pine forests) shall submit one report for each method used.

8.8.1 Reports Using Carbon-stable Accounting Approach (2006)

Each Member shall annually submit certification of sustainable forestry management as prescribed in Section 8.3.

8.8.2 Reports Using Model-based Accounting Approach (2006)

For Members using publicly available growth and yield models, a modified version of the approved southern pine models shall be used to calculate Forest Carbon Sequestration for southern pine. A detailed protocol for the quantification of net changes in southern pine Carbon Stocks is provided in Appendix 8.1. The CCX Forestry Committee may develop protocols based on publicly available growth and yield models for other species, such as such as mixed hardwoods, red pine and fir/spruce, at its discretion.

Each Member employing proprietary timber inventory techniques to quantify net changes in Carbon Stocks shall develop forms for reporting in accordance with its own techniques. The CCX Forestry Committee shall approve the format and required content of such reports.

During 2003, companies using the Model-based Accounting Approach will use models to project Carbon Stocks on January 1, 2003 and December 31, 2006 and the changes in Carbon Stocks on an annual basis for 2003-2006. (1/30/2004)

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Figure 8.1 Summary of Required Reports for Members Using Model-based Accounting Approach

Initial Report:
- Total Carbon Stocks on January 1, 2003.

Annual Report:
- Projected or measured increase in Carbon Stocks for Compliance Year, adjusted for silvicultural practices and acquisitions and dispositions.
- Reduction in Carbon Stocks in Compliance Year due to harvest, fire, pest and weather.
- Net change in Carbon Stocks = (projected or measured increase in Carbon Stocks) – (quantity by which Carbon Stocks decreased due to harvest, fire, pest and weather).

Final Report:
- Total Carbon Stocks on December 31, 2006.
- Retrospective adjustments, if any, to total Carbon Stocks on January 1, 2003.
- Total net change in Carbon Stocks = (total Carbon Stocks on December 31, 2006) – (total Carbon Stocks on January 1, 2003).

Each Member using the Model-based Accounting Approach to quantify net changes in Carbon Stocks must submit the reports specified below.

8.8.2.1 Initial Report (2006)

Each Member shall submit an initial report specifying estimated total Carbon Stocks on January 1, 2003.

8.8.2.2 Annual Reports (2006)

Each Member shall submit an annual report for Compliance Years 2003, 2004 and 2005 quantifying the net change in Carbon Stocks. The report shall specify:

(1) any adjustments made to the above projection on the basis of measurements made during the Compliance Year or to take account of particular silvicultural treatments such as thinning and fertilization not previously reported or to take account of acquisitions and dispositions, calculated in accordance with the procedures specified in Sections 8.13.1 and 8.13.2 respectively of this chapter;

(2) decreases in Carbon Stocks during the Compliance Year due to harvest, pest, fire and weather;

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

(3) net changes in Carbon Stocks in the Compliance Year = (adjusted projections of increases in Carbon Stocks) minus (quantity of decreases in Carbon Stocks due to harvest, pest, fire and weather); and,
(4) projected changes in Carbon Stocks for future years, adjusted for acquisitions and dispositions, silvicultural treatments, harvest, pest, fire and weather.

Figure 8.2 Summary of Annual Report

(1)	Adjustments to item 1 to account for measurements made during the Compliance Year, silvicultural treatments not previously projected and acquisitions and dispositions.
(2)	Decreases in Carbon Stocks due to harvest, fire, pest and weather.
(3)	Net changes in Carbon Stocks = item 2 – item 3.
(4)	Adjusted projection of changes in Carbon Stocks for future years to account for items 2 and 3.

8.8.2.3 Final Report

Each Member shall submit a Final Report after the end of 2006 that shall specify:

(1) total Carbon Stocks on December 31, 2006, based on measurements taken during the Market Period;
(2) any retrospective adjustments to be made to the previously reported figure for total Carbon Stocks on January 1, 2003, including adjustments to account for acquisitions and dispositions as specified in Section 8.11.3 of this chapter;
(3) the net change in Carbon Stocks from January 1, 2003 through December 31, 2006; and,
(4) the difference between the net change in Carbon Stocks calculated on the basis of measurements made in 2006 and the cumulative net change in Carbon Stocks reported in previous reports.

Figure 8.3 Summary of Final Report

(1)	Total Carbon Stocks on December 31, 2006.
(2)	Adjusted total Carbon Stocks on January 1, 2003.
(3)	Net change in Carbon Stocks = item 1 – item 2.
(4)	Difference between item 3 and cumulative total of net changes in Carbon Stocks in annual reports for 2003, 2004 and 2005.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

8.9 Accounting for Variance in Sampling and Calculations of Growth (2006)

In order to ensure high levels of statistical confidence in the reported figures for net increases in Carbon Stocks due to tree growth, the calculations of increases in Carbon Stocks shall be "discounted" to account for the statistical variance associated with the measurement and calculation methods used.

Any method for determining variance in sampling and calculations of growth, including the minimum confidence level required for use of such method, shall be approved by the Executive Committee at the recommendation of the CCX Forestry Committee.

Members are allowed but not required to use the sampling and calculation procedures for the final report in 2006 specified in Appendix 8.1.

Prior to approval of a method for determining variance in sampling and calculations of growth, 20% of CFIs issued to a Member using the Model-based Accounting Approach that realizes positive net changes in Carbon Stocks shall be placed in an escrow account.

Once a method for determining variance has been approved for use by a Member, a portion of the CFIs in the escrow account of that Member may be released to the Member on the basis of calculations of statistical confidence levels previously approved as part of that method. CFIs issued to each Member that remain in the escrow account after the approved method for determining variance has been utilized shall be cancelled.

8.10 Proprietary Information (2006)

With the exception of certain elements to be determined by the Executive Committee at the recommendation of the CCX Forestry Committee, all aspects of the methods, procedures and data used to quantify changes in Carbon Stocks shall be publicly available. The CCX Forestry Committee will determine whether certain information will remain proprietary. Proprietary information will be made available on a confidential basis to third-party Verifiers and the Provider of Regulatory Services designated by CCX for audit purposes.

As part of the procedure for determining whether particular information is proprietary in nature, Members shall not be required to reveal that information directly to other Members from the commercial forestry sector. Such information shall be disclosed on a confidential basis to Members and advisors designated by the CCX Forestry Committee to assist in the determination. In cases of dispute about whether particular information should remain proprietary, Members shall agree to arbitration by Exchange Members for whom participation in such arbitration shall not present a conflict of interest as defined in Section 3.12 of this *Rulebook*.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc.

8.11 Verification and Auditing

Each Member's reports of changes in Carbon Stocks are subject to third-party verification by an independent CCX-approved entity. Costs of verification shall be borne by the Member. All reports are also subject to audit by CCX.

Each Exchange Member shall maintain readily accessible records containing the data, calculations, conversion factors, spreadsheets and other information that provide the basis for substantiating reports to CCX of changes in Carbon Stocks. Underlying data and calculations prepared in accordance with CCX-prescribed rules and procedures shall be subject to audit by CCX. All such records shall be maintained for at least the duration of the Market Period and subsequently in accordance with internal company procedures on document retention.

8.12 Issuance and Surrender of Carbon Financial Instruments (2006)

Exchange Allowances shall be issued each year to each Member using the Model-based Accounting Approach that realizes positive net changes in Carbon Stocks, i.e. increases in Carbon Stocks due to growth are greater than the reductions in Carbon Stocks due to harvest, fire, pest and adverse weather events. The Exchange Allowances will be issued upon receipt of a verifier's report and review by the Exchange and its Provider of Regulatory Services.

One Exchange Allowance will be issued per one hundred metric tons of CO_2 equivalent increase in Carbon Stocks. These Allowances will have the Vintage of the year in which the net increase in Carbon Stocks occurs. When applicable, each Member using the Model-based Accounting Approach shall annually Surrender Carbon Financial Instruments in an amount reflecting net decreases in Carbon Stocks from the previous year.

Allocations of Carbon Financial Instruments for the period 2003-2006 shall be adjusted retrospectively after the submission of the final report to reflect any retrospective adjustments in total net changes in Carbon Stocks from January 1, 2003 through December 31, 2006.

The quantity of Exchange Allowances issued on the basis of increases in Carbon Stocks that can be sold to CCX Members or Associate Members for use in Compliance is limited by provisions in Section 8.14 of this chapter.

8.13 Acquisition and Disposition of Forested Land

The quantification of changes in Carbon Stocks will be adjusted to reflect acquisition or disposition of forested land.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

8.13.1 Acquisition of Forested Land

If a Member acquires a parcel of forested land during the Market Period, that Member shall not be issued or shall not Surrender Carbon Financial Instruments for increases or decreases in Carbon Stocks on the land prior to its acquisition.

Following the acquisition of forested land, an inventory shall be taken and the Carbon Stocks on that land shall be quantified. Projected annual changes in Carbon Stocks reported to CCX shall be adjusted to take account of the projected changes in Carbon Stocks on the land acquired. Members shall be issued or shall not Surrender for increases or decreases in Carbon Stocks on that land from the date of acquisition through December 31, 2006.

8.13.2 Disposition of Forested Land (2006)

If there had been a net increase in Carbon Stocks on a parcel of forested land between 2003 and the time of its disposition, this amount shall be deducted from the previously reported total amount of net changes in Carbon Stocks on the Member's land. In such cases, the Member shall Surrender an amount of Carbon Financial Instruments equivalent to the amount issued to that Member in previous years on the basis of the increase in Carbon Stocks on that parcel of forested land.

Disposition by a Member of a parcel of forested land on which there had been a net reduction in Carbon Stocks between 2003 and the time of its disposition will not result in any adjustments to the net reduction.

Following the disposition of forested land, projected annual changes in Carbon Stocks reported to CCX shall be adjusted to take account of the disposition. A Member shall not be issued or shall not Surrender Carbon Financial Instruments for increases or decreases in Carbon Stocks on forested land after the date of its disposition.

8.13.3 Reporting Acquisitions and Dispositions (2006)

Each Member shall report any acquisitions and dispositions of forested land in the first report to CCX after the transaction. The report shall state any retrospective adjustments to be made in net changes in the Member's Carbon Stocks as a result of the transaction.

For the purposes of the Final Report (see Section 8.8.2.3), Members using publicly available growth and yield models shall not adjust the revised figure for total Carbon Stocks on January 1, 2003 to take account of the quantity of Carbon Stocks on forested land at the time of its acquisition during the Market Period. The annual net increases or decreases in Carbon Stocks on acquired land shall be included in calculations of changes in Carbon Stocks subsequent to the date of acquisition.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

For the purposes of the Final Report, any forested land sold by a Member during the Market Period on which there had been a net increase in Carbon Stocks between 2003 and the time of its disposition shall be considered as if it were not owned by the Member from January 1, 2003 through December 31, 2006.

8.14 Limitations on Use of Carbon Financial Instruments Issued on the Basis of Net Changes in Carbon Stocks (2006)

For all Members using the Model-based Accounting Approach, and regardless of a Member's Direct Emissions Baseline, the maximum net decreases in Carbon Stocks requiring Surrender of Carbon Financial Instruments shall be limited to 3% of each Member's Direct Emission Baseline during 2003, 4% of its Direct Emission Baseline during 2004, 6% of its Direct Emission Baseline during 2005 and 7% of its Direct Emission Baseline during 2006.

For all Members using the Model-based Accounting Approach, and regardless of a Member's Direct Emissions Baseline, the maximum net increases in Carbon Stocks that shall be recognized for the purpose of True-up and sales on the CCX is limited to 3% of the CCX Member's Direct Emission Baseline during 2003, 4% of its Direct Emission Baseline during 2004, 6% of its Direct Emission Baseline during 2005 and 7% of its Direct Emission Baseline during 2006.

The limitations specified above on the Surrender, sale or use for True-up of Carbon Financial Instruments shall be applied separately to the limitations on the Surrender, sale or use for True-up of Carbon Financial Instruments associated with changes in Direct Emissions and Electricity Purchase Opt-ins (Sections 4.8, 4.10 & 4.11.2 of this *Rulebook*).

The Single Firm Sales Limit (Section 4.11.3 of this *Rulebook*) and the limitations on Banking (Section 4.11.4 of this *Rulebook*) shall be applied to Exchange Allowances issued on the basis of increases in Carbon Stocks separately to the application of these limitations to other Carbon Financial Instruments issued to a Member.[2]

Subject to rules that may be developed by CCX, Exchange Allowances issued on the basis of increases in Carbon Stocks in excess of the limits on the sale of such Exchange Allowances as specified above may be marketed as Super Reductions in accordance with Section 4.11.2.1 of this *Rulebook*.

8.14.1 Alternative Method for Defining Maximum Net Increases in Carbon Stocks

For Members that use the Model-based Accounting approach, the maximum net increases in Carbon Stocks that shall be recognized for the purpose of True-up and sales on the CCX can,

[2] i.e. a Member that has reached its Single Firm Sales Limit with regard to Exchange Allowances sold on the basis of a reduction in Direct Emissions, shall nevertheless be able to sell Exchange Allowances issued on the basis of increases in Carbon Stocks up to the quantity specified by the Single Firm Sales Limit, and vice versa.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc.

with approval of the CCX Forestry Committee, be defined on the basis of a Synthetic Direct Emission Baseline.

The Synthetic Direct Emission Baseline is defined as a quantity of metric tons of carbon dioxide emissions calculated using the following equation:

Total heat content of all fuels combusted on-site (in gigajoules) x 0.0273

Where total heat content is the heat content associated with total fuel consumption (to include fossil fuels and biomass-based fuels) during a year that is representative of the CCX baseline period (1998 through 2001). The quantity of total heat content of all fuels combusted on-site that is reported to CCX must be supported by documented evidence provided by a third party entity that has experience in developing greenhouse gas emission inventories.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc.

APPENDIX

TO

CHAPTER 8

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Appendix 8.1 Protocol for Quantifying Net Changes in Carbon Stocks in Southern Pine Plantations

This protocol describes the methods and procedures for quantifying net changes in Carbon Stocks in southern pine plantations using the approved southern pine models. This protocol is intended only for use in the CCX Market Period and should be read in conjunction with Chapter 8 of this *Rulebook*. This protocol is an initial tool for quantifying changes in Carbon Stocks and may be amended as the Market Period progresses to take account of lessons learned.

All references in this Appendix to the rights and obligations of Members shall refer only to those CCX Members from the commercial forestry sector electing to quantify net changes in Carbon Stocks through the use of publicly available growth and yield models.

The Approved Southern Pine Models

Each Member shall use the GaPPS model or similar models, such as those developed by the Plantation Management Research Cooperative (PMRC), to project the volume of tree growth for southern pine for the period of January 1, 2003 through December 31, 2006. This projected volume of growth is converted through the use of appropriate conversion factors to the weight of carbon dioxide removed or sequestered from the atmosphere in order to yield that volume of growth.

GaPPS (Georgia Pine Plantation Simulator)[3] is a computer-based tool for modeling growth an yield of loblolly pine (*Pinus taeda L.)* and slash pine (*Pinus elliottii Engelm.*) plantations and evaluating the effects of various intensive management treatments on the Stands. Slash and loblolly pine are also known as southern pine. The equations used in the GaPPS model are published in the Plantation Management Research Cooperative (PMRC) Technical papers 1996-1 (loblolly)[4] and 1996-3 (slash). (1/30/2004)

Reporting Schedule

Each Member shall submit the reports specified below with respect to land forested with southern pine that the Member owns or to which the Member owns sequestration rights.

Initial Report

Each Member shall submit an initial report specifying:

(1) estimated total Carbon Stocks on January 1, 2003; and,
(2) projected annual changes in Carbon Stocks from January 1, 2003 through December 31, 2006.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

168

Annual Reports (2006)

Each Member shall submit an annual report, on a calendar year basis, for Compliance Years 2003, 2004 and 2005 quantifying the net change in Carbon Stocks. The report shall specify:

(1) previously projected increases in Carbon Stocks due to tree growth for the Compliance Year;
(2) any adjustments made in the above projections to take account of particular silvicultural treatments such as Thinning and fertilization not previously reported and to take account of acquisitions and dispositions, calculated in accordance with the procedures specified in Sections 8.13.1 and 8.13.2 of this *Rulebook* respectively;
(3) decreases in Carbon Stocks during the Compliance Year due to harvest, pest, fire and weather;
(4) net changes in Carbon Stocks in the Compliance Year = (adjusted projections of increases in Carbon Stocks) minus (quantity of decreases in Carbon Stocks due to harvest, fire, pest and weather); and,
(5) projected changes in Carbon Stocks for the coming year, adjusted for acquisitions and dispositions, silvicultural treatments and harvest, fire, pest and weather.

Appendix Figure 8.1 Summary of Annual Report

(1)	Previous projection of increases in Carbon Stocks.
(2)	Adjustments to item 1 to account for silvicultural treatments, acquisitions and dispositions.
(3)	Decreases in Carbon Stocks.
(4)	Net changes in Carbon Stocks = item 2 – item 3.
(5)	New projection of changes in Carbon Stocks for the coming year to account for items 2 and 3.

Final Report

Each Member shall take measurements of Carbon Stocks as close as possible to December 31, 2006. These measurements shall enable a retrospective adjustment of both estimated total Carbon Stocks on January 1, 2003 and the net change in Carbon Stocks from January 1, 2003 through December 31, 2006. The final report shall specify:

(1) total Carbon Stocks on December 31, 2006;
(2) any retrospective adjustments to be made to the previously reported figure for total Carbon Stocks on January 1, 2003, including adjustments to account for acquisitions and dispositions as specified in Section 8.13.3 of this *Rulebook*;

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

(3) the net change in Carbon Stocks from January 1, 2003 through December 31, 2006; and,
(4) the difference between the net change in Carbon Stocks calculated on the basis of measurements made in 2006 and the cumulative net change in Carbon Stocks reported in previous reports.

Appendix Figure 8.2 Summary of Final Report

(1)	Total Carbon Stocks on December 31, 2006.
(2)	Adjusted total Carbon Stocks on January 1, 2003.
(3)	Net change in Carbon Stocks = item 1 – item 2.
(4)	Difference between item 3 and cumulative total of net changes in Carbon Stocks in annual reports for 2003, 2004 and 2005.

The procedures for the issuance and Surrendering of Carbon Financial Instruments on the basis of net changes in Carbon Stocks are described in Section 8.12 of this *Rulebook*.

General Principles

Each Member shall use the approved southern pine models to generate the reported figures.

Each Member shall report net changes in Carbon Stocks in metric tons of carbon dioxide (CO_2) equivalent.

Net changes in Carbon Stocks shall be quantified only on the basis of the wood in the main stem of the tree up to the terminal bud, excluding carbon sequestered in the roots system and the branches. The approved southern pine models projects the volume of tree growth including the bark of the main stem of the tree up to the terminal bud. Measurements of Carbon Stocks reduced through harvest shall also include only the main stem of the tree including the bark.

Incidental hardwood and dead trees shall be excluded from all projections and calculations.

The conversion factor for converting the weight of carbon in Above-ground Biomass to weight of carbon dioxide (CO_2) equivalent shall be 3.666667.

The conversion factor for converting dry weight of harvested timber to weight of carbon shall be 0.5.
Each Member with forested land in the West Gulf region, which comprises the natural range of loblolly pine and the introduced range of slash pine west of the Mississippi River, including Texas, Louisiana, Oklahoma and Arkansas, shall develop a method to adjust the approved southern pine models to take into account specific growing conditions of that region.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Procedures for Annual Reports

The net change in Carbon Stocks in 2003, 2004 and 2005 shall be calculated by deducting the amount by which Carbon Stocks decreased in the Compliance Year through harvest, fire, pest and adverse weather events from the increase in Carbon Stocks projected for that year by the approved southern pine models.

Adjustments to the Projected Annual Increase of Carbon Stocks (2006)

The projection of the annual increase in Carbon Stocks for the Compliance Year contained in the most recent report submitted by the Member to CCX shall be amended to take account of silvicultural treatments that have taken place in that year,, such as, but not limited to, mid-rotation fertilization and Thinning. The equations of the approved southern pine models contain provisions to adjust for such treatments. These treatments shall be carefully documented. (2/4/2004)

As necessary, the CCX Forestry Committee may develop a procedure for adjusting the projected annual increase in Carbon Stocks to account for the effects of different types of Thinning.

Accounting for Acquisitions and Dispositions

Adjustments shall be made to the projection of the annual increase in Carbon Stocks for the Compliance Year in accordance with the procedures specified in Sections 8.13.1 and 8.13.2 of this *Rulebook* to account for acquisitions and dispositions respectively.

Quantifying Reductions Due to Harvest, Pest, Fire and Weather

Members shall retain all records connected to the estimation, measurement and quantification of all forms of reduction in Carbon Stocks due to harvest, fire, pest and adverse weather events included in the report, including auditable harvesting records. There are two categories of reduction in Carbon Stocks which shall be documented as follows:

Harvest (2006)

The amount of wood harvested is quantified either by weighing the harvested timber or by conversion of volume estimates made using commonly accepted methods. This figure shall then be adjusted according to a standardized equation derived from approved southern pine models to

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

account for the Crown. No other premium or statistical adjustment to account for variance shall be applied to the measurements of harvest.

The weight of the wood harvested shall be converted into the amount of Carbon dioxide (CO2) equivalent removed or sequestered from the atmosphere in order to yield that weight of wood in a three stage process:

(1) from "green weight" (i.e. including moisture) of the harvested timber into "dry" weight (i.e. not including moisture);
(2) from dry weight to the amount of carbon stored in the harvested timber; and,
(3) from the amount of carbon stored in the timber to the amount of Carbon dioxide (CO2) equivalent sequestered as the harvested timber grew.

The equations of the approved southern pine models contain conversion factors for converting green weight to dry weight. The standard conversion factors specified in this protocol shall be used to perform the other two stages of the conversion process. (2/4/2004)

Pest, Fire and Weather

The equations of the approved southern pine models include standard factors to account for normal damage caused by insects and other pests that is not so severe as to require that the Member shall take new measurements of the inventory in the affected Stand. There is, therefore, no need for Members to record such damage. Members shall document and quantify the impact of rust infection and other infection or pest damage that is not adequately accounted for within the approved southern pine models.

Members shall adjust projected changes in Carbon Stocks to account for damage caused by pest, fire and adverse weather events in accordance with the procedure specified in Section 8.5 of this *Rulebook*.

Projected Annual Increase in Carbon Stocks for the Next Compliance Year

The projected annual increase in Carbon Stocks for the next Compliance Year shall be recalculated using the approved southern pine models, adjusting the inputs to account for silvicultural practices, reductions in Carbon Stocks due to harvest, pest, fire and adverse weather events, and acquisitions and dispositions.

Reporting

Annual reports shall be submitted on standard forms to be developed by the CCX Forestry Committee.

Procedures for Final Report

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

172

The report shall be based on measurements made as close as possible to December 31, 2006 on temporary plots established for CCX monitoring purposes in the dormant season (October-December) of 2006.

Stratification

Each Member shall stratify the Stands in its inventory according to Site Index, age, and Thinning history using the following categories, resulting in a potential maximum number of 36 strata:

Site Index	< 60	60<x<=70	70>	
Age	0<x<=7	7<x<=15	15<x<=22	23+
Thinning History	Not Thinned	Thinned before 2003	Thinned during 2003-2006	

Adjustments will account for silvicultural treatments through a Site Index boost in the model. Each Member shall use a well-documented method to adjust Site Index.

Sampling (2006)

The sampling procedure shall have two stages:

(1) Selection of five Stands within each Stratum as the primary sampling units; and,
(2) Selection of inventory plots as secondary sampling units within the primary sampling units.

The Stands selected in the first stage are the primary sampling units. The Stands shall be selected proportional to size based upon their timbered acreage using List Sampling with replacement.[3]

Within each selected Stand, the number of inventory plots, the secondary sampling units, shall vary by Stand size as outlined below:

Size of Stand	Number of points/plots
Less than 50 acres	5 points/plots

[3] i.e. once a Stand is chosen as a sampling unit, it shall be returned to the list of Stands from which the sample is chosen, meaning that it can be chosen as a sampling unit more than once.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

50-200 acres	10 points/plots
Greater than 200 acres	15 points/plots

Each Member shall use Prism Sampling with a Basal Area Factor of 10 for merchantable stems with a diameter at Breast Height greater than 4.5 inches. A fixed radius plot of 1/100 an acre shall be implemented and the diameter at Breast Height of every tree with a diameter less than or equal to 4.5 inches shall be measured. Every tree that appears in the lens of a wedge prism with a Basal Area Factor of 10 represents ten square feet of Basal Area. Sub-sample height shall be measured for the first and subsequently every fourth tree on the site.[4]

Data and Calculations

The data collected shall be summarized on a Stand basis to provide estimates of:

(1) trees per acre;
(2) Basal Area per acre;
(3) total dry biomass;
(4) height of Dominant Tree or Co-Dominant Trees; and,
(5) Site Index.

The data from each Stratum shall be used to calculate:

(1) Quantity of Above-ground Biomass in 2006;
(2) Quantity of Above-ground Biomass in 2003; and,
(3) Growth in Above-ground Biomass over the period 2003 to 2006.

The calculations to be undertaken are specified in the CCX Forestry Committee paper, *Proposed Biomass Yield and Growth Sample Design and Estimation Procedures For Forest Products Industry CCX Participants*.

Each Member shall use the documented regression models to calculate total Carbon Stocks on a Stand level on December 31, 2006. This figure shall be compared to the projections based on the approved southern pine models using the pre-2003 inventory data as inputs. The comparison will enable a retrospective adjustment of both estimated total Carbon Stocks on January 1, 2003 and the net change in Carbon Stocks from January 1, 2003 through December 31, 2006.

For the purpose of calculating the revised figure for total Carbon Stocks on January 1, 2003, adjustments to account for acquisitions and dispositions shall be made in accordance with the procedures specified in Section 8.13.3 of this *Rulebook*.

[4] i.e. the person conducting the inventory shall measure the height of the first and every subsequent fourth tree visible as he or she turns through 360° on the spot from which the prism sampling is conducted.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Each Member shall calculate the difference between the net change in Carbon Stocks calculated on the basis of measurements made in 2006 and the cumulative net change in Carbon Stocks reported in previous reports to CCX. This figure shall be used retrospectively to adjust the allocation of Exchange Allowances in accordance with the procedures outlined in Section 8.12 of this *Rulebook*.

Variance

The variance shall be calculated in accord with the procedures specified in the CCX Forestry Committee paper, *Proposed Biomass Yield and Growth Sample Design and Estimation Procedures For Forest Products Industry CCX Participants*. These procedures will be used to establish confidence intervals and to discount the calculated increases in Carbon Stocks to the lower bound of a particular confidence level to be determined by the CCX Forestry Committee.

Reporting

The final report shall be submitted on standard forms to be developed by the CCX Forestry Committee.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Chapter 9 CCX Exchange Offsets and Exchange Early Action Credits

9.0 Purpose (2006)

This Chapter:

- defines CCX Exchange Offsets (XOs) and Exchange Early Action Credits (XEs);
- provides XO and XE Project eligibility rules and other technical specifications; and,
- describes CCX Project registration, verification, audits and aggregation of CCX Exchange Offsets.

Chicago Climate Exchange recognizes the following categories of Exchange Offsets:

- Exchange Methane offsets (XMO)
- Exchange Soil Offsets (XSO)
- Exchange Forestry Offsets (XFO)
- Exchange Early Action Credits (XE)
- Exchange Offsets for Electricity Produced from Renewable Energy (XRE)
- Exchange Emission Reductions (XER)

Other types of offset projects may be recognized as they become technically and commercially available.

Exchange Methane Offsets (XMOs) can be generated by eligible landfill and agricultural methane collection and combustion systems. Exchange Soil Offsets (XSOs) can be generated by eligible soil carbon Projects undertaken in the U.S and Canada. Exchange Forestry Offsets (XFOs) can be generated by eligible forest carbon Projects. Exchange Emission Reductions (XERs) are CCX-eligible Projects undertaken in Brazil that are not methane or forestry Projects (e.g. fuel switching and renewable energy Projects).

9.0.1 General Provisions (2006)

All Projects proposed for registration with CCX are subject to approval by the CCX Offsets Committee.

An entity that has an emission profile that makes it eligible to be a CCX Member or Associate Member may register and trade CCX Exchange Offsets only if the entity is an Exchange Member.[12]

---

[1] Emissions reductions realized at facilities that are included in a Member's CCX emission inventory are not Offset Projects as they cause a decrease in recognized emissions and a decrease in the number of Carbon Financial Instruments needed for compliance.

[2] CCX will not accept registration of Offsets or Offset Projects that are owned (in full or partially) by an entity that is eligible to be a CCX Member but is not a Member. A CCX Member that is a partial owner of an eligible Offset Project may register with CCX its legally-owned Offsets from the project, regardless of whether the other owner(s)

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Certain Offset Projects undertaken by CCX Members prior to 1999 will be eligible to earn Exchange Early Action Credits in accordance with the provisions of Section 9.7. XEs may only be used for compliance purposes by the Member to whom the XEs were originally issued.

Provisions contained in Section 4.11.5 of this *Rulebook* govern use of Exchange Offsets and Exchange Early Action Credits in the CCX True-up process. Eligible Projects that are operated by CCX Members are defined as "Owned and Operated" Projects. Usage and sales of XOs and XEs issued to CCX Member Owned and Operated Projects are addressed in Section 4.11.6 of this *Rulebook*.

Registration of a project must be submitted in accordance with CCX processes and procedures.

A CCX-approved Verifier shall conduct verifications (including in-field inspections when prescribed) of enrolled Projects. Such verifications shall document Project start dates (when applicable) and other records as may be specified by CCX. The CCX-approved Verifier will submit a report in accordance with CCX procedures unless otherwise specified by the Exchange. The cost of the annual verification shall be borne by the Project Owner.

CCX will undertake audits for the purpose of confirming that CCX-approved Verifiers have properly documented Project eligibility and effectiveness in conformance with CCX rules. All Projects registration documents, Verification reports, related documents and documentation of quantification methods shall be subject to inspection and audit. The findings of such audits will be reported to the CCX Offsets Committee. Specific provisions governing audits of Exchange Offset Projects are provided in Chapter 10 of this *Rulebook*.

9.2 Rule Interpretation and Modifications (2006)

Unless otherwise provided in this *Rulebook*, applicable CCX Committees shall be responsible for recommending interpretations and appropriate modifications of rules established in this Chapter to the Exchange. The CCX Offsets Committee is responsible to review all proposed interpretations and modifications and shall have final decision-making authority regarding this Chapter.

9.3 Project Registration, Aggregation, Verification and Reporting (2006)

In order to earn CCX Exchange Offsets, the Project Owner or Aggregator (for the purposes of this Chapter, these terms may collectively be referred to as "Project Owner" unless specifically referred separately) of each CCX-eligible Project must

(1) be registered with CCX as a Member, Associate Member, or Participant Member of the Exchange ;

---

of the project are CCX Members For such projects, the CCX Member may register a quantity of offsets up to the amount that corresponds to its percentage ownership share of the project

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

(2) register the Project with CCX;
(3) obtain independent verification of the Project by a CCX-approved Verifier and,
(4) periodically report to CCX the status of the Project.

Unless otherwise allowed by the CCX Offsets Committee, a CCX Project Owner may directly register a Project with CCX without an Aggregator and may directly execute trades on the CCX Trading Platform as a CCX Member, Associate Member or Participant Member if it qualifies under Section 2.6.1 for access to the Trading Platform.

If a CCX Project Owner does not meet this requirement, Project Registration and trading of CCX Exchange Offsets must be undertaken on its behalf by a CCX Participant Member that meets the requirement.

With the exception of certain small Projects (as specified below), each Project Registration Filing and each periodic Project Report must be accompanied by a verification statement signed by a CCX-approved Verifier.

As per the provisions described below, Carbon Reserve Pools established for CCX forest and soil carbon Projects shall be established for the entire pool of Offsets represented by each CCX-registered Aggregator. Aggregators may charge fees for services they provide to Project Owners. Aggregators shall have the discretion to refuse to represent individual Projects.

As specified below, registration of certain CCX Offset Projects must be accompanied by a Project eligibility statement prepared by a CCX-approved Verifier. The Project Registration Filing must also contain a signed attestation that the entity registering as the CCX Project Owner holds full legal title to the greenhouse gas mitigation rights registered as CCX Exchange Offsets that are associated with the facilities and sites included in the registered Project.

As specified below, the performance of each CCX Project must be quantified and reported (and, as prescribed, verified) in accordance with the provisions of this Chapter. Each Project Owner must submit a Project Report to the Project's Aggregator (for Projects registered through an Aggregator) or directly to CCX. Each Aggregator shall submit to CCX a summary report reflecting the status of and quantity of mitigation achieved by all Projects it represents, using forms to be provided by the Exchange.

Exchange Early Action Credits (XE) must be registered with CCX within twelve months of the Membership approval date. (2006)

9.3.1 CCX Aggregator (2006)

Entities that meet the qualifications provided in Section 2.3 can be accepted as CCX Aggregators. For-profit entities, cooperatives, governmental bodies and non-profit organizations may act as Aggregators. Eligible entities must apply for Aggregator status by filing applicable CCX forms.

An Aggregator will be assigned an account in the CCX Registry and shall have access to the

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

CCX Trading Platform, if eligible. An Aggregator shall undertake the following actions on behalf of CCX-registered Projects it represents:

(1) accept initial registration forms from owners of CCX-eligible Projects;
(2) assemble Project Reports from Project Owners, retain copies of Project verification records;
(3) submit Offset registration fees to CCX;
(4) have sole authority to access the Registry Account(s)[3] holding the Offsets issued to Projects it represents and to access the CCX Trading Platform as an Authorized Trader; and,
(5) execute sales on the CCX Trading Platform on behalf of Project Owners and distribute sales proceeds to Project Owners in accordance with the terms agreed between the Aggregator and Project Owners.

The terms of the business and legal relationships between Aggregators and Project Owners are left to the discretion of those parties.

9.3.2 CCX Registered Offset Advisor (1/21/2004)

The role of a CCX Registered Offset Advisor is to:

- Act as a clearinghouse for project developers, providing advice and recommendations to CCX on the initial suitability and reputations of projects.
- Provide technical and logistical assistance to project developers who wish to submit projects for consideration or registration with CCX.

Addition of CCX Registered Offset Advisors and their geographic coverage is subject to approval of the CCX Offsets Committee. CCX Registered Offset Advisors are subject to the supervision of the CCX Offsets Committee.

CCX Registered Offset Advisors cannot act as aggregators, verifiers or offset providers.

9.4 Offset Issuance (2006)

CCX-eligible Offset Projects can be recorded in the CCX Registry and will be issued Exchange Offsets on the basis of the entire mitigation tonnage realized during the each of the years from 2003 through 2006. The quantity of mitigation achieved by each Offset Project shall be quantified on the basis of metric tons of carbon dioxide (CO_2) equivalent. Each Exchange Offset will represent one hundred metric ton of carbon dioxide (CO_2) equivalent and will be identified by annual Vintage.[4] The minimum trading unit is one Exchange Offset. CCX reserves the right to assess fees for the registration of Offset Projects in the CCX Registry.

[3] Aggregators may choose to establish multiple accounts in the CCX Registry.
[4] The Vintage of an instrument is defined as the first year the designated instrument may be used for Compliance with the CCX Emission Reduction Schedule, or, as applicable, the CCX Electricity Purchase Reduction Schedule.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Exchange Offsets and Exchange Early Action Credits will be issued only if all required documentation is presented to CCX. Subject to provisions in Chapter 4 of this *Rulebook*, Exchange Offsets and Exchange Early Action Credits will be recognized as equivalent to Exchange Allowances when surrendered for Compliance. XOs and XEs may be used for Compliance in their designated Vintage year or in later years. The Vintage year assigned to XOs and XEs shall correspond to the year in which the associated Greenhouse Gas mitigation occurs, except that XEs earned prior to 2004 will be assigned a Vintage of 2004 (or later Vintages, subject to recommendations developed by the CCX Offsets Committee).

CCX may issue offsets on the basis of annual emission mitigation. CCX may also issue Offsets on a quarterly basis to landfill and agricultural methane projects that submit required verification documentation. (3/11/2004)

9.5 CCX Offset Project Terms and Conditions

By registering a Project with CCX, each Project Owner agrees to and acknowledges the CCX Transaction terms and conditions provided in Section 5.5, Figure 5.1 as well as the additional Terms and Conditions provided in Figure 9.1.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Figure 9.1 Additional terms and conditions associated with CCX Offset Projects and Exchange Offsets (2006)

(1) The enrolled Project meets all applicable eligibility rules of the Chicago Climate Exchange.

(2) CCX will issue to the CCX Registry Account of the Project Owner or its designated Aggregator a quantity of Exchange Offsets based on the entire mitigation tonnage approved by CCX and that conforms to the Rules provided in this Chapter.

(3) Each sale of Exchange Offsets executed through the Chicago Climate Exchange shall represent a complete transfer of all legal rights associated with the mitigation of Greenhouse Gases that causes the issuance of CCX Offsets. The transferred legal rights are those corresponding to the quantity and Vintage of the Exchange Offsets issued in accordance with the terms and conditions provided in this section and other applicable Rulebook sections.

(4) The Project Owner or its CCX-registered Aggregator may sell or retain the Exchange Offsets earned under the provisions of this agreement.

(5) The Project Owner shall retain full legal ownership of all rights associated with the mitigation of Greenhouse Gases that may accrue:
   - (a) on lands or via activities not included in the CCX-registered Project;
   - (b) in excess of the quantity of Exchange Offsets issued by CCX to CCX-registered Projects; or,
   - (c) before or after the years 2003 through 2006 for the CCX- registered Project.

(6) CCX makes no warranty as to the marketability or market value of CCX Exchange Offsets.

(7) Each Project Owner, and, when applicable, its Aggregator, is required to periodically submit a signed Project Report that confirms conformance with the terms herein. Representatives of CCX may conduct on-site inspection of registered Projects and related documents. Each Project Owner agrees to provide access in such cases in a prompt and cooperative manner. All CCX Exchange Offset Projects, Project Reports and verification reports are subject to inspection and audit by the provider of regulatory services designated by CCX and by other independent experts as may be engaged by CCX.

(8) CCX may request additional information and/or access to registered Projects for the purpose of advancing understanding of Greenhouse Gas mitigation Projects:
   - (a) Project Owners may decline such access without penalty; and,
   - (b) In no cases shall research findings cause a reduction in the quantity of Exchange Offsets to be issued to a registered Project.

(9) Additional terms and conditions are prescribed for individual Project types in other sections of this Chapter.

(10) Failure to conform to the rules provided herein may result in termination of enrollment in CCX and prohibition from all further participation in CCX.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

9.6 Additional CCX-eligible Projects (2006)

The CCX Offsets Committee may approve additional Project types and locations. In the process of evaluating additional project types, the CCX Offsets Committee may observe the following principles, which have been used in the establishment of the provisions of this Chapter:

(1) eligibility criteria and Offset issuance quantities shall reflect the best available scientific and technical information, as evidenced by peer-review published studies and other high-quality research findings;
(2) conservative Offset issuance rates (e.g. application of discounted Offset values, use of Forest Carbon Reserve Pool);
(3) balancing requirements for adequate documentation and verification of environmental effectiveness with the goal of minimizing transaction costs;
(4) compatibility with emerging international standards; and,
(5) avoidance of negative environmental and social impacts.

9.7 Exchange Methane Offsets (XMOs)

9.7.1 Eligible Projects (2006)

Exchange Methane Offsets will be issued to owners of GHG emission reductions achieved by landfill and agricultural methane collection and combustion systems placed into operation in the on or after January 1, 1999.[5] Landfill methane collection and combustion systems in the U.S. may be registered with CCX and may earn XMOs only for mitigation occurring during time periods for which the landfill was not required to collect and combust methane in accordance with U.S. regulations requiring such actions under the New Source Performance Standards. Landfill methane combustion occurring in countries outside of the U.S. may earn XMOs only for mitigation that is not required under the national law of such country. XMOs will be issued on the basis of metric tons of methane destroyed, net of CO_2 released upon combustion, during the years 2003 through 2006, at a net rate of 18.25 metric tons CO_2 for each metric ton of methane combusted.

Appendix 9.2A provides the protocol to be employed in quantifying landfill gas methane combustion for CCX XMO Projects. Appendix 9.2B provides the protocol to be employed in quantifying methane combustion by agricultural methane Projects. The Project Verifier must document (among other items):

(1) the Project Owner's clear ownership rights to Greenhouse Gas emission reductions associated with sites included in the Project;

[5] Agricultural methane collection systems include covered lagoons, anaerobic digesters, complete-mix and plug-flow digesters.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc.

(2) eligibility of the site to earn CCX XMOs; and,
(3) records of methane content and total gas flows or total electricity generation and engine manufacturer's efficiency rating (if applicable).

9.7.2 XMO Project Registration, Verification and Project Reports

Registration of each CCX XMO Project must be accompanied by a Project eligibility statement prepared by a CCX-approved Verifier. The Project Registration Filing must include a signed attestation that the entity registering as the CCX Project Owner holds full legal title to the Greenhouse Gas mitigation rights registered as CCX Exchange Offsets that are associated with the facilities included in the registered Project. The filings must contain an attestation by a CCX-approved Verifier as to the quantity of mitigation achieved and Exchange Offset issuance that is prepared in conformance with the rules provided herein, and with the verification protocols prescribed by the Exchange.

9.8 Exchange Forestry Offsets (XFOs)

9.8.1 General Provisions

Exchange Forestry Offsets will be issued to owners of CCX-eligible Forestry Projects that are registered with the Exchange. As provided below, XFOs will be issued on the basis of increases in Carbon Stocks or avoided deforestation, quantified in metric tons of carbon dioxide (CO_2) equivalent, realized during the 2003 through 2006 period.

The rules and methods to be applied to quantification of Exchange Forestry Offsets are intended to be harmonized with those established for quantification of changes in Carbon Stocks by CCX Members in the forest products sector. Those rules and methods are provided in Chapter 8 of this *Rulebook*.

The CCX Forestry Project Registration Filing must include a signed attestation by the Project Owners stating that the forest Project has as a primary purpose long-term Carbon Storage. Project Owners will be required to provide documentary evidence of the legal protection status of forest parcels included in a CCX-registered Project, if applicable. Project Owners and other parties having an interest in the included forest parcels may take actions that maintain and/or enhance the long-term health and viability of the participating forest parcels (e.g. thinning, pruning, selective harvest). The loss of Carbon Stocks associated with any selective harvesting activities that occur on the sites included in the CCX Project must be reflected in the Project performance reports.

All issuance of Exchange Offsets to CCX-qualifying Forestry Projects shall require the placement of 20% of earned Exchange Offsets in a Forest Carbon Reserve Pool. A Forest Carbon Reserve Pool will be established for each Project (when an Aggregator is not involved). When Projects are represented by an Aggregator, a Forest Carbon Reserve Pool will be

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

established for the entire pool of Projects represented by the Aggregator. As specified in Section 9.8.8 below, Exchange Offsets held in a Forest Carbon Reserve Pool shall remain the property of the Project Owner, and all Exchange Offsets not subject to termination by CCX (in cases of Project reversals) shall be released to the Project Owner during 2006.[6] The function and mechanics of the Forest Carbon Reserve Pool are discussed in Section 9.8.7 below.

In addition to the terms and conditions presented in Section 9.5, the terms and conditions provided in Figure 9.2 shall apply to CCX Exchange Forestry Offset Projects.

Figure 9.2 Additional Terms and Conditions Associated with CCX Forestry Projects and Exchange Forestry Offsets

(1) the Project Owner acknowledges that it must annually submit a signed attestation that it is in conformance with the terms and conditions presented herein to CCX (or, in the case of Pooled Projects, to the Aggregator that represents the Project);
(2) the Project Owner acknowledges that a CCX-approved Verifier will be selected by the Project Owner to provide verification of the Project, and that other entities engaged by CCX will be allowed access to Project lands and Project documents for the purpose of undertaking Project audits;
(3) the Project Owner acknowledges that a decrease in Carbon Stocks will result in cancellation of Offsets held in the Forest Carbon Reserve Pool; that the Project Owner is required to replenish the Forest Carbon Reserve Pool; and that the Project Owner may be required to surrender additional Carbon Financial Instruments to compensate for loss of Carbon Stocks that had previously experienced increases that caused the issuance of XFOs if the quantity of XFOs in the Reserve Pool is inadequate; and,
(4) the Project Owner acknowledges that actual increases and decreases in Carbon Stocks must be reported to CCX in accordance with CCX rules.

9.8.2 Eligible Forestry Projects

9.8.2.1 Forestation

Projects involving Forestation and forest enrichment, via plantings and/or natural regeneration initiated on or after January 1, 1990, on land not forested, or on forest land that had been degraded or unforested condition on December 31, 1989, may earn XFOs. The quantity of XFOs to be issued to a CCX-registered forestry Project shall be based on the annual increase in Carbon Stocks (expressed in metric tons of carbon dioxide equivalence) on eligible sites included in the Project during each of the years 2003 through 2006.

[6] Project Owners that choose to extend the term of their participation in CCX beyond 2006 may be required to maintain Offsets in a Forest Carbon Reserve Pool

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

9.8.2.2 Conservation of Threatened Forests

For Projects undertaken in specified states in Brazil, forest conservation and protection initiatives undertaken in conjunction with Forestation activities may earn XFOs in an amount up to the quantity of XFOs earned in the same year by the Forestation component of such combined Projects. This provision is further defined in Section 9.8.6 below.

9.8.2.3 Long-term Commitments

Upon registration of Forestation Projects with CCX, the Project Owner must present to CCX evidence that the Carbon Stocks in forest parcels included in a Project will be subject to long-term maintenance in a manner deemed acceptable by the CCX Offsets Committee and the CCX Forestry Committee.

Projects in the U.S. and Canada can qualify if undertaken on privately-owned land and placed in protective status via:

(i) establishment of a long-term conservation easement providing that the Project land is to be maintained as forest for the duration of the easement; or
(ii) transfer of ownership of land parcels to a land trust, qualifying non-governmental organization or governmental body, provided such transfer establishes legal protection that the Project land is to be maintained as forest; or,
(iii) other means that the CCX Offsets Committee and the CCX Forestry Committee may determine to be acceptable.

In addition to the other rules set forth in this *Rulebook*, Projects in Brazil are eligible if they are undertaken on privately owned land that is placed in protective status by:

(i) placing the land in Private Natural Heritage Reserve[7] status; or
(ii) transferring ownership of the land to a qualifying non-governmental organization; or
(iii) placing the land into another protected status approved by CCX; or,
(iv) other means deemed acceptable by the CCX Offsets Committee and the CCX Forestry Committee.

Reliable forest protection programs must be established as a central element of each Project. Documentation of the above requirements must be included in the Project Registration Filing.

[7] In Portuguese this status is termed Reserva Particular do Patrimônio Natural (RPPN).

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc.

9.8.2.4 Sustainable Forest Management: XFOs Issued on the Basis of Sustainable Management of Overall Carbon Stocks Controlled by Project Owners (2006)

XFOs will be issued to forestry Projects only in cases where the Project Owner can demonstrate that its forest holdings outside the Project are sustainably managed.

For forestry Projects undertaken by CCX Members in the commercial forestry sector that elect to use the Carbon-stable Accounting Approach (see Section 8.3 of this *Rulebook*), such demonstration can take the form of certification from the Sustainable Forest Initiative, the Forest Stewardship Council or another similar reputable third-party verification program that the Member's commercial forest lands are sustainably managed. CCX Members in the commercial forestry sector that elect to use the Carbon-stable Accounting Approach shall also provide annual confirmation, signed by a corporate officer, that there will be no net decrease in overall Carbon Stocks held in the Member's commercial forestry inventory during the period 2003 through 2006. The statement that there is no decrease in overall Carbon Stocks held in a Member's commercial forestry inventory during the 2003 through 2006 period may be subject to verification by an entity designated by CCX.

For other Project Owners such demonstration can be established through, for example, attestation and provision of evidence that the Project Owner sustainably manages its non-Project forest Carbon Stocks, and that its non-Project forest holdings are not converted to non-forest uses. Attestation statements and associated documentation will be subject to verification by an entity designated by CCX.

9.8.3 Included Carbon Pools (2006)

XFOs will be issued on the basis of increases in Carbon Stocks in above-ground living biomass occurring on lands included in a CCX Project. Methods and quantification tools that can be applied to allow inclusion of other carbon pools (e.g. below-ground biomass, litter and soil carbon) can be accepted by the CCX Offsets Committee on a case-by-case basis.

In addition to the CCX Offset Project terms and conditions established in Section 9.5, in all cases Project Owners (or, as applicable, the ultimate owner of carbon sequestration rights associated with land included in a CCX Project) shall retain Ownership rights for all sequestration occurring in any excluded carbon pools.

9.8.4 Forest Carbon Quantification Methods

Carbon sequestration in CCX Forestry Projects shall be quantified using a combination of standard growth coefficients and direct in-field sampling and measurement (direct measurement). As applicable in the provisions below, direct measurement of forest carbon must be conducted by a CCX-approved Verifier that shall apply a CCX-recognized Forest Carbon Direct Quantification Method. CCX-recognized Forest Carbon Quantification Methods include

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

the Winrock[8] methodology or other methods as may be approved by CCX in a manner consistent with the provisions herein. The cost of verification of such direct measurements will be borne by the Project Owner

For purposes of CCX forestry Project quantification rules, three categories of Project size are specified. Small Forestation Projects are CCX Forestation Projects owned by entities for which the minimum annual gross accumulation of Carbon Stocks (during years 2003 through 2006), on all sites enrolled in CCX by the Project Owner, as defined and quantified under CCX Rules, is expected to be less than 2,000 metric tons CO_2 equivalent per year. Medium-Sized Forestation Projects are Projects owned by an entity for which the minimum annual gross accumulation of Carbon Stocks (during years 2003 through 2006), on all sites enrolled in CCX by the Project Owner, as defined and quantified under CCX rules, is expected to be more than 2,000 but less than 12,500 metric tons CO_2 equivalent per year. Large Forestation Projects are Projects owned by entities for which the minimum annual gross accumulation of Carbon Stocks (during years 2003 through 2006), on all sites enrolled in CCX by the Project Owner, is expected to be more than 12,500 metric tons carbon dioxide (CO_2) equivalent per year.

Carbon accumulation in Small and Medium-sized Forestation Projects in the U.S. and Canada may be quantified using the CCX-approved direct measurement methods or through use of the CCX Reforestation Carbon Accumulation Tables provided in Appendix 9.3[9,10] The coefficients in Appendix Table 9.3A shall be applied for reforestation and afforestation undertaken in the U.S. and Canada for Projects involving plantings in excess of 250 stems per acre. The coefficients in Appendix Table 9.3C shall be applied for widely spaced tree planting Projects, including urban and suburban tree planting programs, undertaken in the U.S. and Canada. The CCX Forestry Committee may recommend modifications to the Tables provided in Appendix 9.3.

Project Registration Filings for Small and Medium-sized Forestation Projects must document the quantity of trees involved in the Project, acreage included, description of planted tree species and the tree ages, sizes and planting density at the time of Project registration.

Small Forestation Projects shall be subject to inspection by verification entities engaged by CCX. All information contained in the Project Registration Filing for Medium-sized Forestation Projects must be verified by a CCX-approved Verifier.

---

[8] MacDicken, K.G., "*A Guide to Monitoring Carbon Storage in Forestry and Agroforestry Projects,*" Winrock International Institute for Agricultural Development, 1997.

[9] The coefficients in Appendix 9-3 reflect quantities that are 70% of the typical carbon accumulation values expected for trees having the ages specified in the Appendix (i.e a 30% discount is applied).

[10] Similar coefficients shall be developed for additional sites and reforestation practices as needed Such coefficients shall represent 70% of central estimates of carbon accumulation. Such estimates shall be established in a manner that reflects variation in tree ages, species and planting densities associated with CCX-approved locations

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc.

For Large Forestation Projects the baseline Carbon Stocks and carbon accumulation must be quantified through direct measurement undertaken by a CCX-approved Verifier.[11] Offset issuance is determined on the basis of net carbon accumulation, which shall reflect carbon lost from a Project site due to harvest, fire, pests or other events.

Owners of Projects that are quantified through direct measurement shall initially quantify the number of Offsets generated by the Project through use of the applicable Carbon Accumulation Coefficients provided in Appendix 9.3 (or other recognized and credible carbon accumulation reference values as may be recommended by CCX). Final Offset issuance quantities for 2003, 2004 and 2005 shall be based on direct measurement of carbon increments as determined by a measurement occurring during the third or fourth calendar quarter of 2005. CCX Projects that have been subject to direct measurement prior to 2003 may use those data to quantify annual increments in Carbon Stocks during the 2003 through 2006 period.

The quantification of gross increases in Carbon Stocks for 2006 will be the annualized average of increases in Carbon Stocks occurring during the period between quantification of the baseline and the measurement undertaken in 2005. Offset issuance shall occur in a quantity that is discounted to reflect the lower bound of a specified level of statistical confidence around the central estimate of annual carbon accumulation. This level of statistical confidence will be prescribed by the CCX Offsets and Forestry Committees and will be comparable to the procedures provided in Chapter 8

Table 9.1 summarizes the above rules for Small, Medium-sized and Large Forestation Projects.

Table 9.1 Quantification of Baselines and Carbon Accumulation for Small, Medium-sized and Large CCX Forestation Projects (2006)

Project size (average annual metric tons CO_2 equivalent increment)	**Small**	**Medium**	**Large**
Definition	U.S. and Canada Projects that are less than 2,000 metric tons CO_2/yr	More than 2,000 mtCO_2/yr, less than 12,500 metric tons CO_2/yr	More than 12,500 metric tons CO_2/yr
Baseline quantification	Not required if Appendix 9.3 Carbon	Not required if Appendix 9.3 Carbon	Direct measurement by CCX-approved

[11] If the Project's baseline Carbon Stock is quantified more than 90 days before or after January 1, 2003, the CCX Forest Carbon Baseline is to be established by estimating the December 31, 2002 Carbon Stock based on the actual baseline measurements and credible growth parameters.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

188

-	Accumulation Tables are applied; direct measurement is optional. Project Registration Filings must detail acreage, tree counts, types and sizes.	Accumulation Tables are applied. All information contained in Project Registration Filing (including the baseline, if direct measurement is elected) must be verified by a CCX-approved Verifier.	Verifier.
Periodic quantification of carbon increments	Appendix 9.3 Carbon Accumulation Tables or direct measurements	Appendix 9.3 Carbon Accumulation Tables or direct measurements in late 2005. Annualized gains over 2003-2005 are applied to 2006.	Initially Appendix 9.3 Carbon Accumulation Tables; direct measurement required in late 2005; annualized gains over 2003-2005 are applied to 2006.
Verification	Project and reports subject to inspection by entities engaged by CCX.	Independent verification of Project Registration Filing and annual Project Reports and direct carbon measurements (if latter method is elected).	Independent verification of Project Registration Filing, annual Project Reports and direct carbon measurements.

9.8.5 Combined Forestation and Forest Conservation Projects (2006)

Offsets will be issued to forest conservation portions of eligible Combined Forestation and Forest Conservation Projects (provided the two activities occur on contiguous sites unless approved otherwise by the CCX Offsets Committee) in an amount reflecting recent deforestation rates in the state in which the Project occurs. Qualifying locations are in specified states of Brazil and in other locations as may be approved by the CCX Offsets Committee. The Avoided Deforestation Rate (ADR) will be calculated on the basis of the actual annual deforestation rate during recent multi-year time periods in the state in which the Project is implemented. Exchange Offsets shall be issued on the basis of a 10% discount of the quantity of avoided carbon loss due to deforestation as calculated on the basis of definitions provided herein.

The baseline and annual carbon sequestration benefits of all Combined Forestation and Forest Conservation Projects must be quantified through use of CCX-approved recognized direct quantification methods. The Project Registration Filing and all Project Reports must be verified by a CCX-approved Verifier.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Exchange Offsets will be issued on the basis of the annual avoided carbon loss (expressed in carbon dioxide equivalence) on eligible sites during years 2003 through 2006. Exchange Offsets for forest conservation can be issued in an amount up to (but shall not exceed) the quantity of Exchange Offsets issued in the same year to the Forestation component of a Combined Forestation and Forest Conservation Project.

Table 9.2 lists the states of Brazil in which Combined Forestation and Forest Conservation Projects are pre-qualified to register as XFO Projects in CCX, as well as the Avoided Deforestation Rate to be applied in quantifying avoided carbon loss and XFO Offset issuance.

Table 9.2 States in Brazil in Which Combined Forestation and Forest Conservation Projects are Pre-Qualified as Eligible to Register as XFO Projects in CCX, Annual Avoided Deforestation Rates to be Applied in Quantifying Avoided Carbon Loss and XFO Offset Issuance[12]

State	Annual Avoided Deforestation Rate (ADR) (% of forest included in the CCX-registered Project Carbon Stock baseline)
Alagoas	0.70*
Bahia	0.70*
Ceará	0.70*
Espirito Santo	1.09
Goiás	1.82
Mata Grosso do Sul	1.91
Minas Gerais	1.46
Paraíba	0.70*
Pernambuco	0.70*
Piauí	0.70*
Paraná	0.93
Rio de Janeiro	2.63
Rio Grande do Sul	1.08
Santa Catarina	0.73
Sergipe	0.70*
São Paulo	0.72

** represents an initial default value to be modified upon acquisition of additional information*

[12] The data in Table 9-2 are based on information provided by: "Avaliação e Ações Prioritárias para a Conservação da Biodiversidade da Mata Atlântica e Campos Sulinos," a publication of the Brazilian Environment Ministry with participation of Conservation International of Brazil, SOS Mata Atlântica, Institute of Ecological Research, Biodiversity Foundation, the Secretary of the Environment for the State of Sao Paulo and the State Forestry Institute of Minas Gerais.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Annual avoided carbon loss will be defined as the mathematical expression listed below.
Annual avoided carbon loss = maximum possible offset issuance[13]
= 0.90 x Annual deforestation rate x adjusted baseline (adjusted for earlier-year offset issuance)

$$\text{Year 1} = B \times ADR$$
$$\text{Year 2} = B \times ADR\,(1 - ADR)$$
$$\text{Year 3} = B \times ADR\,(1 - ADR - ADR^2)$$
$$\text{Year 4} = B \times ADR \times (1 - ADR - ADR^2 - ADR^3)$$

Where "B" is the baseline Carbon Stock multiplied by 0.90. The baseline carbon is the quantity of living biomass carbon on-site at the end of 2002, expressed in carbon dioxide equivalent. The multiplication by 0.90 reflects a 10% discount applied to the quantification of the baseline Carbon Stock. ADR is the value shown in column 2 of Table 9.2.

The annual modification of the B x ADR value reflects that annual downward adjustment in quantity of carbon that would have been exposed to deforestation in the "without Project" scenario.

9.8.6 Forest Project Registration Filings and Project Reports

9.8.6.1 Forest Project Registration Filings (2006)

The following will be included in each CCX Forestry Project Registration Filing:

(1) CCX-provided Forestry Project Registration documents, which shall include;
  - (a) description of actions (afforestation, reforestation via plantings, forest enrichment, passive reforestation);
  - (b) attestation that planting occurred after December 31, 1989;
  - (c) description of pre-Project condition of included lands;
  - (d) legal description of land included in the forest Project; and,
  - (e) identity of the land owner(s);

(2) legal evidence that the Project land is owned by the Project Owner, or, in instances where the Project owner is not the landowner, evidence that the CCX Forestry Offsets to be generated by the Project are legally owned by the Project Owner;

(3) documentary evidence (e.g. copies of filed conservation easements) that Project lands are legally established to be in conformance with the applicable CCX-prescribed conservation status;

(4) documentary evidence that non-Project forest lands owned by the Project Owner are sustainably managed and are maintained as forests;

(5) description of carbon quantification methods to be employed (direct measurement through application of CCX-approved forest carbon direct quantification methods, or use of the applicable Tables provided in Appendix 9.3); and,

[13] Subject to the constraint that annual avoided deforestation Offsets cannot exceed the forestation Offsets component of a combined Project

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

(6) a (non-binding) projection of expected Offset issuance quantities for each year from 2003 through 2006 based on the Tables provided in Appendix 9.3 or other credible methods.

Upon registration with CCX, the Owner of each Large Forestation Project must also present a forest establishment, management and protection plan that includes a description of actions taken to increase and maintain Carbon Stocks, which shall include a description of the planting/protection actions and dates in the Project, planting densities, tree and plant species.

9.8.6.2 XFO Project Reports (2006)

For Medium and Large Forestation Projects such reports must include a verification report prepared by a CCX-approved Verifier. For Small Forestation Projects, the Project Owner must submit a signed annual attestation report to its selected CCX-registered Aggregator. The Aggregator must maintain such attestations.
Verification reports must attest the validity of the reported quantity of increase in Carbon Stocks and Exchange Offset issuance in conformance with Section 9.8.4. Verification reports must conform to CCX requirements.

XFO Project Reports must:

(1) include the Project Owner's CCX Registry Account number (or the Aggregator's Registry Account number, if applicable);
(2) contain an attestation that the Project Owner is in conformance with CCX Rules governing long-term maintenance of Carbon Stocks on all sites owned by the Project Owner;[14] and,
(3) report instances of net loss of Carbon Stocks occurring during 2003, 2004, 2005 and 2006.

9.8.7 Forest Carbon Reserve Pool

A quantity of Exchange Forestry Offsets equal to twenty percent (20%) of all XFOs generated by CCX-eligible Forestry Projects (as defined and quantified in conformance with this *Rulebook*) shall be held in a CCX Forest Carbon Reserve Pool. Such Reserve Pools shall be established for each Large Forestation Project, for each Combined Forestation and Forest Conservation Projects, and for each Aggregator of Projects. XFOs in the Reserve Pool shall remain the property of the Project Owner(s) (pool participants in the case of aggregated Projects) and all XFOs that remain in the Reserve Pool shall be released to the Project Owners in late 2006. In the event that a CCX-registered Project experiences a net loss of Carbon Stocks during 2003, 2004, 2005 or 2006, (e.g. due to events such as fire or tree removal), CCX shall promptly cancel XFOs held in the corresponding CCX Forest Carbon Reserve Pool in an amount equal to the net quantity of

[14] An SFI or FSC audit report may be used as a basis for documenting that commercial forestry holdings in the country in which the Project occurs are sustainably managed.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Carbon Stocks (expressed in metric tons CO_2 equivalent) released from the CCX-registered Project. The maximum amount of carbon loss to be recognized by CCX shall be no more than the total quantity of XFOs issued to the Project during its enrollment in CCX.

Project Owners will be responsible for replacing the XFOs that are cancelled in instances of net loss of Carbon Stocks. Such replacement instruments will be placed into the Forest Carbon Reserve Pool. Options available for the replacement of lost tons, and the associated replacement rates are as follows:

(1) if previously issued XFOs are replaced with CCX-issued Exchange Allowances or Exchange Offsets, each previously issued Exchange Offset must be replaced with one Exchange Allowance or Exchange Offset; and,
(2) if previously issued Exchange Offsets are replaced with CCX XFOs to be generated by the affected Project in later years (but as soon as practicable), each cancelled XFO must be replaced with 1.2 later-Vintage XFOs.

9.9 Exchange Soil Offsets (XSOs) (U.S.)

9.9.1 Eligible Projects and XSO Issuance Rates (2006)

Projects involving specified agricultural soil carbon sequestration activities in designated states, counties and parishes in the Midwest and Mississippi delta regions of the U.S. shall be eligible to earn XSOs as per the following provisions:

(1) Exchange Soil Offsets will be earned at a rate of 0.5 metric tons CO_2 per acre per year to land managers who commit to continuous Conservation Tillage (defined as continuous no-till, strip till or ridge till) through 2006 on the acres specified upon Project registration.[15] Enrolled acres may be planted in soybeans no more than two of the four years 2003, 2004, 2005 and 2006. The U.S. counties and parishes in which continuous Conservation Tillage represents a CCX-eligible Project are listed in Appendix 9.4A. Collectively these counties and parishes are defined as "Zone A" for CCX purposes.
(2) Exchange Soil Offsets will be issued to land managers who commit to maintain increases in soil Carbon Stocks realized as a result of grass cover plantings that were undertaken on or after January 1, 1999. Such grass cover must be maintained through 2006 on the acres specified upon Project registration. Under this provision XSOs will be issued at a rate of 0.75 metric tons CO_2 per acre per year. The U.S. counties and parishes in which these practices are eligible to earn XSOs

[15] For CCX purposes Conservation Tillage is as defined in the Natural Resources Conservation Service National Handbook of Conservation Practices. These definitions are: No-till/Strip-till - Managing the amount, orientation, and distribution of crop and other plant residue on the surface year-round while growing crops in narrow slots or tilled or residue-free strips in soil previously untilled by full width inversion implements; and Ridge-till - Managing the amount, orientation, and distribution of crop and other plant residue on the soil surface year-round while growing crops on preformed ridges alternated with furrows protected by crop residue

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

are provided in Appendix 9.4B. Eligible locations to earn XSOs through maintenance of grass cover plantings are the counties and parishes of CCX Zone A, as well as additional eligible counties in Colorado, Kansas and Nebraska that are defined as "Zone B" for CCX purposes.

(3) For Saskatchewan rural municipalities designated as "Zone C" having black and gray soils, Exchange Soil Offsets will be earned at a rate of .40 metric tons CO_2 per acre per year to land managers who commit to continuous zero-tillage and do not allow summer fallow for the years 2003 through 2006 on the acres specified upon Project registration.

(4) For Saskatchewan rural municipalities designated as "Zone D" having brown and dark brown soils, Exchange Soil Offsets will be earned at a rate of .20 metric tons CO_2 per acre per year to land managers who commit to continuous zero-tillage and do not allow summer fallow for the years 2003 through 2006 on the acres specified upon Project registration.

An Owner of an Exchange Soil Offset Project may be issued additional XSOs if it presents evidence that actual increases in soil carbon exceed the rates stipulated above, provided such evidence is deemed acceptable by the Committee on Offsets.

9.9.1.1 Additional Regions for Exchange Soil Offsets (2006)

The CCX Offsets Committee may approve regions other than the Midwest and Mississippi delta regions of the US as eligible for generation of Exchange Soil Offsets.

9.9.2 Soil Carbon Reserve Pool

Each CCX XSO Project shall be required to place 20% of the Offsets it earns into a CCX Soil Carbon Reserve Pool. Such XSOs shall remain the property of the Project Owner(s) (pool participants in the case of aggregated Projects) and all XSOs that remain in the Soil Carbon Reserve Pool shall be released to Project Owners in late 2006. In the event that a Project Owner does not conform to the XSO performance requirements listed in Section 9.8.1 above, such event shall be promptly reported to CCX (such reporting shall occur through a Project's Aggregator if the Project is registered through an Aggregator). CCX will then cancel XSOs held in the Soil Carbon Reserve Pool in an amount equal to the quantity of XSOs previously issued to the Project.

Project Owners will be responsible for replenishing the Soil Carbon Reserve Pool by replacing the XSOs that are cancelled in instances of Project non-performance. Each previously issued XSO must be replaced with one CCX Exchange Allowance or Exchange Offset.

In the case of noncompliance with the terms and conditions for CCX Exchange Soil Offsets the owner of the noncompliant Project shall transfer to the Soil Carbon Reserve Pool (as specified below) a quantity of CCX Exchange Offsets and/or Exchange Allowances that is equal to the

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc.

total quantity of XSOs that have been issued to the Project during the years 2003 through 2006. The Owner of the non-performing Project shall be prohibited from further participation in CCX.

9.9.3 Verification

Verifier entities designated by CCX shall conduct in-field inspections of enrolled XSO Projects. Such inspections shall examine field conditions, documentation of Project start dates (when applicable) and other records as may be specified by CCX.

9.10 Exchange Emission Reductions (XERs) (2006)

Exchange Emission Reductions are CCX Exchange Offsets that are issued to owners of the rights to Greenhouse Gas mitigation produced by qualifying Projects undertaken in developing countries. XERs are eligible for Compliance in CCX.

Qualifying XER Projects will include:

(a) fuel switching and
(b) renewable energy generation from solar, wind, small hydroelectric and biomass systems.

CCX Offsets Committee shall consider such projects on a case-by-case basis.

9.11 Exchange Early Action Credits (XEs) (2006)

Exchange Early Action Credits (XEs) will be issued to certain Projects undertaken from 1995 through 1998. To qualify, a Project must be:

(1) off-system; or an Owned and Operated project;
(2) originally undertaken or financed by CCX Members;
(3) direct emission reductions or involve sequestration;
(4) legally owned by the CCX Member;
(5) measured and verified; and,
(6) registered in the U.S. Department of Energy 1605(b) database, the U.S. Initiative on Joint Implementation program, or an equivalent registry system.

XEs can be used for Compliance only by the CCX Member that originally owned them.

Exchange Early Action Credits will be given to the following Project types that meet the eligibility criteria:

(i) reforestation, afforestation and avoided deforestation;
(ii) landfill methane destruction in the U.S.; or,
(iii) fuel switching and other energy related USIJI Projects.

Exchange Early Action Credits will be issued on the basis of mitigation tonnage realized by the

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

qualifying Project during the years 1995 through 2006. Applicable verification requirements shall be the same as those required for comparable Offset Project types.

9.12 CCX Offset Issuance for Electricity Produced by Renewable Energy (8/12/2005)

9.12.1 General Provision

In reflection of CO_2 emissions displacement, CCX Offsets will be issued to legal owners of offsets produced by eligible renewable energy facilities on the basis of electricity produced by such facilities.

9.12.2 Eligible Entities

The entity types eligible to generate earn CCX Offsets from renewable energy facilities are defined as entities that undertake sales of electricity produced by renewable energy systems to entities that are not CCX Members engaged in production and sale of electricity.[16]

9.12.3 Facilities Eligible to Produce Offsets

Eligible renewable energy facilities owned by an Eligible Entity and placed into service on or after January 1, 2005.

As provided in Section 4.10.1, eligible facility types shall be electricity generation systems associated with CCX recognized renewable energy sources, which are:

- Solar;
- Hydropower;
- Wind;
- renewable fuels, which, for CCX purposes are;
    - wood, wood waste and wood-derived fuels
    - Agricultural residues and grasses
    - landfill and agricultural methane,
    - ethanol (bioalcohol).

9.12.4 Required Energy Contract Conditions

CCX Offsets for electricity produced by eligible renewable energy facilities can be issued only if the owner of the facility conforms with all of the following requirements:

1. The entity that operates the facility producing the proposed offsets must establish in its power purchase agreement contracts that it retains all green attributes associated with the electric power generated.

[16] As provided in Section 9.1, CCX will not accept registration of Offsets or Offset Projects that are owned (in full or partially) by an entity that is eligible to be a CCX Member but is not a Member.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

2. The entity that operates the facility producing the proposed offsets must not sell its generated electricity as "green power" or allow other entities that may resell such electricity to make such claim.
3. If power production by the facility that produces the proposed offsets yields Renewable Energy Certificates (RECs), those RECS must be surrendered to and retired by CCX in order to allow issuance of Offsets.
4. The renewable energy facility producing the proposed offsets is not counted towards meeting obligations established by state or local renewable energy mandates.

The CCX Offsets Committee shall review all proposed renewable energy-based offsets. Such reviews will include an assessment of the four conditions cited above as well as any other circumstances that could result in double-counting of emission reductions associated with the proposed offsets. The entity proposing registration of renewable energy-based offsets shall provide information requested by the Offsets Committee as it undertakes such reviews.

9.12.5 Offset Issuance Rate

CCX Offsets will be issued at a rate of 0.40 metric tons CO_2 per megawatt-hour generated by eligible renewable energy facilities.[17]

[17] **Example calculation:**

Rated capacity of wind or biomass energy facility	1mw
Capacity factor	35%
Annual electricity production	3,066 mwh
Avoided CO_2 emissions	0 40 mtCO_2/mwh
CCX Offset issuance	1,226 mt CO_2 (round to 1,200 mt CO_2, or 12 CFIs)

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

APPENDICES

TO

CHAPTER 9

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Appendix 9.1 Not Used

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Appendix 9.2A Protocol for Measuring and Verifying Greenhouse Gas Reductions From Landfills (1/21/2004)

INTRODUCTION

The purpose of this protocol is to address the measurement and verification of methane emissions reductions from the combustion of landfill gas (LFG) for the Chicago Climate Exchange (CCX).

Topics covered in this document include the following:

- Overview of requirements and overall approach for crediting methane reductions from landfills as emission offsets;
- Protocol for measuring, recording, and verifying methane recovery rates based on LFG flow and methane measurements;
- Use of measured data to calculate methane emission reductions at non-regulated sites;
- An alternative method for calculating methane emission reductions at LFG-to-energy facilities;
- Protocol to distinguish methane recovery resulting from early system installation vs. methane recovery from systems installed to meet regulatory requirements; and

Topics not included in this document include the following:

- Accounting for (carbon dioxide) emission reductions that may result from displacement of other fuels used in power production;
- Protocol for credits for expanded LFG recovery from regulated sites other than from accelerated recovery (i.e., before required by regulation) from new cells;
- Accounting for effects of oxidation when calculating methane emissions reduction; and
- Protocol for credits from other measures to reduce methane emissions through enhanced recovery or oxidation, including: 1) Geomembranes; 2) Bio-covers; and 3) Bioreactors.
- Third party verification requirements. Verification shall be conducted in accordance with the provisions contained in Chapter 10 of the CCX Rulebook and as prescribed by the CCX Offsets Committee.
-

Requirements and Overall Approach for Crediting Methane Reductions

For CCX purposes landfills are treated as providers of emission Offsets. CCX eligibility requirements for methane reductions from landfills are provided in Chapter 9 of the CCX

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Rulebook. That Chapter also addresses Offset issuance rates for methane capture and combustion systems.

Landfill methane collection and combustion systems in the U.S. may be registered with CCX and may earn XMOs only for mitigation occurring during the time periods for which the landfill was not required to control non-methane organic compounds (which is most commonly undertaken through methane collection and combustion systems) in accordance with U.S. regulations. The applicable regulations for U.S. landfills are the rules governing control of New Source Performance Standards (NSPS) rules (40 CFR Subpart WWW), which define if, when and how a gas collection and control system (GCCS) is required and how much NMOC must be collected. The NSPS rules apply to landfills with design capacities greater than 2.5 million megagrams (2.75 million tons) that began receiving waste or commenced construction, reconstruction, or modification on or after May 30, 1991. These landfills are known as "new sources." Landfills above the 2.5 million megagram design capacity threshold that operated between November 8, 1987 and May 30, 1991, or have capacity available for future waste deposition, are considered "existing sources" and are regulated under the Emissions Guidelines (EG) rule. The EG rule has the same requirements as the NSPS rule for control of LFG emissions. These rules require a landfill to control emissions of non-methane organic compounds (NMOCs), a class of air pollutants present in LFG, when the estimated NMOC emissions exceed 50 megagrams or 55 tons per year. A GCCS must be installed to control NMOC emissions within 30 months of the time the landfill reports that its NMOC emissions exceed the 50 megagram threshold.

The NSPS rule also defines how quickly the GCCS needs to be expanded to incorporate recently deposited waste. The landfill must install wells in new waste cells and extract and control the NMOCs present in the LFG within 5 years of the time waste is first placed in the cell if the cell is still active, or within 2 years of the time waste is first placed in the cell if the cell is closed or at final grade.

While the NSPS rule provides clear definitions of the timing of required GCCS installations and expansions into new cells, there is no clear definition of what constitutes an NSPS-compliant system. The rule only specifies that the GCCS must be able to handle maximum expected flows from the entire landfill, and to minimize off-site subsurface migration or surface emissions. Additional extraction wells must be installed in areas of the landfill where monitored methane concentrations near the landfill surface exceed 500 parts per million (ppm) over a specified period of time. However, there does not appear to be a correlation between the number of 500 ppm exceedances and the ability of the GCCS to recover generated LFG.[18]

Accordingly, this protocol includes methods to distinguish methane emissions reduction resulting from early system installations (i.e., prior to the date required by NSPS), either in the case of new system installations or in the case of expansion of the system into new refuse cells. However, this protocol does not include methods for determining methane emissions reductions resulting from improvements to GCCSs beyond what is required by NSPS, nor does it include

[18]See Pierce, J L and Stege, A., 2002. Measurement and characterization of landfill gas surface emissions at landfills with soil covers WasteCon, October 2002.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

methods for estimating methane emissions reductions from the installation of geo-membranes, biocovers, or bioreactors. The lack of those procedures in this protocol does not preclude later consideration of such methods.

The overall approach to quantifying methane emissions reductions described in this report is to rely on measured quantities of methane collected and destroyed through the operation of a GCCS. Direct measurement by continuous monitoring of methane recovery is the most desirable method. Periodic measurement of methane concentrations in LFG, coupled with continuous monitoring of LFG flows is considered acceptable. Details on acceptable methods for recording rates of methane emissions reduction from both non-regulated and regulated sites are provided in the remainder of this protocol.

PROTOCOL FOR RECORDING METHANE EMISSIONS REDUCTIONS

Rates of methane capture and destruction at a landfill are a function of the following measurable quantities:

- The rate of LFG flow to the control device (flare station, power plant, or other facility that combusts collected LFG);
- The methane content of the recovered LFG; and
- The methane destruction efficiency in the control device.

Since methane is the combustion fuel for the control device and is reduced (from about 20 to 55 percent by volume of the LFG) to ppm levels as a result of combustion, the destruction efficiency will be very near 100 percent in all cases (typically about 99.9%) and destruction rates can be assumed to be 100%. Methane recovery rates are therefore considered to be equivalent to methane emissions reductions.

Standard protocols for measuring the flow rate and methane content of recovered LFG are described below. An alternative method for measuring methane combustion rates at energy recovery facilities is provided at the end of this section. Also provided is a discussion of methods for calculating methane emissions reductions at non-regulated sites.

LFG Flow Rate Measurements

LFG flow rates are to be measured upstream of the control device by means of an installed flow metering device. The LFG flow rate at the control device is not equivalent to the sum of LFG flows measured at individual wells (due to losses and/or air infiltration along the collection piping and the cumulative errors inherent in multiple flow rate measurements); measurement of LFG flows from individual wells is not an acceptable quantification method. The protocol for measuring LFG flow using a flow meter is described below.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

202

Flow Meter Requirements

Instrument Description

The following description of the types of flow meters and recommended flow meter installation points has been taken from the Solid Waste Association of North America's manual of practice for landfill gas operations and maintenance.[19]

The most common types of flow meters measure flow by sensing differential pressure. Examples include the orifice plate, pitot tube, venturi tube, and the averaging pitot tube (e.g., Annubar™). These flow meters measure flow using a standard mathematical formula without the need to modify the result based on proprietary device-specific information. The Annubar™ relies on proprietary information supplied by the manufacturer, such as a correction coefficient, chart, or flow computer to determine the flow. The flow meter may be read using a pressure gauge, or it may require a differential pressure transmitter which sends a signal to the flow computer or flow readout device. Instantaneous readings are typically recorded on a chart recorder.

Other types of flow meters such as hot wire anemometers produce an electronic signal based on the cooling effect on a filament caused by the gas flow. These devices are sensitive to the LFG flow rate, the moisture content, and the gas composition, and require re-calibration to yield accurate measurements when the gas composition changes. However, they are widely used within the LFG industry and are acceptable if calibrated to site conditions.

The flow meter should be installed along the header pipe at a location that provides a straight section of pipe sufficient to establish laminar gas flow, as turbulent flow resulting from bends, obstructions, or constrictions in the pipe can cause interference with flow measurements which rely on differential pressure. The most desirable location for the flow meter is downstream of the blower and upstream of the control device because the LFG is drier and under slight pressure instead of vacuum. The flow meter may also be installed upstream of the blower and downstream of the moisture separator.

Performance Standards

The following information regarding flow meter performance must be maintained and may be required by CCX to be included in Project Reports:

- *Manufacturer specifications of flow meter accuracy should be +/- 5% of reading;*
- *Proof of initial calibration;*
- *Capability to record flow every 15 minutes; and*
- *Means to correct for temperature and pressure.*

[19] Solid Waste Association of North America, 1997. Landfill gas operation and maintenance – manual of practice.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc.

Instrument Maintenance and Periodic Check of Flow Meter Accuracy

Installed flow meters should be inspected, cleaned, and checked for accuracy using a portable instrument such as a pitot tube to measure the flow velocities along a transverse of the header pipe The velocity measurements are then used to calculate a flow rate, which is typically accurate to within 2 percent in larger pipes (greater than 4 inch diameter). The inspection, cleaning, and flow verification should be done at least quarterly.

Recordkeeping

The following records of LFG flows to the control device are to be kept in order to verify methane emissions reductions:

- Type of flow meter;
- Date and location of flow meter installation;
- Dates and results of flow meter calibration;
- Copies of charts or diskettes on which flow rates were recorded;
- Monthly tabulations of number of hours control device was shut down (no Offsets will be issued by CCX for periods during which the control device is not operated);
- Monthly tabulations of unadjusted total daily LFG flow to the control device (in actual cubic feet per day);
- Copies of field data used for flow measurement calibration;
- Monthly tabulations of daily LFG flow rate standardization calculations and results (in standard cubic feet per day);
- Information on the portable instrument and procedures used to check the installed flow meter accuracy, including field measurements and flow calculations; and
- Records of third-party verification of flow measurements and procedures.

The above-listed records need to be kept readily accessible and on-site for at least 2 years after the date that annual methane emissions reductions for the site have been recorded at the CCX and may be required by CCX to be included in Project Reports.

Methane Concentration Measurements

Measurement of the methane concentration of LFG is almost exclusively performed using an infrared gas analyzer (for example, the GEM-500 and GEM-2000 manufactured by LandTec, Inc.). Methane concentration measurements should be taken at approximately the same location as the flow meter. Measurements can be taken directly by connecting the sampling tube to a sampling port, or they can be taken from an LFG sample collected in a Tedlar bag or Summa canister or any other EPA-approved sampling method.

Instrument Requirements

Performance Standards

The following performance standards are recommended for current measurements for the calculation basis of

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Exchange Methane Offsets:

- Precision: Methane measurements are to be to the nearest 0.1 percent.
- Accuracy: Methane measurement accuracy decreases with increasing methane concentration but should be within +/- 10 percent of reading, as specified by the manufacturer.

Alternate instruments, including gas chromatographs or thermal conductivity detectors must meet similar standards.

Instrument Calibration Procedures

The gas analyzer instrument needs to be calibrated against a gas sample with a known methane concentration prior to each day of use. See instructions in the GEM manual for details on the calibration procedures, including instrument adjustments. A calibration gas with a methane concentration close to the concentration expected in the field (i e , 40 to 50% methane) is optimal.

Frequency of Recording

Although continuous monitoring of the methane concentration of recovered LFG would be optimal, it is not practical given the instruments available to the LFG industry currently. Unlike LFG flow rates, methane concentrations are not likely to vary dramatically over short time periods. The minimum frequency of measurement is at least monthly for Exchange Methane Offsets. "Grandfathered" Early Action Credits may go back to 1995 and data may not be archived for all sites. Where methane content measurement data is available, the average concentration measured for the year should be the concentration used to determine total methane destruction. Where data is not available the average landfill gas methane concentration of 45% will be used.

Recordkeeping

The following records of measured methane concentrations are to be kept in order to verify methane emissions reductions:

- Type of instrument.
- Dates and results of instrument calibration.
- Dates and results of methane measurement
- Monthly tabulations of measured methane concentrations.
- Records of third-party verification of methane measurements and procedures.

The above-listed records need to be kept readily accessible and on-site for at least 2 years after the date that annual emissions reductions for the site have been registered with CCX and may be required by CCX to be included in Project Reports.

Calculating Total Daily, Monthly, and Annual Methane Flows

Tabulated records of total daily LFG flows (in standard cubic feet per day) need to be matched against methane concentrations measured during the corresponding time period to determine daily methane recovery rates, using equation 1:

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Equation 1

[CH_4 recovered (standard ft^3/day)] = [LFG recovered (standard ft^3/day)]x [%CH_4]

The methane value used in the calculation should be the measurement that is the closest available in time to the date of the flow measurement, and in no case be more than 4 days distant from the date of the flow measurement. Daily methane flows should be tabulated and summed on a monthly basis. Total annual methane recovery from the landfill is to be tabulated using the monthly summaries of methane recovery

In order to estimate the amount of methane combusted in metric tons per year (Mg/yr), the annual methane recovery rate in cubic feet per year needs to be converted to weight using Equation 2:

Equation 2:

CH_4 combusted (Mg/yr) = [CH_4 recovery (ft^3/yr)] x [16.04 (molecular weight of CH_4)] x [1Mg/10^6 g]* [1mol/24.04L @ STP] x [28.32L/1cf]

Alternative Method for Calculating Methane Combustion Rates

Energy recovery facilities that use LFG as a fuel to generate electricity typically have detailed records of electrical generation rates in kilowatt-hours (kWhr) that can be used to calculate methane combustion rates. Information on the heat rate of the combustion unit in Btus per kilowatt hour (Btu/kWhr) can be used to calculate Btus of methane combusted Typically, the high heating value of methane (1,012 Btus per cubic foot) is used to convert to a methane flow rate. The calculation can be summarized as provided in Equation 3:

Equation 3

Methane recovery (ft^3) = [kWhr of electricity produced from the LFG fuel] x [heat rate in Btu/kWhr] / [1012 Btu/ft^3 (HHV of methane)]

To estimate annual methane combustion rates, use the amount of electricity generated over a one year period in the equation above. The heat rate used in the calculation should be from the most recent source test for the combustion device If no source test information is available, the heat rate per the manufacturer's specifications should be used

This alternative method for calculating methane combustion rates at energy recovery facilities is preferred over the standard method applicable to other facilities (i.e., flares) because it does not rely on monthly methane concentration measurements and is therefore more accurate.

Performance Standards

The following information regarding the measurement of methane combustion at energy recovery facilities must be maintained and may be required by CCX to be included in Project Reports:

- *Type, make, and model number of combustion unit(s);*
- *Number of combustion units that exclusively use LFG as fuel;*
- Heat rate of combustion device(s) per manufacturer's specifications;
- Copy of a summary table from the most recent source test showing the measured heat rate of combustion device(s);

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

- *Summary tables showing kWhr of electricity produced from LFG per month over the annual period;*
- Type of electrical metering device; and
- *Accuracy, precision, and calibration information on the metering device per manufacturer.*

PROTOCOL FOR DETERMINING ELIGIBLE METHANE EMISSIONS REDUCTIONS FROM REGULATED (NSPS) SITES

Methane emissions reductions from landfills required to control LFG NMOC emissions due to NSPS regulations are not eligible to earn CCX Offsets unless the emission reductions occur prior to the date that NSPS requirements apply.

Methods for Determining Eligibility of Methane Reductions Prior to NSPS Regulation

All methane recovered from a landfill prior to the date that NSPS requires the GCCS to be operational is potentially eligible to earn CCX Offsets. Methane emissions reductions are no longer eligible starting on the date of required system start-up, except for methane recovery from new cells (see below). The NSPS-required system start-up date is 30 months after the landfill first reports that its NMOC emissions are over 50 megagrams per year. Since the NSPS rule requires regular (at least once every 5 years) reporting of current and projected NMOC emissions to the EPA, the required system start-up date is well-defined.

The protocol for establishing emissions reductions due to early system operation at NSPS sites is the same as for non-regulated sites. The same data measurement, verification, recordkeeping, and reporting procedures are to be followed, with the following additional requirements:

- Records of the system start-up date need to be kept on-site for at least 2 years after the final submittal of methane emissions reduction reports to CCX. Copies of start-up date records must be maintained and may be required by CCX to be included in Project reports.
- NSPS reports providing NMOC emission rate estimates, including Tier 1 and Tier 2 reports, need to be kept on site for at least 2 years after the final submittal of methane emissions reduction reports to CCX. Copies of the results of the Tier 1 and/or Tier 2 NMOC emission rate estimates and the projected date when system start-up will be required by NSPS should be maintained and may be required by CCX to be included in Project reports. reductions to CCX.

Methods for Determining Reductions in Methane Emissions Due to Accelerated Wellfield Installation in New Refuse Cells

All methane recovered from active waste cells that have refuse in place for less than 5 years, and all methane recovered from inactive cells that have refuse in place for less than 2 years, is potentially eligible to be counted as methane emissions reductions. The protocol for determining whether the 5 or 2-year age requirement is met and for measuring methane recovery from the

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc.

new cells is described below.

Protocol for Establishing Age of Refuse Cells

The following recordkeeping, reporting, and data verification procedures should be followed to establish that the 5 or 2-year age limit requirements are met:

- A plan-view site drawing showing the following items must be kept on-site for at least 2 years after the final submittal of the methane emissions reduction report to CCX may require that such documents be included in Project Reports: A delineation of the refuse cell boundaries;
  - The locations of extraction wells installed in the cell;
  - The locations of collection system piping connecting the cell's extraction wells to the rest of the GCCS; and
  - The location where flow and methane measurements are taken.
- Records of showing the date that refuse was first placed in the cell must be kept on-site for at least 2 years after the final submittal of the methane emissions reduction report to the CCX and CCX may require inclusion of such records in CCX Project Reports

Methods for Measuring Accelerated Methane Recovery from New Cells

Methods for measuring methane recovery from new refuse cells meeting the 5 and 2-year age limit include methods which rely on direct measurements alone and methods which rely on a combination of direct measurements and indirect calculations. Both approaches require that the collection system is designed to allow LFG collected from the new refuse cells to remain separate from LFG collected from other cells, at least up to the point where the LFG flows and methane content can be measured. This requirement makes necessary a separate gas conveyance line (header piping) from the new cells.

Methods relying solely on direct measurement of methane flows require the installation of a flow meter and an LFG sampling port at some point along the header pipe collecting LFG from just the new cell(s). LFG flows and methane contents are to be measured at this location using the same procedure as described previously for measurement of methane recovery from the entire landfill for non-NSPS sites. Recordkeeping, reporting, and verification of the measured methane recovery rates and conversion of methane flows to tons of CO_2-equivalent emissions reductions are also the same as described previously.

If installation of a fixed flow meter along the header pipe collecting LFG from the new cells is not practical, periodic measurements are acceptable if the following protocol is followed:

- *Establish baseline methane recovery rates from the entire (NSPS) system prior to expanding the system to collect LFG from the new cells. The baseline methane recovery rate should be in standard cubic feet per minute (scfm) and be the average value from one month of measurements taken using the measuring procedures described previously for measuring methane recovery from non-NSPS sites. The baseline recovery rates should be representative of normal operations and not be measured when there are problems with the wellfield.*
- *Shortly after wells installed in the new cells are operational, conduct new measurements of average methane recovery from the entire site (in scfm), based on one month of measurements taken using the measurement procedures described previously The difference between the new methane recovery rates*

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

- *and the baseline methane recovery rates equals the initial rate of incremental methane emissions reductions.*

- *Ongoing methane emissions reduction quantification is to be based on average methane recovery rates (in scfm) as measured along the header pipe collecting LFG exclusively from the new cells. The measurement of methane recovery from the new cells should be conducted using the following procedures:*

  1. Use a portable flow measuring device such as a pitot tube that meets the standards described in a previous section, "Flow Meter Requirements."
  2. Use an infrared gas analyzer (such as a GEM-500) or alternative instrumentation that meets the standards described in a previous section, "Methane Concentration Measurements."
  3. Take measurements of LFG flow and methane concentrations each week, starting one week after the initial rate of methane emissions reductions is established. Adjust measured LFG flow rates to scfm.
  4. Calculate an average daily methane recovery rate from the new cells. Calculate the percentage of sitewide methane recovery derived from the new cells.

Ongoing emissions reduction quantification would be based on continuous flow monitoring (and weekly methane concentration measurements) for the entire system and weekly LFG flow and methane concentration measurements from the expansion system only. If fluctuations in total site methane recovery are indicated, compare the most recent measured methane recovery rate from the new cells with an estimated methane recovery rate from the new cells calculated from the total site methane recovery rate and the most recently measured percentage of methane recovery from the new cells. Use the lower of the two methane recovery values.

Recordkeeping, Reporting, and Verification Requirements

Recordkeeping, reporting, and data verification requirements described above for measuring methane recovery from non-NSPS sites and for confirming that the 5 and 2-year refuse age requirements are met are applicable to NSPS landfills that recover additional methane as a result of accelerated installation of wells in new cells

As indicated above, additional calculation steps will be required to calculate daily methane recovery from average methane recovery rates (in scfm) at landfills that use indirect methods to calculate methane recovery from accelerated installation of wells in new cells.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Appendix 9.2B Protocol For Quantifying Greenhouse Gas Reductions From Anaerobic Manure Digesters (November 2004)

Introduction

The purpose of this protocol is to address the measurement and verification of methane emissions reductions from the combustion of landfill gas (LFG) for the Chicago Climate Exchange (CCX).

Topics covered in this document:

- Overall approach for crediting methane reductions from anaerobic digestion of animal manure as emission offsets;
- Protocol for measuring, recording, and verifying anaerobic digester methane recovery rates based on biogas flow and methane measurements; and

Topics not included:

- Accounting for (carbon dioxide) emissions reductions that may result from displacement of other fuels used in power production; and

Requirements and Overall Approach for Crediting Methane Reductions

For CCX purposes, anaerobic digesters are treated as providers of Exchange Methane Offsets. CCX eligibility requirements for methane reductions from anaerobic digesters include the following:

- A company must demonstrate clear ownership rights of the emission reductions from the destruction of methane in order to register the offsets with CCX.
- Projects eligible to earn offsets during the years 2003 through 2006 are those placed into service on or after January 1, 1999.
- Except as may be provided by CCX, procedures outlined in this protocol must be followed to quantify methane emission reductions.
- Eligible animal manure biogas methane collection and combustion systems will be issued Offsets for all methane collected and destroyed. Such issuance shall occur at a rate of 18.25 metric tons CO_2 per metric ton of methane combusted.

The overall approach to quantifying methane emissions reductions described in this report is to rely on measured quantities of methane collected through the operation of an anaerobic digester and destroyed by combustion in a flare or energy recovery facility. Details on acceptable methods for recording rates of methane emissions reduction from combustion of biogas produced

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

210

from anaerobic digestion of animal manures are provided.

Although there are no regulations currently requiring the control of biogas emissions from the treatment of animal manures using anaerobic digestion or other methods, the USEPA's National Resource Conservation Service has published a guidance document for the operation of three categories of anaerobic digesters, including: (1) covered anaerobic lagoons; (2) complete mix digesters; and (3) plug flow digesters. The guidance document contains practice standards that should be followed at anaerobic digester facilities seeking to earn offsets through methane emissions reductions. The standards are included as Appendix F of a handbook on the use of biogas technologies for managing livestock manure, which is available on the web at http://www.epa.gov/outreach/agstar/library/handbook/appendixf.pdf.

Protocol for Quantifying Methane Emissions Reductions

Rates of methane capture and destruction at a biogas facility are a function of the following measurable quantities:

- The rate of biogas flow to the control device (flare station, power plant, or other facility that combusts collected biogas);
- The methane content of the recovered biogas; and
- The methane destruction efficiency in the control device.

Since methane is the combustion fuel for the control device and is reduced (from about 60 to 80 percent by volume) to ppm levels as a result of combustion, the destruction efficiency will be very near 100 percent in all cases, and destruction rates can be assumed to be 100 percent. Methane combustion rates are therefore assumed to be equivalent to methane emissions reductions.

Standard protocols for measuring the flow rate and methane content of recovered biogas are described below. An alternative method for measuring methane combustion rates at energy recovery facilities also is provided.

Biogas Flow Rate Measurements

Biogas flow rates are to be measured upstream of the control device by means of an installed flow meter device. The protocol for measuring biogas flow using a flow meter is described below.

Flow Meter Requirements

The following description of the types of flow meters and recommended flow meter installation points has been taken from the Solid Waste Association of North America's manual of practice

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

for landfill gas operations and maintenance.[20]

The most common types of flow meters measure flow by sensing differential pressure. Examples include the orifice plate, pitot tube, venturi tube, and the averaging pitot tube (e.g., Annubar™). These flow meters measure flow using a standard mathematical formula without the need to modify the result based on proprietary device-specific information. The Annubar™ relies on proprietary information supplied by the manufacturer, such as a correction coefficient, chart, or flow computer to determine the flow. The flow meter may be read using a pressure gauge, or it may require a differential pressure transmitter which sends a signal to the flow computer or flow readout device. Instantaneous readings are typically recorded on a chart recorder.

Other types of flow meters such as hot wire anemometers produce an electronic signal based on the cooling effect on a filament caused by the gas flow. These devices are sensitive to the biogas flow rate, the moisture content, and the gas composition, and require re-calibration to yield accurate measurements when the gas composition changes. However, they are widely used within the biogas industry and are acceptable if calibrated to site conditions.

The flow meter should be installed along the header pipe at a location that provides a straight section of pipe sufficient to establish laminar gas flow, as turbulent flow resulting from bends, obstructions, or constrictions in the pipe can cause interference with flow measurements which rely on differential pressure. The most desirable location for the flow meter is downstream of the blower and upstream of the control device because the biogas is drier and under slight pressure instead of vacuum.

The following information regarding flow meter performance must be maintained and may be required by CCX to be included in Project Reports:

- Accuracy, precision per manufacturer;
- Proof of initial calibration;
- Means to correct for temperature and pressure.

Installed flow meters should be inspected, cleaned, and checked for accuracy using a portable instrument such as a pitot tube to measure the flow velocities along a transverse of the header pipe. The velocity measurements are then used to calculate a flow rate, which is typically accurate to within 2 percent in larger pipes (greater than 4 inch diameter). The inspection, cleaning, and flow verification should be done at least quarterly.

Recordkeeping

The following records of biogas flows to the control device are to be kept in order to verify methane emissions reductions:

- Type of flow meter;

[20] Solid Waste Association of North America, 1997. Landfill gas operation and maintenance – manual of practice

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc.

- Date and location of flow meter installation;
- Dates and results of flow meter calibration;
- Copies of charts or diskettes on which flow rates were recorded;
- Monthly tabulations of number of hours control device was shut down (no offsets will be issued by CCX for periods during which the control device is not operated);
- Copies of field data used for flow measurement standardization, including barometric pressure, biogas temperature and pressure measurements, and biogas characteristics (percent methane, oxygen, water);
- Monthly tabulations of hourly biogas flow rate standardization calculations and results (in standard cubic feet per hour);
- Information on the portable instrument and procedures used to check the installed flow meter accuracy, including field measurements and flow calculations; and
- Records of third-party verification of flow measurements and procedures.

The above-listed records need to be kept readily accessible and on-site for at least 2 years after the date that annual methane emissions reductions for the site have been recorded at the CCX and may be required by CCX to be included in Project Reports.

Third-Party Verification of Landfill Gas Flow Measurements and Procedures

At least once per year, biogas flow measurements, records, and procedures should be verified as acceptable per the CCX protocol by a CCX-approved Verifier.

Methane Concentration Measurements

Offset providers who wish to use default factors (provided below) for methane concentration are required to provide laboratory analysis of methane concentration at least once per year. Offset providers who wish to receive credit for values in excess of the established default values must provide hourly averaged methane concentration data using the protocols described below.

Default values for methane concentration:

- Entities able to provide laboratory analysis of methane concentration between 70.1% and 75% for biogas digesters will be assigned a default value of 70%.
- Entities able to provide laboratory analysis of methane concentration between 65.1% and 70% for biogas digesters will be assigned a default value of 65%.
- Entities able to provide laboratory analysis of methane concentration between 60% and 65% for biogas digesters will be assigned a default value of 60%

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Default values will be reevaluated on a yearly basis and will be adjusted according to the most current laboratory analysis.

The methane concentration of biogas is typically measured using instrumentation located inside the digester, as methane concentrations are an important parameter to be monitored during digester operations. Instruments collect samples from gases that accumulate near the roof of the digester and provide periodic or continuous biogas methane concentrations.

The following information regarding methane concentration measurement instrumentation must be submitted:

- Accuracy, precision per manufacturer;
- Proof of initial calibration;
- Records of periodic instrument calibration (according to the manufacturers instructions for calibration);
- Capability to record methane concentrations at least every 15 minutes for entities not using default values for methane content.

The gas analyzer instrument needs to be calibrated against a gas sample with a known methane concentration at least once per year. See instructions in the instrument manual for details on the calibration procedures, including instrument adjustments. A calibration gas with a methane concentration close to the concentration expected in the field (i.e., 60-70% methane) is optimal.

Recordkeeping

The following records of measured methane concentrations are to be kept in order to verify methane emissions reductions:

- Type of instrument.
- Dates and results of instrument calibration.
- Dates, times, and results of methane measurement.
- Records of laboratory analysis of methane concentration- at least once per year.
- For entities not using default methane concentration factors- monthly tabulations of unadjusted average methane concentration of recovered biogas during each hour of digester operation, based on the average methane concentration measured during four 15-minute periods.
- Records of third-party verification of methane measurements and procedures.

The above-listed records need to be kept readily accessible and on-site for at least 2 years after the date that annual emissions reductions credits for the site have been recorded at the CCX.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Third-Party Verification of Methane Measurements and Procedures

At least once per year, methane concentration measurements, records, and procedures should be verified as acceptable per the CCX protocol by a CCX-approved Verifier.

Use of Measured Data To Calculate Methane Emissions Reductions From Anaerobic Digestors

Methods for calculating the amount of methane recovered from anaerobic digesters and combusted are described below.

Methane concentrations should be measured at a minimum of once per year. Default factors will be applied to all offset providers who do not provide methane concentrations on an hourly basis as described below. Tabulated records of average hourly biogas flows (in standard cubic feet per hour) need to be matched against methane concentrations measured during the corresponding time period to determine hourly methane recovery rates, using the following equation:

[CH_4 recovered (standard ft^3/hour)] = [average biogas recovery rate (standard ft^3/hour)]x [average hourly %CH_4].

Calculated hourly methane flows should be tabulated and summed on a daily and monthly basis. Total annual methane recovery from the landfill is to be tabulated using the monthly summaries of methane recovery.

In order to estimate the amount of methane combusted in metric tons per year (Mg/yr), the annual methane recovery rate in cubic feet per year needs to be converted to weight using the following formula:

> CH_4 combusted (Mg/yr) = [CH_4 recovery (ft^3/yr)] x [16 (molecular weight of CH_4)] x [1Mg/10^6 g]* [1mol/24.04L @ STP] x [28.32L/1cf]

Third-Party Verification of Methane Combustion Rate Calculations

For offset providers who desire to use actual hourly methane concentrations all calculations of hourly, daily, monthly, and annual methane recovery rates, and metric tons of methane combusted, need to be verified as acceptable per the CCX protocol by a CCX-approved Verifier prior to submitting records of annual amounts of methane combusted.

Alternative Method For Calculating Methane Combustion Rates

Energy recovery facilities that use biogas as a fuel to generate electricity typically have detailed records of electrical generation rates in kilowatt-hours (kWhr) that can be used to calculate

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

methane combustion rates. Information on the heat rate of the combustion unit in Btus per kilowatt hour (Btu/kWhr) can be used to calculate Btus of methane combusted. Typically, the high heating value of methane (1,012 Btus per cubic foot) is used to convert to a methane flow rate. The calculation can be summarized as follows:

Methane recovery (ft^3) = [kWhr of electricity produced from the biogas fuel] x [heat rate in Btu/kWhr] / [1012 Btu/ft^3 (HHV of methane)]

For estimating annual methane combustion rates, use the amount of electricity generated over a one-year period in the equation above. The heat rate used in the calculation should be from the most recent source test for the combustion device. If no source test information is available, the heat rate per the manufacturer's specifications should be used.

The following information regarding the measurement of methane combustion at energy recovery facilities must be submitted:

- Type, make, and model number of combustion unit(s);
- Number of combustion units that exclusively use biogas as fuel;
- Heat rate of combustion device(s) per manufacturer's specifications;
- Copy of a summary table from the most recent source test showing the measured heat rate of combustion device(s);
- Summary tables showing kWhr of electricity produced from biogas per month over the annual period;
- Type of electrical metering device; and
- Accuracy, precision, and calibration information on the metering device per manufacturer.

Prior to submitting methane recovery rates to be recorded as metric tons of methane combusted, all calculations of annual methane recovery rates need to be verified as acceptable per the CCX protocol by a CCX-approved Verifier.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Appendix Table 9.3 CCX Reforestation Carbon Accumulation Tables Dense Planting (>250 stems per acre) (Metric tons carbon dioxide (CO_2) per acre per year)[21]

	Years since planting			
U.S. region and species*	**0-5**	**5-10**	**11-15**	**16-20**
SE loblolly	1.51	1.86	6.99	6.17
SE slash	1.51	1.75	6.52	5.83
SE longleaf pine	1.40	1.51	5.24	4.78
SE Bottomland hardwoods	0.00	0.47	0.93	3.03
Delta loblolly	2.21	2.80	7.81	7.92
Delta slash pine	2.10	2.68	7.69	7.69
Southern plains loblolly	2.10	2.45	6.87	6.87
South Central Bottomland hardwoods	0.23	1.63	2.56	3.49
Appalachian loblolly	1.63	1.98	7.11	6.41
Appalachian shortleaf pine	1.51	1.75	6.52	5.71
Northeast white/Norway spruce	1.28	1.28	1.40	2.56
Northeast red pine	2.68	3.38	3.50	3.50
Lake States white spruce	3.61	4.78	4.66	5.01
Lake States red pine	2.10	2.45	2.56	4.31
Lake States Bottomland hardwoods	0.70	1.16	1.40	2.10
Corn Belt mixed hardwoods	3.50	4.54	4.66	4.78
Corn Belt mixed softwoods	3.96	5.13	5.36	3.50
Central States Bottomland hardwoods	1.16	2.80	3.03	1.63
Northern Plains, mixed hardwoods	1.98	2.45	2.45	2.45
Rocky Mountains, ponderosa pines	1.40	1.40	1.51	2.33
Pacific Coast Douglas fir	1.05	1.40	1.28	3.26
Pacific Coast ponderosa pine	1.63	0.70	0.82	0.93

* If the species and region combinations do not match your Project, apply the Carbon Accumulation Values for the species you have that are applicable to a climatically similar climate. Projects in Canada should apply the carbon values applicable in the closest U.S. region listed above unless undertaken more than 250 miles from the U.S. border

Region definitions:
SE (southeast): AL, FL, GA, SC; Delta: AR, LA, MS; South Central: AL, AR, LA, MS, OK, TN, TX; Southern plains: OK, TX; Appalachian: KY, NC, VA, TN, WV; Northeast: CT, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VT; Lake States: MI, MN, WI; Corn Belt: IA, IL, IN, MO, OH; Central States: IA, IL, IN, KS, MO, NE, SD; Northern Plains: KS, ND, NE, SD; Rocky Mountains: AZ, CO, ID, MT, NM, NV, UT, WY; Pacific Coast: CA, OR, WA

[21] Source: The values in Table 9.3A are 70% of the annualized carbon accumulation quantities for carbon in live vegetation that are reported in Richard Birdsey, "Regional Estimates of Timber Volume and Forest Carbon for Managed Timberland," in R.N Sampson and D Hair, eds., *Forests and Global Change, Volume 2: Forest Management Opportunities For Mitigating Carbon Emissions*

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Appendix 9.3A – Not Used

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Appendix 9.3B Methods for Quantifying Carbon Accumulation for Urban and Suburban Tree Planting Programs

Step 1: Determine the number and species of qualifying live trees standing at the end of 2002 (or upon Project registration) on lands included in the CCX-registered Project. Qualifying trees are those planted after December 31, 1989 on sites not forested at that time.

Annual carbon sequestration values are calculated **per one hundred trees**.

Step 2: Reference Table 9.3B to determine how many trees in the Project (rounded to the nearest hundred) correspond to the tree types listed below (species: H = Hardwood, C = Conifer) and growth rates (S = Slow, M = Moderate, F = Fast).

Do not include trees with diameters less than 1 inch at breast height.

Step 3: Apply the annual carbon accumulation values provided in Table 9.3C to determine annual metric tons of CO_2.

For the purpose of calculating Tree Age in order to use Table 9.3C, zero-year trees are 1 inch in diameter at Breast Height (total diameter at Breast Height of all trunks for multi-trunk trees).

To calculate Tree Age for trees with a diameter greater than 1 inch, use the following formula:

(Tree diameter (in inches) – 1) multiplied by 3. Round the result to the nearest whole number.

Retain all worksheets, calculations, field assessments and other information on tree counts.

Calculation Example: A city planted 10,000 two-inch diameter White Ash trees in 1996. Those trees were therefore age 3 in 1996, so they are age 10 during 2003. The city concludes that 90% of the trees survived through 2002 (9,000 remain alive).

The carbon sequestration calculation is as follows:

Tree type:	White Ash
Tree count:	9,000
Tree types, growth rate:	H, F
Carbon accumulated during 2003	90 x 2.25 = 202.5 metric tons CO_2 (round up to 203 metric tons).

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Appendix Table 9.3B1 Tree Types and Growth Rates Applied to Urban and Suburban Tree Plantings[22]

Species	Type	Growth Rate	Species	Type	Growth Rate
Ailanthus, *Ailanthus altissima*	H	F	Maple, bigleaf, *Acer macrophyllum*	H	S
Alder, European, *Alnus glutinusa*	H	F	Maple, Norway, *Acer platanoides*	H	M
Ash, green, *Fraxinus pennsylvanica*	H	F	Maple, red, *Acer rubrum*	H	M
Ash, mountain, American *Sorbus americana*	H	M	Maple, silver, *Acer saccharinum*	H	M
Ash, white, *Fraxinus americana*	H	F	Maple, sugar, *Acer saccharum*	H	S
Aspen, bigtooth, *Populus grandidentata*	H	M	Mulberry, red, *Morus rubra*	H	F
Aspen, quaking, *Populus tremuloides*	H	F	Oak, black, *Quercus rubra*	H	M
Baldcypress, *Taxodium distichum*	C	F	Oak, blue, *Quercus douglasii*	H	M
Basswood, American, *Tilia americana*	H	F	Oak, bur, *Quercus macrocarpa*	H	S
Beech, American, *Fagus grandifolia*	H	S	Oak, California black, *Quercus kelloggii*	H	S
Birch, paper (white), *Betula papyrifera*	H	M	Oak, California White, *Quercus lobata*	H	M
Birch, river, *Betula nigra*	H	M	Oak, canyon live, *Quercus chrysolepsis*	H	S
Birch, yellow, *Betula alleghaniensis*	H	S	Oak, chestnut, *Quercus prinus*	H	S
Boxelder, *Acer negundo*	H	F	Oak, Chinkapin, *Quercus muehlenbergii*	H	M
Buckeye, Ohio, *Aesculus glabra*	H	S	Oak, Laurel, *Quercus laurifolia*	H	F
Catalpa, northern, *Catalpa speciosa*	H	F	Oak, live, *Quercus virginiana*	H	F
Cedar-red, eastern, *Juniperus virginiana*	C	M	Oak, northern red, *Quercus rubra*	H	F
Cedar-white, northern, *Thuja occidentalis*	C	M	Oak, overcup, *Quercus lyrata*	H	S
Cherry, black, *Prunus serotina*	H	F	Oak, pin, *Quercus palustris*	H	F
Cherry, pin, *Prunus pennsylvanica*	H	M	Oak, scarlet, *Quercus coccinea*	H	F
Cottonwood, eastern, *Populus deltoides*	H	M	Oak, swamp white, *Quercus bicolor*	H	M
Crabapple, *Malus spp.*	H	M	Oak, water, *Quercus nigra*	H	M
Cucumbertree, *Magnolia acuminata*	H	F	Oak, white, *Quercus alba*	H	S
Dogwood, flowering, *Cornus florida*	H	S	Oak, willow, *Quercus phellos*	H	M
Elm, American, *Ulmus Americana*	H	F	Pecan, *Carya illinoensis*	H	S
Elm, Chinese, *Ulmus parvifolia*	H	M	Pine, European black, *Pinus nigra*	C	S
Elm, rock, *Ulmus thomasii*	H	S	Pine, jack, *Pinus banksiana*	C	F
Elm, September, *Ulmus serotina*	H	F	Pine, loblolly, *Pinus taeda*	C	F
Elm, Siberian, *Ulmus pumila*	H	F	Pine, longleaf, *Pinus palustris*	C	F
Elm, slippery, *Ulmus rubra*	H	M	Pine, ponderosa, *Pinus ponderosa*	C	F
Fir, balsam, *Abies balsamea*	C	S	Pine, red, *Pinus resinosa*	C	F
Fir, Douglas, *Pseudotsuga menziesii*	C	F	Pine, Scotch, *Pinus sylvestris*	C	S
Ginkgo, *Ginkgo biloba*	H	S	Pine, shortleaf, *Pinus echinata*	C	F
Hackberry, *Celtis occidentalis*	H	F	Pine, slash, *Pinus elliottii*	C	F
Hawthorne, *Crataegus spp.*	H	M	Pine, Virginia, *Pinus virginiana*	C	M
Hemlock, eastern, *Tsuga canadensis*	C	M	Pine, white eastern, *Pinus strobus*	C	F
Hickory, bitternut, *Carya cordiformis*	H	S	Poplar, yellow, *Liriodendron tulipifera*	H	F
Hickory, mockernut, *Carya tomentosa*	H	M	Redbud, eastern, *Cercis canadensis*	H	M

[22] "Method for Calculating Carbon Sequestration by Trees in Urban and Suburban Settings," in Energy Information Administration, U S Department of Energy, *Voluntary Reporting of Greenhouse Gases*, April 1998.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Species	Type	Growth Rate	Species	Type	Growth Rate
Hickory, shagbark, *Carya ovata*	H	S	Sassafras, *Sassafras albidum*	H	M
Hickory, shellbark, *Carya laciniosa*	H	S	Spruce, black, *Picea mariana*	C	S
Hickory, pignut, *Carya glabra*	H	M	Spruce, blue, *Picea pungens*	C	M
Holly, American, *Ilex opaca*	H	S	Spruce, Norway, *Picea abies*	C	M
Honeylocust, *Gleditsia triacanthos*	H	F	Spruce, red, *Picea rubens*	C	S
Hophornbeam, eastern, *Ostrya virginiana*	H	S	Spruce, white, *Picea glauca*	C	M
Horsechestnut, common, *Aesculus Hippocastanum*	H	F	Sugarberry, *Celtis laevigata*	H	F
Kentucky coffeetree, *Gymnocladus dioicus*	C	F	Sweetgum, *Liquidambar styraciflua*	H	F
Linden, little-leaf, *Tilia cordata*	H	F	Sycamore, *Platanus occidentalis*	H	F
Locust, black, *Robinia pseudoacacia*	H	F	Tamarack, *Larix laricina*	C	F
London plane tree, *Platanus_X_acerifolia*	H	F	Walnut, black, *Juglans nigra*	H	F
Magnolia, southern, *Magnolia grandifolia*	H	M	Willow, black, *Salix nigra*	H	F

Type: H = Hardwood, C = Conifer Growth Rate: S = Slow, M = Moderate, F = Fast

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc.

221

Appendix Table 9.3B2 Annual CCX Carbon Accumulation Quantities for Urban and Suburban Tree Plantings (Metric tons CO_2) per One Hundred Trees by Tree Type and Age

Annual Sequestration Rates by Tree Type and Growth Rate (metric tons CO_2 per one hundred trees)							
		Hardwood			Conifer		
Tree Age*	Tree diameter (at 4.5 feet height)	Slow	Moderate	Fast	Slow	Moderate	Fast
0	1 inch	0.15	0.22	0.31	0.08	0.12	0.16
1	1.33"	0.19	0.31	0.47	0.10	0.17	0.26
2	1.66"	0.23	0.41	0.63	0.13	0.23	0.36
3	2.0"	0.28	0.50	0.80	0.16	0.29	0.48
4	2.33"	0.33	0.61	0.99	0.19	0.36	0.61
5	2.66"	0.37	0.71	1.18	0.22	0.43	0.75
6	3.0"	0.43	0.83	1.38	0.26	0.51	0.89
7	3.33"	0.48	0.94	1.59	0.29	0.59	1.04
8	3.66"	0.54	1.06	1.81	0.33	0.68	1.19
9	4.0"	0.58	1.19	2.03	0.36	0.77	1.36
10	4.33"	0.64	1.31	2.25	0.41	0.86	1.54
11	4.66"	0.70	1.43	2.48	0.44	0.96	1.71
12	5.0"	0.76	1.57	2.72	0.49	1.06	1.90
13	5.33"	0.82	1.70	2.96	0.54	1.15	2.09
14	5.66"	0.87	1.84	3.21	0.57	1.26	2.28
15	6.0"	0.94	1.97	3.46	0.62	1.38	2.49
16	6.33"	1.00	2.11	3.72	0.66	1.48	2.70
17	6.66"	1.06	2.26	3.97	0.71	1.60	2.91
18	7.0"	1.13	2.40	4.23	0.77	1.71	3.14
19	7.33"	1.19	2.55	4.50	0.82	1.83	3.36
20	7.66"	1.26	2.70	4.78	0.86	1.95	3.59
21	8.0"	1.33	2.84	5.05	0.92	2.07	3.82
22	8.33"	1.40	3.01	5.33	0.97	2.20	4.07
23	8.66"	1.46	3.16	5.61	1.03	2.33	4.31
24	9.0"	1.53	3.31	5.90	1.07	2.46	4.56
25	9.33"	1.60	3.47	6.19	1.13	2.59	4.81
26	9.66"	1.67	3.64	6.48	1.19	2.73	5.07
27	10.0"	1.75	3.79	6.77	1.25	2.87	5.33
28	10.33"	1.82	3.95	7.08	1.31	3.01	5.59
29	10.66"	1.89	4.11	7.38	1.36	3.15	5.86

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc.

222

Appendix 9.4A Zone A Counties that Qualify for Exchange Soil Offsets (XSOs)
(conservation tillage and grass plantings)

ARKANSAS		
Arkansas	Drew	Mississippi
Ashley	Greene	Monroe
Chicot	Jackson	Prairie
Clay	Lawrence	Poinsett
Craighead	Lee	Phillips
Crittenden	Lincoln	St Francis
Cross	Lonoke	Woodruff
Desha		

ILLINOIS		
Adams	Henderson	Massac
Alexander	Henry	Morgan
Bond	Iroquois	Moultrie
Boone	Jackson	Ogle
Brown	Jasper	Peoria
Bureau	Jefferson	Perry
Calhoun	Jersey	Piatt
Carroll	Jo Daviess	Pike
Cass	Johnson	Pope
Champaign	Kane	Pulaski
Christian	Kankakee	Putnam
Clark	Kendall	Randolph
Clay	Knox	Richland
Clinton	La Salle	Rock Island
Coles	Lake	Saline
Cook	Lawrence	Sangamon
Crawford	Lee	Schuyler
Cumberland	Livingston	Scott
De Witt	Logan	Shelby
De Kalb	Macon	St. Clair
Douglas	Macoupin	Stark
DuPage	Madison	Stephenson
Edgar	Marion	Tazewell
Edwards	Mason	Union
Effingham	Marshall	Vermilion
Fayette	McDonough	Wabash
Ford	McHenry	Warren
Franklin	McLean	Washington
Fulton	Menard	Wayne
Gallatin	Mercer	White
Greene	Monroe	Whiteside
Grundy	Montgomery	Will
Hamilton		Williamson
Hancock		Winnebago
Hardin		Woodford

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Appendix 9.4A (continued) Zone A Counties that Qualify for Exchange Soil Offsets (XSOs) *(conservation tillage and grass plantings)*

INDIANA		
Adams	Hancock	Orange
Allen	Harrison	Owen
Bartholomew	Hendricks	Parke
Benton	Henry	Perry
Blackford	Howard	Porter
Boone	Huntington	Pulaski
Brown	Jackson	Putnam
Carroll	Jasper	Randolph
Cass	Jay	Ripley
Clark	Jefferson	Rush
Clay	Jennings	Scott
Clinton	Johnson	Shelby
Crawford	Kosciusko	Spencer
Daviess	Lagrange	St. Joseph
De Kalb	Lake	Starke
Dearborn	La Porte	Steuben
Decatur	Lawrence	Switzerland
Delaware	Monroe	Tippecanoe
Dubois	Madison	Tipton
Elkhart	Marion	Union
Fayette	Marshall	Vermillion
Floyd	Martin	Wabash
Fountain	Miami	Washington
Franklin	Montgomery	Warren
Fulton	Morgan	Warrick
Grant	Newton	Wayne
Greene	Noble	Wells
Hamilton	Ohio	Whitley

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Appendix 9.4A (continued) Zone A Counties that Qualify for Exchange Soil Offsets (XSOs) ***(conservation tillage and grass plantings)***

IOWA		
Adair	Floyd	Monona
Adams	Franklin	Monroe
Allamakee	Fremont	Montgomery
Appanoose	Greene	Muscatine
Audubon	Grundy	O'Brien
Benton	Guthrie	Osceola
Black Hawk	Hamilton	Page
Boone	Hancock	Palo Alto
Bremer	Hardin	Plymouth
Buchanan	Harrison	Pocahontas
Buena Vista	Henry	Polk
Butler	Howard	Pottawattamie
Calhoun	Humboldt	Poweshiek
Carroll	Ida	Ringgold
Cass	Iowa	Sac
Cedar	Jackson	Scott
Cerro Gordo	Jasper	Shelby
Cherokee	Jefferson	Sioux
Chickasaw	Johnson	Story
Clarke	Jones	Tama
Clay	Keokuk	Taylor
Clayton	Kossuth	Union
Clinton	Lee	Van Buren
Crawford	Linn	Wapello
Dallas	Louisa	Warren
Davis	Lucas	Washington
Decatur	Lyon	Wayne
Delaware	Madison	Webster
Des Moines	Mahaska	Winnebago
Dickinson	Marion	Winneshiek
Dubuque	Marshall	Woodbury
Emmet	Mills	Worth
Fayette	Mitchell	Wright

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc.

Appendix 9.4A (continued) Zone A Counties that Qualify for Exchange Soil Offsets (XSOs) *(conservation tillage and grass plantings)*

KANSAS		KENTUCKY		LOUISIANA
Allen	Johnson	Anderson	Henry	Ascension
Anderson	Labette	Ballard	Hickman	Assumption
Atchison	Leavenworth	Bath	Hopkins	Avoyelles
Bourbon	Lincoln	Boone	Jefferson	Caldwell
Brown	Linn	Bourbon	Jessamine	Catahoula
Butler	Lyon	Boyle	Kenton	Concordia
Chase	Marion	Bracken	Lincoln	East Baton Rouge
Cherokee	Marshall	Breckinridge	Madison	East Carroll
Clay	McPherson	Butler	Marshall	East Feliciana
Cloud	Miami	Caldwell	Mason	Franklin
Coffey	Montgomery	Campbell	McCracken	Iberville
Cowley	Morris	Calloway	McLean	Lafayette
Crawford	Nemaha	Carlisle	Mercer	Livingston
Dickinson	Neosho	Carroll	Montgomery	Madison
Doniphan	Osage	Christian	Muhlenberg	Morehouse
Douglas	Ottawa	Clark	Nicholas	Ouachita
Elk	Pottawatomie	Crittenden	Ohio	Pointe Coupee
Ellsworth	Republic	Daviess	Oldham	Richland
Franklin	Rice	Edmonson	Owen	St. Charles
Geary	Riley	Fayette	Pendleton	St. James
Greenwood	Saline	Fleming	Robertson	St. John Baptist
Harvey	Shawnee	Franklin	Scott	St. Laundry
Jackson	Wabaunsee	Fulton	Shelby	St. Martin
Jefferson	Washington	Gallatin	Spencer	Tensas
	Wilson	Garrard	Trimble	West Baton Rouge
	Woodson	Grant	Union	West Carroll
		Graves	Washington	West Feliciana
		Grayson	Webster	
		Harrison	Woodford	
		Henderson		

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc.

226

Appendix 9.4A (continued) Zone A Counties that Qualify for Exchange Soil Offsets (XSOs) *(conservation tillage and grass plantings)*

MICHIGAN	MINNESOTA	MISSISSIPPI
Allegan	Big Stone	Adams
Barry	Blue Earth	Amite
Bay	Brown	Bolivar
Berrien	Carver	Carroll
Branch	Chippewa	Claiborne
Calhoun	Cottonwood	Coahoma
Cass	Dodge	Copiah
Clinton	Douglas	Desoto
Eaton	Faribault	Franklin
Genesee	Fillmore	Hinds
Gratiot	Freeborn	Holmes
Hillsdale	Goodhue	Humphreys
Huron	Grant	Issaquena
Ingham	Hennepin	Jefferson
Ionia	Houston	Leflore
Isabella	Jackson	Lincoln
Jackson	Kandiyohi	Madison
Kalamazoo	Le Sueur	Marshall
Kent	Lincoln	Panola
Lapeer	Lyon	Quitman
Lenawee	Martin	Sharkey
Livingston	McLeod	Sunflower
Macomb	Meeker	Tallahatchie
Mecosta	Mower	Tate
Midland	Murray	Tunica
Monroe	Nicollet	Warren
Montcalm	Olmsted	Washington
Muskegon	Pipestone	Wilkinson
Newaygo	Pope	Yazoo
Oakland	Redwood	
Oceana	Renville	
Ottawa	Rice	
Saginaw	Scott	
Sanilac	Sibley	
Shiawassee	Steele	
St. Clair	Stevens	
St. Joseph	Swift	
Tuscola	Wabasha	
Van Buren	Waseca	
Washtenaw	Watonwan	
Wayne	Winona	
	Wright	
	Yellow Medicine	

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Appendix 9.4A (continued) Zone A Counties that Qualify for Exchange Soil Offsets (XSOs) ***(conservation tillage and grass plantings)***

MISSOURI		
Adair	Grundy	Osage
Andrew	Harrison	Pemiscot
Atchison	Henry	Pike
Audrain	Holt	Platte
Barton	Howard	Putnam
Bates	Jackson	Ralls
Boone	Jasper	Randolph
Buchanan	Johnson	Ray
Butler	Knox	Saline
Caldwell	Lafayette	Schuyler
Callaway	Lewis	Scotland
Carroll	Lincoln	Scott
Cass	Linn	Shelby
Chariton	Livingston	St. Charles
Clark	Macon	St. Louis
Clay	Marion	Stoddard
Clinton	Mercer	Sullivan
Cole	Mississippi	Vernon
Daviess	Monroe	Warren
De Kalb	Montgomery	Worth
Dunklin	New Madrid	
Gentry	Nodaway	

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

228

Appendix 9.4A (continued) Zone A Counties that Qualify for Exchange Soil Offsets (XSOs) *(conservation tillage and grass plantings)*

NEBRASKA		OHIO		OKLAHOMA
Adams	Lancaster	Adams	Highland	Craig
Antelope	Madison	Allen	Logan	Mayes
Boone	Merrick	Auglaize	Lucas	Muskogee
Buffalo	Nance	Brown	Madison	Nowata
Burt	Nemaha	Butler	Marion	Okfuskee
Butler	Nuckolls	Champaign	Mercer	Okmulgee
Cass	Otoe	Clark	Miami	Osage
Ceder	Pawnee	Clermont	Montgomery	Ottawa
Clay	Phelps	Clinton	Morrow	Rogers
Colfax	Pierce	Crawford	Ottawa	Tulsa
Cuming	Platte	Darke	Paulding	Wagoner
Custer	Polk	Defiance	Pickaway	Washington
Dakota	Richardson	Delaware	Preble	
Dawson	Saline	Fairfield	Putnam	
Douglas	Sarpy	Fayette	Sandusky	
Dixon	Saunders	Franklin	Seneca	
Dodge	Seward	Fulton	Shelby	
Fillmore	Sherman	Greene	Union	
Gage	Stanton	Hamilton	Van Wert	
Greeley	Thayer	Hancock	Warren	
Hall	Thurston	Hardin	Williams	
Hamilton	Valley	Henry	Wood	
Howard	Washington		Wyandot	
Jefferson	Wayne			
Johnson	York			
Kearney				

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

229

Appendix 9.4A (continued) Zone A Counties that Qualify for Exchange Soil Offsets (XSOs) *(conservation tillage and grass plantings)*

SOUTH DAKOTA	WISCONSIN	TENESSEE
Bon Homme	Buffalo	Crockett
Brookings	Calumet	Dyer
Clark	Crawford	Gibson
Clay	Columbia	Fayette
Codington	Dane	Hardman
Day	Dodge	Haywood
Deuel	Fond du Lac	Lake
Grant	Grant	Lauderdale
Hamlin	Green	Madison
Hanson	Green Lake	Obion
Hutchinson	Iowa	Shelby
Kingsbury	Jefferson	Tipton
Lake	Kenosha	Weakley
Lincoln	La Crosse	
Marshall	Lafayette	
McCook	Milwaukee	
Minnehaha	Monroe	
Moody	Ozaukee	
Robets	Pepin	
Turner	Racine	
Union	Richland	
Yankton	Rock	
	Sauk	
	Sheboygan	
	Trempealeau	
	Vernon	
	Walworth	
	Washington	
	Waukesha	

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Appendix 9.4B Zone B Counties that Qualify for Exchange Soil Offsets (XSOs) *(grass plantings only)*

COLORADO	KANSAS	NEBRASKA
Logan	Barton	Chase
Phillips	Cheyenne	Cheyenne
Sedgwick	Decatur	Deuel
Yuma	Ellis	Dundy
	Finney	Franklin
	Ford	Frontier
	Graham	Furnas
	Grant	Gosper
	Gray	Harlan
	Greeley	Hayes
	Grove	Hitchcock
	Hamilton	Keith
	Haskell	Lincoln
	Hodgeman	Perkins
	Jewell	Red Willow
	Kearny	Webster
	Lane	
	Logan	
	Mitchell	
	Ness	
	Norton	
	Osborne	
	Pawnee	
	Phillips	
	Rawlins	
	Rooks	
	Ruch	
	Russell	
	Scott	
	Sheridan	
	Sherman	
	Smith	
	Stanton	
	Thomas	
	Trego	
	Wallace	
	Wichita	

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc.

Chapter 10 Environmental Audits and Offset Project Verification

10.0 Purpose

This Chapter provides the rules governing audits of CCX Member Emission Reports and Emission Baselines, verification of CCX Offset Projects and audit of Project Reports.

10.1 General Provisions

Emissions, Emission Baselines and Project verification reports will be subject to audit by the Provider of Regulatory Services designated by CCX. CCX Offset Projects are to be independently verified[1] as per the provisions of Chapter 9 of this *Rulebook*. Project Reports shall be prepared and signed by a CCX-approved Verifier in accordance with the provisions of Chapter 9.

10.2 Rule Interpretation and Modifications

Unless provided otherwise by the Board, issues involving audits of emissions and Emission Baselines shall be addressed by the CCX Environmental Compliance Committee; and issues involving verification and audit of CCX Offset Projects shall be addressed by the CCX Offsets Committee.

10.3 Emission Audits

The Provider of Regulatory Services designated by CCX shall conduct audits of each CCX Member's Emission Baseline and annual emission reports, as directed by the CCX Environmental Compliance Committee.

CCX Members shall cooperate fully with the Provider of Regulatory Services designated by CCX. All relevant data, underlying calculations, receipts or other evidence used to quantify emissions shall be provided promptly upon request of the Provider of Regulatory Services designated by CCX.

The scope of these emissions audits shall include (based on the sample selected):

(1) the quality of data management and records of underlying data;
(2) completeness and accuracy of calculations and baseline and annual emission reports;
(3) proper inclusion and documentation of Jointly Owned Facilities;

[1] With the exception of certain Projects that shall be subject to inspection by a CCX-designated verification entity, as specified in Chapter 9 of this *Rulebook*

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

232

(4) correct application of CCX rules for filling Baseline Period data gaps; and,
(5) other data, methods and procedures deemed necessary to establish the accuracy of baseline and annual emissions.

In cases where an audit of Emission Baselines identifies deficiencies, the Environmental Compliance Committee may direct a follow-up audit be conducted for the purpose of evaluating proper correction of deficiencies.

The Provider of Regulatory Services designated by CCX shall report the findings of its audits to CCX to enable CCX to establish True-up for each Member. Should the CCX Environmental Compliance Committee determine that a Member is deficient in its application of CCX rules, it may direct the Member to take certain remedial action.

10.4 Offset Project Verification and Audits

10.4.1 Project Verification

CCX may approve qualified entities to be eligible to provide independent verification of CCX Exchange Offset Projects. Each CCX Project Registration Filing for methane Projects and Large and Medium-sized Forestry Projects must be accompanied by a verification statement signed by a CCX-approved Verifier. The verification statement must attest to the CCX eligibility and existence of the registered Project, as well as the descriptive information required by CCX in a form and manner prescribed by the Exchange. The periodic Project Reports to be filed by Project Owners must be by signed by a CCX-approved Verifier, which shall attest to the accuracy of the information provided in the Project Report. The Verifier must attest to the ongoing operation and maintenance of the Project, and to the quantity of emissions mitigation reported and all associated calculations. The costs of Project verification is to be paid by the Owner of a Project.[2]

A CCX-designated entity shall conduct inspections of CCX soil carbon Projects and Small Forestation Projects. Owners of such Projects shall provide prompt access to the Project site and all associated documentation for inspection.

10.4.2 Audit of Project Reports

The Provider of Regulatory Services designated by CCX shall conduct audits of Project Reports. Such audits will review the completeness of Project Reports, the accuracy of underlying calculations and the veracity of raw data used in calculations. Audits of Project Reports may include site visits or other steps needed to confirm the accuracy of the information contained in the Report.

[2] With the exception of Small Forestation Projects and soil carbon Projects

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

10.4.3 Qualifications of Verifiers

CCX will accept applications from entities wishing to be approved as Verifiers. Such entities must provide CCX with requested information which will include, but may not be limited to, the following:

(1) evidence of professional licenses, direct experience, educational backgrounds and other indications of capability with the Project types for which the entity seeks to become a Verifier;
(2) evidence of an established business history and absence of legal or other problems that may prevent the entity from reliably providing its services in a highly professional manner;
(3) evidence of professional liability (or similar) insurance;
(4) applicant's current financial statement;
(5) acknowledgement that the entity must report to CCX any changes in the above items that may reduce the entity's ability to provide its services in a highly professional manner; and,
(6) acknowledgement that verification of CCX Projects must be conducted in conformance with CCX rules, and that all Project Reports are subject to audit.

The CCX Offsets Committee will approve Verifiers.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Chapter 11 Associate Members (2006)

11.0 Purpose

This Chapter provides the rules governing the CCX Associate Member category. Associate Members commit to fully offset Indirect and Direct Emissions (collectively "Emissions") associated with their offices and business travel.

11.1 General Provisions (May 2006)

Associate Members are required to annually offset their Emissions through the acquisition of Carbon Financial Instruments.

Associate Members that meet the eligibility requirements to access the CCX Trading Platform may be approved by CCX to trade Carbon Financial Instruments directly through the CCX Trading Platform. Associate Members that do not meet the eligibility requirements to access the CCX Trading Platform must acquire Carbon Financial Instruments by means of Cash Transactions.

Associate Members are subject to the applicable provisions of this Rulebook.

Parties with Direct Emissions of 5,000 metric tons or less of CO2 will be deemed to be Associate Members and will not be eligible to participate as Members.

11.2 Emissions

11.2.1 Included Emissions

Associate Members are required to report U.S. Emissions resulting from:

- Electricity purchases for office facilities
- Heating fuel purchases for office facilities
- Business travel (airplanes, automobiles, trains)

Electricity produced using specified renewable energy sources can be treated as zero emission electricity by an Associate Member. Specified renewable energy sources may be excluded from the indirect emissions reporting. Electricity produced by the following Renewable Electricity Production Systems shall qualify under this provision:

- Solar
- Hydropower
- Wind
- Renewable Fuels, which, for purposes of CCX are:

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

- wood, wood wastes and wood-derived fuels[1]
- agricultural residues and grasses
- landfill and agricultural methane
- ethanol (bioalcohol)

Documentary evidence that electricity is produced solely for the Associate Member or is otherwise dedicated to the Associate Member may consist of copies of power plant ownership documents, power purchase contracts, and, as specified by CCX, certain renewable energy certificates.

11.2.2 Optional Emissions Inclusion

Associate Members may elect to report other Emissions in accordance with Rules 11.3.2.1 and 11.3.2.2.

Once an Associated Member has made an election to include optional Emissions, the Associate Member must include the optional Emissions in all subsequent program years.

11.2.2.1 Non-U.S. Emissions

Associate Members may elect to include the Emissions of its non-U.S. activities.

11.2.2.2 Employee Emissions

Associate Members may elect to include Emissions resulting from:

- Daily employee commuting
- Employees' home energy usage
- Employees' personal automobile usage and air travel
- Materials consumption (e.g. paper and food)
- Events such as corporate retreats, annual meetings, etc.

11.3 Reporting Procedure

Each CCX Associate Member shall submit its annual Emissions report to the Exchange in a manner, format and time prescribed by the Exchange.

11.3.1 Indirect Emissions Reporting Requirements

An Associate Member must, at a minimum, submit an Emissions report for the program year in which the membership was approved and for all subsequent program years.

[1] CCX Members may elect to include N_2O and CH_4 emissions associated with fossil fuel and biomass combustion.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc.

11.3.2 Prior Program Years Reporting Election

At the time of membership approval, an Associate Member may make a one-time election to report its Emissions for program years prior to its membership approval. An Associate Member that elects to report its Emissions for prior program years must submit an annual Emissions report for each elected program year in a manner and time prescribed by the Exchange.

11.4 Emissions Audit

CCX shall conduct audits of each Associate Member's Emissions report as directed by the CCX Environmental Compliance Committee.

All relevant data, including, but not limited to, underlying calculations, receipts or other evidence used to quantify indirect emissions shall be provided promptly upon request by CCX.

If an audit of Emissions identifies deficiencies, a follow-up audit may be conducted for the purpose of evaluating proper correction of deficiencies.

11.3.2 Surcharge on Metric Tonnes Reported

If an Associate Member is unable to provide the relevant supporting documentation as described in Rule 11.5, the Associate Member or CCX, upon determination that the relevant supporting documentation is not adequate for an Emissions category, may elect to access a surcharge on the metric tons of CO2 reported as Emissions.

The Environmental Compliance Committee will establish a surcharge for each program year. The surcharge, if applicable, will be assessed on an Associate Member for the current program year based on the greater level of indirect emissions reported for an applicable indirect emissions category by the Associate Member for the current program year or any prior program year.

11.5 True-up

Subsequent to the end of each calendar year of the CCX program, each Associate Member must True-up its Emissions and Carbon Financial Instrument holdings in accordance with the manner prescribed the Exchange. CCX will notify each Associate Member of the total quantity of Carbon Financial Instruments that must be acquired and Surrendered for True-up, and each Associate Member will then provide notice to the Exchange indicating which Carbon Financial Instruments it chooses to Surrender. CFIs that are Surrendered are transferred to the Registry Account Holder's Registry Retirement Account.

Associate Members' Emissions will be rounded up to the nearest hundred metric ton denomination for True-up purposes. Associate Members with Emissions less than one hundred metric tons must acquire and Surrender at least one CFI in each program year in which they elect or are required to participate.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

11.6 Acquiring Carbon Financial Instruments

Associate Members must acquire CFIs to meet their requirements under Section 11.6 in accordance with the requirements of Sections 5.4 through 5.9.

11.7 CCX Registry Account

Associate Members are also Registry Account Holders and are subject to the requirements and privileges of Section 5.3.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Chapter 12 Other Participants (2006)

12.0 Purpose

This Chapter provides the rules governing parties that have registered with the Exchange as Liquidity Providers, Offset Providers and Offset Aggregators (collectively known as "Participant Members") and Exchange Participants.

12.1 General Provisions

Participant Members and Exchange Participants are subject to the applicable provisions of this Rulebook.

12.2 Liquidity Providers

A Liquidity Provider is an entity or person who trades on the Exchange for reasons other than compliance with CCX Emission Reduction Schedule or indirect emissions offset. A Liquidity Provider may post bids and offers on the CCX Trading Platform subject to the limits established by the Exchange and holdings in the Liquidity Provider's Registry Account.

A Liquidity Provider must at all times meet the requirements of an Eligible Commercial Entity and Eligible Commercial Participant as defined in paragraph 1a(11) and (12) of the U.S. Commodity Exchange Act and Rulebook Section 2.6.1.

12.3 Offset Providers and Offset Aggregators

Offset Providers must register Exchange Offsets with CCX in accordance with the provisions of Rulebook Chapter 9 and pay the applicable registration fees.

CCX may elect to grant an Offset Provider/Offset Aggregator access to the CCX Trading Platform for the sole purpose of selling its registered Exchange Offsets. An Offset Provider/Offset Aggregator that is granted access to the CCX Trading Platform to sell its registered Exchange Offsets will be subject to the applicable provisions of Rulebook Chapter 5 regarding Trading Platform access and execution.

12.4 Exchange Participants

Exchange Participants establish Registry Accounts for the purpose of purchasing and retiring Carbon Financial Instruments by means of a Cash Transaction in accordance with Rulebook Section 5.9. Exchange Participants are not eligible to sell Carbon Financial Instruments to any CCX Member or non-member party.

During the annual True-Up, CCX will retire all Carbon Financial Instruments in the Registry Accounts of Exchange Participants. All CFIs that are retired are transferred to the Registry

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Account Holder's Registry Retirement Account.

Exchange Participants may engage in the purchase and sale of Super Reduction allowances in accordance with Rulebook Section 4.11.2.1.

Reproduction or quotation is expressly prohibited without written consent of Chicago Climate Exchange, Inc

Chicago Climate Exchange®
Phase II Summary Term Sheet

Time Period for CCX Extension	2007 through 2010
Enrollment of New Members	The first compliance year for entities that become CCX Members for the Extension Phase shall be the calendar year during which they execute a CCX Commitment Letter in 2005, 2006 or 2007.[1]
Emission Reduction Schedule	All CCX Members shall commit to an annual reduction schedule that results in year 2010 emission reduction commitments of 6% below baseline. Annual reduction commitments for Members joining for the Extension Phase are defined on the basis of a linear reduction path from their first commitment year to the CCX-wide 2010 reduction commitment. Reduction schedules for Initial Phase CCX Members[2] who elect to participate in the Extension Phase shall be: 2007 4.25% below baseline 2008 4.5% below baseline 2009 5% below baseline 2010 6% below baseline
Emission Baselines	All Initial Phase CCX Members for the period 2007 through 2010 and all Members joining for the Extension Phase may elect to use one of the following periods as the basis of their emission baseline: • the average emission level realized during the calendar years 1998 through 2001 or • the emission level realized during calendar year 2000.[3] CCX rules on baseline adjustments to reflect acquisition and disposition of emission sources shall

[1] For new Members that have 2006 as the first commitment period, the reduction schedule shall be: 2006: 1.2% below baseline; 2007: 2.4% below baseline; 2008: 3.6% below baseline; 2009: 4.8% below baseline; 2010: 6% below baseline.

[2] An Initial Phase CCX Member ("Initial Phase CCX Member") is defined as a Member who is participating in the CCX Pilot Program for the years 2003 through 2006.

[3] If an Initial Phase CCX Member elects to change its baseline calculation for 2007 through 2010, there will be no retroactive adjustment to baselines and/or allocation of allowances for the years 2003 through 2006.

	apply. For entities that attest that they are unable to assemble emissions data during the baseline periods listed above, alternative historic baseline periods may be allowed if approved on a case-by-case basis by appropriate CCX committees.
Economic Growth Provision	Maximum recognized emissions for compliance shall be 3% above baseline for years 2007 through 2010. *(This provision is applied symmetrically around reduction targets, thereby providing a limit on both required purchases and allowed sales)*
Use of Super Reductions and Special Reserve Allowances Earned During CCX Initial Phase	Each Initial Phase CCX Member is allowed to use 25% of the Super Reductions and Special Reserve allowances earned during the years 2003 through 2006 for compliance for each of the years 2007 through 2010.
Re-enrollment of Initial Phase CCX Members	Re-enrollment will be effective upon submission of a properly executed Phase II Commitment Letter.
Rules on Emissions from New Electric Power Generating Units	For new or re-powered plants placed into operation on or after January 1, 2002, a flat annual exemption of 895,425 metric tons CO_2 applies. Emissions exceeding this amount are included in the Member's inventory to the extent those emissions exceed the emissions that would be released by a best-in-class gas combined cycle power plant.
Rules on Best-In-Class Commercial, Industrial and Residential Buildings	Emissions and electricity usage in buildings constructed or retrofitted after December 31, 2002 that demonstrate achievement of best-in-class energy efficiency ratings shall be exempt when quantifying compliance with annual CCX emission and electricity purchase reduction commitments.
Development of CCX Market Architecture for the post-2010 Period	During 2007, CCX shall establish a Special Committee to formulate, for review by all CCX Members, a proposed Market Architecture to be employed for a multi-year time period starting January 1, 2011.

Disclaimer:
This CD contains a CCX Rulebook which is current as of the date printed on the CD. CCX assumes no responsibility for providing the recipient with updates to this rulebook. Updates to the CCX Rulebook are communicated via CCX Advisories which can be found on the CCX website at www.chicagoclimateexchange.com.

Authorized persons of CCX member firms can access the most current version of the CCX Rulebook via the CCX Registry.

CHICAGO CLIMATE EXCHANGE (CCX®)
APPLICATION FOR MEMBERSHIP

Welcome to CCX! All applicants for membership in CCX must complete the attached application. Depending on your membership category, additional forms and documents may be required as described below. The membership categories are summarized as follows:

- **Member** - Members have direct Greenhouse Gas ("GHG") emissions from facilities in the United States, Canada or Mexico and enter into a legally binding commitment with CCX to reduce its direct emissions 1% per year over a four year period (2003 – 2006).

- **Associate Member** – Associate Members have negligible direct GHG emissions and enter into a legally binding agreement with CCX to offset all indirect GHG emissions associated with selected business activities.

- **Participant Member** – This membership category includes Offset Providers, Offset Aggregators and Liquidity Providers
  - Offset Provider/Offset Aggregators are able to sell CCX offsets produced by qualifying CCX-registered offset projects
  - Liquidity Providers trade or engage in market-making activities on CCX for purposes other than compliance with the CCX emissions reductions schedule.

- **Exchange Participant** – Exchange Participants have no compliance requirements and may only purchase and retire CCX Carbon Financial Instruments ("CFIs")

All membership categories are assigned a CCX Registry account to track their trades and holdings of CFIs. **The membership grid on the following page outlines what information/documents are required to be submitted for each category of membership.**

Upon completion of the application, please send all items to the attention of:
Director of Compliance
Chicago Climate Exchange
190 S. LaSalle, 8th Floor
Chicago, IL 60603

Please direct any questions to Fran Kenck, Director of Compliance at
312.229.5162 or at fkenck@chicagoclimateexchange.com

Please note: *As an electronic trading facility providing for the execution of transactions on a principal to principal basis between eligible commercial entities in exempt commodities, CCX qualifies as an "exempt commercial market" as defined in Section 2(h)(3) of Commodity Exchange Act and in Part 36.3 of the regulations of the Commodity Futures Trading Commission (CFTC). CCX is not registered with, or recognized, designated, licensed or approved by the CFTC. All CCX Members entering into transactions on the CCX Trading Platform must be an "eligible commercial entity" as defined under section 1a(11) of the Commodity Exchange Act.*

Application Requirements

Membership Category / Required Information	Member	Associate Member	Offset Provider/ Offset Aggregator	Liquidity Provider	Exchange Participant
General Information/ Authorization	✓	✓	✓	✓	✓
Eligible Commercial Entity Questionnaire	Required only for applicants who wish to access the CCX Trading Platform	Required only for applicants who wish to access the CCX Trading Platform	✓	✓	Required only for applicants who wish to access the CCX Trading Platform
CCX Authorized Users (Trading Platform/ Registry Access)	✓	✓	✓	✓	✓
Commitment Letter	✓	✓	✓	n/a	n/a
Application Fee	✓	✓	✓	✓	✓
Organizational Documents [1]	Required for all membership categories, except applicants who are individuals.				
Board Resolution (or equivalent document) [2]	Required for all membership categories, except applicants who are individuals.				
Financial Information [3]	Required only for applicants who will have access to the CCX Trading Platform whose Eligible Commercial Entity Status is based on financial information.				

✓ **Required document/information for membership category, regardless of applicant's form of organization or whether it will have access to the CCX Trading Platform.**

---

[1] Organizational documents are documents that demonstrate the legal existence of an entity. Examples of organizational documents include articles of incorporation, articles of formation, certificate of limited partnership, etc.

[2] A board resolution or equivalent document attests that the person signing the application on behalf of the entity has been authorized by the entity's management. If the entity also qualifies for access to the CCX Trading Platform, the resolution must indicate that trading has been authorized by the entity's management. A sample form is attached.

[3] For publicly traded companies, applicants must submit their most recent Form 10-K and 10-Q. All other applicants must submit their most recent audited financial statement. If the applicant does not have an audited financial statement, CCX may accept a letter from a certified public accountant attesting to the applicant's qualifications as an Eligible Commercial Entity. Certain floor brokers and floor traders may submit a guarantee letter from a clearing firm in lieu of this letter.

General Information

Type of Membership

Member	☒	**Participant Member**	
Associate Member	☐	o ***Offset Provider***	☐
		o ***Offset Aggregator***	☐
Exchange Participant	☐	o ***Liquidity Provider***	☐

1. Applicant's Full Legal Name: Miami-Dade County, a political subdivision of Florida

2. Business Description: Not a business; please see attached copy of Charter Home Rule Amendment

3. FEIN (entities)/Social Security Number (individuals): 59-6000573

4. Address: Stephen P. Clark Center

111 NW 1st Street, 29h Floor

City, State, Zip Code: Miami, Florida

5. Primary Contact: Mr. Roger Carlton **Title:** Assistant County Manager

E-Mail Address: carlton@miamidade.gov

Phone Number: (305) 375- 3640

6. Website: http://miamidade.gov/wps/portal

7. Type of organization (check one):

- ☐ Corporation organized under the laws of : _____
- ☐ Limited Liability Company organized under the laws of: _____
- ☐ Limited Partnership organized under the laws of: _____
- ☐ General Partnership organized under the laws of: _____
- ☒ Other (please specify): County

8. Financial and Banking Information (Complete below or attach separately:

Applicant's Fiscal Year End: 9/30

Banking Information (for settlement of CCX transactions)

Bank Name: Wachovia Bank

Address: 10401 Deerwood Park Boulevard

Building #1, 3rd Floor F10117

City, State, Zip Code: Jacksonville, FL 32256

Primary Contact (Name): Cheri Johnston Phone Number: 1-800-590-7868 Opt #652

Account Number: 2000036274277 ABA Routing #: 067006432

**** Please note that it is CCX's policy not to accept wires/checks from or to send wires/checks to an account other than that in the name of the member. No exceptions will be made to this policy.***

rev 8/04/05 v4

9. The following questions pertain specifically to the applicant's activities related to *trading on regulated exchanges and over-the-counter markets*:

A. Has the applicant ever been denied exchange registration, or had a registration suspended, revoked, or conditioned by a governmental or regulatory authority during the past 5 years?

☐ Yes ☒ No

B. Has the applicant ever been denied membership or clearing privileges by any commodity or securities exchange/clearing organization or had any membership or clearing privilege ever been suspended, revoked, or conditioned during the past 5 years?

☐ Yes ☒ No

C. Has the applicant ever been convicted, pled guilty, entered a plea of "no contest" or entered into a voluntary settlement as to any violation of any criminal or penal code during the past 5 years?

☐ Yes ☒ No

D. Is the applicant subject to any investigation or have any charges been brought against it by any governmental or regulatory authority or exchange/clearing organization for violation of its laws or rules during the past 5 years?

☐ Yes ☒ No

E. Does the applicant currently have any judgments, liens, attachments or other encumbrances filed against it during the past 5 years?

☐ Yes ☒ No

If any of the questions above (a through e) are answered "yes", please attach a statement giving complete details as to dates, parties, circumstances and disposition for all matters that resulted in sanction of greater than $5,000. Please include copies of decisions or final notices pertaining to the information provided in the statement.

Eligible Commercial Entity Questionnaire

As an exempt market, all membership categories that will be entering into transactions on the CCX Trading Platform must qualify as an Eligible Commercial Entity ("ECE"). This questionnaire is required only for applicants who meet the requirements to enter trades directly via the CCX Trading Platform. This questionnaire must be completed by all applicants who qualify and can be used as a guide for all applicants to determine if they meet the requirements of an ECE.

There are four categories under which an applicant may qualify as an Eligible Commercial Entity ("ECE"). These categories are depicted on the attached pages as categories A, B, C and D. The applicant need only qualify under **one of the four** categories. For example, if the applicant qualifies under category A, it is not necessary to proceed to categories B, C and D. To qualify under a particular category, you must be able to check at least one box in Column I and one box in Column II to be considered an ECE.

The four categories are described briefly below:

Category A	*This category is for certain types of entities (described in column II)* ***that are engaged in a commercial activity*** *related to the commodity (described in column I).*
Category B	*This category is for certain types of entities (described in column II)* ***that are not engaged in the commercial activity*** *related to the commodity but meet certain financial qualifications (described in column I)*
Category C	*This category is for* ***certain types of collective investment vehicles*** *(described in column I)* ***that are not engaged in the commercial activity*** *related to the commodity. Depending on their participants, certain financial qualifications must be met (described in column II)*
Category D	*This category is for* ***registered floor brokers or floor traders*** *(described in column I) that meet certain qualifications (described in column II)*

Due to the nature of the CCX emission reduction/offset program, Members and Associate Members will be deemed to be engaging in a commercial activity and will generally fall into Category A.

All other membership categories must determine which category best fits their operations and complete the form accordingly.

IT IS ACCEPTABLE TO COMPLETE AND RETURN ONLY THE PAGE CONTAINING THE CATEGORY UNDER WHICH YOU QUALIFY AS AN ECE.

The term "commodity" as used in this section and in the following pages is defined in Section 1a(4) of the Commodity Exchange Act as wheat, cotton, rice, corn, oats, barley, rye, flaxseed, grain sorghums, mill feeds, butter, eggs, Solanum tuberosum (Irish potatoes), wool, wool tops, fats and oils (including lard, tallow, cottonseed oil, peanut oil, soybean oil, and all other fats and oils), cottonseed meal, cottonseed, peanuts, soybeans, soybean meal, livestock, livestock products, and frozen concentrated orange juice, and all other goods and articles, except onions as provided in section 13-1 of this title, and all services, rights, and interests in which contracts for future delivery are presently or in the future dealt in.

Category A

To qualify as an Eligible Commercial Entity, you must be able to check one box in Column I and one box in Column II.

Column I

Applicant, in connection with its trade or business:

1. has demonstrable ability, directly or though separate contractual ability, to make or take delivery of the underlying commodity; ☐

or

2. incurs risks, in addition to price risk, related to the commodity; ☐

or

3. is a dealer that regularly provides risk management or other hedging services to, or engages in market-making activities with, the foregoing entities involving transactions to purchase or sell the commodity or derivative agreements, contracts, or transactions in the commodity. ☐

AND

Column II

Applicant is acting for its own account and is (check all that apply):

1. a financial institution (as defined by the CEA); ☐

or

2. an insurance company (regulated by a State by a foreign government and is subject to comparable regulation as determined by the CFTC, including a regulated subsidiary or affiliate of such insurance company); ☐

or

3. a corporation, partnership, proprietorship, organization, trust or other entity—

   a. that has total assets exceeding $10 million; ☐

   or

   b. the obligations of which under an agreement, contract, or transaction are guaranteed or otherwise supported by a letter of credit or keepwell, support or other agreement by an entity described under Section 1 (a)(12)(v)(II) of the CEA; ☐

   or

   c. has a net worth of $1 million <u>and</u> is trading for hedging purposes. ☐

or

4. a governmental entity (domestic or foreign) or political subdivision of a governmental entity, a multinational or supranational government entity, or an instrumentality, agency or department of any of the above. ☐

or

5. a broker/dealer subject to regulation under the Securities and Exchange Act of 1934 or a futures commission merchant subject to the Commodity Exchange Act, (or a foreign entity performing a similar role or function, subject to foreign regulation)[4]. ☐

or

6. an associated person of a registered broker/dealer. ☐

or

7. an investment bank holding company. ☐

[4] If the broker/dealer or FCM is a natural person, other requirements apply. See Section 1(a)(12)(A)(viii) and (ix) of the Commodity Exchange Act.

Category B

To qualify as an Eligible Commercial Entity, you must be able to check one box in Column I and one box in Column II.

Column I			Column II
Applicant has or is one of a group of entities under common control or management having in the aggregate $100 million in total assets.	☒	AND	Applicant regularly enters into transactions to purchase or sell the commodities traded on CCX and is one of the following types of entities: 1. a financial institution (as defined by the CEA); ☐ **or** 2. an insurance company (regulated by a State by a foreign government and is subject to comparable regulation as determined by the CFTC, including a regulated subsidiary or affiliate of such insurance company); ☐ **or** 3. a corporation, partnership, proprietorship, organization, trust or other entity— a. that has total assets exceeding $10 million; ☐ **or** b. the obligations of which under an agreement, contract, or transaction are guaranteed or otherwise supported by a letter of credit or keepwell, support or other agreement by an entity described under Section 1 (a)(12)(v)(II) of the CEA; ☐ **or** c. has a net worth of $1 million <u>and</u> is trading for hedging purposes; ☐ **or** 4. a governmental entity (domestic or foreign) or political subdivision of a governmental entity, a multinational or supranational government entity, or an instrumentality, agency or department of any of a national government that either: a. owns and invests on a discretionary basis $25 million or more in investments ☒ **or** b. enters into transactions only with entities described in 1, 2, 5, 6, or 7 in Section I or with an affiliated person of an FCM. ☐ **or** 5. a broker/dealer subject to regulation under the SEC Act of 1934 or a futures commission merchant subject to the CEA, (or a foreign entity performing a similar role or function, subject to foreign regulation)[5]; ☐ **or** 6. an investment bank holding company. ☐

[5] If the broker/dealer or FCM is a natural person, it does not qualify as an ECE under this provision of the Commodity Exchange Act.

Category C

To qualify as an Eligible Commercial Entity, you must be able to check one box in Column I and one box in Column II.

Column I		Column II
Applicant regularly enters into transactions to purchase or sell the commodities traded on CCX and is a collective investment vehicle, which is defined as the following: 1. an investment company registered under the Investment Company Act of 1940 or a foreign entity performing a similar function subject to foreign regulation; ☐ **or** 2. a commodity pool that has total assets exceeding $5 million and is formed and operated by a registered commodity pool operator or a foreign entity performing a similar function subject to foreign regulation; ☐ **or** 3. an ERISA plan, a governmental benefit plan or a foreign entity performing a similar function subject to foreign regulation that has total assets exceeding $5 million or whose investment decisions are made by an registered investment adviser, a registered commodity trading advisor, a foreign entity performing a similar function subject to foreign regulation, a financial institution or insurance company. ☐	**AND**	Applicant is: 1. A collective investment vehicle (as defined in column I) whose participants include: ☐ • Qualified Eligible Persons as defined by CFTC Rule 4.7(a); or • Accredited Investors as defined in SEC Regulation D; or • Qualified Purchasers as defined in section 2(a)(51)(A) of the Investment Company Act of 1940 that has or is one of a group of vehicles under common control or management having in the aggregate $100 million in total assets. **or** 2. A collective investment vehicle (as defined in column I) whose participants **do not** include: ☐ • Qualified Eligible Persons; or • Accredited Investors; or • Qualified Purchasers that has or is one of a group of vehicles under common control or management having in the aggregate $1 billion in total assets.

Category D

To qualify as an Eligible Commercial Entity, you must be able to check one box in Column I and one box in Column II.

Column I		Column II
Applicant is:		Applicant:
A CFTC registered floor broker or floor trader trading for its own account that is a member of a designated contract market or has trading privileges on a designated contract market. ☐	**AND**	1. has total assets exceeding $10 million; ☐ **or** 2. has total assets exceeding $5 million <u>and</u> is trading for hedging purposes; ☐ **or** 3. has their trades on CCX guaranteed by a clearing member that is a member of a CFTC-registered derivatives clearing organization. ☐

Forms

CCX Authorized Users

Applicant requests user access to the following systems for the individuals named below:

Name	(check all that apply) CCX Trading Platform	CCX Registry	User Administrator[1]
Wendy Norris	☐	☒	☐
Frank Hinton	☒	☒	☐
Roger Carlton	☒	☒	☒
	☐	☐	☐
	☐	☐	☐
	☐	☐	☐
	☐	☐	☐
	☐	☐	☐
	☐	☐	☐
	☐	☐	☐
	☐	☐	☐
	☐	☐	☐
	☐	☐	☐
	☐	☐	☐
	☐	☐	☐

Only Applicants that qualify as an Eligible Commercial Entity are allowed access to the CCX Trading Platform. Therefore only authorized individuals of ELIGIBLE COMMERCIAL ENTITIES are the only individuals who will be granted access to the CCX Trading Platform

All Applicants are allowed access to the CCX Registry.

For security reasons, each individual that is named above must complete a separate ***Authorized User Form*** (found at the end of this application).

[1]The User Administrator has the authority to grant or revoke user access to the CCX Trading Platform and/or the CCX Registry. Each applicant must designate at least one User Administrator.

Authorized User Form

Applicant/Member requests user access for the individual named below to the following systems (check all that apply):

***CCX Registry** ☑ ****CCX Trading Platform** ☐

Access Level _____
(Drop-down menu. See ** below.)

Name:	Wendi J. Norris		
Address	111 NW 1 ST, Suite 2410		
City, State, Zip:	Miami, FL 33128		
Phone Number:	305-375-2495	Email Address:	WJN@miamidade.gov

Security Question: (Drop-down menu. See *** below.) [redacted]

Answer: [redacted]

The individual listed above agrees to abide by all CCX rules and conditions in the CCX Rulebook and subsequent amendments and advisories as they pertain to the CCX Trading Platform. ***(Signature is only required for individuals being given access to the CCX Trading Platform as a Trader or Super User.)***

Signature: Wendi Norris Date: 4/19/07

Confirmed By:
Signature of User Administrator:
Roger M Carlton Date: 4/27/07
Name of User Administrator
Roger M. Carlton
Organization:
Miami-Dade County

Please note that, in accordance CCX *Rules,* all CCX Members are obligated to notify CCX of any addition, deletion or other change of formal contact or other people authorized to use the CCX Registry and/or CCX Trading Platform.

* **CCX Registry Access gives all users view only access to daily and monthly clearing statements, transaction history, and holdings. Direct emitting Members also have view only access to emission summaries (if applicable)**

** **CCX Trading Platform access allows five levels of user access as described below. Reminder: Only applicants that are Eligible Commercial Entities may give user access to the CCX Trading Platform.**

➢ ***Super User***	Allows the user to log in to the CCX Trading System. The user can execute orders as well as request and assign accounts.
➢ ***Trader***	Allows the user to log in to the CCX Trading System. The user can enter and execute orders only.
➢ ***Risk Manager***	Allows the user to log in to the CCX Trading System. The user can request and assign accounts but has view only access to the trading platform.
➢ ***View Only***	Allows the user to log in to the CCX Trading System. The user cannot enter orders, execute orders, request or assign accounts.
➢ ***Accounting***	Allows the user to retrieve Deal Reports. Will not allow user access to the Trading System.

*** **User must choose one of five security questions listed below:**

1. What is your favorite sports team?
2. What is your library card number?
4. What is your favorite vacation destination?
5. What is your favorite movie?

rev 8/04/05 v4

Authorized User Form

Applicant/Member requests user access for the individual named below to the following systems (check all that apply):

***CCX Registry** ☒ ****CCX Trading Platform** ☒

Access Level **Trader**
(Drop-down menu. See ** below.)

Name:	Frank P. Hinton		
Address	Steven P. Clarke Center 111 NW 1st Street - Suite 2550		
City, State, Zip:	Miami, Fl. 33128		
Phone Number:	(305) 375-5046	Email Address:	fph1@miamidade.gov

Security Question: (Drop-down menu. See *** below.) [redacted] Answer: [redacted]

The individual listed above agrees to abide by all CCX rules and conditions in the CCX Rulebook and subsequent amendments and advisories as they pertain to the CCX Trading Platform. ***(Signature is only required for individuals being given access to the CCX Trading Platform as a Trader or Super User.)***

Signature: Date: 4/18/07

Confirmed By:

Signature of User Administrator: Date: 4/27/07

Name of User Administrator
Roger M. Carlton

Organization:
Miami-Dade County

Please note that, in accordance CCX *Rules,* all CCX Members are obligated to notify CCX of any addition, deletion or other change of formal contact or other people authorized to use the CCX Registry and/or CCX Trading Platform.

* **CCX Registry Access gives all users view only access to daily and monthly clearing statements, transaction history, and holdings. Direct emitting Members also have view only access to emission summaries (if applicable)**

** **CCX Trading Platform access allows five levels of user access as described below. Reminder: Only applicants that are Eligible Commercial Entities may give user access to the CCX Trading Platform.**

➢ ***Super User***	Allows the user to log in to the CCX Trading System. The user can execute orders as well as request and assign accounts.
➢ ***Trader***	Allows the user to log in to the CCX Trading System. The user can enter and execute orders only.
➢ ***Risk Manager***	Allows the user to log in to the CCX Trading System. The user can request and assign accounts but has view only access to the trading platform.
➢ ***View Only***	Allows the user to log in to the CCX Trading System. The user cannot enter orders, execute orders, request or assign accounts.
➢ ***Accounting***	Allows the user to retrieve Deal Reports. Will not allow user access to the Trading System.

*** **User must choose one of five security questions listed below:**

1. What is your favorite sports team?
2. What is your library card number?
4. What is your favorite vacation destination?
5. What is your favorite movie?

rev 8/04/05 v4

Authorized User Form

Applicant/Member requests user access for the individual named below to the following systems (check all that apply):

***CCX Registry** ☒ ****CCX Trading Platform** ☒

Access Level **Risk Manager**
(Drop-down menu. See ** below.)

Name: Roger M. Carlton

Address 111 NW 1 Street, Suite 2900

City, State, Zip: Miami, FL 33128

Phone Number: 305-375-3641 Email Address: carlton@miamidade.gov

Security Question: (Drop-down menu. See *** below.) Answer:

[redacted]

The individual listed above agrees to abide by all CCX rules and conditions in the CCX Rulebook and subsequent amendments and advisories as they pertain to the CCX Trading Platform. ***(Signature is only required for individuals being given access to the CCX Trading Platform as a Trader or Super User.)***

Signature: Date: 4/27/07

Confirmed By:

Signature of User Administrator:

Date: 4/27/07

Name of User Administrator
Roger M. Carlton

Organization:
Miami-Dade County

Please note that, in accordance CCX *Rules,* all CCX Members are obligated to notify CCX of any addition, deletion or other change of formal contact or other people authorized to use the CCX Registry and/or CCX Trading Platform.

* **CCX Registry Access gives all users view only access to daily and monthly clearing statements, transaction history, and holdings. Direct emitting Members also have view only access to emission summaries (if applicable)**

** **CCX Trading Platform access allows five levels of user access as described below. Reminder: Only applicants that are Eligible Commercial Entities may give user access to the CCX Trading Platform.**

➢ ***Super User***	Allows the user to log in to the CCX Trading System. The user can execute orders as well as request and assign accounts.
➢ ***Trader***	Allows the user to log in to the CCX Trading System. The user can enter and execute orders only.
➢ ***Risk Manager***	Allows the user to log in to the CCX Trading System. The user can request and assign accounts but has view only access to the trading platform.
➢ ***View Only***	Allows the user to log in to the CCX Trading System. The user cannot enter orders, execute orders, request or assign accounts.
➢ ***Accounting***	Allows the user to retrieve Deal Reports. Will not allow user access to the Trading System.

*** **User must choose one of five security questions listed below:**

1. What is your favorite sports team?
2. What is your library card number?
3. Who was your favorite teacher?
4. What is your favorite vacation destination?
5. What is your favorite movie?

Rev 8/04/05 v4

AUTHORIZATION/AGREEMENT

Applicant Miami-Dade County, Florida, hereby applies to become a member of the Chicago Climate Exchange ("CCX") in the membership category selected in this application and shall promptly provide any additional answers to questions concerning this application and to any other reasonable questions that may be asked by the staff of the Exchange or NASD or any CCX Committee. Applicant agrees to seek to maintain the accuracy and completeness of the information contained in this application throughout the application process.

Applicant acknowledges that Applicant meets all of the requirements for participation in the membership category Applicant has applied for, as is outlined in the CCX Rulebook. Applicant further acknowledges and agrees to abide by all the requirements and obligations of the CCX, except as set forth in the Letter of Commitment and Commitment Letter Addendum Agreement Between Miami-Dade County, Florida, and the Chicago Climate Exchange, Inc.

Applicant undertakes to seek to immediately notify the Exchange in writing of any material change in any information contained in this application for or upon becoming aware of any event that may impact on eligibility for participation in Applicant's applicable membership category.

Applicant authorizes CCX and the National Association of Securities Dealers ("NASD") to obtain information from sources that they deem appropriate in order to adequately evaluate and process this application, to conduct required financial reviews in accordance with applicable rules and to ensure the integrity and effective operation of CCX in the future.

Applicant understands that failure to provide full and accurate information may result in this application being delayed or rendered invalid.

Applicant has read and agrees to abide by the rules of the Exchange as provided in the CCX *Rulebook* as they relate to the membership category for which it has applied, except as set forth in the Letter of Commitment and Commitment Letter Addendum Agreement Between Miami-Dade County, Florida and the Chicago Climate Exchange, Inc.

Applicant will comply with the Terms and any and all laws, rules, regulations or orders applicable to Applicant's access to and use of the System, the Exchange, and the Exchange Data, except as set forth in the Letter of Commitment and Commitment Letter Addendum Agreement Between Miami-Dade County, Florida and the Chicago Climate Exchange, Inc.

Signed and accepted by a duly authorized representative of:

Applicant: Miami-Dade County, Florida

Signature: _____ Date: _____

Print Name: Mayor Carlos Alvarez

May , 2007

Dr. Richard Sandor
Chairman and Chief Executive Officer
Chicago Climate Exchange, Inc.
190 S. Lasalle Street, Suite 800
Chicago, Illinois 60603

Letter of Commitment

Dear Dr. Sandor:

This Letter of Commitment constitutes the legally binding commitment of Miami-Dade County, a political subdivision of the State of Florida, to participate as a Member of the Chicago Climate Exchange, Inc. ("CCX") for Direct Emissions only in accordance with the Phase II Summary Term Sheet, a copy of which is attached hereto as Attachment A and which is incorporated herein by reference hereto as if fully set forth herein, subject to and in accordance with the terms, conditions, restrictions, and limitations set forth in the Commitment Letter Addendum Agreement Between Miami-Dade County, Florida and the Chicago Climate Exchange, Inc., dated May , 2007 ("Addendum"), a copy of which is attached hereto as Attachment B and which is incorporated herein by reference hereto as if fully set forth herein. This Letter of Commitment shall not be effective until and unless the aforesaid Addendum is duly executed by the authorized representatives of both Miami-Dade County, Florida and the Chicago Climate Exchange, Inc. For and in consideration of the aforesaid Addendum, Miami-Dade County, Florida, to the extent permitted by federal law and regulations and the laws of the State of Florida, agrees to trade Miami-Dade County's CCX Carbon Financial Instruments exclusively through the Chicago Climate Exchange, Inc. with other CCX Registry Account Holders, for Phase II, Direct Emission only.

Signed:_____
Mayor Carlos Alvarez

Date: _____

COMMITMENT LETTER ADDENDUM AGREEMENT BETWEEN MIAMI-DADE COUNTY, FLORIDA, AND THE CHICAGO CLIMATE EXCHANGE, INC.

This Commitment Letter Addendum Agreement Between Miami-Dade County, Florida, And The Chicago Climate Exchange, Inc., dated May , 2007, is agreed to and entered into as a modification to and as an addendum to the Letter of Commitment between Miami-Dade County, Florida ("Miami-Dade County" or the "County"), and the Chicago Climate Exchange, Inc. (hereinafter sometimes referred to herein as "CCX"), as additional terms and conditions between Miami-Dade County, Florida, and the Chicago Climate Exchange, Inc., and supersedes and takes precedence over any and all conflicting or inconsistent terms, conditions, requirements or any other provision of any document of any kind whatsoever issued or to be issued by the Chicago Climate Exchange, Inc. or issued or to be issued by any of CCX's agents, servants, employees, contractors, officers, directors, affiliates or any other entity associated with the Chicago Climate Exchange, Inc. in the past, present or future, including, but not limited to the: (i) Chicago Climate Exchange, Inc. Rulebook, and any and all documents mentioned therein; (ii) Phase II Summary Term Sheet; (iii) Application For Membership and associated documents; and (iv) Chicago Climate Exchange Trading Platform and Registry System Agreement for Registry Account Holders (the "Registry System Agreement").

1. Rule Adoption and Amendments. If Miami-Dade County, Florida determines at any time, in Miami-Dade County's sole discretion, that the adoption, promulgation, amendment or issuance of any rule, regulation, or policy by the Chicago Climate Exchange, Inc. or any of CCX's affiliates, conflicts with or is inconsistent with or is pre-empted by any limitation, requirement, restriction, or condition applicable to

Miami-Dade County by any decision or order of any state or federal court, or any state, federal or local law, then upon Miami-Dade County providing notice to CCX, and after good faith efforts have been made by both Miami-Dade County and CCX to agree to an alternate resolution to such matter, Miami-Dade County may forthwith terminate Miami-Dade County's membership in CCX for Phase II Direct Emissions only, without penalty of any kind to Miami-Dade County and Miami-Dade County's obligations pursuant to all contracts, representations, application, and agreements with or to CCX shall be excused without penalty of any kind whatsoever to Miami-Dade County as of the date of such termination.

2. Miami-Dade County Indemnification. Notwithstanding any provision to the contrary or any inconsistent provision in the CCX Rulebook and any document mentioned therein, including Rulebook § 2.13, any document issued by CCX, the Phase II Summary Term Sheet, the Chicago Climate Exchange Trading Platform and Registry System Agreement For Registry Account Holders, including Registry System Agreement § 7, or in any contract, representation, application, or agreement to or between Miami-Dade County and CCX, Miami-Dade County shall neither indemnify nor hold harmless CCX, or CCX's directors, officers, agents, servants, employees, contractors, affiliates or any other entity associated with CCX in the past, present or future with respect to any liability of any kind whatsoever, losses of any kind whatsoever, damages of any kind whatsoever, attorneys fees of any kind whatsoever (including appellate attorneys fees), and any and all costs of prosecution or of defense, which CCX or CCX's officers, directors, agents, servants, employees, contractors, affiliates or any other CCX-associated entity may incur in the future or have incurred in the past, both civil or criminal, as a

result of any claim, demand, suit, cause of action or proceeding of any kind or nature, arising out of the County's application to, and participation in, the Chicago Climate Exchange, Inc.

3. CCX Indemnification and Liability. CCX shall indemnify and hold harmless Miami-Dade County and Miami-Dade County's officers, employees, agents, servants, contractors, agencies and instrumentalities from any and all liabilities of any kind whatsoever, penalties of any kind whatsoever, losses of any kind whatsoever, damages of any kind whatsoever, attorneys fees of any kind (including appellate attorney fees) and any and all costs of prosecution or defense, which Miami-Dade County, Miami-Dade County's officers, employees, agents, servants, contractors, agencies and instrumentalities may incur in the future , both civil or criminal, as a result of any claims, demands, suits, causes of action or proceedings of any kind or nature arising out of, relating to or resulting from any action or failure to act by CCX or from any action or failure to act by CCX's officers, directors, employees, agents, servants, contractors, affiliates or any other CCX-associated entity. CCX and CCX's successors and assigns shall pay all claims, losses, penalties and damages of any kind whatsoever in connection therewith and CCX shall investigate and defend all such claims, proceedings, suits or actions of any kind or nature in the name of Miami-Dade County, where applicable, including appellate proceedings, and shall pay all such costs, penalties, judgments and attorneys fees (including appellate attorneys fees) which may issue thereon. CCX expressly understands and agrees that any insurance protection or insurance policy shall not in any way limit the obligation and responsibility of CCX to indemnify, keep and save harmless and defend Miami-Dade County and Miami-Dade County's officers,

employees, agents, servants, contractors, agencies and instrumentalities as herein provided. This provision in Paragraph 3 hereinabove shall supersede any provision to the contrary or inconsistent provision in the CCX Rulebook and any document mentioned therein, including Rulebook §§ 2.13 and 3.10, any other document issued by CCX, the Phase II Summary Term Sheet, the Chicago Climate Exchange Trading Platform And Registry System Agreement For Registry Account Holders, including Registry System Agreement § 7, or in any contract, representation, application, or agreement between Miami-Dade County and CCX. The provisions of this indemnification and hold harmless clause shall survive the termination of Miami-Dade County's membership in CCX for Phase II Direct Emissions only, until the expiration of any applicable statute of limitations.

4. Confidentiality. Notwithstanding any provision to the contrary or any inconsistent provision in the CCX Rulebook and any document mentioned therein, including Rulebook §§ 2.9(11), 3.11 and 5.4.3, any other document issued by CCX, the Phase II Summary Term Sheet, the Chicago Climate Exchange Trading Platform And Registry System Agreement For Registry Account Holders, including Registry System Agreement § 8, or in any contract, application, representation or agreement between CCX and Miami-Dade County, Miami-Dade County and Miami-Dade County's officers, agents, servants and employees shall at all times comply with all laws, statutes, ordinances and regulations applicable to Miami-Dade County which require providing to the public those documents, records, oral and written communications of any kind and other items required thereby to be provided to the public. Miami-Dade County does hereby disclaim any ability whatsoever to protect from disclosure to the public any such

documents, records, oral and written communications of any kind and other items thereby required to be provided to the public and disclaims hereby any liability whatsoever to CCX or any other person or legal entity of any kind for such provision to the public. CCX furthermore does hereby acknowledge the aforesaid disclaimer and consents to the aforesaid disclosure to the public without limitation of any kind. This Paragraph 4 herein shall be solely and exclusively governed by the Constitution of the State of Florida, the laws of the State of Florida, and the applicable provisions of the Miami-Dade County Home Rule Charter and Code of Miami-Dade County, Florida.

5. Force Majeure. Notwithstanding any provision to the contrary or any inconsistent provision in the CCX Rulebook and any document mentioned therein, any other document issued by CCX, the Phase II Summary Term Sheet, the Chicago Climate Exchange Trading Platform And Registry System Agreement For Registry Account Holders, including the Registry System Agreement § 11, or in any contract, representation, application or agreement between Miami-Dade County and CCX, the term "*force majeure* event" shall mean: a decision or order of any state or federal court, federal law, a statute of the State of Florida or of Congress, act of God, civil disturbance, civil or military authority, act of terrorism, war, strike, fire, hurricane and other substantial rainfall or wind event, other catastrophes, power supply or transmission failure or any other cause beyond Miami-Dade County's reasonable control, and any other *force majeure* event specified in any contracts, representations, application, or agreements between Miami-Dade County and CCX. All *force majeure* events as defined hereinabove shall be considered to be *force majeure* events whether or not such *force majeure* event occurs before or after the commencement date of Miami-Dade County's

membership in the CCX for Phase II Direct Emissions only, if Miami-Dade County determines at any time, in Miami-Dade County's sole discretion, that Miami-Dade County is unable to perform any of Miami-Dade County's obligations, in whole or in part, as a member of the CCX for Phase II Direct Emissions only, or pursuant to any contract or agreement or representation with or to CCX, because of a *force majeure* event, then upon Miami-Dade County providing notice to CCX, Miami-Dade County's membership in CCX for Phase II, Direct Emissions only, shall be deemed forthwith terminated and Miami-Dade County's obligations pursuant to all contracts, representations, and agreements with and to CCX shall be excused without penalty of any kind whatsoever as of the date of termination.

6. Dispute Resolution. Notwithstanding any provision to the contrary or any inconsistent provision, in any contract, application, representation or agreement between Miami-Dade County and CCX or in any rule, regulation or policy of CCX adopted prior to or subsequent to Miami-Dade County becoming a member of CCX for Phase II, Direct Emissions only, including Rulebook § 2.14 and Registry System Agreement § 15, any dispute or controversy arising under or in connection with Miami-Dade County's membership in CCX for Phase II, Direct Emissions only, shall be the subject of arbitration, mediation or other method of alternative dispute resolution only if agreed to by both Miami-Dade County and CCX.

7. Fees and Payments. Notwithstanding the provisions of CCX Rulebook § 2.8, Miami-Dade County does not consent to CCX or CCX's Executive Committee's sole power in levying any fees, assessments or dues upon Miami-Dade County. Miami-Dade County agrees to pay such dues, assessments and fees charged by CCX, with proper

notice, only if such dues, assessments, and fees so charged are deemed reasonable by Miami-Dade County, in the sole discretion of Miami-Dade County. Failure of CCX to either waive or discount any such dues, assessments or fees pursuant to Rulebook § 2.8, after notification from the County of its disagreement with such dues, assessments or fees, allows Miami-Dade County to terminate Miami-Dade County's membership in CCX for Phase II Direct Emissions only, without penalty of any kind to Miami-Dade County and Miami-Dade County's obligations pursuant to all contracts, representations, application, and agreements with or to CCX shall be excused without penalty of any kind whatsoever to Miami-Dade County as of the date of such termination.

8. Exchange Communications. Notwithstanding the provisions of CCX Rulebook § 2.15, Miami-Dade County does not consent to the effective date of an addition to or modification of the rules of CCX, where CCX fails to publish notice of said addition or modification, prior to the effective date of said addition or modification.

9. Registry Account Holder's Warranties and Covenants. Notwithstanding the provisions of Registry System Agreement § 3(f), Miami-Dade County does not consent to CCX's ability without cause or prior notice, to temporarily or permanently cease to operate the Exchange or Systems, or suspend, terminate, or restrict the County's access to and utilization of the Exchange and the Systems.

10. Governing Law. The Letter of Commitment of Miami-Dade County, Florida, and this Commitment Letter Addendum Agreement shall be governed by the laws of the State of Florida. Venue shall be in the United States District Court for the Southern District of Florida with respect to any matter arising out of Miami-Dade County's membership in CCX for Phase II, Direct Emissions only.

11. Headings. The headings in this Commitment Letter Addendum Agreement are intended for convenience of reference and shall not affect its interpretation.

12. This Commitment Letter Addendum Agreement shall be effective on the date that this Commitment Letter Addendum Agreement is executed by the duly authorized representatives of both Miami-Dade County, Florida, and CCX and shall be deemed terminated at the close of business on December 31, 2010.

Miami-Dade County, Florida, a political subdivision of the State of Florida

By:_____
Mayor Carlos Alvarez

Date:_____

Chicago Climate Exchange, Inc.

By:_____
President

Date:_____

Miami-Dade County Due Diligence Request to the Chicago Climate Exchange, Inc.

1. A copy of the Notification of Operation as an Exempt Commercial Market provided to the Commodity Futures Trading Commission. 17 CFR 36.3 (a)
2. A copy of the most recent Annual Certification filed with the Commodity Futures Trading Commission. 17 CFR 36.3(4)
3. A copy of the last three years of records of any allegations or complaints received by the CCX concerning instances of suspected fraud or manipulation in trading activity conducted in reliance on the exemption set forth in section 2(h)(3) of the Act. 17 CFR 36.3 (b)(iii)
4. Has the CCX ever been denied exchange registration, or had a registration suspended, revoked, or conditioned by a governmental or regulatory authority during the past five years?
5. Has the CCX ever been denied membership or clearing privileges by any commodity or securities exchange/clearing organization or had any membership or clearing privilege ever been suspended, revoked or conditioned during the past five years?
6. Has the CCX ever been convicted, pled guilty, entered a plea of "no contest" or entered into a voluntary settlement as to any violation of any criminal or penal code during the past five years?
7. Is the CCX subject to any investigation or have any charges been brought against CCX by any governmental or regulatory authority or exchange/clearing organization for violation of its laws or rules during the past five years?
8. Does CCX currently have any judgments, liens, attachments or other encumbrances filed against it during the past five years?
9. If any of the questions numbered 4 through 8 are answered "yes" , please provide a statement with the complete details as to dates, parties, circumstances and disposition for all such matters. Please include copies of decisions or final notices pertaining to the information provided in the statement.
10. Please provide a copy of any and all determination letters, private letter rulings or other decisions of the Internal Revenue Service of the United States with respect to the operation and functions of CCX and the tax consequences under federal law and regulation for members of the CCX.
11. Please provide a list of any pending litigation against CCX including the case number and name and address of the Court in which pending.
12. Please provide a list of any threatened litigation against CCX including the name of the party or parties involved.
13. Please provide a list of any unasserted claims against CCX which CCX has knowledge of and the name of the parties involved and any monetary amounts claimed.
14. Please provide a copy of the Articles of Incorporation and By Laws of CCX (Delaware).
15. Please provide a list of the officers and directors of the CCX. Include names, addresses and telephone numbers of Board of Directors.
16. Please provide a copy of the most recent independent audit of CCX, including the management letter. If there are findings, please provide a copy of the Board of Directors/Management written response to the auditors.
17. Does the CCX have Officers and Directors Liability Insurance? If so, please provide the name and address of the insurance company and the limits of the coverage.

Exempt Commercial Markets That Have Filed Notice with the CFTC

Exempt Commercial Markets That Have Filed Notice with the CFTC

Section 2(h)(3) of the Commodity Exchange Act (CEAct) establishes an exemption from regulation for agreements, contracts and transactions in exempt commodities that are traded on electronic trading facilities between eligible commercial entities. These markets, referred to as "exempt commercial markets or ECMs," must satisfy the initial and ongoing requirements of sections 2(h)(3) through (5) of the Act. CFTC rule 36.3 contains the implementing procedures for sections 2(h)(3) through (5).

Limited CFTC Jurisdiction and Oversight

In contrast to its authority over designated contract markets and registered derivatives transaction facilities, the CFTC does not have general oversight authority over exempt commercial markets. Exempt commercial markets are not registered with, or designated, recognized, licensed or approved by the CFTC, and they are prohibited from representing that they are so registered, designated, etc. An exempt commercial market may rely upon the section 2(h)(3) exemption for transactions that are not subject to the CFTC's regulatory or enforcement jurisdiction (e.g., transactions that are not contracts for future delivery or options).

The entities that have filed a notice with the CFTC to operate as an exempt commercial market are listed below.

Exempt Commercial Market	Location	Date of Notification	Commodity Categories	Staff Remarks
ChemConnect, Inc.	Houston, TX	07/12/06	Energy products	Acknowledgement letter sent 09/25/06.
Chicago Climate Exchange, Inc. (CCX)	Chicago, IL	07/24/03	Emission allowances	Acknowledgement letter sent 09/09/03. CCX's subsidiary, Chicago Climate Futures Exchange (CCFE), was approved by the CFTC as a designated contract market (DCM) [CFTC Approval Documents, Exchange Filings & Comments]. While the CFTC does not have oversight authority over CCX, it does have oversight authority over CCFE as a DCM.
Commodities Derivative Exchange, Inc. (CDXchange)	Northfield, IL	05/31/02	Metals	Acknowledgement letter sent 09/23/04.
HoustonStreet Exchange, Inc.	Eliot, ME	06/27/02	Energy products	Acknowledgement letter sent 08/22/03.
ICAP Commodity and Commodity Derivatives Trading System	London, UK	07/09/06	Energy products	Acknowledgement letter sent 09/01/06.
ICAP Electronic Trading	Louisville, KY	06/15/06	Natural gas and its derivatives	Acknowledgement letter sent 09/01/06.

269

Community				
ICAP Hyde Limited Trading System	London, UK	08/11/05	Forward Freight Agreements	Acknowledgement letter sent 09/01/06.
Intercontinental Exchange, Inc. (ICE)	Atlanta, GA	12/27/01	Precious metals, base metals and energy products	Acknowledgement letter sent 01/14/02.
International Maritime Exchange	Oslo, Norway	06/15/01	Freight rates	Acknowledgement letter sent 09/14/01.
Natural Gas Exchange, Inc. (NGX)	Calgary, Alberta, Canada	11/05/02	Energy products	Acknowledgement letter sent 01/23/04.
NetThruPut Inc.	Calgary, Alberta, Canada	03/23/06	Condensates and liquefied petroleum gas	Acknowledgement letter sent 04/14/06.
Optionable, Inc.	Briarcliff Manor, NY	06/19/01	Energy products	Acknowledgement letter sent 07/30/01.
Spectron Live.com Limited	London, UK	07/07/03	Liquefied petroleum gas	Acknowledgement letter sent 06/09/04.
TFS Energy, LLC	Stamford, CT	07/08/03	Weather derivatives	Acknowledgement letter sent 08/21/03.
Tradespark, LP	New York, NY	04/15/02	Energy products, weather indices and emission allowances	Acknowledgement letter sent 07/18/02.
TradeCapture Exchange	Stamford, CT	08/15/05	Energy products, emission allowances, and weather	Acknowledgement letter sent 03/12/07.
Tradition Financial Services Pulp and Paper Division	Stamford, CT	05/15/03	Pulp and paper products	Acknowledgement letter sent 06/22/04.

Additional Information

- General Information About Exempt Commercial Markets.
- Part 36 of the CFTC's Regulations
- Exempt Commercial Market Annual Certification Form - CFTC Form 205
- CFTC Actions to Expand the ECE Definition
  - January 16, 2003 Order Relating to CFTC-Registered Floor Brokers and Floor Traders
  - November 15, 2004 Order Relating to International Petroleum Exchange Brokers and Traders

Updated March 13, 2007

270

ADD ON

Memorandum

MIAMI-DADE COUNTY

Date: June 26, 2007

Supplement to Agenda Item No. 8D1A

To: Honorable Chairman Bruno A. Barreiro and Members, Board of County Commissioners

From: George M. Burgess
County Manager

Subject: Supplemental Information to Item 8D1A, Resolution Approving the Form of the Chicago Climate Exchange, Inc., Application for Membership and All Other Related Agreements and Letters; Authorizing Execution of These Documents by the County Mayor or His Designee; Designating County Representatives to Perform Required Duties; and Authorizing the County Mayor or His Designee to Designate Additional or Substitute Representatives as Needed

---

Additional information and documents are being provided for the above referenced item that was presented to the Government Operations and Environment (GOE) Committee at the May 15, 2007 meeting.

For the past several months, County staff has been working to reduce potential liabilities that may arise from Miami-Dade County's membership in the Chicago Climate Exchange, Inc. These efforts include obtaining a Dun & Bradstreet Report for CCX (Attachment A) and review of documents sent by CCX in response to a thorough Due Diligence Request by Miami-Dade County. The CCX response and documents received thus far are available for review. In addition, Miami-Dade County has worked with CCX staff to negotiate acceptable language and conditions in the Commitment Letter Addendum Agreement Between Miami-Dade County, Florida and the Chicago Climate Exchange, Inc. (Attachment B). This document establishes additional terms and conditions to further protect Miami-Dade County from potential legal and financial liabilities that may arise from membership in the Chicago Climate Exchange, Inc. Some of these terms and conditions include the following: mutual indemnification between Miami-Dade County and CCX; clarification and agreement on acceptable language with regards to the use of the word "levy" in Paragraph 7 on page 6 of the Addendum Agreement (Fees, Dues, and Assessments); specification of the amounts CCX will charge to Miami-Dade County for the Enrollment Fee ($5,000), and for annual dues and assessments ($5,000 per calendar year for Phase II 2007 – 2010 inclusive); and establishment of a disclaimer by Miami-Dade County, as a government entity within the state of Florida, to protect from disclosure any documents or communications by CCX.

At the May 15, 2007 meeting of the GOE Committee, Assistant County Manager Roger Carlton advised the Committee members that the annual dues were revised from $5,000 to $10,000, due to the amount estimated for the total baseline emissions of Miami-Dade County. The item associated with this supplement was revised to incorporate that amendment. Subsequently, during a June 25, 2007 conference call, CCX agreed to return to the original annual dues amount of $5,000.

Assistant County Manager

ATTACHMENT A

From: Robainas, Yvette (GSA)
Sent: Tuesday, May 01, 2007 11:28 AM
To: Hefty, Nichole (DERM)
Subject: Emailing: GetDNBReport
Nicole, attached is the desired report for your perusal. Thank you.

D&B Reports - Comprehensive Report
Duns Number: 143249923
Requested: 04/30/2007 1:45:35 PM
Reference: NONE ENTERED

143249923

070421
CHICAGO CLIMATE EXCHANGE, INC.
COPYRIGHT 2007 DUN & BRADSTREET INC. - PROVIDED UNDER CONTRACT
FOR THE EXCLUSIVE USE OF SUBSCRIBER XXXXXXXXXX.

COMPREHENSIVE REPORT

DUNS: 14-324-9923
CHICAGO CLIMATE EXCHANGE,
INC.

FINANCIAL STRESS CLASS: 1
CREDIT SCORE CLASS: 2

190 S LA SALLE ST STE 800
AND BRANCH(ES) OR DIVISION(S)
CHICAGO IL 60603
TEL: 312 554-3350

KEY
==========
LOWEST RISK HIGHEST RISK
1 2 3 4 5

SIC: 62 31
LINE OF BUSINESS: SECURITY/COMMODITY EXCHANGE
YEAR STARTED: 2003
CONTROL DATE: 2003

DATE PRINTED: APR 30 2007

CHIEF EXECUTIVE: RICHARD L SANDOR, PRES

==========
EXECUTIVE SUMMARY

- The Financial Stress Class of 1 for this company shows that firms with this classification had a failure rate of 1.2% (120 per 10,000), which is lower than the average of businesses in D&B's database.
- The Credit Score Class of 2 for this company shows that 4.6% of firms with this classification paid one or more bills severely delinquent, which is lower than the average of businesses in D&B's database.
- Subject company pays its bills within terms.
- Subject company's industry pays its bills an average 3 days beyond terms.
- Subject company pays its bills more promptly than the average for its industry.
- UCC filing(s) are reported for this business.
- Under present management control 4 years.
- No record of open Suit(s), Lien(s), or Judgment(s) in the D&B database.

- History is clear.

==========

CREDIT CAPACITY SUMMARY

D&B Rating:	ER7 (formerly 2R3)	Payment Activity (based on 11 experiences):	
		Average High Credit:	$3,370
# of Employees		Highest Credit:	$15,000
Total:	9	Total Highest Credits:	$21,850

Worth: -
Working Capital: -

==========

FINANCIAL STRESS SUMMARY

The Financial Stress Model predicts the likelihood of a firm ceasing business without paying all creditors in full, or reorganizing or obtaining relief from creditors under state/federal law over the next 12 months. Scores were calculated using a statistically valid model derived from D&B's extensive data files.

Financial Stress Class: (Highest Risk: 5; Lowest Risk: 1)	1
Incidence of Financial Stress Among Businesses with this Class:	1.20% (120 per 10,000)
Incidence of Financial Stress: - Average of businesses in D&B's database	2.60% (260 per 10,000)
Financial Stress National Percentile: (Highest Risk: 1; Lowest Risk: 100)	46
Financial Stress Score: (Highest Risk: 1,001; Lowest Risk: 1,875)	1364

The Financial Stress Score of this business is based on the following factors:

- Payment information in the D&B files indicates no slow payment(s) nor negative comment(s).
- No record of open suit(s), lien(s), or judgment(s) in the D&B files.

Notes:

- The Financial Stress Class indicates that this firm shares some of the same business and financial characteristics of other companies with this classification. It does not mean the firm will necessarily experience financial stress.

- The Incidence of Financial Stress shows the percentage of firms in a given Class that discontinued operations with loss to creditors. The average Incidence of Financial Stress is based on businesses in D&B's database and is provided for comparative purposes.

- The Financial Stress National Percentile reflects the relative ranking of a company among all scorable companies in D&B's file.

- The Financial Stress Score offers a more precise measure of the level of risk than the Class and Percentile. It is especially helpful to customers using a scorecard approach to determining overall business performance.

- All Financial Stress Class, Percentile, Score and Incidence statistics are based on 2004.

==========

FINANCIAL STRESS NORMS

Norms for Companies in the Same ...	National Percentile
- Region (EAST NORTH CENTRAL)	49
- Industry: FINANCIAL SERVICES	63
- Employee Range (1-9)	38
- Years in Business Range (3-5)	42
- Subject Company	46

Key Comparisons
The subject company has a Financial Stress Percentile that shows:

- Higher risk than other companies in the same region.
- Higher risk than other companies in the same industry.
- Lower risk than other companies in the same employee size range.
- Lower risk than other companies with a comparable number of years in business.

==========

CREDIT SCORE SUMMARY

The Credit Score Class predicts the likelihood of a firm paying in a severely delinquent manner (90+ Days Past Terms) over the next twelve months. It was calculated using statistically valid models and the most recent payment information in D&B's files.

Credit Score Class:	2
Incidence of Delinquent Payment Among Companies with this Class:	4.60%
Incidence of Delinquent Payment:	20.10%
- Average compared to businesses in D&B's database	
Percentile:	89
Credit Score:	537

The Credit Score of this business is based on the following factors:

- Payment information in the D&B files indicates no slow payment(s) nor negative comment(s).
- No record of open suit(s), lien(s), or judgment(s) in the D&B files.

Notes:

- The Credit Score Class indicates that this firm shares some of the same business and payment characteristics of other companies with this classification. It does not mean the firm will necessarily experience delinquency.

- The Incidence of Delinquent Payment is the percentage of companies with this classification that were reported 90 days past due or more by creditors. The calculation of this value is based on an inquiry weighted sample.

- The Delinquency Rate is the percentage of companies with this classification that were reported 90 days past due or more by creditors. The calculation of this value is based on an inquiry weighted sample.

- The Percentile ranks this firm relative to other businesses. For example, a firm in the 80th percentile has a lower risk of paying in a severely delinquent manner than 79% of all scorable companies in D&B's files.

- The Credit Score offers a more precise measure of the level of risk than the Class and Percentile. It is especially helpful to customers using a scorecard approach to determining overall business performance.

- All Credit Class, Percentile, Score and Incidence statistics are based on sample data from 2004.

==========

CREDIT SCORE NORMS

Norms for Companies in the Same ...	National Percentile
- Region (EAST NORTH CENTRAL)	50
- Industry: FINANCIAL SERVICES	54
- Employee Range (1-9)	58
- Years in Business Range (3-5)	50
- Subject Company	89

Key Comparisons
The subject company has a Credit Score Percentile that shows:

- Lower risk than other companies in the same region.
- Lower risk than other companies in the same industry.
- Lower risk than other companies in the same employee size range.
- Lower risk than other companies with a comparable number of years in business.

PAYMENT TRENDS

PAYDEX scores below are based on dollar weighted trade in most recent 12 mos.

	'05 JUN	'05 SEP	'05 DEC	'06 MAR	'06 MAY	'06 JUN	'06 JUL	'06 AUG	'06 SEP	'06 OCT	'06 NOV	'06 DEC	'07 JAN	'07 FEB	'07 MAR	'07 APR
FIRM	78	78	54	68	80	80	80	80	80	80	80	80	80	80	80	80
Industry Quartiles																
Upper	80	80	80	80		80			80			80			80	
Median	77	77	78	78		78			78			78			78	
Lower	70	70	71	72		73			72			72			72	

Industry PAYDEX based on:
SIC: 62XX
739 Firms

KEY TO PAYDEX SCORES:
80 Within terms
78 3 Days Beyond Terms
54 27 Days Beyond Terms

SUMMARY OF PAYMENT HABITS

Dollar Range Comparisons:

Suppliers That Extend Credit of...	Number of Experiences: #	Total Amount $	% of Dollars Within Terms %
OVER $100,000	0	0	0
$50,000 - 99,999	0	0	0
$15,000 - 49,999	1	15,000	100
$ 5,000 - 14,999	0	0	0
$ 1,000 - 4,999	0	0	0
Under 1,000	4	1,850	100

PAYMENT ANALYSIS BY INDUSTRY

There are 11 payment experiences in D&B's file for the most recent 12 months, with 11 experiences reported during the last three month period.

	Total Recd #	Dollar Amount $	Highest Credit $	Within Terms	Slow 1-30	Slow 31-60	Slow 61-90	Slow 91+
				--- % of dollar amount ---				
Total in D&B's File	11	21,850	15,000					
Industry								
Telephone communicants	3	0	0	0	0	0	0	0
Nonclassified	2	1,250	750	100	0	0	0	0
Ret-direct selling	1	15,000	15,000	100	0	0	0	0
Air courier service	1	500	500	100	0	0	0	0

Whole appliances	1	100	100	100	0	0	0	0
Radiotelephone commun	1	0	0	0	0	0	0	0
Newspaper-print/publ	1	0	0	0	0	0	0	0

OTHER PAYMENT CATEGORIES:		
Cash Experiences	0	0
Paying Record Unknown	1	5,000
Unfavorable Comments	0	0
Placed for Collection		
with D&B	0	0
other	0	N/A

==========

PUBLIC FILINGS SUMMARY

The following data includes both open and closed filings found in D&B's database on the subject company.

Record Type	#	Most Recent Filing Date
Bankruptcy Proceedings	0	-
Judgments	0	-
Liens	0	-
Suits	0	-
UCC's	1	03/01/2007

==========

PUBLIC FILINGS DETAIL

The following data is for information purposes only and is not the official record. Certified copies can only be obtained from the official source.

---

* * * UCC FILING(S) * * *

COLLATERAL: Business machinery/equipment
FILING NO: 011851940 DATE FILED: 03/01/2007
TYPE: Original LATEST INFO RECEIVED: 03/22/2007
SEC. PARTY: GFC LEASING, A DIVISION OF GORDON FLESCH CO., INC., MADISON WI FILED WITH: SECRETARY OF STATE/UCC DIVISION, IL
DEBTOR: CHICAGO CLIMATE EXCHANGE

The public record items contained in this report may have been paid, terminated, vacated or released prior to the date this report was printed.

==========

BUSINESS BACKGROUND

HISTORY

11/09/06

RICHARD L SANDOR, PRES DOUG DOBBEN, CFO
DIRECTOR(S): THE OFFICER(S)

This business registered as a corporation in Illinois on March 18, 2003.

Business started 2003. 100% of capital stock is owned by Richard L Sandor.

RICHARD L SANDOR. Antecedents are undetermined.

DOUG DOBBEN. Antecedents are undetermined.

OPERATIONS

11/09/06 Operates as a security or commodity exchange, specializing in stock options (100%).

All sales cash. Sells to commercial concerns. Territory : International.

EMPLOYEES: 9 which includes partners. UNDETERMINED employed here.

FACILITIES: Occupies premises in building.

BRANCHES: Maintains a branch in New York, NY.

==========

FINANCIAL SUMMARY

KEY BUSINESS RATIOS

NOTE:
Business ratios are not available for this company or its industry. Certain segments, such as financial services, insurance companies, government agencies and public institutions, have distinctive financial reporting characteristics that do not allow for calculation of these measures.

FINANCIAL INFORMATION

11/09/06 Peggy Sabol, Acct Mgr submitted the following partial estimates dated NOV 09 2006:

Sales for 2005 were $6,000,000.

On November 9, 2006, Peggy Sabol, Acct Mgr, confirmed operation and location, for the captioned business.

As of November 9 2006 a search of Dun & Bradstreets Public Record database found no open suits, liens, judgements or UCCs to which Chicago Climate Exchange, Inc. at 190 S La Salle St Ste 800, Chicago IL was named defendant or debtor. Public records received hereafter will be entered into the database and will be included in reports which contain a Public Filings section.

==========

CUSTOMER SERVICE

If you need any additional information, or have any questions regarding this report, please call our Customer Service Center at (800) 234-3867 from anywhere within the U.S. From outside the U.S., please call your local D&B office.

END OF COMPREHENSIVE REPORT

ATTACHMENT B

COMMITMENT LETTER ADDENDUM AGREEMENT BETWEEN MIAMI-DADE COUNTY, FLORIDA, AND THE CHICAGO CLIMATE EXCHANGE, INC.

This Commitment Letter Addendum Agreement Between Miami-Dade County, Florida, And The Chicago Climate Exchange, Inc., dated , 2007, is agreed to and entered into as a modification to and as an addendum to the Letter of Commitment between Miami-Dade County, Florida ("Miami-Dade County" or the "County"), and the Chicago Climate Exchange, Inc. (hereinafter sometimes referred to herein as "CCX"), as additional terms and conditions between Miami-Dade County, Florida, and the Chicago Climate Exchange, Inc., and supersedes and takes precedence over any and all conflicting or inconsistent terms, conditions, requirements or any other provision of any document of any kind whatsoever issued or to be issued by the Chicago Climate Exchange, Inc. or issued or to be issued by any of CCX's agents, servants, employees, contractors, officers, directors, affiliates or any other entity associated with the Chicago Climate Exchange, Inc. in the past, present or future, including, but not limited to the: (i) Chicago Climate Exchange, Inc. Rulebook, and any and all documents mentioned therein; (ii) Phase II Summary Term Sheet; (iii) Application For Membership and associated documents; and (iv) Chicago Climate Exchange Trading Platform and Registry System Agreement for Registry Account Holders (the "Registry System Agreement").

1. Rule Adoption and Amendments. If Miami-Dade County, Florida determines at any time, in Miami-Dade County's sole discretion, that the adoption, promulgation, amendment or issuance of any rule, regulation, or policy by the Chicago Climate Exchange, Inc. or any of CCX's affiliates, conflicts with or is inconsistent with or is pre-empted by any limitation, requirement, restriction, or condition applicable to

Miami-Dade County by any decision or order of any state or federal court, or any state, federal or local law, then upon Miami-Dade County providing notice to CCX, and after good faith efforts have been made by both Miami-Dade County and CCX to agree to an alternate resolution to such matter, Miami-Dade County may forthwith terminate Miami-Dade County's membership in CCX for Phase II Direct Emissions only, without penalty of any kind to Miami-Dade County and Miami-Dade County's obligations pursuant to all contracts, representations, application, and agreements with or to CCX shall be excused without penalty of any kind whatsoever to Miami-Dade County as of the date of such termination.

2. Miami-Dade County Indemnification. Notwithstanding any provision to the contrary in any contract or agreement between Miami-Dade County and CCX or in any CCX rule adopted prior to or subsequent to the date of this agreement including without limitation Rulebook Sections 2.13 and 3.10 and Registry Agreement Section 7, the following standards shall govern the indemnification obligations of Miami-Dade County: Miami-Dade County shall protect, defend, indemnify, and save harmless CCX, its officers, employees, and agents from any and all costs, fees (including attorneys fees), claims, actions, lawsuits, judgments, awards of damages or liability of any kind, arising out of or in any way resulting from the negligent acts or omissions of Miami-Dade County, its officers, employees, or agents, or from claims arising from directions, instructions and orders in respect to any of Miami-Dade County's CCX accounts given by Miami-Dade County's officers, employees or agents, to the extent permitted by the laws of the State of Florida. Miami-Dade County agrees that its obligations under this

paragraph extend to any claim, demand or cause of action brought by or on behalf of any of Miami-Dade County's employees or agents.

3. CCX Indemnification and Liability. Notwithstanding any provision to the contrary in any contract or agreement between Miami-Dade County and CCX or in any CCX rule adopted prior to or subsequent to the date of this agreement, including without limitation Rulebook Sections 2.13 and 3.10 and Registry Agreement Section 7, the following standards shall govern the indemnification and liability obligations of CCX: CCX shall protect, defend, indemnify, and save harmless Miami-Dade County, its officers, employees, and agents from any and all costs, fees (including attorneys fees), claims, actions, lawsuits, judgments, awards of damages or liability of any kind, arising out of or in any way resulting from the negligent acts or omissions of CCX, its officers, employees, or agents. Additionally, CCX shall be liable to Miami-Dade County for CCX's breach of any contract or agreement between CCX and Miami-Dade County. CCX agrees that its obligations under this paragraph extend to any claim, demand or cause of action brought by or on behalf of any of CCX's employees or agents.

4. Confidentiality. Notwithstanding any provision to the contrary or any inconsistent provision in the CCX Rulebook and any document mentioned therein, including Rulebook §§ 2.9(11), 3.11 and 5.4.3, any other document issued by CCX, the Phase II Summary Term Sheet, the Chicago Climate Exchange Trading Platform And Registry System Agreement For Registry Account Holders, including Registry System Agreement § 8, or in any contract, application, representation or agreement between CCX and Miami-Dade County, Miami-Dade County and Miami-Dade County's officers, agents, servants and employees shall at all times comply with all laws, statutes,

ordinances and regulations applicable to Miami-Dade County which require providing to the public those documents, records, oral and written communications of any kind and other items required thereby to be provided to the public. Miami-Dade County does hereby disclaim any ability whatsoever to protect from disclosure to the public any such documents, records, oral and written communications of any kind and other items thereby required to be provided to the public and disclaims hereby any liability whatsoever to CCX or any other person or legal entity of any kind for such provision to the public. CCX furthermore does hereby acknowledge the aforesaid disclaimer and consents to the aforesaid disclosure to the public without limitation of any kind. This Paragraph 4 herein shall be solely and exclusively governed by the Constitution of the State of Florida, the laws of the State of Florida, and the applicable provisions of the Miami-Dade County Home Rule Charter and Code of Miami-Dade County, Florida. Miami-Dade County agrees to seek to notify CCX of any Florida public records law requests by any person or entity as to any records, documents, written communications of any kind or other items received by Miami-Dade County from CCX.

5. Force Majeure. Notwithstanding any provision to the contrary or any inconsistent provision in the CCX Rulebook and any document mentioned therein, any other document issued by CCX, the Phase II Summary Term Sheet, the Chicago Climate Exchange Trading Platform And Registry System Agreement For Registry Account Holders, including the Registry System Agreement § 11, or in any contract, representation, application or agreement between Miami-Dade County and CCX, the term "*force majeure* event" shall mean: a decision or order of any state or federal court, federal law, a statute of the State of Florida or of Congress, act of God, civil disturbance,

civil or military authority, act of terrorism, war, strike, fire, hurricane and other substantial rainfall or wind event, other catastrophes, power supply or transmission failure or any other cause beyond Miami-Dade County's reasonable control, and any other *force majeure* event specified in any contracts, representations, application, or agreements between Miami-Dade County and CCX. All *force majeure* events as defined hereinabove shall be considered to be *force majeure* events whether or not such *force majeure* event occurs before or after the commencement date of Miami-Dade County's membership in the CCX for Phase II Direct Emissions only, if Miami-Dade County determines at any time, in Miami-Dade County's sole discretion, that Miami-Dade County is unable to perform any of Miami-Dade County's obligations, in whole or in part, as a member of the CCX for Phase II Direct Emissions only, or pursuant to any contract or agreement or representation with or to CCX, because of a *force majeure* event, then upon Miami-Dade County providing notice to CCX, Miami-Dade County's membership in CCX for Phase II, Direct Emissions only, shall be deemed forthwith terminated and Miami-Dade County's obligations pursuant to all contracts, representations, and agreements with and to CCX shall be excused without penalty of any kind whatsoever as of the date of termination.

6. Dispute Resolution. Notwithstanding any provision to the contrary or any inconsistent provision, in any contract, application, representation or agreement between Miami-Dade County and CCX or in any rule, regulation or policy of CCX adopted prior to or subsequent to Miami-Dade County becoming a member of CCX for Phase II, Direct Emissions only, including Rulebook § 2.14 and Registry System Agreement § 15, any dispute or controversy arising under or in connection with Miami-Dade County's

membership in CCX for Phase II, Direct Emissions only, shall be the subject of arbitration, mediation or other method of alternative dispute resolution only if agreed to by both Miami-Dade County and CCX.

7. Fees, Dues and Assessments. With respect to CCX Rulebook Section 2.8, Miami-Dade County recognizes that CCX and CCX's Executive Committee have the sole power to levy any fees, assessments or dues. However, due to the limitations and restrictions of Florida law, the Miami-Dade County Home Rule Amendment to the Florida Constitution and the Miami-Dade County Home Rule Charter, CCX and Miami-Dade County agree that CCX and CCX's Executive Committee shall not exercise this power to levy with respect to Miami-Dade County and Miami-Dade County's membership in CCX. Miami-Dade County agrees to pay CCX the following: a) Enrollment Fee of $5,000.00- one time, and b) Annual dues and assessments in the amount of $5,000.00 per calendar year for Phase II 2007-2010 inclusive (in addition to transaction fees and compliance costs for purchase of Carbon Financial Instruments pursuant to the CCX Rulebook).

8. Exchange Communications. CCX shall provide notice of additions or modifications to CCX's rules and fee schedules to all members of CCX simultaneously, including Miami-Dade County, as soon as reasonably possible subsequent to adoption by CCX.

9. Governing Law. The Letter of Commitment of Miami-Dade County, Florida, and this Commitment Letter Addendum Agreement shall be governed by the laws of the State of Florida. Venue shall be in the United States District Court for the

Southern District of Florida with respect to any matter arising out of Miami-Dade County's membership in CCX for Phase II, Direct Emissions only.

10. Headings. The headings in this Commitment Letter Addendum Agreement are intended for convenience of reference and shall not affect its interpretation.

11. This Commitment Letter Addendum Agreement shall be effective on the date that this Commitment Letter Addendum Agreement is executed by the duly authorized representatives of both Miami-Dade County, Florida, and CCX and shall be deemed terminated at the close of business on December 31, 2010.

Miami-Dade County, Florida, a political subdivision of the State of Florida

By:_____
Mayor Carlos Alvarez

Date:_____

Chicago Climate Exchange, Inc.

By:_____
Paula DiPerna, Executive Vice-President

Date:_____

ADD ON

Memorandum

MIAMI-DADE COUNTY

Date: June 26, 2007

8(D)1a Supplement No 2

To: Honorable Chairman Bruno A. Barreiro and Members, Board of County Commissioners

From: George M. Burgess
County Manager

Subject: Supplemental Information to Item 8D1A, Resolution Approving the Form of the Chicago Climate Exchange, Inc., Application for Membership and All Other Related Agreements and Letters; Authorizing Execution of These Documents by the County Mayor or His Designee; Designating County Representatives to Perform Required Duties; and Authorizing the County Mayor or His Designee to Designate Additional or Substitute Representatives as Needed

---

As one of the first members of the International Council for Local Environmental Initiative's (ICLEI) Cities for Climate Protection Campaign, Miami-Dade County established itself as a pioneer in implementing Greenhouse Gas emissions by implementing its Urban CO2 Reduction Plan. As part of this Plan, the County has been implementing programs and changing operations to reduce its greenhouse gas emissions since 1993. These proactive initiatives include such things as energy efficient building retrofits, purchase of hybrid electric vehicles, recycling, methane capture and flaring at landfills, and providing County services via the Internet to reduce Vehicle Miles Traveled (VMTs). These efforts and many other initiatives resulted in the reduction of over 34,000,000 tons of the predominant greenhouse gas, carbon dioxide (CO2), and are documented in "A Long Term CO2 Reduction Plan for Miami-Dade County, 1993 – 2006," that was presented to the Board as Agenda Item 12(B)1 on January 25, 2007.

Clearly, the County has been a leader in environmental initiatives and membership in the Chicago Climate Exchange should be no exception. However, given the serious budgetary reductions faced by our property tax supported operations I can not support any payments to the Exchange, estimated at $80,000 per year for the next four years, from our property tax supported operations. Rather, and appropriately, I am recommending that any required payments to the Climate Exchange over the next four years come from our Fleet Operations Fund. While I would prefer the commitment to be annual, the rules of the Chicago Climate Exchange (CCX) require a four-year term. Nevertheless, we intend to measure our success in reducing greenhouse emissions annually and revisit our funding strategy as appropriate each year.

Assistant County Manager