

Carbon Credit Markets: A New Revenue Opportunity for Land Owners

Wisconsin SAF Conference

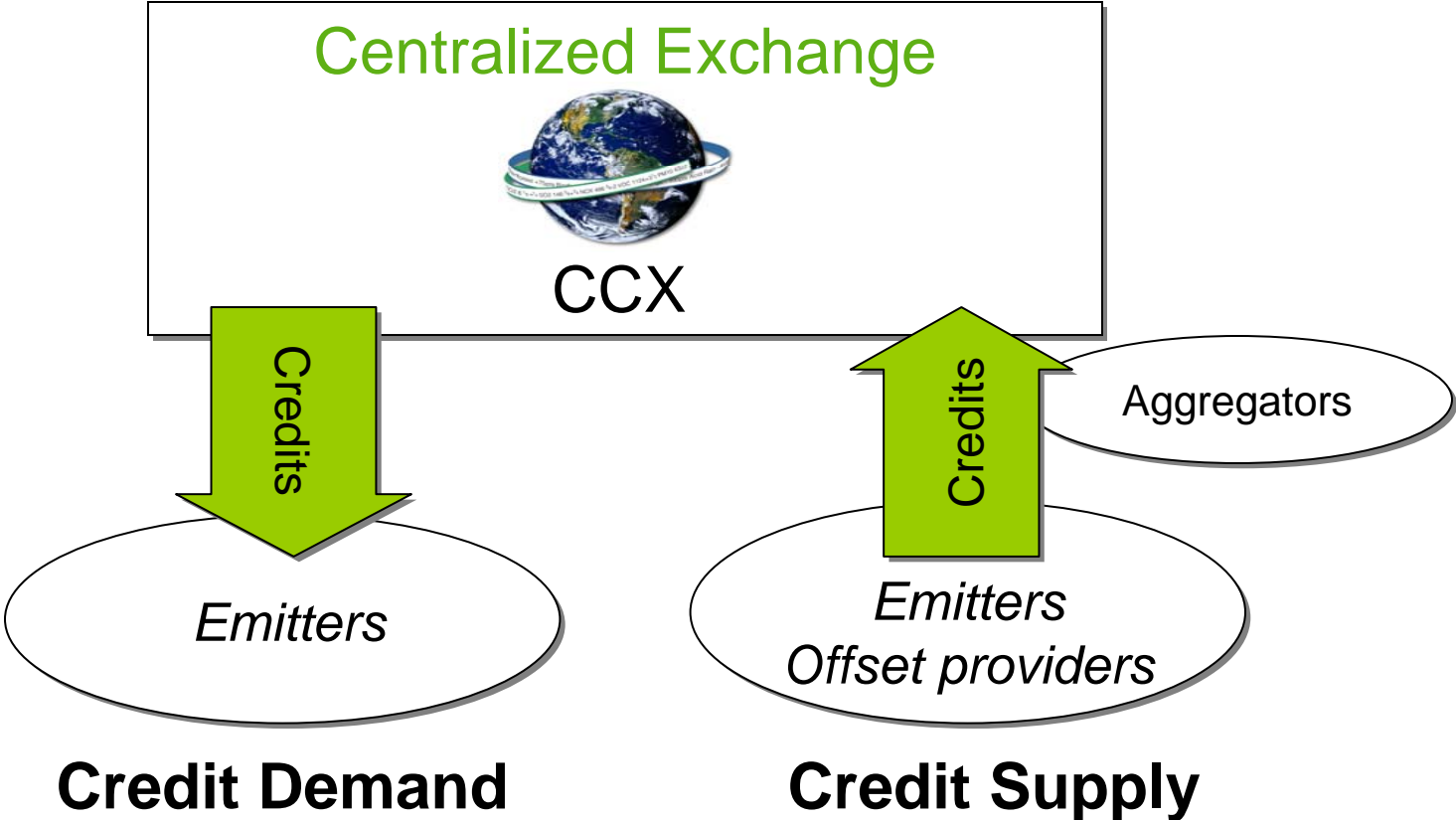
Stevens Point, WI

November 12, 2008

The Carbon Credit Market

- What is the role of AgraGate in this market?
- How can forest land owners participate in the carbon credit market?
- What are the AgraGate cruise requirements?
- What is the outlook for the market in the US?

The Carbon Credit Market



AgraGate Overview

- **AgraGate** is an aggregator of environmental credits with a current focus on carbon credits
- **AgraGate** was formed in July 2007 as a subsidiary of the Iowa Farm Bureau
- **AgraGate** is continuing the work of the Iowa Farm Bureau which began aggregating carbon credits when the Chicago Climate Exchange (CCX) was launched in 2003

AgraGate Vision

Farmers, ranchers, and land owners have the potential to deliver significant value within the emerging carbon credit market

AgraGate's focus is on soils and forestry offset projects



Carbon Market Assessment and Participation

Assessment	Participation
Information	Enrollment
Education	Verification
Eligibility evaluation	Certification
	Registration
	Sales
	Disbursements

Details of Eligible CCX Offsets



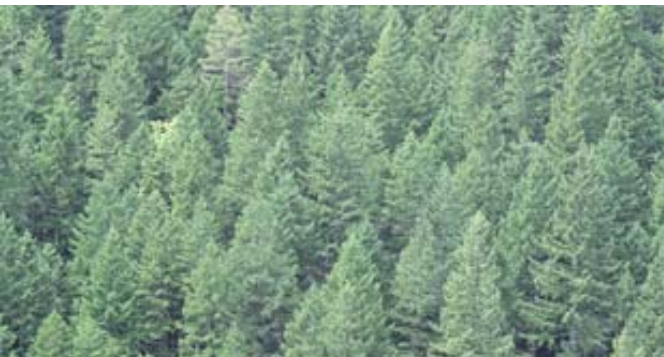
Forestry Offsets (XFOs)

New Tree Plantings (Afforestation)

Sustainably Managed Forests

XFO (Forestry) Credits Are Earned on Annual Net Carbon Accumulation

CO₂ sequestered – off take + long-lived wood credit



CO₂ Sequestered



Off Take



Wood Product Credit

Three CCX XFO protocols

- **Afforestation** –
New trees planted after January 1, 1990 on land where there previously were no trees
- **Sustainably Managed Forests** –
Forest land under a certified, sustainable forest management plan.
- **Long-lived Wood Products** –
Credits earned based on verifiable long-term storage of carbon in certain end-use products.

AgraGate Forestry Contract

Contract term

- A 15-year contract to keep land in sustainable forestry.
- Carbon credit quantification initially through the period 2010.
- The contract will automatically extend on January 1, 2011, but participants have the option to “opt out” of the carbon quantification at end of 2010.

AgraGate Forestry Contract

Carbon quantification

- For Afforestation projects, credits earned can be calculated using either the CCX Carbon Accumulation tables or through direct measurement using a growth and yield model.
- For Sustainably Managed Forest projects, we need to use direct measurement and a growth and yield model.
- For Long-lived Wood Products, CCX table values are used.

AgraGate Forestry Contract

Reserve credits

- At registration, 20 percent of credits will be placed into a Reserve account.
- Reserve credits will not stay in the reserve account for more than five (5) years. After five years in the reserve account, credits will be released and available for sale.
- At the end of the contract period, all remaining credits will be sold.

AgraGate Forestry Contract

Payments to land owners

- Contract holders will be paid based upon their projected net credit contribution to the respective forestry pool over the carbon quantification period.
- Projected net credit contribution will be determined by:
 - Growth and yield model annual carbon sequestration projections
 - Projected thinning/harvesting during quantification period
 - Projected disposition of harvest timber
- Inventory “true-ups” at the end of the contract and after each significant harvest

XFO Eligibility - Afforestation

- Planting and/or natural regeneration on private lands after Jan. 1, 1990 on land not forested on Dec. 31, 1989.
- A contractual commitment to maintain the enrolled land as forest for at least 15 years from the enrollment date and sign a letter of intent to do so.
- Credits based on annual increase in carbon stocks as determined via CCX Accumulation tables or through direct measurement.
- Thinning will not be allowed.

XFO Eligibility – Managed Forests

- Provide evidence of sustainable forest management through certification from agencies or schemes indorsed by PEFC (e.g., SFI, ATFS), the Forest Stewardship Council (FSC), or other certification programs approved by the CCX Committee on Forestry.
- Make a 15-year contractual commitment to a sustainable forest management program and a signed letter of intent.
- Provide verified documentation for the net changes in carbon stocks on eligible sites.

XFO – Managed Forests

- Net Change in Carbon Stocks must involve a model-based accounting approach.
- A baseline of carbon stocks (i.e., starting inventory) must be established in order to calculate annual net changes in carbon stocks.
- For northern stands, we will be running the US Forest Service's FVS growth and yield model.
- FVS model projects carbon accumulation initially through 2010. Land owners' share of pool is based on their average annual carbon accumulation.

Noncompliance due to uncontrollable events

In the case of noncompliance that results from adverse weather, natural disaster, or pestilence that is not controllable by the project owner, the liability of the project owner shall be limited to forfeiture of any existing reserve credits.

XFO contract costs

- AgraGate charges a 10% service fee
- Verification costs (\$0.10-\$0.20/credit) and CCX fees (\$0.20/credit) are the responsibility of the participant
- These costs are deducted at the time that net proceeds are distributed
- Cruise costs are also the responsibility of the land owner

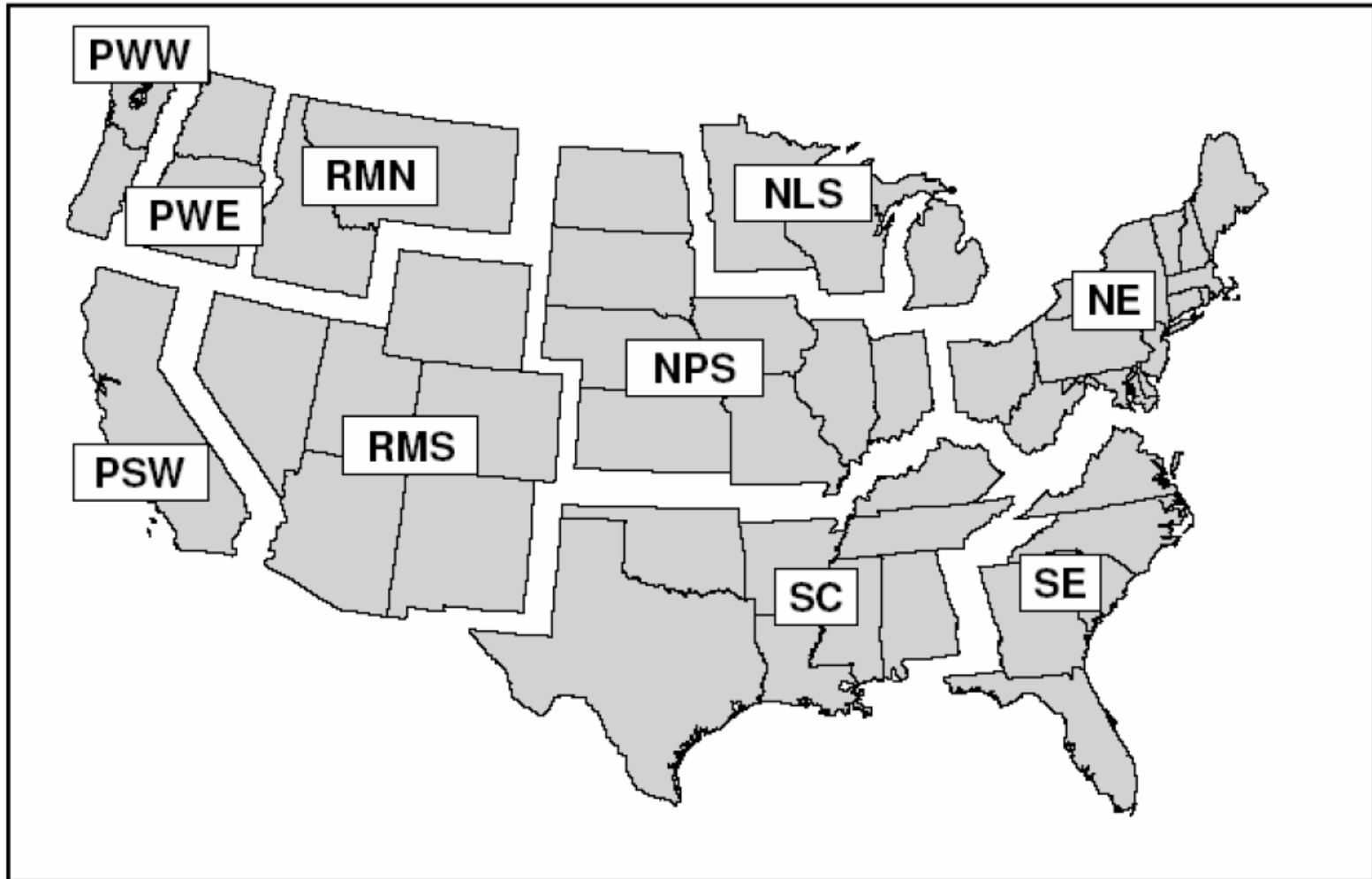
XFO enrollment steps (Afforestation)

- Read and understand XFO contract
- Complete Enrollment worksheets
- Gather copies of required documents
 - Proof of ownership (e.g., copy of deed)
 - Aerial photos and/or maps (shape files are encouraged)
 - Proof of no trees prior to planting (aerial photos prior to planting)
 - Planting date documents
 - Copy or CRP contract (if applicable)
- Sign contract
- Sign CCX Letter of Intent
- Send application to AgraGate

XFO enrollment steps (Managed Forest)

- Read and understand XFO contract
- Complete Enrollment worksheets
- Gather copies of required documents
 - Proof of ownership (e.g., copy of deed)
 - Aerial photos and/or maps (shape files are encouraged)
 - Sustainable Management Plan certification proof
- Conduct Cruise (capture cruise data in XLS file)
- Sign contract
- Sign CCX Letter of Intent
- Send application (with cruise data) to AgraGate

CCX Classification of Afforestation Regions



CCX XFO Afforestation Credits Rates

Carbon Accumulation rates for afforestation forestry projects							
Region	Species	Age of Trees					
		1-5	6-10	11-15	16-20	21-25	26-30
Northern Lake State	Aspen-birch	1.592	1.402	0.983	1.537	1.861	2.044
Northern Lake State	Elm-Ash-cottonwood	0.921	1.098	1.024	1.483	1.661	1.802
Northern Lake State	Maple-Beech-birch	1.131	1.240	1.140	1.788	2.239	2.379
Northern Lake State	Oak-hickory	1.466	1.429	1.266	1.752	2.082	2.160
Northern Lake State	Spruce-balsam fir	0.837	1.185	1.138	2.010	2.487	2.805
Northern Lake State	White-red-jack pine	0.146	0.679	1.036	2.260	3.297	3.396

XFO credits rates – selected WI stands

Credit range: 1.58 to 3.65

Stand	Dominate Species	SI	MT/acre w/CCX 20% discount
1	Red Pine	60	2.45
2	Red Pine	59	3.65
3	Red Pine	60	3.11
4	Black and White Oak	52	1.58
5	Red Pine	61	2.57
6	Red Pine	60	2.71
7	Black and White Oak	51	1.77
8	Red Pine	49	2.12
9	Over-Black and White Oak, Under-Red and White Pine	40	1.91
10	White Ash, Sugar Maple, Red Maple, Hemlock	65	2.36
11	Quaking Aspen	80	2.13
12	Sugar and Red Maple, Quaking Aspen, White Ash, Red Oak	61	3.42
13	Red Oak, White Oak, Basswood, Quaking Aspen	65	1.8
14	White Ash, Basswood, Sugar Maple, Elm	69	2.43

Participants are paid on the net proceeds from the sale of your carbon credits

Sustainably Managed Forest example

Gross revenue-

- $2.57 \text{ credits/acre/year} * \$4/\text{credit} = \$10.28/\text{acre/year}$

Costs-

- **Aggregator fee:** $10\% * \$10.28 = \$1.03/\text{acre/year}$
- **CCX costs:** $\$0.20/\text{credit} * 2.57 \text{ credits/acre/year} = \$0.51/\text{acre/year}$
- **Verifying costs (estimate):** $\$0.20/\text{credit} * 2.57 \text{ credits/acre/year} = \$0.51/\text{acre/year}$

Net Proceeds-

- $\$10.28 - \$1.03 - \$0.51 - \$0.51 = \$8.23/\text{acre/year}$

AgraGate Cruise Protocol Summary

- Sampling method:
 - Fixed radius plot (1/10 acre or 1/100 acre)
 - Variable radius (prism – 10 BAF)
- Sample size:
 - A minimum of 10 plots per stand
 - At least one plot per 40 acres
- Sampling technique
 - Plot centers monumented (spike)
 - First tree to the north in the plot marked (paint, blazed, tag)
 - GPS (lat and long) coordinate (highly recommended)

AgraGate Cruise Protocol Summary

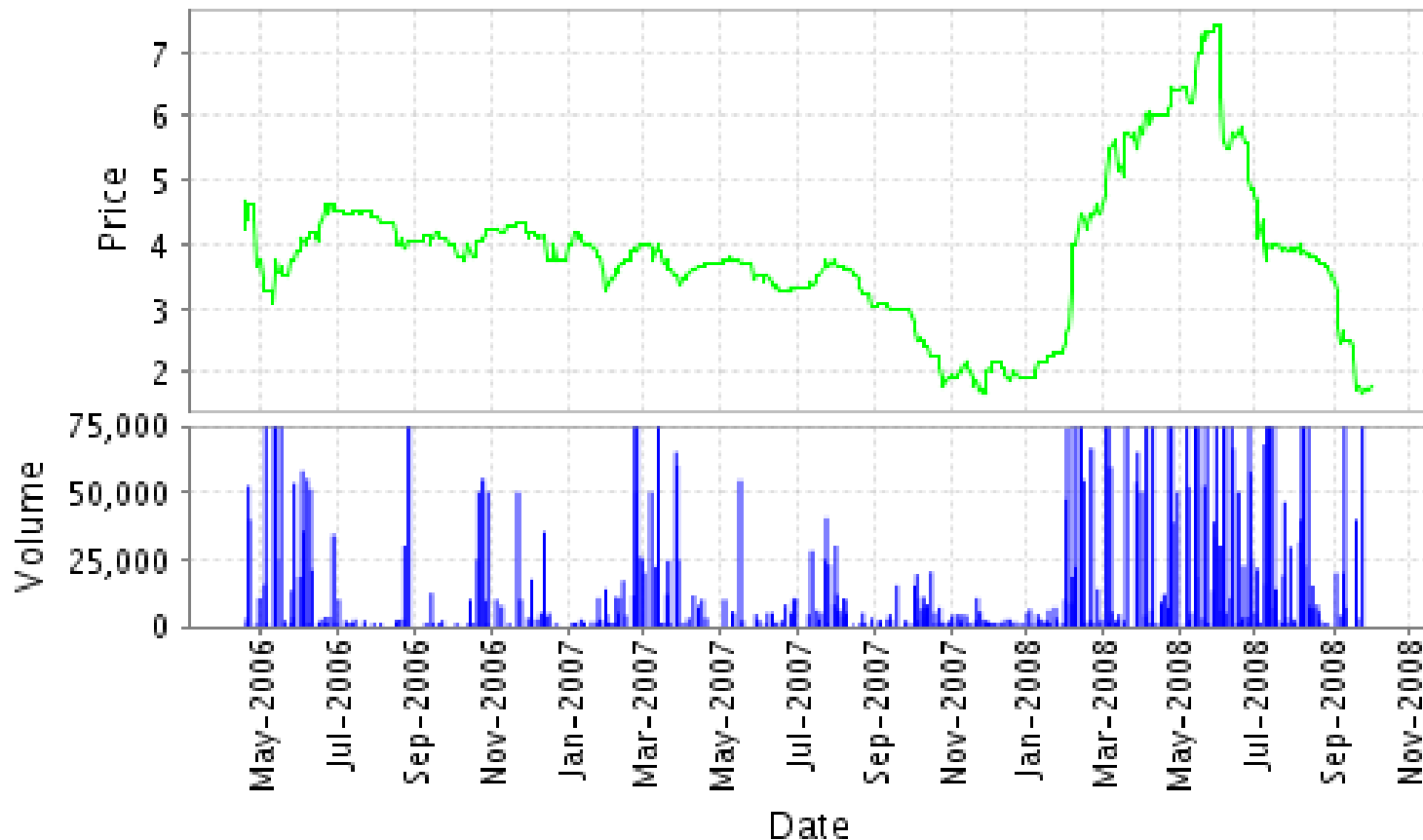
- Overstory data collection
 - Record species of each tree using two-digit FVS code
 - Measure diameter at breast height to nearest inch class (e.g., 5.6 to 6.5 is 6 inch dbh)
 - Tree height not required
- Understory data collection
 - For stands four (4) years old and younger, establish 1/100 acre plots
 - Tally all stems greater than 12 inches in height and less than 5 inches in diameter
 - Visual diameter estimate

AgraGate Cruise Protocol Summary

- Hardwood planted or natural stands
 - Establish a 1/100th-acre plot (11.78 feet) fixed radius plot nested in the overstory plot (if applicable) with a common plot center to measure regeneration and understory trees within each stand. Tally all seedlings and saplings greater than 12 inches in height but less than the 5-inch diameter class.
 - Don't count the understory if the plan is to destroy the understory (e.g., through stand improvement).

Carbon Credit Prices, Vintage 2008

CCX Carbon Financial Instrument (CFI) Contracts Daily Report



What is ahead for the carbon credit market?

- Climate change legislation
 - Focus on market-based, cap-and-trade mechanisms
 - Warner-Lieberman bill went to Senate floor in early June – did not make it out of debate.
 - Market reacted negatively when Warner-Lieberman stalled – more uncertainty came into the market.
 - We anticipate climate change legislation will pass next year
 - Will it recognize ag and forestry offsets?
 - Will it recognize “early action” offset?

Contact Information



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