



BrownWinick
ATTORNEYS AT LAW®

Negotiating Carbon Contracts

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Why Should You Care?

- Some form of carbon regulation is very likely and we need to know how to react in the new regulated environment.
- Poorly developed contracts, a lack of understanding as to what is involved, and a failure to plan can be a recipe for disaster.

What I will cover

- General Introduction to Carbon Trading
- Waxman Markey (Aces) Bill
- Current Cap and Trade Programs
- Issues in Negotiating a Carbon Contract

I. The Basics of Cap and Trade

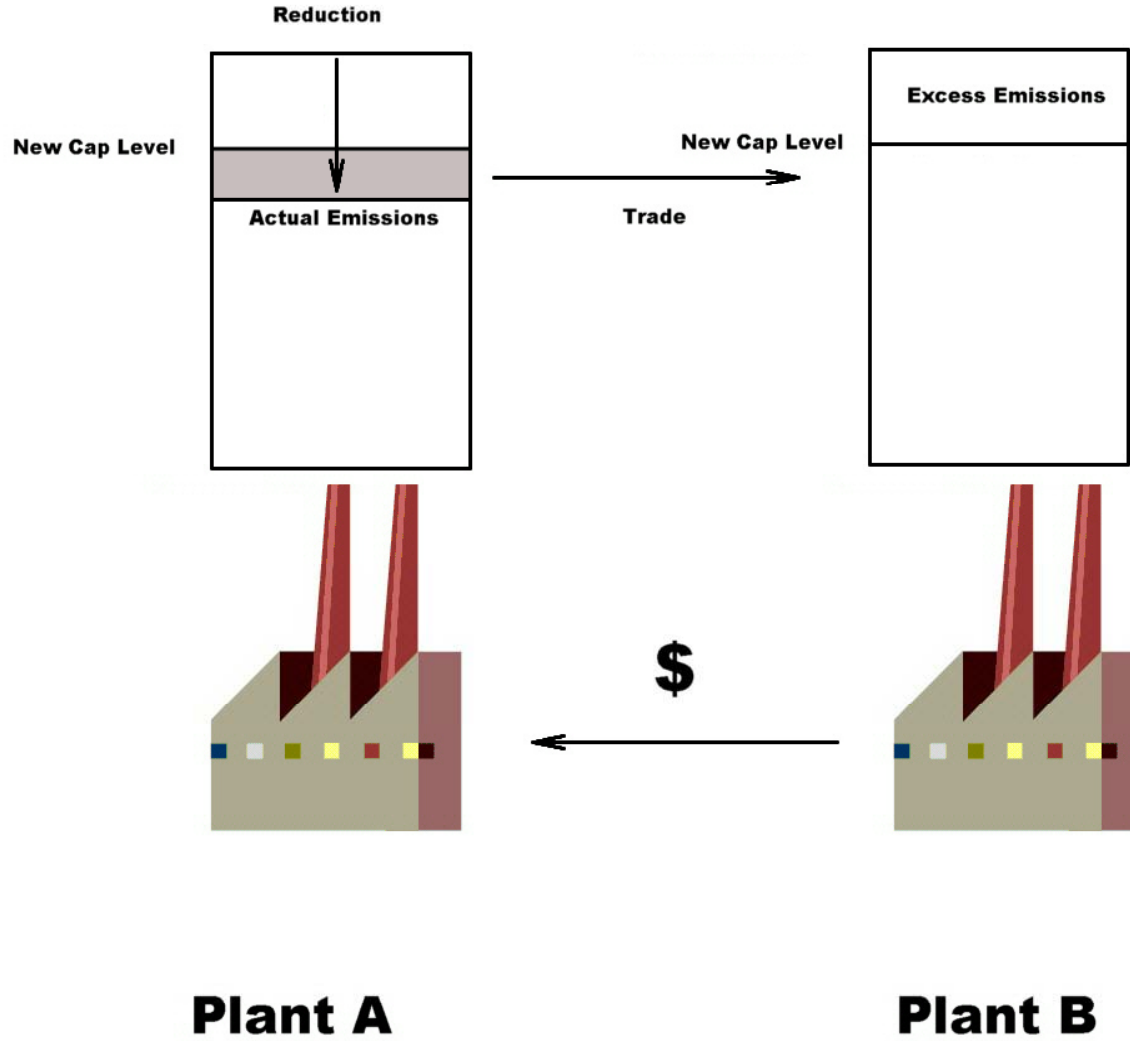
- What is cap and trade? A regulatory scheme that puts caps on emissions and allows companies that are below the cap to sell their credit to companies that are above the cap.

Example

- Plant A, and Plant B. Both plants are faced with similar caps on their emissions. However, for some reason Plant A can more economically achieve emission reductions. Plant A goes ahead with the extra emission reduction effort confident that it will be able to sell that reduction in emissions as a tradable credit, also known as an "offset."

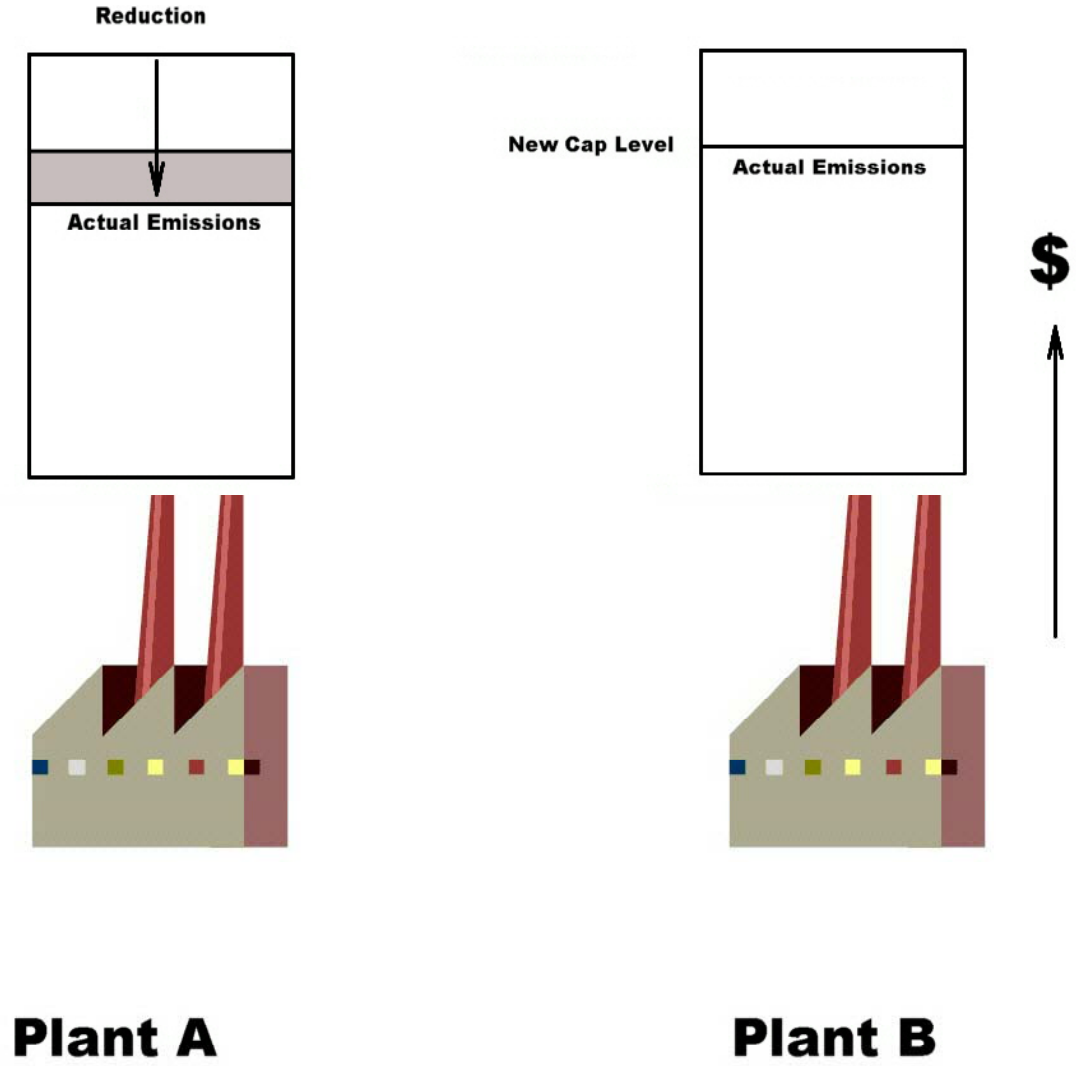
Plant B buys the credit

- Plant B finds that it is less expensive to buy the credit on the market than it is to install the additional equipment necessary to achieve emission reduction caps. So, plant B purchases enough credits to offset its failure to achieve compliance. Essentially, Plant B "pays" Plant A to improve Plant A's own emission reduction.



B invests in new technology

- As the cap is lowered each year, there will come a time when Plant A can no longer sell its credits. It needs those credits for its own use. Plant A will join an increasing number of buyers in a seller's market. As the price increases for the credits, Plant B's engineers may eventually reach the point where they decide that it will cost less to reduce the company's emissions than it will cost to purchase offsets.



II. What is Waxman-Markey

- AMERICAN CLEAN ENERGY AND SECURITY (ACES) ACT OF 2009
- Only passed by the House



Key Provisions

A). Renewable Electricity Standard – Electric Utilities must meet **20%** of their electricity demand through a combination of renewable energy sources and energy efficiency improvements by the year 2020, or face substantial fines

B). Reduction of Carbon Emissions Through a “Cap & Trade” System – By 2020, covered entities must reduce carbon emissions by **17%** of 2005 levels; by 2050, covered entities must reduce carbon emissions by **80%** of 2005 levels

C). Consumer Protections – Federal government will auction a portion of emission allowances to pay for refundable tax credits or rebates to low-income consumers.

Emissions Allowances

- One allowance is equal to one ton of carbon dioxide equivalent.
- Per entity limit of ***two billion*** emission allowances in a year.
- Half from domestic sources unless there is insufficient domestic supply.

What are Allowances?

- Emissions allowances issued or auctioned by the EPA (a statutorily prescribed number are issued/auctioned per year)
- Compensatory allowances issued to a covered entity that reduces or eliminates the emission of GHGs for which the entity has already submitted an allowance to the EPA for retirement

Transition Plan for Allowances:

- 20% of the initial emissions allowances are held for auction by the EPA, while 80% are distributed to covered entities free of charge.
- After 2025, this allocation gradually phases out until 2031, at which time 70% of the allowances are held for auction

Later Sale

- *Emissions allowances may be bought & sold, traded, held for later use, or transferred by covered entities AND non-covered entities.*
- ***ALL transfers must be verified by submission of a Certificate of Transfer to the EPA***

Sale of Emission Allowances

- *No restriction on who can purchase, hold, exchange or retire emission allowances.*
- Investors, speculators, foreign nations in competition with the U.S., and environmental groups could buy the emission allowances.

More Regulation:

- Offset Advisory Board for the purpose of verifying the overall environmental integrity of offset-producing projects and activities;
- Secretary of Agriculture gets some allowances to promote of carbon capture and sequestration activities that are not eligible offset-producing activities.

Penalties

- *Excess Emissions Fine*: Penalty equal to the ***product*** of the tons of carbon dioxide equivalent produced above its emissions cap and twice the auction price of the oldest emission allowances sold at the most recent EPA auction

Agriculture

- USDA will administer a separate offset credit program.
- Establishes a “crediting period” during which eligible activities receive offset credits.

- The crediting periods are:
 - up to 5 years for agricultural GHG sequestration practices
 - up to 20 years for forestry GHG sequestration practices
 - up to 10 years for other practices that reduce or avoid GHG emissions or sequester GHGs

Types of USDA offsets:

- Emissions of methane gas from solid waste landfills, sequestering GHGs on agricultural
- Lands, rangelands, and forests, altering agricultural tillage practices, planting winter
- Crops, and reducing the use of nitrogen fertilizer.

USDA Offsets:

- such offsets could occur domestically or in another country if the United States is a party to a bilateral or multilateral agreement or arrangement with the relevant country.

Auction Time!

- Auctions would occur four times a year, with the first auction occurring no later than March 31, 2011.

III. How Does Cap and Trade Work Now?

- EU
- Voluntary Programs in the U.S.
- EPA's SO₂ and NO_x programs

European Union

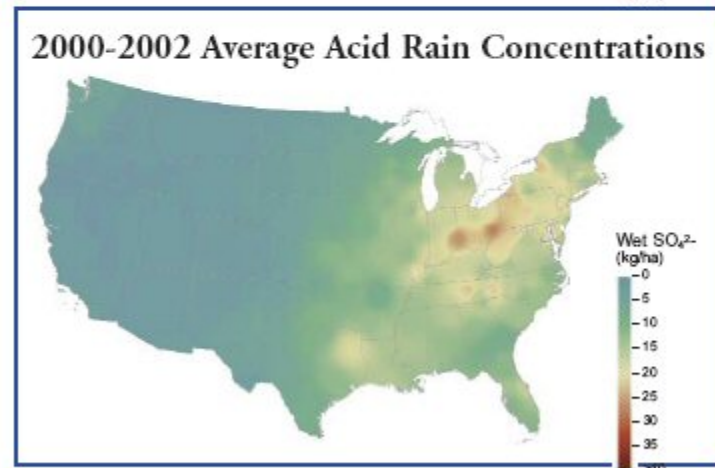
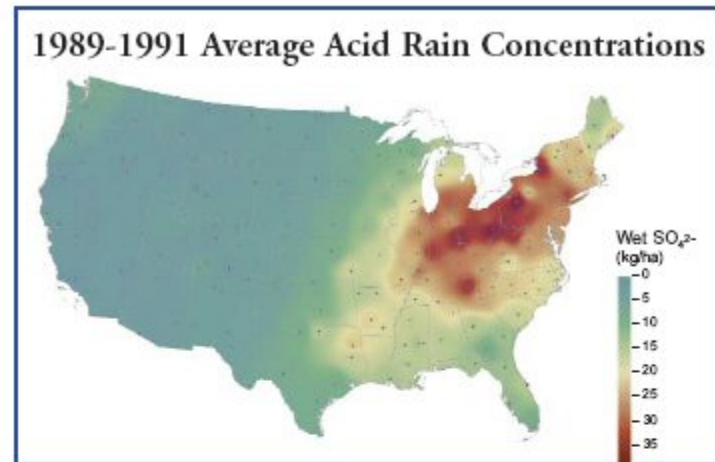
- Begun in 2005
- Subject to fairly volatile price swings
- Many of the credits are financed by large financial institutions.
- Not successful in reducing emissions.
- Lobbying inserted liberal caps.
- EU utilities made huge windfalls selling their extra credits.

U.S. SO₂ Program

- 1990 Clean Air Act Amendments created a Sulfur dioxide (SO₂) acid rain reduction program.
- This program has reduced SO₂ emissions at a fraction of anticipated costs and engendered health benefits exceeding program costs by more than 40 to 1.*

*Environmental Defense Fund

- Program achieved 100 percent compliance in reducing sulfur dioxide emissions.
- Power plants took advantage of the allowance banking provision to reduce SO₂ emissions 22 percent.

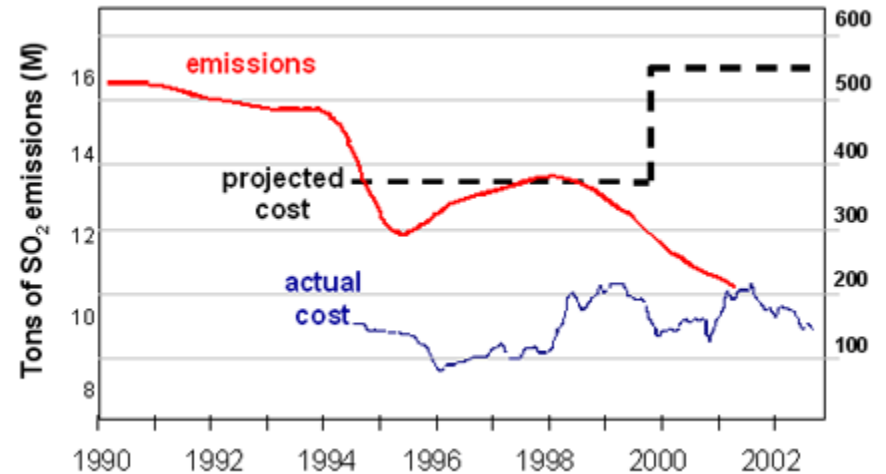


Monitors show significant decreases in wet sulfate deposition in the Eastern U. S. Source: NADP

<http://www.epa.gov/airmarkets/cap-trade/docs/ctresults.pdf>

Success Story

- Originally estimated to cost the EPA \$6B
- Actual costs do not exceed \$1.8B



<http://www.edf.org/page.cfm?tagID=1085>

SO₂ and NO_x

- Trades are made online through a program entirely administered by the USEPA --Online Allowance Transfer System (OATS).
- Auction takes place once per year in March.
- An order of magnitude smaller than carbon trading.
- High engineering and legal expertise.



Clean Air Markets

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2009 EPA Allowance Auction Results

Allowances Available for Auction		
Origin of Allowances	Spot Auction (First Usable in 2009)	7 Year Advance Auction (First Usable in 2016)
EPA	125,000	125,000
Privately Offered	0	0
Total	125,000	125,000

Spot Auction Results			
Allowances	Number of Bids	Number of Bidders	Bid Price
Bid For: 892,343	Successful: 18	Successful: 11	Highest: \$500.00
Sold: 125,000	Unsuccessful: 59	Unsuccessful: 11	Clearing: \$62.00 (the clearing price is the lowest price at which a successful bid was made)
	Total: 77	Total: 22	Lowest: \$0.06
			Weighted Average of Winning Bids: \$69.74

7 Year Advance Auction Results			
Allowances	Number of Bids	Number of Bidders	Bid Price
Bid For: 624,916	Successful: 6	Successful: 6	Highest: \$200.00
Sold: 125,000	Unsuccessful: 19	Unsuccessful: 9	Clearing: \$6.63 (the clearing price is the lowest price at which a successful bid was made)
	Total: 25	Total: 15	Lowest: \$1.03

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Chicago Climate Exchange

- Chicago Climate Exchange (CCX) operates North America's only cap and trade system for all six greenhouse gases
- Reductions achieved through CCX are the only reductions made in North America through a legally binding compliance regime, providing third party verification by the Financial Industry Regulatory Authority (FINRA, formerly NASD).



CCX

- CCX emitting Members make a voluntary but legally binding commitment to meet annual GHG emission reduction targets. Those who reduce below the targets have surplus allowances to sell or bank; those who emit above the targets comply by purchasing CCX Carbon Financial Instrument® (CFI®) contracts.

IV. Contracts

- Types of Projects
- Broker Contracts
- Term
- Commissions
- Manufacturers
- Lenders
- Developers
- Agriculture

Kinds of Projects

- Sinks and Sequestration (example: forest preserve).
- Carbon Negative (example: wind tower).
- Technology Controls (example: NOx scrubber).
- Operational Changes (example: buying different inputs, modifying practices)

Sinks and Sequestration

- Certain projects put carbon back into the environment or keep it there.
- Examples: Some agricultural projects, reforestation, pumping into the ocean or underground.
 - Longer term than other types of projects.
 - Require verification and penalties.
 - Rely on third-party expertise.
 - Most likely to involve brokers.

Carbon Negative:

- Some projects replace carbon-based energy with renewable energy sources.
- Example: Solar energy, geothermal, tidal, and wind energy.
 - Not permanent.
 - “Avoided” carbon stays suspended or in the ground.
 - Subject to revision (ethanol industry is an example)

Technology and Practices.

- Reduction through technology and practices.
- Example: Control technology on a smokestack.
 - Can be expensive.

Sink and Sequestration Contracts

- Must be long-term contracts.
- Will require third-party verification.
- Similar to USDA CRP contracts.
- May require controls over the land.
- May involve loss of some ownership interests.
- May require inspection rights.

Sink and Sequestration Brokerage Contracts (cont.)

- May allow a third party to try to rescue the project and/or prevent a breach.
- May require filing notices of the access rights.
- May require subordination from lenders to protect the right.
- May require farm tenancies to be modified.
- Interest must survive probate

Sink and Sequestration Brokerage Contracts (cont.)

- Difficult to securitize or bundle.
- Acts of God, condemnation or “highest and best use” considerations must be contemplated.
- Costs of “breaking the contract” must be included in the contract.
- May be impossible to recover credit payments made in the past in the event of a breach.

Carbon Negative Contracts

- Generates a fairly easy to calculate (compared to *some* sequestration projects) credit on a ton for ton basis.
- Every ton avoided is a ton saved.
- Contracts can be shorter-term and still lucrative.
- Contracts can be divided up, securitized, and bundled.

Carbon Negative Contracts (cont.)

- Fewer “reach back” and indemnity issues if the project ends (i.e., if the wind tower falls over).
- Lender rights are more intangible. They are more concerned with the ability of the project to generate in the future.
- Some research risk as additional “costs” are added.

Carbon Negative Contracts (cont.)

- Brokerage contracts are more commodity-based as the broker is likely adding nothing other than market liquidity, which is not likely to be an issue in an EPA-regulated marketplace.
- Questions may arise as to whether the company actually owns the credit or whether others downstream own the credit.

Carbon Negative Contracts (cont.)

- Rights to the credit are more likely to be subject to dispute if not set out clearly.
- As an example, for a wind project, the parties should decide who owns the carbon credit in the contracts:
 - Landowner may claim an interest
 - Transmission Company
 - Electricity Buyer
 - Tower Builder
 - Tower Operator

Technology Controls and Contracts

- The main impact of ACES or other similar Cap and Trade legislation, especially for utilities, will be on technology controls to reduce carbon emissions.
- Compliance is handled by state and federal environmental agencies.
- Little or no third-party oversight is required.

Technology Controls and Contracts (cont.)

- Some aggressive broker contracts are a very poor fit.
- Very little or no investment by brokers.
- Brokerage commissions should be more commodity- based as the broker is likely adding nothing other than market liquidity, which is not likely to be an issue in an EPA-regulated marketplace

Technology Controls and Contracts (cont.)

- Most industries already have emission reduction technology in place.
- Some of this technology may also reduce carbon dioxide or other greenhouse gases.
- Minor changes to existing equipment may generate large decreases (NO_x example)

Technology Controls and Contracts

- Carbon trading contracts can *accidentally* capture any credits generated by an industry from the use of this equipment.
- Through poor contract language some contracts inadvertently may give the carbon credit trader the right to modify equipment.
- Most manufacturers will not warrant the performance of equipment that is modified by third parties.

Operational Changes

- ACES or other similar Cap and Trade legislation, will encourage operational changes to reduce carbon emissions.
- Third-party confirmation or regulatory oversight may be required to confirm the reduction.
- Some aggressive broker contracts are a very poor fit.
- Very little or no investment by brokers.

Operational Changes

- Brokerage contracts may be value-added as specialists offer to split the benefit of their insight and expertise in reducing the generation of emissions.

Other Parties

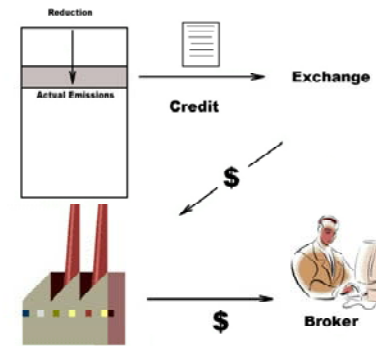
- Equipment Manufacturers (Technology controls)
- Brokers (all types of contracts)
- Lenders
- Developers

Equipment Manufacturer Contracts

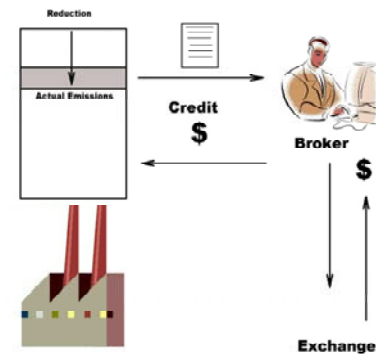
- May add a provision to contracts to take an interest in a portion of the company's credit generated by the equipment.
- If this is used to reduce the price of the equipment then it must be related to the warranty and performance goals.
- Performance and the subsequent credit must be “tethered” in the contract.

Different Brokerage Contracts

- **Broker Style Contracts** (title stays with the owner, broker takes a commission).
- **Property Style Contracts** (title changes to the broker. Broker owes a commission back to the generator).



Plant A

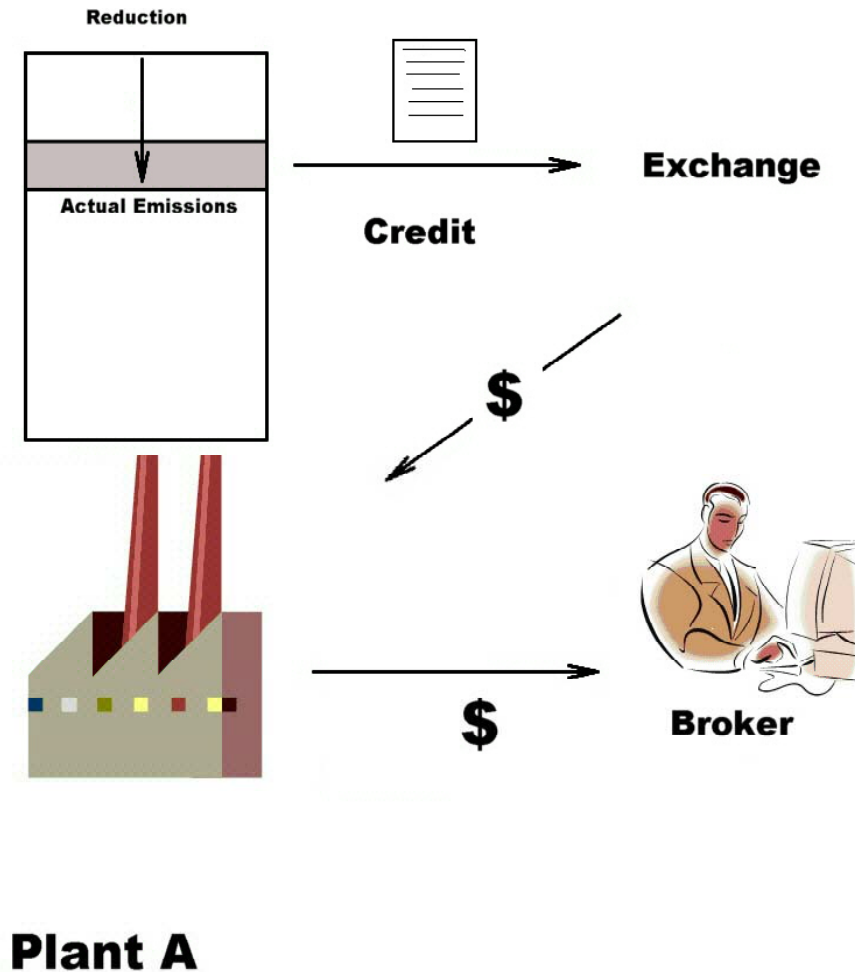


Plant A

Brokerage Style Contracts

- Some of the contracts are modeled after conventional brokerage service agreements.
- After the credit is issued, the generating company and the trading company split the net revenues according to the agreed formula and depending on the type of credit sold.

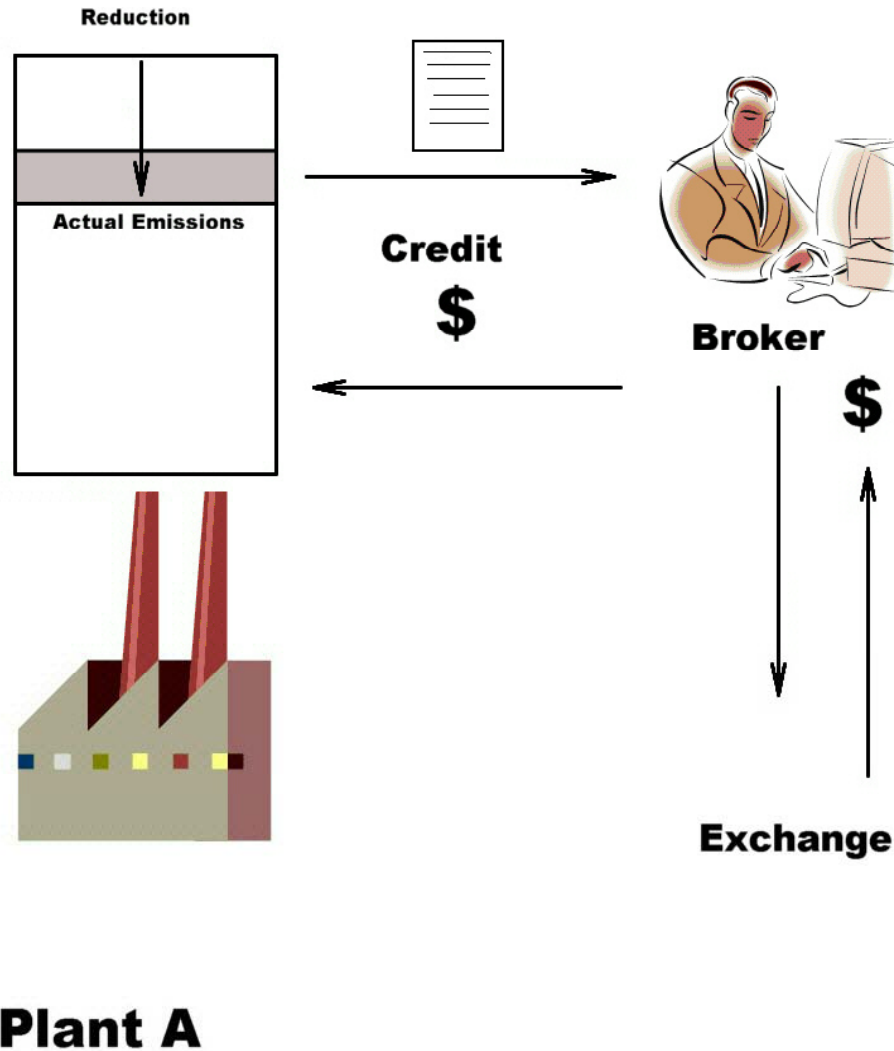
Brokerage Style Contracts



Property Style Contracts

- Other contracts take the "property" approach. Once the credit is converted into a tradable security it is owned by the carbon trading company. The producer is paid a portion of the proceeds when the security is sold.

Property Style Contracts



Brokerage Contracts

- In the end, either approach can accomplish the same thing.
- However, if a party to the carbon trade fails, a producer may be in a better legal position as an owner of the credit if it is trying to get its credit back.

What is the Contract Term?

- Some of the carbon credit brokerage contracts have ten year terms
- Given the uncertainty surrounding the coming legislative debate over how carbon emission will be regulated, most companies should avoid a decade-long contract except in situations involving sequestration projects.

Commissions

- The commissions in the contracts I have reviewed are much higher than what is usually encountered in a commodity business, sometimes as high as 50 percent.
- In the approaching age of Cap and Trade this is unacceptable except in sequestration or similar situations where the broker brings value other than market liquidity.

Equipment Manufacturers

- Without tethering continued performance with the right to use the credit, the credit can be lost through subsequent sales regardless of whether the equipment actually works.

Lender Concerns

- Because these credits will be similar to securities, it is likely that certificated interests in carbon credits may only be secured through actual possession by a lender.
- Inability to secure carbon credits may impair lending levels for companies.
- Because the carbon credit can be freely sold an assignment of income from a carbon credit may be ineffective.

Development Contracts

- In certain development situations, the carbon credits generated by some projects (wind, geothermal, and other “negative carbon projects”) may be divided and sold off in order to assist in the financing of the project.
- Typically, an investor may require ownership of the credit as a condition of providing funding.

Development Contracts

- Municipalities and Lenders may also demand a share of carbon credits generated through emission reductions.

Agricultural Projects

- Currently handled through CCX and private sale arrangements.
- Under ACES, USDA would be able to “federalize” agricultural carbon credits.
- CCX could still be involved depending on the regulations.

Summary:

- Make sure that the contract fits the situation
- CCX-related contracts tend to be “one size fits all” approaches that can have devastating effects.
- Limit commissions to cover costs plus a reasonable fee for services unless the broker brings something to the table other than liquidity
- Lenders should be scrutinize contracts, especially for carbon negative projects.
- Be clear on who owns the carbon credits.
- Make sure that the contract is flexible and can work in under any federal program.

Fun Facts:

- The United States emits 5,800 megatonnes^[1] of GHG.
 - China emits 6,200 megatonnes of GHG (2006 estimates).
 - Iowa emissions total 108 MMtCO₂e.^[2]
 - Iowa residences emitted 5 MMtCO₂e in 2003.
 - Iowa agriculture emitted 24 MMtCO₂e in 2003.
 - Iowa electric power plants emitted 36 MMtCO₂e in 2003.
 - Iowa dry mill ethanol plants emitted 6.27 MMtCO₂e during the most recent year.
 - Forest fires in the U.S. emit 290 MMtCO₂e each year. (National Science Foundation http://www.nsf.gov/news/news_summ.jsp?cntn_id=110580)
 - A single forest fire can emit up to 4 MMtCO₂e each year.
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- ^[1] A "tonne" is a metric ton, which is 1,000 Kg or 2,204 lbs. A megatonne is a million tonnes. A gigatonne is a billion tonnes.
- ^[2] Iowa examples are from the 2007 Greenhouse Gas Emissions from Selected Iowa Source Categories, Iowa Department of Natural Resources, August 28, 2008.

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