

## The Present and Future of Carbon Trading Practice

Meets in Bauer 365B, Weds, evenings, 6:00 P.M. – 8:45 P.M.

This class will explore the evolving markets in Carbon trading; how they work; and the legal regulatory environment that surrounds them. Particular attention will be paid to the emerging US systems, including the federal system. Students will work on cutting edge projects about how the evolving US system should be implemented. Grades will be based on project work in teams (though Business and Law students will be graded separately), with possible additional points added or subtracted based on classroom participation. **Teams that submit particularly promising Final Team Projects will be invited to present these at a public program to policy makers, attorneys, and business persons.**

While it is not completely clear whether the US will pass a comprehensive federal climate change bill or whether, if they do, it will be cap and trade, this outcome is highly likely (discussion of this issue first day of class). Moreover, even if the US does not pass comprehensive federal climate change legislation ever, there are existing cap and trade regimes already emerging within the United States and in existence around the world.

For classroom purposes, the practice of carbon trading is a very new topic. As such, it is for those ready to undertake a large amount of independent work and thinking. Though assignments for class are given, because many of the law and policies are emerging, students should do research on their own for every topic, which will be part of the class discussion. Though the class work requires independent thought and inter-dependent work, the rewards will be vast. Through the focus on the evolution of the markets in Carbon trading, the topics examined by the course will include the creation of property rights; the design and function of various types of commodity markets and derivatives; market design and the incentives of market participants.

Thus, students who learn the materials in this class will be well prepared for work in energy and environmental law and in the energy industry --- from producers to trading firms --- that will be impacted in some form by Carbon Trading. However, the broader understanding of the inter-linkages amongst property rights, market design, and trading will also be very valuable.

Assigned text: Global Climate Change and U.S. Law, Michael Gerrard, ed. (2007) (ISBN-13: 978-1-59031-816-4) (updates: <http://www.abanet.org/abapubs/globalclimate>) Available new and used online (Although we will not be assigning the majority of the book, as it deals with more than trading, the rest of the book will be a good resource for the future).

In addition there will be a class packet handed out at the beginning of class that will contain pertinent short articles, designated by week in which they should be read. Additions may be made to this packet as the class continues.

January 21, 2009      Week 1

- I. Introduction to climate change, cap-and-trade regulation, environmental law and to environmental externalities  
Professors Flatt and Pirrong  
Assignment: - no assignment prior to class

January 28, February 4 Weeks 2, 3 (Professors Pirrong and Kumar)

- II. Commodity Trading Primer
  - a. What is a commodity?
  - b. Standardization, measurement, and enforcement of commodity transactions
  - c. Creation and enforcement of property rights by private entities (e.g., commodity exchanges)
  - d. A prosaic example: Chicago wheat, 1858
  - e. A modern example: NYMEX crude oil futures
  - f. Creation and enforcement of property rights by government (e.g., sulfur allowances)
  - g. Basic trading instruments: spot, forwards, futures, swaps, options
  - h. Delivery settlement vs. cash settlement
    - i. Basic trading mechanisms: organized exchanges and over-the-counter markets
    - j. The roles of commodity trading: price discovery, resource allocation, and risk transfer (hedging and speculation)
  - k. Contract performance in commodity markets: centralized clearing and counterparty credit issues
  - l. Legal risks in new commodity markets (possible examples: early interest rate swaps, credit derivatives-regulatory uncertainty might be a major issue to consider here)
  
- III. Challenges to the creation of a tradable CO<sub>2</sub> property right  
Current and possible future approaches to creation and enforcement of CO<sub>2</sub> property right

Assignment – week two – Craig Pirrong, *The Efficient Scope of Private Transactions-Cost-Reducing Institutions: The Successes and Failures of Commodity Exchanges*, 34 J. Legal Stud. 229 (1995);

Week three – Gerrard 32-52 (this will be your first reading about the International Framework that sets up the possibility of a CO2 trading system); Peter Gray, *Carbon Accounting for Lawyers, a Practical Guide* (packet) Carol Rose, *Lessons of Water Rights for Carbon Trading*, 50 Ariz. L. Rev. 91 (2008) (packet) (used by permission)

Feb. 11 - Week 4

- IV. CO2 Trading Present
  - a. Current CO2 trading mechanisms
  - b. US (CCX and new exchanges) - the Voluntary market

Professor Pirrong, Kumar, and Flatt (*possible guest speakers - Jennifer Clymer on the voluntary market*)

Assignment: Gerrard, 666-673, Chapter 4 (Climate Change and US Law), 101-115 (Impact of Kyoto Protocol on U.S. Business)

Visit and Explore website registering the voluntary carbon market (<http://www.climateregistry.org/>)

Feb. 18 – week 5

- c. Europe
- d. California
- e. Regional Greenhouse Gas Initiative (RGGI)

Professors Kumar, Pirrong, and Flatt

Assignment: Chapter 8 (Regional Initiatives), 315-337, Chapter 18, 627-689 (Practical Aspects of CO2 Trading systems); Ellerman, et al., *Lessons from the European Trading Scheme*

Examine European Carbon Market Trading Log at The European Carbon Market in Action (EUROPA - Environment - Kyoto Protocol - Community Transaction Log.htm)(find this on your own)

Look up California regulations governing implementation of AB 32, and one of the northeast states regulations of RGGI.

Feb. 25 - Week 6

- V. CO2 Current Trading, issues
  - a. Offsets - definition
  - b. - the Kyoto Protocol and the Clean Development Mechanisms
  - c. EU use of CDM - Certificates of Emission Reduction
  - d. EU - use of Joint Implementation
  - e. Critiques of CDM, possible replacement ideas

- VI. Carbon Neutrality and offset verification.
- VII. Linking Systems

Professor Flatt –; *Possible Guest Speaker, Professor Maria Savasta-Kennedy, on offset verification*

Assignment – review Gerard, 42-50; **Savasta-Kennedy article (handed out/packet)**; on your own, find defensible discussion of current EU reaction to CDM mechanism, and possible future changes in use (or changes since Sept. 2008) Michael Wara, *Measuring the Clean Development Mechanism's Performance and Potential*, 55 UCLA L. Rev. 1759 (2008) (packet) Tim Dodge, *Bringing Forests Back Into the Fold* (packet); Options and Implications of Linking the EU ETS with Other Trading Schemes (DG Internal Policies of the Union- EU) handed out/packet

Also look at

[http://www.ecobusinesslinks.com/carbon\\_offset\\_wind\\_credits\\_carbon\\_reduction.htm](http://www.ecobusinesslinks.com/carbon_offset_wind_credits_carbon_reduction.htm);

**AT END of CLASS - Assignment of Project Teams - creation of CO2 trade and offset agreement**

March 4      Week 7

In class work on project - creation of CO2 trade and offset design, with verification

Professors Flatt, Kumar, and Pirrong

Assignment: Meet with group before class - have basic idea for group project ready

March 11 – Week 8

VIII. CO2 Trading - Future U.S. federal system

- a. Currently proposed legislative designs for federal system
- b. Issues to discuss with proposals
  1. set up of market
  2. safety valve
  3. allocation of credits
  4. auction proposals – use of funding – (adaptation issue) – Obama proposal
  5. addition of offsets
  6. additional environmental review in offset provisions
  7. state pre-emption
- c. political winds
- d. response to international changes

Professor Flatt

Assignment: Gerrard, 52-56; Victor B. Flatt, "The Legislative Temperature for Climate Change, 102 Northwestern University Law Review Colloquy 123 (2007) (and comments) at <http://www.law.northwestern.edu/lawreview/colloguy/priorcolloguies/climate-change.html>; find and read 42 U.S.C. Sec. 7651(a)- 7651(e) (SO2 acid rain trading provisions); Review allocation and trading section of proposed climate change bills (find on your own – each one look at at least one proposed federal bill); Read Sections 2401-2410 of proposed Liebennan-Warner Bill (print and bring to class); read, copy, and bring to class - discussion of integration of EU ETS and US Federal System, given additional environmental review, at [www.law.uh.edu/EENRCenter](http://www.law.uh.edu/EENRCenter).

SPRING BREAK

March 25 and April 1 - Weeks 9 and 10

- e. Possible Regulatory systems for implementation of carbon trading
  1. private regulatory system - CCX system (*guest lecture by video-conference - Richard Sandor or Sandor video*) - how implemented; verified insurance verification
  2. government agency - traditional environmental- EPA
  3. government agency - CFTC (*guest speaker on ethanol, energy, or natural gas or other commodity managed by CFTC*)

Professors Kumar, Pirrong, and Flatt

Assignment: Gerrard, 666-673, Regulations governing SO2 trading system by the EPA (40 CFR, Part 73) (handout);

*CFTC regulations for \_\_\_\_\_ (choice of speaker TBA)*

April 8 and April 15 -Weeks 11 and 12

- IV. Market Response to US Possibilities
  - a. The economics of carbon pricing
  - b. How CO2 prices are likely to behave
  - c. Market design issues - case studies
  - d. Corporate disclosure policies (Flatt)

Professors Pirrong, Kumar, and Flat  
Assignment: TBA, Chapter 13 (Disclosure Issues) pp. 453-483.

*April 22, and 29 - Weeks 13 and 14*

*Continued discussion of U.S. possibilities in trading mechanisms; class projects on Market Design and Proposed Regulatory Platform - specifically answering questions of what the market should look like and why, which agency(ies) should administer (could start by critiquing proposal and offering alternative)*

Professors Kumar, Pirrong, and Flatt