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:

<u>http://www.abanet.org/abapubs/globalclimate</u>) 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

 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 modem 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
 - 1. 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 CO2 property right Current and possible future approaches to creation and enforcement of CO2 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*) Sandor - CCX

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

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)

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

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

Feb. 25 - Week 6

- V. CO2 Trading, cont...
 - 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.

Professor Flatt – Possible Guest Speaker Kyle Danish - Discussion of U.S. interaction with CDM; Possible Guest Speaker, Professor Maria Savasta-Kennedy, on offset verification

Assignment – review Gerard, 42-50; **Savasta-Kennedy article**; 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)

Also look at

<u>http://www.ecobusinesslinks.com/carbon_offset_wind_credits_carbon_reduction.htm;</u> (article on verification of voluntary offset markets)

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

- VII. CO2 Trading and Future
 - a. Possible approaches to CO2 markets in the U.S
 - 1. pure trade markets
 - 2. trade and offset market
 - 3. trade and offset market subject to additional environmental review
- b. 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/climatechange.html; 42 U.S.C. Sec. 7651(a)- 7651(e) (SO2 acid rain trading provisions); Review allocation and trading section of proposed climate change bills (to be handed out); Read Sections 2401-2410 of proposed Liebennan-Warner Bill; look at

> http://www.ecobusinesslinks.com/carbon_offset_wind_credits_carbon_reducti on.htm; read EENR Center summary and proposal of how to address differences in offset markets (www.law.uh.edu/EENRCenter)

SPRING BREAK

March 25 and April 1 - Weeks 9 and 10

- b. Regulatory systems for implementation of carbon trading
 - 1. private regulatory system CCX system (*guest lecture by videoconference - 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)

4. Additional Administrative Review

Professors Kumar, Pirrong, and Flatt

Assignment: Regulations governing SO2 trading system by the EPA (40 CFR, Part 73); Chicago Climate Exchange Verification System (to be handed out); *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 alterative)

Professors Kumar, Pirrong, and Flatt