

Greenhouse Gases; Carbon Taxes and Trading; and Carbon Sequestration

Midwest Greenhouse Gas Reduction Accord and Opportunities for
Kansas



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My Charge Today

- What are the opportunities that arise for Kansas with the Midwest Greenhouse Gas Reduction accord?

First, let's define terms

- “Greenhouse Gases” - There are six. No problems with this term
- “Carbon Taxes and Trading” – Few in Washington D.C. are talking taxes.
- Waxman/Markey – This is Cap and Trade proposal, not a carbon tax proposal

Greenhouse Gases; Carbon Taxes and Trading; and Carbon Sequestration

Cap and Trade vs. Carbon Tax

- Carbon Tax puts a price on carbon (CO² equivalent)
- Cap and trade sets a cap on emissions and allows the “market” to set a price.
- Three regional efforts in U.S. – RGGI (up and running), Western Climate Initiative and Midwest Governors Climate Change Accord – All are Cap and Trade Proposals

Typical Cap and Trade Suspects

- Cap point sources of GHG – Coal plants, intermediates, peaking plants, large industrial emitters, other.
- Transportation? – Politically sensitive (customer is very price sensitive)
 - Move to “stage two”
 - Or move all the way upstream – A tax
- Non-Point Sources – Like Agriculture

Core Design Elements-MGA

- Draft Model Rule on October 21, 2009
- Emission reduction targets
 - 15-25% below 2005 levels by 2020
 - 60-80% below 2005 levels by 2050
- Preliminary Scope
 - Electricity generation and imports
 - Industrial combustion sources
 - Industrial process sources w/ credible monitoring protocols
 - Fuels serving residential, commercial and industrial buildings [phased in during the 2nd comp. period]
 - Transportation fuels [pending modeling results]
- Offsets – No entity can use more than 20% offsets for compliance

Offsets Defined

- A **offset** is a financial instrument aimed at a reduction in greenhouse gases emissions.
- The financial instrument is based on an underlying offset “project”
- The offset project stores (sequesters) CO² (or CO² equivalent) across a specified timeframe.

Offsets in a Cap and Trade System

- Greenhouse gas emitting entities can purchase offsets to enable compliance under a cap and trade system (subject to restrictions)

Offset Principles:

- Must not compromise the integrity of the cap-and-trade program, and therefore must be real, additional, verifiable, permanent, and enforceable
- Must address uncertainty, leakage, and non-compliance
- Must be adaptable, transparent, and as administratively simple and cost effective as possible without compromising the other principles
- Should be developed in a manner that will facilitate linkage with other programs

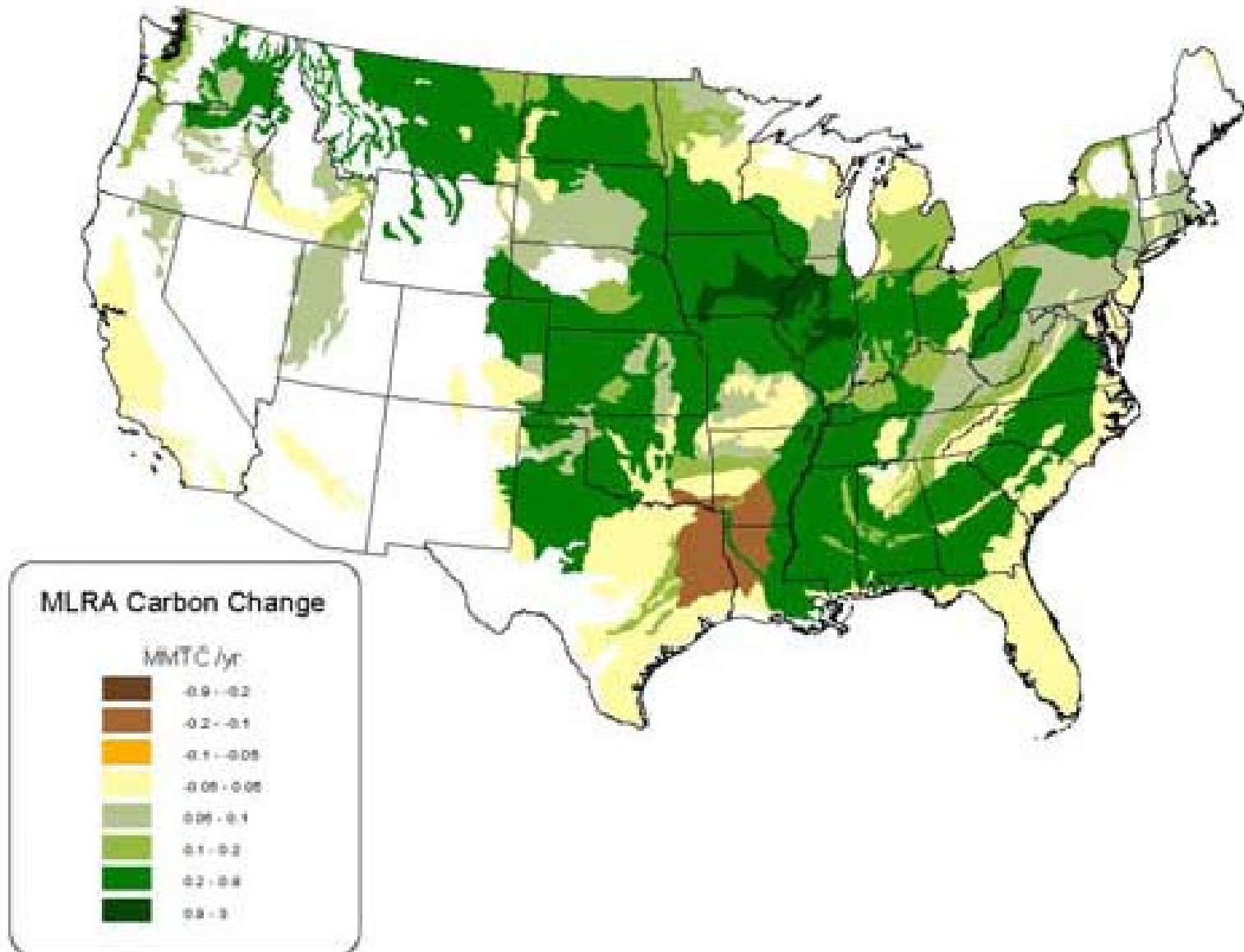
Let's talk Offsets, not Sequestration

- Sequestration – the mechanical and biological method of storing carbon using a biological production function.
- Offsets – a currency
- We must build a currency
- If done correctly, KSU is better positioned than anybody else to build this currency
- Kansas could become the world expert in biological offsets

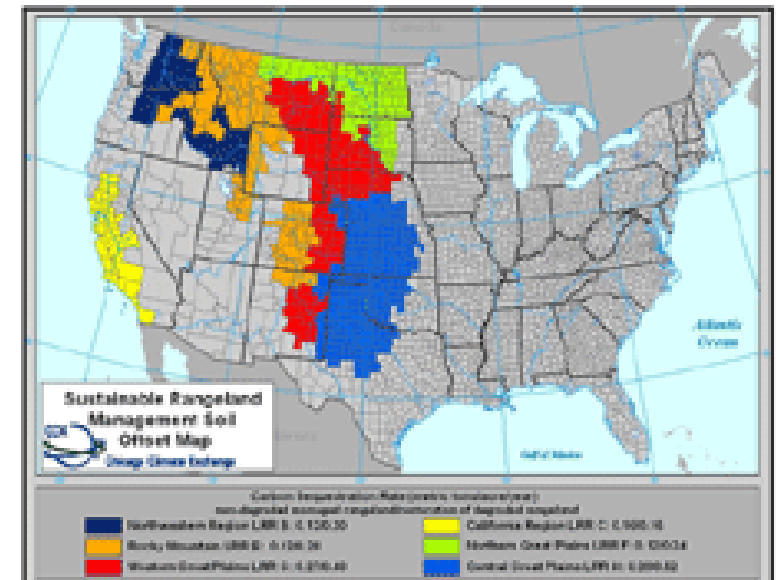
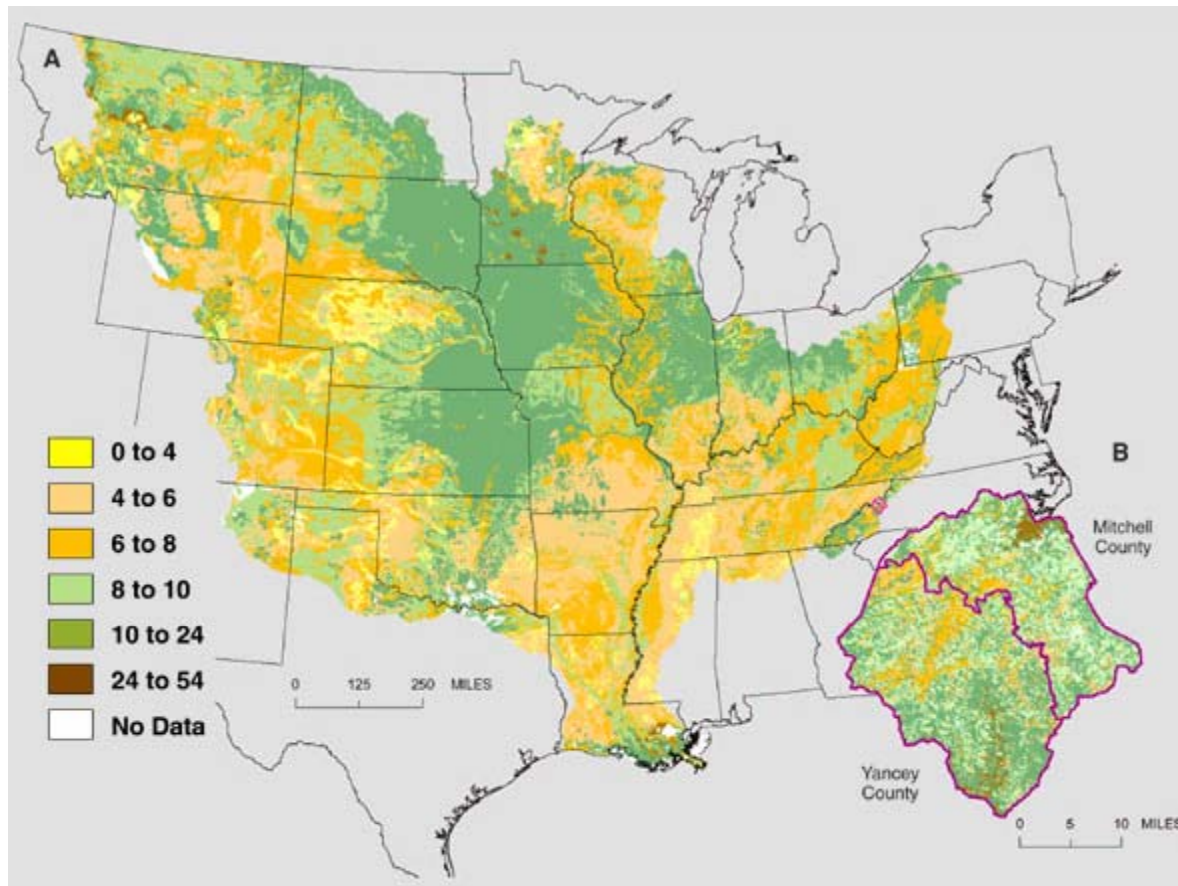
Sustainability Seminar: Greenhouse Gases; Carbon Taxes and Trading and Carbon Sequestration

Let's rewrite the value proposition for today:
Greenhouse Gases; Cap and Trade, and
Biological Offsets (Ag and Forestry)

Soil Carbon Storage Potential



Agriculture Offsets vs. Carbon Sequestration



Opportunities for Kansas

- Kansas has tremendous potential for biological offset development and revenue capture.
- My alma mater can be a world leader in the development of offset currency.
- KSU has the tool to begin the journey (Consortium for Agricultural Soils Mitigation of Greenhouse Gases).

What can my Alma Mater do to develop the offset currency for the world?

- Monitoring and Verification – Consortium
- Indemnification/insurance – For the new crop insurance of the commodity of CO² (Set-Asides, Insurance, Premiums/Discounts, etc.)
- Financial options, hedging, forward contracting, puts, calls, liquidity
- Define the commodity of offsets, just like #2 yellow corn or HRWW.
- Premiums/discounts, just like all commodities

When will the journey be done?

- When a farmer/rancher/landlord can go to a crop insurance agent and get insurance, when a farmer/rancher can go to a bank and get a operating loan for a carbon offset project and use financial tools to lock in input costs/output prices.....

Thank you.

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