



# Outlook for Climate Change Legislation

The Role of Agriculture and Forestry in a Reduced Carbon Economy

May 27, 2009



# Welcome!



## Introductions and Objectives

**Ernie Shea**  
**25x'25 Project Coordinator**



# Webinar objectives:

- **Provide an update of the 25x'25 Carbon Project**
- **Give an overview of the Waxman-Markey bill, including 25x'25's assessment of what changes and additions are required**
- **Discuss Cap and Trade imperatives**
- **Examine the economic impacts**
- **Look at how the House, Senate and Obama administration will likely move forward on climate legislation over the coming months.**



# Session Leaders

- **Nathan Rudgers**, chair, 25x'25 Carbon "Work Group and 25x'25 National Steering Committee member
- **Jana Gastellum**, associate director of energy, Energy Future Coalition
- **Jeffrey Frost**, 25x'25 carbon advisor
- **Todd Wooten**, director, Southeast Climate Resources Center, Duke University
- **Bart Ruth**, chair, 25x'25 Policy Committee
- **Ernie Shea**, 25x'25 project coordinator and president of Natural Resource Solutions



# Webinar Procedures

- **Lines will be muted during presentations (\*96) to minimize background noise**
- **For presenters and Q&A, unmute by pressing \*6**
- **Will take questions following each presentation and also at the end of the session**
- **To ask a question, either press \*6 to unmute or use the comment feature to submit a written question**





# **25x'25 Carbon Project Update**

**Nathan Rudgers**

**Chair, 25x'25 Carbon Work Group and 25x'25  
National Steering Committee member**



# 25x'25 Carbon Initiative

- Organized in spring of 2008
- Led by a work group composed of over forty respected agricultural, forestry and conservation leaders
- Primary goals:
  - facilitate agriculture and forestry sector dialogue on our role in a reduced carbon economy, and
  - help identify climate change solution sets they can provide



# 25x'25 Carbon Work Group

- Farmers and ranchers
- Forest land managers
- Soil scientists
- Agronomists
- Ag economists
- Renewable energy, conservation and business partners



# Mission

- Analyze agriculture and forestry's role in a reduced carbon economy
- Develop recommendations for how each sector can capitalize on efforts to reduce and capture carbon and greenhouse gas emissions

# Areas of Focus

- Ag and forestry impacts and opportunities
- Mechanisms to manage GHG emissions
- Consequences of policy choices
- How ag and forestry could best participate in emerging carbon markets
- Cap-and-trade guiding principles and policy imperatives

# Progress to Date

- Produced a comprehensive report on the role of Ag and Forestry in a Reduced Carbon Economy
  - Available at [www.25x25.org](http://www.25x25.org)
  - Printed copies of Ex. Summary available
- Hosted a National Summit
- Organizing State level Carbon Forums
- Working with policy makers and partners on necessary enabling policy



# Key Messages

- Agriculture and forestry are uniquely positioned to deliver low-cost offsets, in quantity, during the early years of a cap and trade program when a quick start is most urgent.
- Agriculture and forestry have much to gain from this opportunity.

# Reduction Opportunities

## ■ Sequestration

- Conservation tillage and crop rotations
- Cover crops
- Grazing practices

## ■ Avoided emissions

- Biofuel production
- Thermal bio-power and bio-heat
- Renewable electrical power

## ■ Emission reductions

- Manure management
- Fertilizer practices



# Primary Challenges

- Costs
  - Changes in operating practices
  - Tracking and selling offsets
  - Increased input cost (esp. fuel and fertilizer)
- Getting the correct enabling policy in place
- Development of viable markets
- Informing ag and forest sectors of opportunities, challenges, alternatives and consequences
- Shaping our own destiny



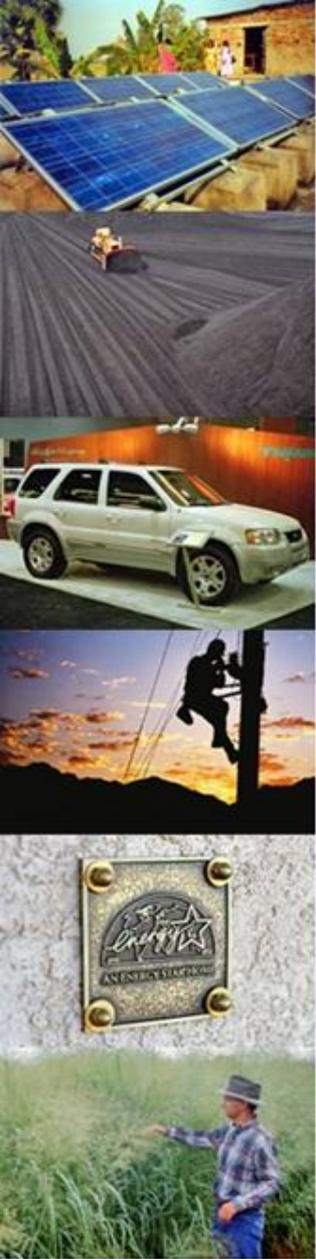


# **HR2454 (Waxman-Markey Bill)**

**Jana Gastellum**  
Associate Director of Energy, Energy Future  
Coalition



# Climate Legislation Update



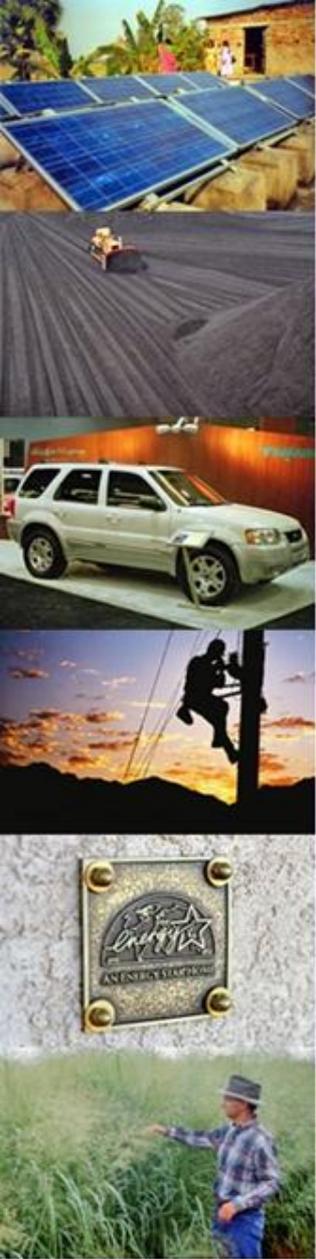
*Jana Gastellum*

*Associate Director, Energy  
Energy Future Coalition*

*25x'25 Carbon Webinar  
May 27, 2009*

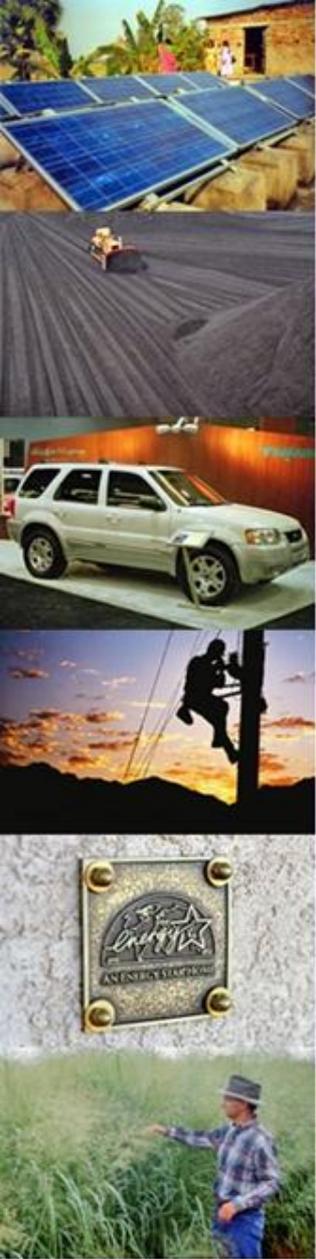
# H.R. 2454

- House Energy and Commerce Committee passed May 21, 2009
- Vote: 33-25
- Being referred to 8 additional committees



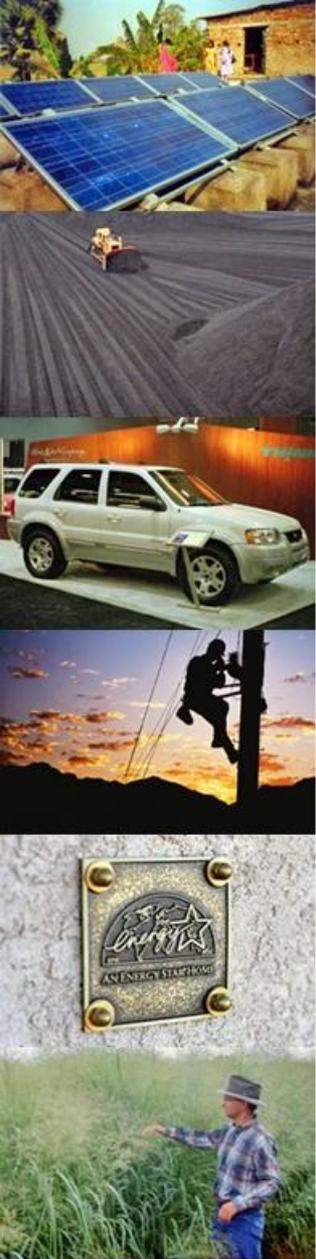
# Provisions

- Title I: Clean Energy
- Title II: Energy Efficiency
- Title III: Reducing Global Warming Pollution
- Title IV: Transitioning to a Clean Energy Economy



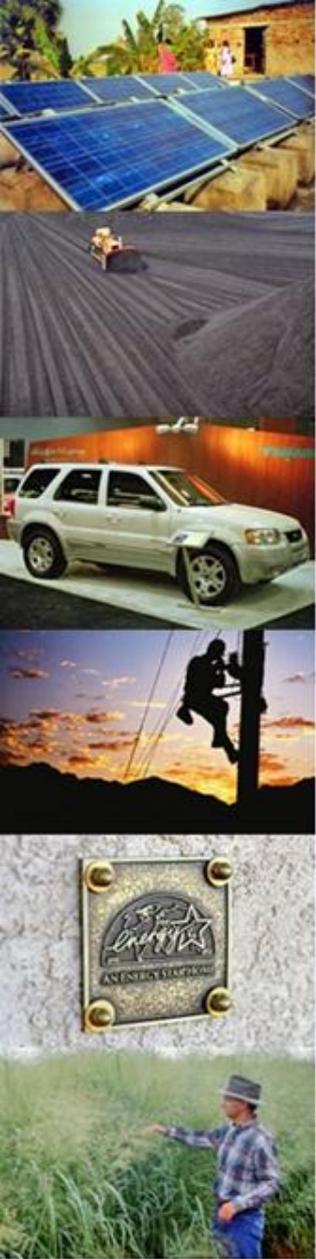
# Title I: Clean Energy

- Combined Efficiency and Renewable Electricity Standard
  - Begins with 6% in 2012 and rises to 20% in 2020
  - Can fulfill 5% with efficiency
  - States can petition to increase efficiency up to 8% by 2020



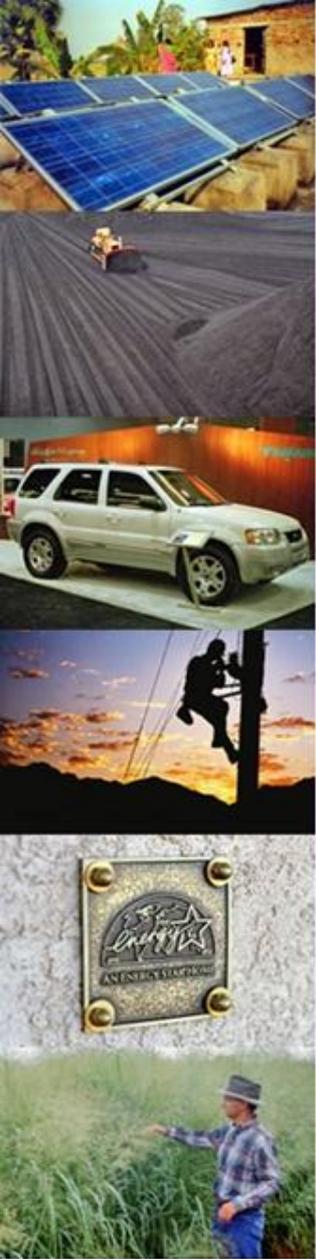
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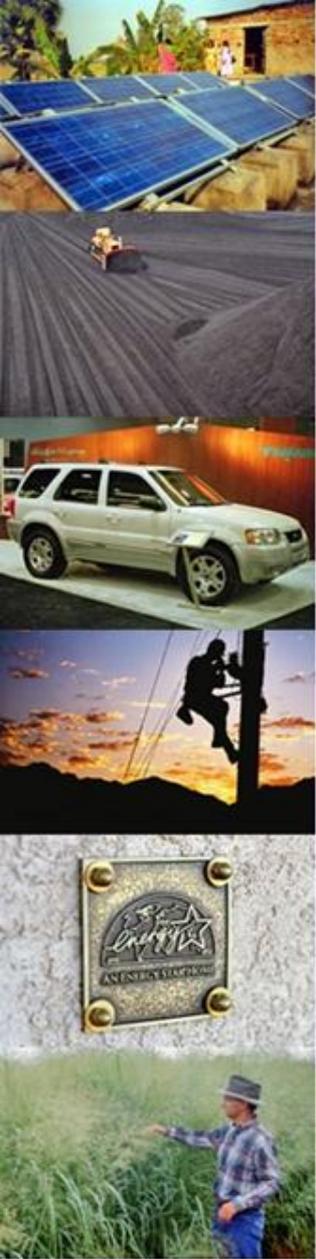
- Defines renewables as: wind, solar, geothermal, certain hydropower projects, marine and hydrokinetic RE, and biogas and biofuels ***derived exclusively from eligible biomass*** (under discussion)
- To encourage distributed generation (e.g., small wind, rooftop solar), projects are eligible for 3 credits for each MWh produced



# Title II: Energy Efficiency

- Buildings Codes
- Lighting and Appliance Programs
- Transportation Efficiency
- Industrial Efficiency
- Improvements in Energy Savings Performance Contracting
- Public Institutions





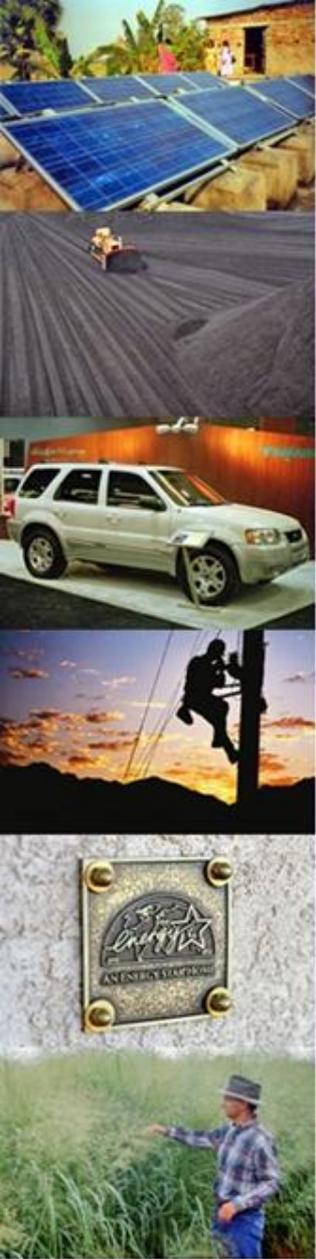
# Title III:

## Reducing Global Warming

- Covers 85% U.S. emissions, must reduce emissions below 2005 levels
  - 3% by 2012
  - 17% by 2020
  - 42% by 2030
  - 83% by 2050
- Compromise on near-term targets to pass out of Committee
  - Utilities still questioning 2012 number

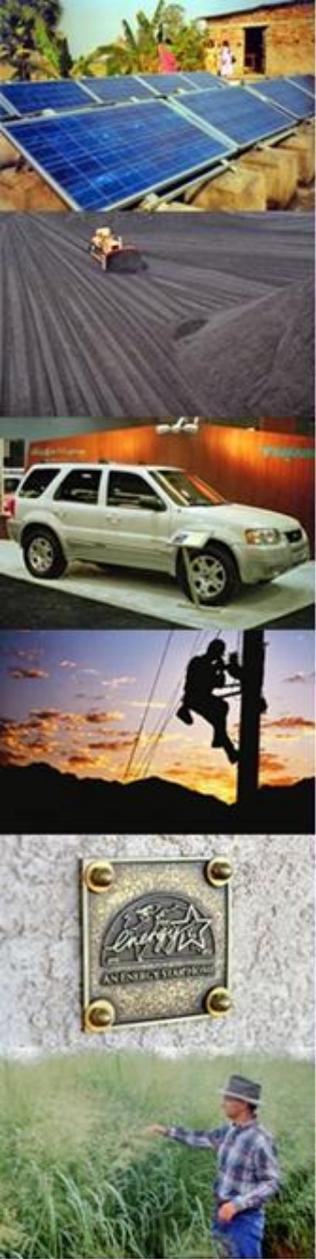
# Allowances

- Emissions Allocation
  - 30% electricity generators
    - Additional 5% to independent merchant generators
  - 9% natural gas distribution companies
  - 2% oil refiners
  - 5% reduced deforestation
  - Additional allocations to “trade-vulnerable” industries, low-income consumers, EE/RE, etc.
- Remainder Auctioned
  - Rebates to consumers



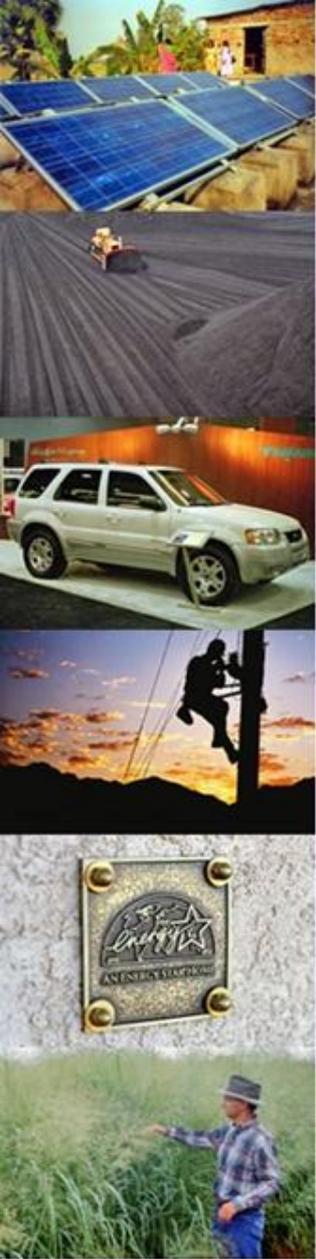
# Offsets

- Offsets allowed up to 2 billion tons, split evening between international and domestic suppliers
  - If domestic cap not reached, can use up to an additional 500 million metric tons of international offsets
  - New version eliminates 5:4 ratio
- Creates Offsets Integrity Advisory Board
  - Recommends eligible project types, methodologies , etc.



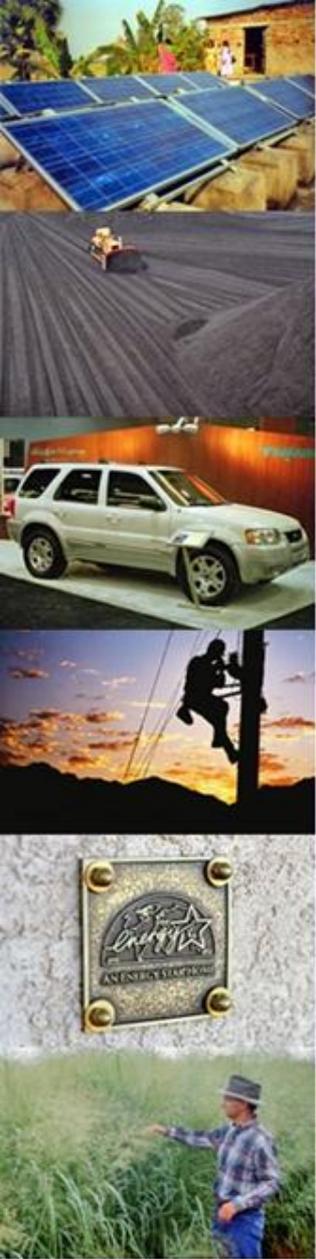
# Carbon Market Assurance

- Oversight of carbon allowances and offsets markets
- FERC as regulator
  - “Cease and desist” power for market manipulation, including *suspected* manipulation
  - President can delegate regulation for derivatives markets to appropriate agencies



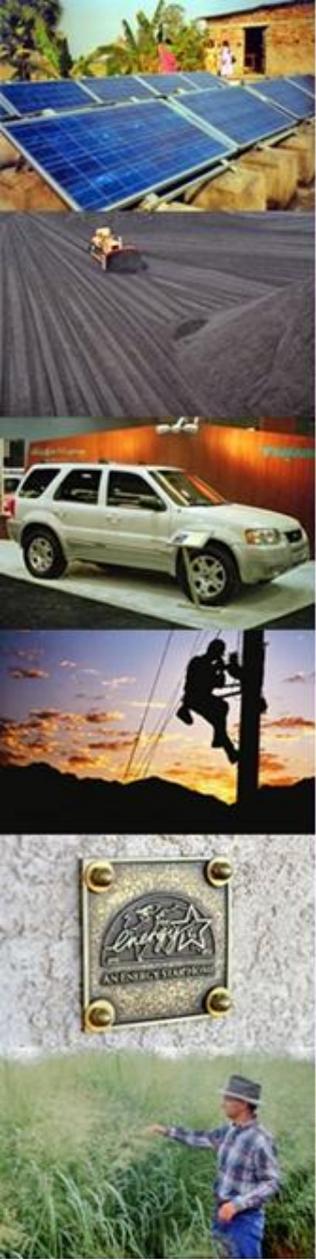
# EPA Analysis

- Decreasing cap from 20% to 17% results in lower allowance prices, smaller impact on energy bills and household spending
  - Household spending only 0.2% lower in 2020 (\$140/year), assuming revenue recycling



# EPA Analysis (cont.)

- Offsets: Stimulates domestic afforestation, methane capture, improved forest management, and other ag projects that sequester carbon
  - Domestic, eliminate 5:4 ratio
    - Increases use of domestic offsets by 11%, increases offset prices 16%
    - This will lower allowance prices 7% each year

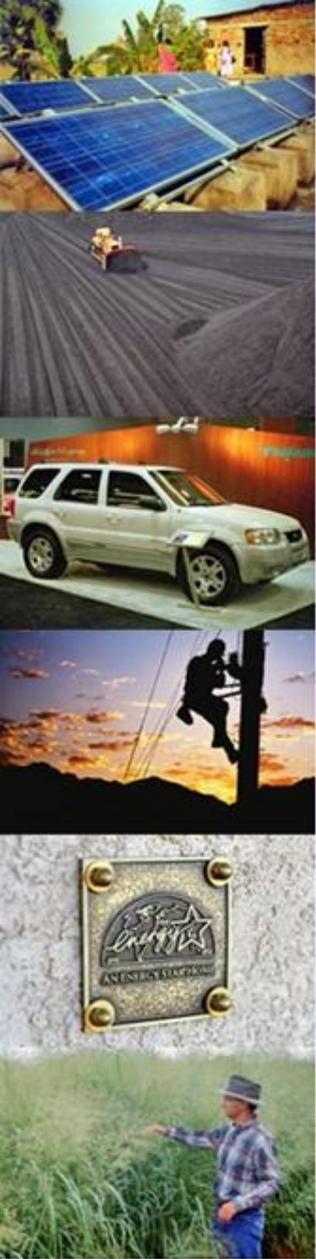


# Unresolved Issues

*“Right now I love every provision in that bill, but I don’t love it so much that I would not hear what other people have to say about it and learn more and examine alternatives.”*

*-Rep. Waxman*

- Renewable biomass definition
- Targets
- Allocations
- RES
- Transmission
- FERC oversight power





# Cap and Trade Imperatives

**Jeffrey Frost**  
**25x'25 Carbon Advisor**



# Key Points

- Offsets Are Critical for Cap & Trade
- The Agriculture and Forestry Opportunity
- The Ideal Offset Program
- Waxman-Markey Offsets Limitations

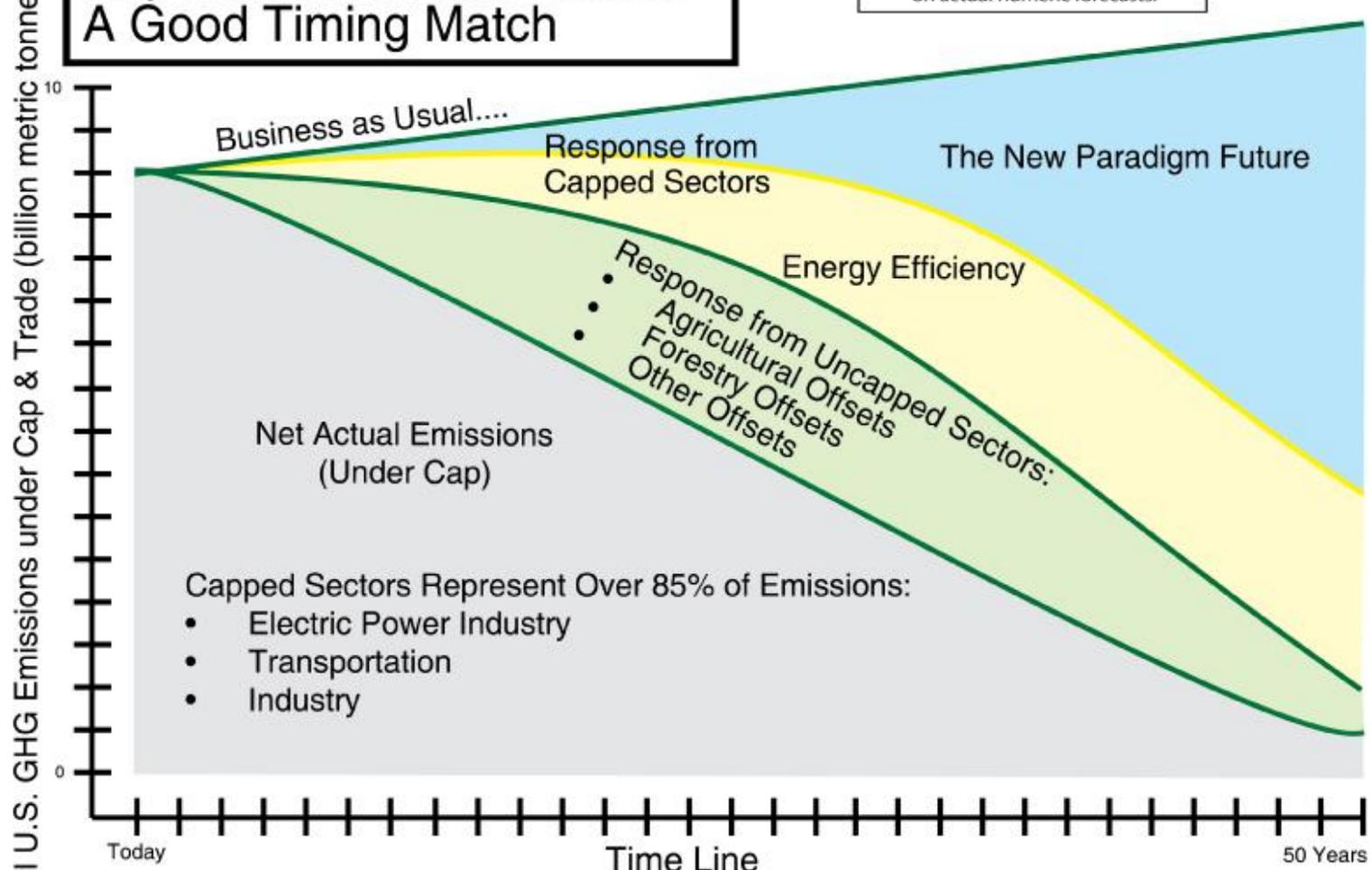
# Offsets Are Critical for Cap & Trade

- Induces Change in Uncapped Sectors
- Reduces Program Costs
- Produces Large Volumes Earlier
- Fills the Timing Gap; Bridges to the New Paradigm Future



# Cap-and-Trade with Offsets – A Good Timing Match

This is a visual portrait. It is NOT based on actual numeric forecasts.



Farm and forestry offset services – UNDER A PROPERLY DESIGNED PROGRAM - offer a great advantage to the capped sectors under cap-and-trade. Key benefits include: Immediate delivery of low-cost reductions to capped sectors; low-cost abatement opportunities that will reduce energy costs to American households; a growing volume of reductions as carbon prices rise over time in response to a declining cap; a saturation of the biological sequestration sources of emissions reductions at a time when the capped sectors have had ample opportunity to overcome capital turnover times, and the requisite technological solution development demanded by the fundamental paradigm shift to a low-carbon economy.



# The Agriculture and Forestry Opportunity

- **The Facts:**
  - There Will Be a Low-Carbon Future
  - There Will Be Costs for ALL Sectors of the U.S. Economy, Including Ag & Forestry
  - We Can Shape Our Own Participation  
ONLY IF WE ARE AT THE TABLE
- Cap & Trade - the Probable Policy Choice
- Cap & Trade Opportunity



# The Agriculture and Forestry Opportunity

- The Facts
- Cap & Trade - the Probable Policy Choice:
  - Ag & Forestry Are Uncapped
  - Significant Revenue Potential
  - Perhaps the Only Sectors with Net Benefits
  - Offset Market Participation is Voluntary
- Cap & Trade Opportunity



# The Agriculture and Forestry Opportunity

- The Facts
- Cap & Trade - the Probable Policy Choice
- Cap & Trade Opportunity:
  - The Offset Program Details Are Critical



# The Ideal Offset Program

Yes We Need It All . . . But Let's Focus In . . . (next slide)

- environmental rigor;
- acceptance of all three categories of reductions ( reductions in N<sub>2</sub>O and CH<sub>4</sub> emissions, terrestrial sequestration, and avoided fossil fuel emissions);
- broad positives list, based upon the best science, of allowable offset projects;
- efficient, low-cost qualification procedure for new offset project types;
- efficient, low-cost project eligibility/qualification and registration procedures;
- efficient, low-cost project monitoring, quantification, verification, offset registration, and offset delivery and monetization procedures;
- stackable ecosystems services benefits from multiple programs;
- support for early actors so as to in no way disadvantage them vis-à-vis others;
- generous crediting periods;
- offset and allowance trading markets regulation favoring offset providers and market transparency over market speculation & complex derivative strategies;
- an appropriate agriculture and forestry offsets program definition and administration role for USDA within the overall authority of EPA;
- full acceptance of terrestrial sequestration;
- definition of permanence as 40 to 50 years on a contracted duration basis, with appropriate mechanisms to achieve fungibility and to allow risk management behind the registry;



# The Ideal Offset Program

## Issue #1: Terrestrial Sequestration (the 7% to 25% mystery)

- Technical Terms:
  - Contracted Duration
  - Fungibility
  - Risk Management
- What this Delivers:
  - Environmental Effectiveness
  - Cost Effectiveness
  - C&T Program Operational Efficiency
  - Market Efficiency



# Waxman-Markey Offsets Limitations

- Biological Sequestration Offsets Rules
- Market Efficiency Plans
- Operational Efficiency
- Early Action
- USDA Role
- Quick Start Planning
- Domestic Offset Parity with International Offsets Opportunities



# Waxman-Markey Supplemental Problems

- Indirect Land Use Change
- Renewable Biomass
  - Eligible Land Sources
  - Eligible Definitions





# Economic Impacts

**Todd Wooten**

**Director, Southeast Climate Resources  
Center**

**Nicholas Institute for Environmental Policy  
Solutions**

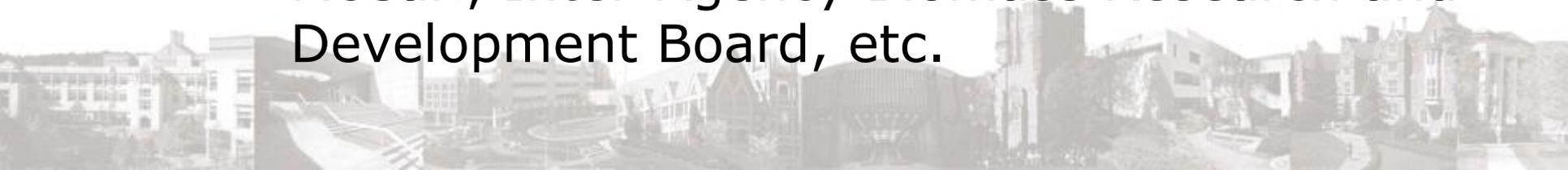
**Duke University**





# Economic Modeling

- Crop budget calculation
  - Simple projection of estimated price minus estimated input costs
  - Doane Report
- Economic Modeling
  - Accounts for shifts in behavior
  - Accounts for shifts in markets
  - McCarl, Inter-Agency Biomass Research and Development Board, etc.





# Limitations of Doane Report

- Energy impacts used are on the high end of projections
- Does not use full economic modeling
- Does not account for new markets created in a CO<sub>2</sub> regime, i.e. offsets, biofuels





# Estimated Fuel Costs

- Doane relies on EPA estimate of Lieberman-Warner
- EPA's recent modeling of Waxman-Markey suggests significantly lower costs
- W-M modeling unavailable at the time of Doane report





# Advantages of Modeling

- Modeling can anticipate likely behaviors
- Changes in behavior reflected in changes in markets
- More detailed picture of overall impacts





# Biofuels and Offsets

- New market opportunities could offset any increases
- No till, NO<sub>2</sub> reduction projects could have dual benefits
- Possibly not included due to RFS mandate





# Other studies

- **Inter-Agency Biomass Research and Development Board**
  - “Feedstock Production for Biofuels”
  - Biofuel demand sharply reduces loss from increased input costs





# Contact Information

[todd.wooten@duke.edu](mailto:todd.wooten@duke.edu)

(919) 613 8701





# Path Forward

**Bart Ruth**

**Chair, 25x'25 Policy Committee**



# Path Forward

## ■ House Action

- referred to eight Committees
- Ag committee could play a pivotal role
- House leaders want to pass climate legislation before the August recess

## ■ Senate Action

- not expected to take up legislation until this fall; more likely 2010
- Ag state Senators will play a major role

## ■ Obama Administration

- watching to see what Congress does
- need something to take to the UN Climate Change talks in Copenhagen in Dec.'09





[www.25x25.org](http://www.25x25.org)



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