



SUSTAINABILITY



ENERGY | ENVIRONMENT | ECONOMICS



National Climate Policy:

Implications for Florida Stakeholders

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**ECO₂ASSET
SOLUTIONS**

LYKES BROS. INC.



Presentation Objectives

1. Compare the two policy tracks to regulate greenhouse gas emissions and address climate change
2. Describe the implications of both policies for various Florida stakeholders
3. Provide steps to prepare your organization for national climate policy



Presentation Agenda

- Background
- National Climate Change Policy
 - EPA Regulation of Greenhouse Gases
 - Congressional Legislation
- Opportunities and Risks
- Q & A and Discussion



BACKGROUND





Greenhouse Gas (GHG) Basics

- **Definition: Any gas that has the potential to trap heat in the Earth's atmosphere.**
- ***Carbon Dioxide (CO₂)* is the most abundant**
- **Not all greenhouse gases were created equal:**

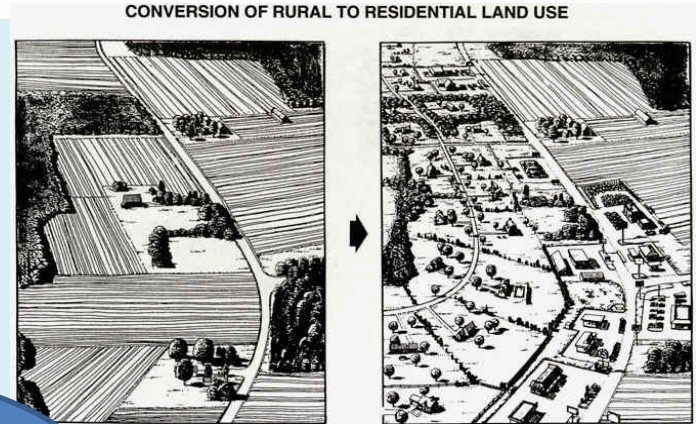
Greenhouse Gas	Global Warming Potential
Carbon dioxide (CO ₂)	1
Methane (CH ₄)	25
Nitrous Oxide (N ₂ O)	298

Source: Intergovernmental Panel on Climate Change (IPCC)

- **Greenhouse gases are measured in metric tons of carbon dioxide equivalents (CO₂e)**



ENERGY USE



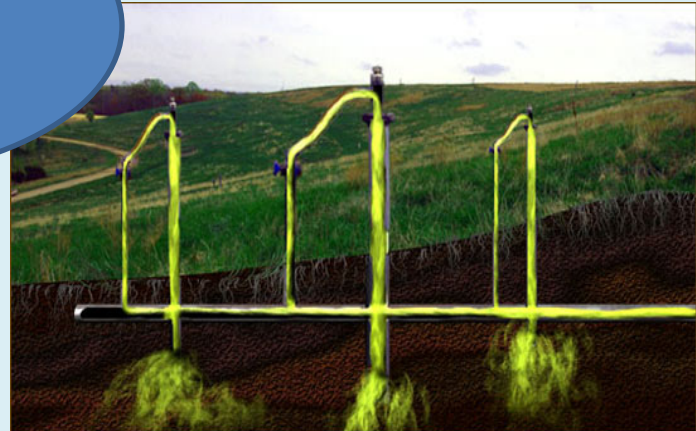
CONVERSION OF RURAL TO RESIDENTIAL LAND USE

LAND CONVERSION

OPERATIONS
THAT RELEASE
GREENHOUSE
GASES



FERTILIZER



LANDFILL



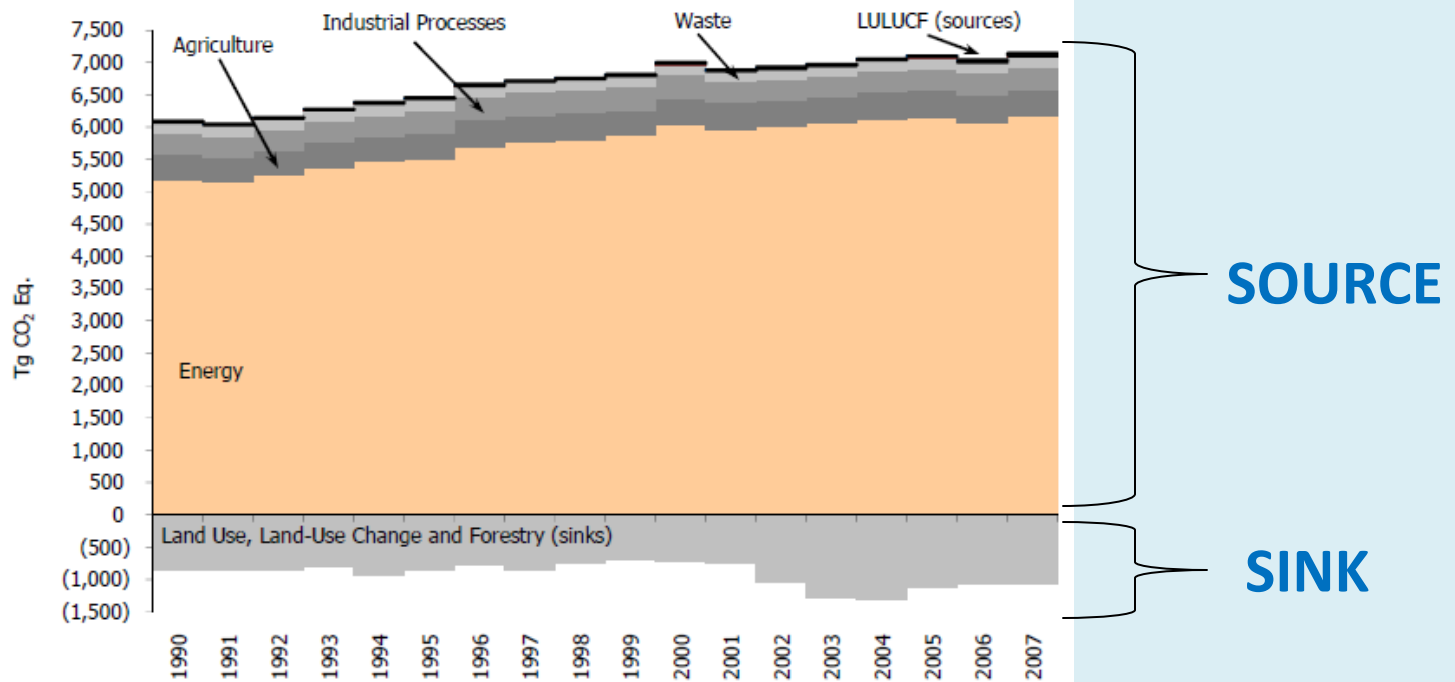
Greenhouse Gas Sinks



Process that removes greenhouse gases from the atmosphere and stores carbon (e.g., woody biomass and/or soil carbon)



Sources and Sinks in the US



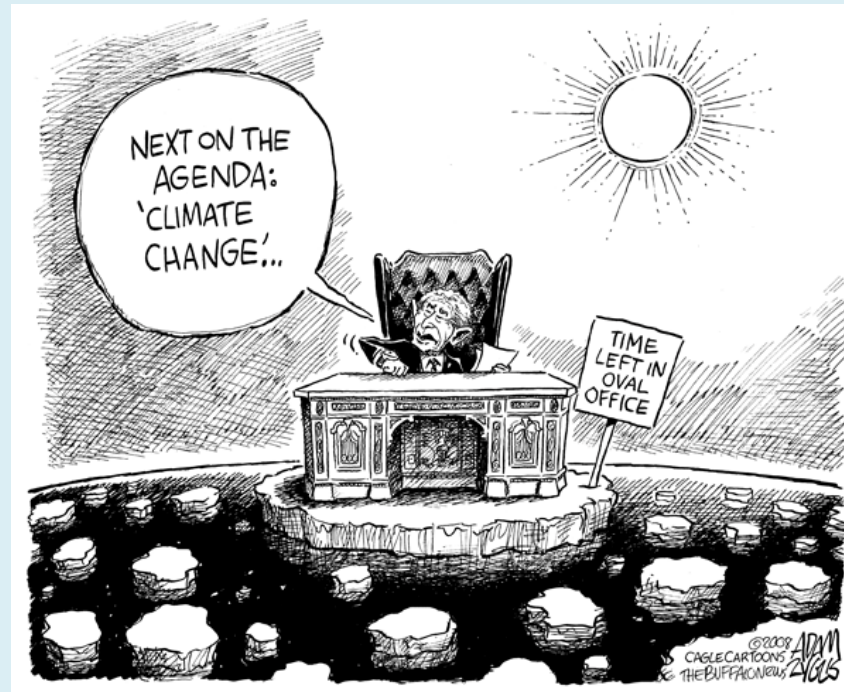
Note: Relatively smaller amounts of GWP-weighted emissions are also emitted from the Solvent and Other Product Use sectors

Figure ES-11: U.S. Greenhouse Gas Emissions and Sinks by Chapter/IPCC Sector

Source: US Environmental Protection Agency



CLIMATE POLICY





Overview of Policy Instruments

- **Command and Control Regulation**
- **Market Based Approaches**
 - Voluntary Incentive Programs
 - Pay-Per-Use Tax (e.g., Carbon Tax)
 - Cap and Trade Model
- **Hybrid Models**
 - Cap and Tax
 - Cap and Dividend



Two Tracks of Action

- Regulatory Action by the United States Environmental Protection Agency (US EPA)
- ◉ Congressional Legislation
 - ◉ House
 - ◉ Senate
 - ◉ President





EPA REGULATION





EPA Regulation

- Greenhouse Gases Historically Not Regulated
- Massachusetts v. EPA
 - Supreme Court found that the EPA has the authority to regulate greenhouse gases from tailpipes of automobiles (i.e., all GHGs)





EPA Initiatives

1. Proposed Greenhouse Gas Permitting Requirements on Large Industrial Sources

- 25,000 mtCO₂e
- Highest Energy Users (70%)

2. Mandatory Reporting of Greenhouse Gas Rule

- 25,000 mtCO₂e
- Highest Energy Users (85%)

3. Endangerment Finding





Covered Sectors (Examples)

- Electricity Utilities
- Ammonia Manufacturing Facilities
- Pulp and Paper Manufacturing
- Manufacturers of lumber products
- Landfills
- Beef cattle feedlots
- Dairy cattle and milk production facilities
- Suppliers of Natural Gas



EPA Regulation

- **Significance of Regulation**
 - Authorization to take action on regulation
 - Command and Control Approach
 - Thresholds, standards, and permits
 - Requires Best Available Control (BACT) Technology
 - Pass through cost to consumer



CONGRESSIONAL CLIMATE CHANGE POLICY





Waxman – Markey Bill

- American Clean Energy and Security (ACES) Act of 2009
 - Passed House of Representatives in July 2009
 - Narrow passage Vote of 219-212
- Stated Purpose

Calendar No. 97

111TH CONGRESS
1ST SESSION

H. R. 2454

IN THE SENATE OF THE UNITED STATES

JULY 6, 2009
Received and read the first time

JULY 7, 2009
Read the second time and placed on the calendar

AN ACT

To create clean energy jobs, achieve energy independence, reduce global warming pollution and transition to a clean energy economy.

**ASSET
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BROS. INC.**



Waxman Markey Bill

- **Comprehensive Energy and Climate Policy**
- **Main Provisions**
 - **Clean Energy (Title I)**
 - **Energy Efficiency (Title II)**
 - **Federal Cap and Trade System (Titles III and V)**
 - **Transitioning the Economy (Title IV)**



TITLE I: CLEAN ENERGY

WAXMAN-MARKEY BILL





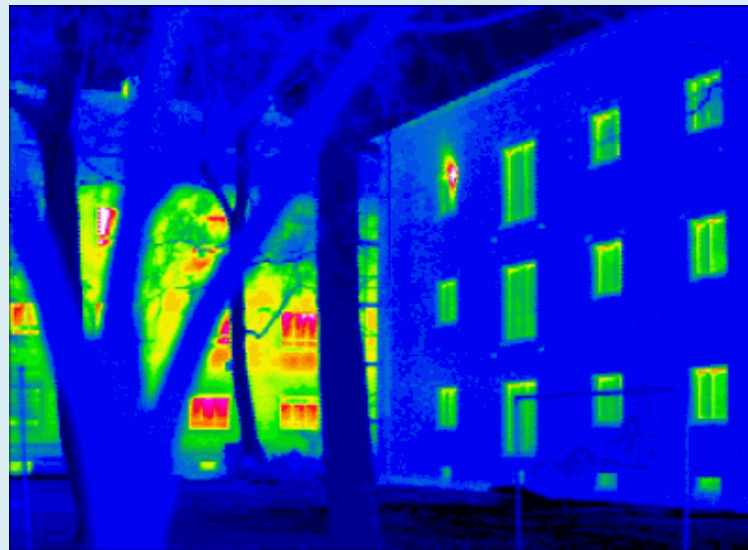
Clean Energy (Title I) Key Provisions in the Waxman-Markey bill.

- Establishes a nationwide Combined Efficiency and Renewable Electricity Standard (CERES)
 - Establishes the supply targets (6% supply in 2012 and is gradually increased to 20% in 2039)
 - Establishes the breakdown of supply ($\frac{3}{4}$ from renewable energy and $\frac{1}{4}$ supply from energy efficiency)
 - Establishes a Federal Renewable Energy Credit (REC) program
- Spurs R&D and the rapid commercialization of carbon capture and storage (CCS) from the combustion of coal
- Incentivizes the transition to the large-scale electrification of vehicles
- Establishes state accounts to distribute emission allowances to be used to fund energy projects
- Improves the distribution of clean energy with Smart Grid technology and transmission planning
- Establishes and funds research, education, and training facilities (i.e., Energy Innovation Hubs and Centers for Energy and Environmental Knowledge and Outreach)
- Establishes revolving loans to fund research of advanced technologies as well as nuclear
- Requires miscellaneous studies, determinations, and new agency development



TITLE II: ENERGY EFFICIENCY

WAXMAN-MARKEY BILL





Energy Efficiency (Title II) Key Provisions in the Waxman-Markey bill

- Establishes building energy efficiency programs
 - Sets an average energy efficiency reduction targets for residential and commercial buildings (30% initially with ultimate goal of zero-net-energy building)
 - Establishes a national energy efficiency building code for new buildings
 - Establishes and funds a Retrofit for Energy and Environmental Performance (REEP) program
- Establishes standards and programs to improve energy efficiency in lighting and appliances
- Improves transportation efficiencies
 - Sets greenhouse gas emission standards for new heavy-duty and non-road engines and vehicles
 - Promulgates national greenhouse gas reduction targets for surface transportation sources
 - Requires state transportation plans to set greenhouse gas reduction targets
- Spurs innovation in industrial manufacturing processes with programs and incentives
- Improves energy savings performance contracting
- Establishes a low-income community energy efficiency program and research on consumer behaviors
- Includes various miscellaneous provisions
 - Establishes a national energy efficiency goal beginning with 2.5% improvement in 2012
 - Calls for a national products disclosure study
- Establishes numerous policies to provide green resources for energy efficiency neighborhoods
 - Sets new energy efficiency standards for HUD, rural, and federally-covered properties
- Includes numerous incentives, grants, demonstration/pilot projects, finance mechanisms, and requirements



TITLES III & IV: GREENHOUSE GAS REGULATION (CAP AND TRADE) WAXMAN-MARKEY BILL





Cap and Trade Program (Titles III and V) Key Provisions in the Waxman-Markey bill.

- **Creates a cap and trade system to reduce greenhouse gas emissions**
 - Establishes global warming pollution reduction goals and targets
 - Establishes cap and trade program rules, including carbon offset and supplemental reductions from reduced deforestation
- **Describes the distribution and allowable uses of emission allowances**
- **Establishes greenhouse gas standards for uncovered sectors; exempts certain pollutants from the cap and trade program (e.g., criteria air pollutants and certain HFCs); and other miscellaneous provisions**
- **Provides assurances for the regulation and enforcement of the allowance market and establishes a carbon derivatives market**
- **Establishes the USDA as having authority of offset credit program from domestic agricultural and forestry**



Waxman Markey Bill

- **Where Does the Revenue go?**
 - **Energy Consumers**
 - Majority is passed through to customer!
 - **Trade Vulnerable Industries (includes agriculture)**
 - **Incentive Programs to Spur Innovation**
 - **Adaptation and Research**
- **Other Key Cap and Trade Provisions**
 - **Market Oversight**
 - **Banking and Borrowing**
 - **Reporting and Verification Procedures**



TITLE IV: TRANSITION

WAXMAN-MARKEY BILL



Waxman-Markey Bill

Clean Energy Transition Plan (Title IV) Key Provisions in the Waxman-Markey bill.

- Ensures real greenhouse gas reductions in industrial emissions by providing rebates to eligible industries
- Establishes funding to develop green jobs and assists workers affected by the transition to clean energy
- Establishes an energy refund program to provide relief from higher electricity costs to eligible low-income consumers
- Provides assistance to developing countries to transition to clean energy
- Provides resources to adapt to already committed climate change
 - Domestically, calls for a number of studies; establishes a national climate service office/program; requires States to develop a Climate Adaptation Plan; and calls for national strategic plans to be developed to address public health issues and conservation of natural resources as a result of climate change
 - Internationally, establishes a climate change adaptation program to assist developing countries address climate change
- Clarifies that programs will be deficit neutral and funds can only be used for intended purposes



WHAT ACTION HAS BEEN TAKEN IN THE SENATE?



Kerry-Boxer Bill

- **Senate Version of Waxman-Markey Bill**
- **Key Differences**
 - Interim Reduction Targets Slightly Different
 - EPA's authority to regulate GHG retained
 - Price floor and ceiling (\$11 and \$28)
 - International carbon offsets limited to 25%



Senate Status

- Kerry-Boxer Bill Passed the Environmental and Public Works (EPW) Committee
- Timeline
 - Passage Required in Five Committees
 - Full Senate Vote (60% passage)
- Reconciled with Waxman-Markey Bill before Signed by President
- Earliest Possible.....2010 (Other bills?)



**WHAT ARE IMPLICATIONS FOR
FLORIDA STAKEHOLDERS OF POLICY
AND/OR EPA REGULATION?**



If national policy passed....

- **Renewable Energy Standard**
 - Florida landowners in position to be significant suppliers of renewable energy
 - Solar, biomass, energy crops
- **Energy Efficiency Credits (either as carbon offset or bundled in with REC system)**
- **Carbon Offset Project Development**
 - Significant Suppliers from Forestry and Agriculture
- **Adaptation Needs**
 - Florida has more to lose from affects of climate change



If national policy not passed.....

- EPA Regulation is Eminent!
- No Mechanism to Stop International Leakage
- Potential Disproportion Cost to:
 - Agriculture
 - Low-income Populations & Rural Areas
 - Certain Industries
 - Power Plants
 - Refineries
 - Fertilizer Manufacturers



WHAT ARE THE RISKS AND OPPORTUNITIES FOR FLORIDA'S STAKEHOLDERS?



Risks/Opportunities

- **Congressional Legislation**

- **Opportunities**

- Renewable Energy Supplier
- Carbon Offset Provider
- Direct Payments to Industries (Ag, Elect.)
- Adaptation Funding

- **Risks**

- Increased Costs (Electricity, Fuel, Additives, Water)

- **U.S. EPA**

- **Opportunities**

- Ensures regulation of greenhouse gases

- **Risks**

- Increased Costs (Electricity, Fuel, Additives, Water)
- Unfair Distribution of Costs



WHAT SHOULD FLORIDA'S STAKEHOLDERS DO TO PREPARE FOR NATIONAL CLIMATE POLICY?





Potential Next Steps

- **Understand Risks and Opportunities**
 - **Understand Greenhouse Gas Emissions**
 - Operational Emissions
 - Life Cycle Analysis
 - **Evaluate Renewable Energy, Energy Efficiency, and Carbon Offset Opportunities**
- **Get a Seat at the Table in Policy Negotiations**
 - **Lobbyists**
 - **Trade Groups**
 - **Individuals**



About EcoAsset Solutions

- **Sustainability Advisory Group that serves**
 - Government (state and local)
 - Corporations (produce, commercial, and industrial)
 - Higher Education Institutions
 - Landowners (foresters, farmers, ranchers)
- **Core Services**
 - Technical Analysis and Planning
 - Education and Training
 - Sustainability Data Resource Management
 - Carbon Offset Project Development and Commercialization
- **Wholly-owned subsidiary of Lykes Bros, Inc.**



QUESTIONS AND COMMENTS

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