



Agriculture, Renewable Energy & the Environment

A presentation at the Pew Climate Conference

Innovative Approaches to Climate Change: A State-Federal Workshop

by

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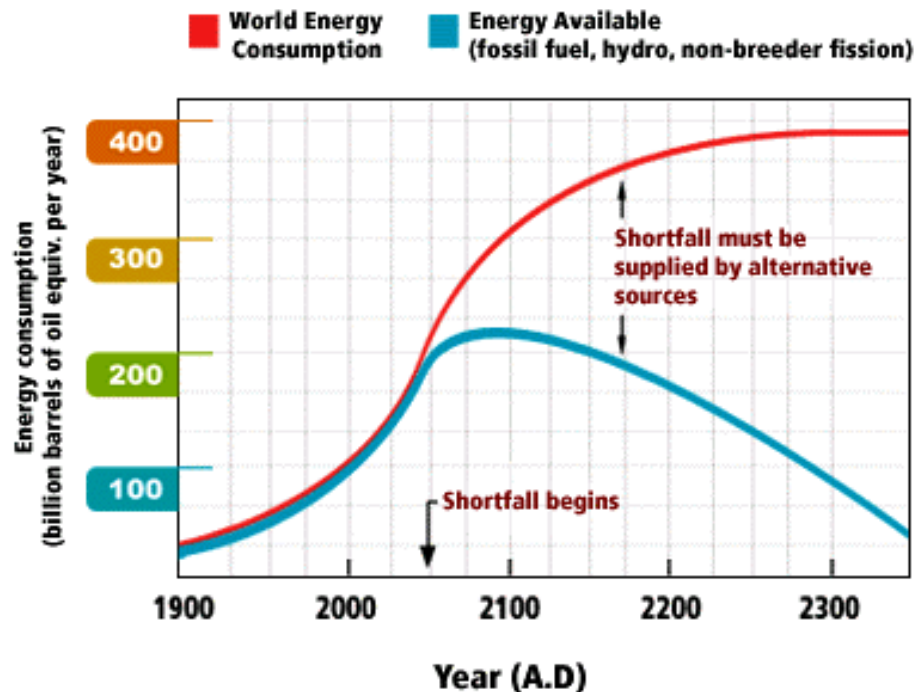
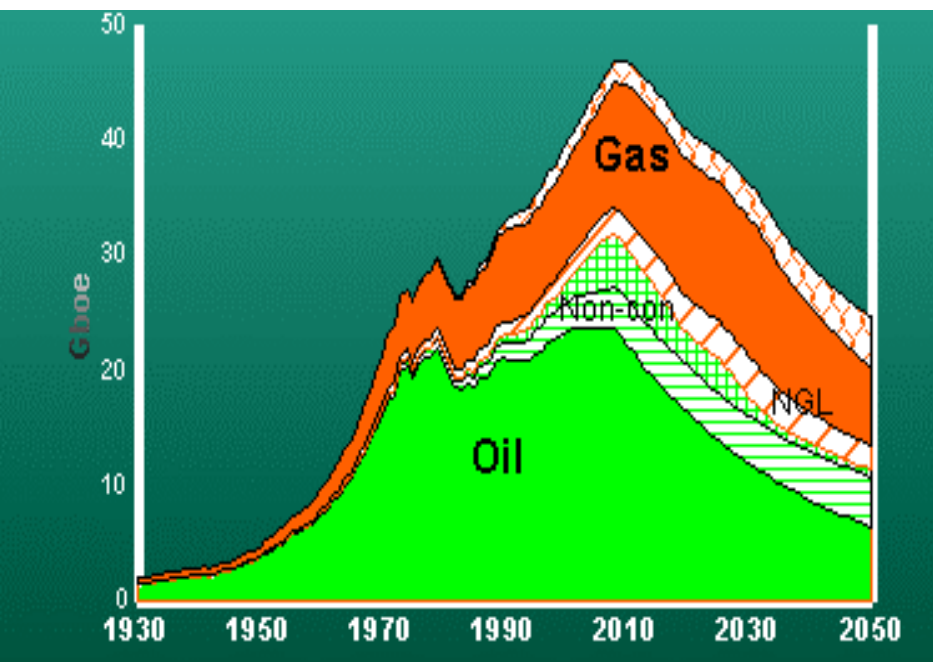
Director, Research & Commodity Services

Iowa Farm Bureau Federation



Era of New Opportunity

- Rising energy costs
 - \$50 crude oil
 - \$6 natural gas



- Cheaper Renewables
 - Wind
 - Ethanol/biodiesel



Era of New Opportunity

- Public awareness
 - Clean air is more than smog reduction
 - Sulfur
 - Particulates
 - carbon



Era of New Opportunity

- Economic Feasibility
 - Ethanol
 - Wind
- Technological feasibility
 - Ethanol net energy efficiency
 - Wind Turbine efficiency
 - Methane digesters
 - Fuel cells



Shifting Emphasis to Renewable Energy Sources



Switchgrass crops can be harvested to make biofuels.

Biomass



Hydro Power



Geothermal



Solar



Wind power



Hydrogen Fuel Cell



A good Fit: Wind & Agriculture





Role of State Initiatives

- Stimulate new technology development
 - Research grants
 - Early adoption, pilot programs
- Stimulate development of critical mass of new industries
 - Production &/or Purchase Incentives
 - Fuel & Portfolio Standards
 - Purchasing Preferences



Private Industry Inputs

- Innovation
- Investment
- Initiative
 - Renewable Fuels Production
 - Wind Energy Development
 - Pollution Credit Trading



In Iowa, the interests of agriculture are broader than just ethanol – they extend to all areas of renewable energy



Innovative Initiatives from the Private Sector

- Farm Bureau Activities
 - Agriculture & Energy Conference
 - State Energy Taskforce
 - Carbon Sequestration Program
 - Renewable Energy as Economic Development



FB & Climate Change

- Policy
 - Oppose Kyoto
 - Oppose Carbon Taxes
 - Support Renewable Energy Incentives
 - Supportive of the concept of cap & trade with the caps based on sound science
- Carbon Sequestration
 - Atmospheric carbon & ag soils
 - Putting atmospheric carbon into the soil is a good thing



IFB Energy Taskforce

- **Vision Statement:** Create local wealth through development and promotion of Iowa's renewable energy capacity
- **Goals related to achieving the vision**
 - Fully utilize the energy capacity of Iowa's crop production by processing a high percentage of Iowa's corn and soybeans through biorefineries
 - Facilitate the production of ethanol through biomass
 - Fully develop Iowa's renewable energy production capacity (10,000 – 20,000MW)
 - Enhance economic development in rural Iowa through locally-owned renewable energy production



IFB Energy Taskforce

- **Specific State & National Goals**
 - 5 billion gallons of renewable fuels by 2012
 - 20% of liquid fuels will be biofuels by 2020
 - 50% of national biofuels production to be produced in Iowa
 - At least E-85 fueling station in every county of the state in 5 years
 - 2% of state total diesel fuel sales will be biodiesel within 5 years
 - 10% of state energy generation from renewables by 2010
 - 20% of state energy generation from renewables by 2020
 - 50% of growth in renewables would be locally owned



New Market Opportunities

The Chicago Climate Exchange: Creating a Market for GHG Emission Reductions



- Voluntary
- Market-based
- Private Initiative



Carbon Sequestration

- Facilitate the participation of agriculture in carbon sequestration activities
 - Create infrastructure for ag participation
 - Conduct educational events
 - Sign-up producers
 - Develop databases
 - Facilitate transactions



IFB Carbon Project

- 50+ educational meetings
- 200+ contracts
- 80,000+ acres enrolled
 - Notill
 - Grasslands
- Expanding program to neighboring states
 - Kansas
 - Nebraska
 - Minnesota
 - South Dakota



IFBF/CCX Database

Microsoft Access - [Enrollment Worksheet CDK]

File Edit View Insert Format Records Tools Window Help

Type a question for help

Contract No: XSO-0198
Parcel No: 1

Name: Miller Family Farms by De
Contract Number: XSO-0198
Contract Date: 3/15/2004
Address: 410 NE 15th
City: Ankeny
State: IA Zip: 50021
Phone: 515-965-1290
County: Polk
Staff Member: Dave Miller

No-till Acres: 165.5 Old Grass: 4.0
Total Acres Enrolled: 169.5 New Grass: 0.0

Double Click Image to enlarge

Double Click Parcels for Map

Contract No	Parcel No	ParcelMap	Field Acres	No-till Acres	Old Grass	New Grass	Land Title Holder	County	Township Name
XSO-0198	1		136.9	136.9	0.0	0.0	Morrison Trail Farms	Lucas	White Breast
			Description	Section No.	Township_Range Numbers		Comments		
			SE1/4	7	T72N R22W				
Contract No	Parcel No	ParcelMap	Field Acres	No-till Acres	Old Grass	New Grass	Land Title Holder	County	Township Name
XSO-0198	2		22.6	22.6	0.0	0.0	Morrison Trail Farms	Lucas	White Breast
			Description	Section No.	Township_Range Numbers		Comments		

Record: 1 of 3
Record: 199 of 199

Form View

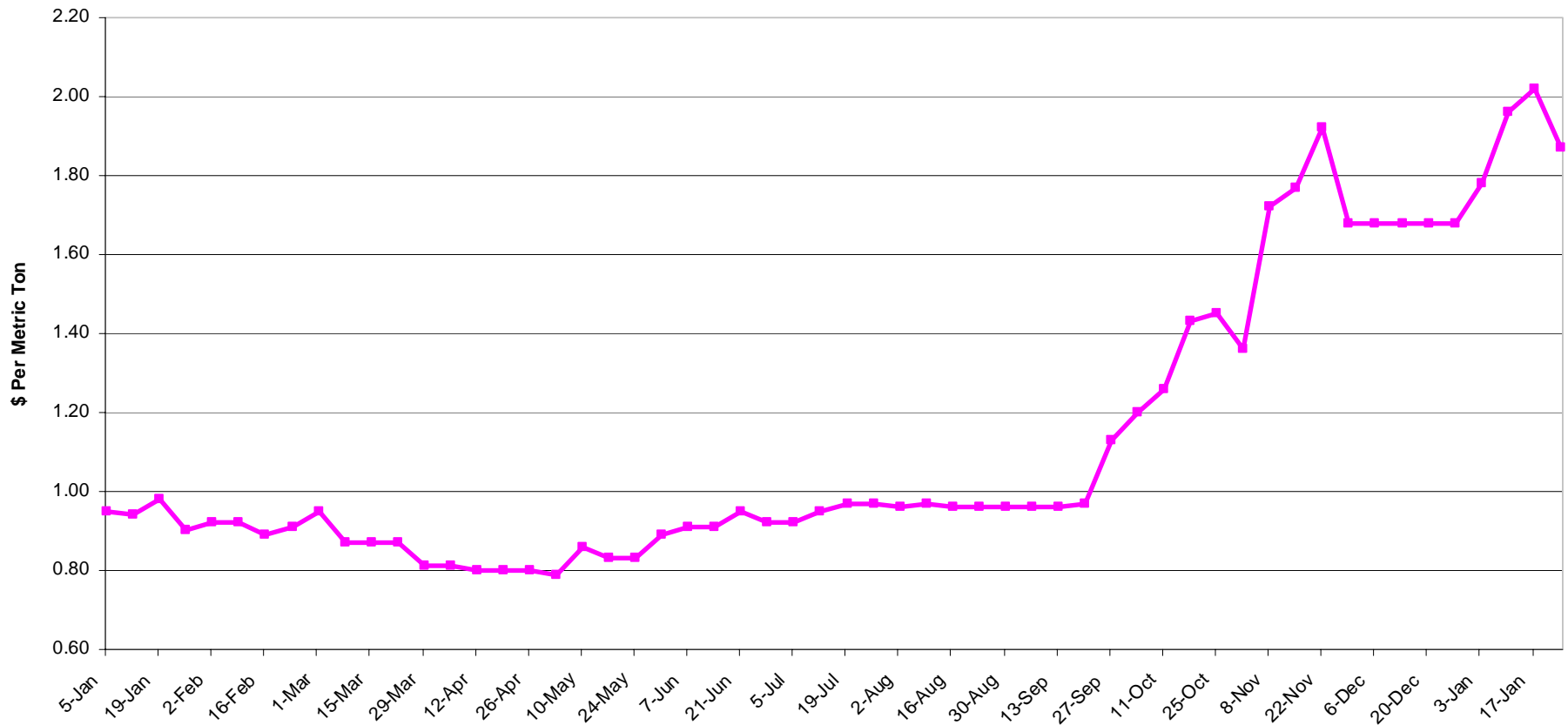
Start

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2004 Carbon Offset Prices

2004 Carbon Offset Prices





Energy As Economic Development

- CORE – Community-Owned Renewable Energy
 - Create local wealth through development and promotion of Iowa’s renewable energy capacity
 - Assist in the development of local organization and infrastructure needed to develop renewable energy opportunities



CORE Goals

- Promote Renewable Energy as a form of Rural Development
- Create a standard for community-based renewable energy development
- Stimulate local equity investment in community-based renewable energy projects
 - Goal: \$200 Million aggregate investment
 - Develop a Diversified renewable energy portfolio
 - Multiple geographic locations with different wind regimes
 - Multiple off-takers
 - Multiple technologies
- Investigate additional opportunities in the value chain



What's Needed?

- Supportive federal policy
- Favorable attitude by state officials
- Stimulating incentives
 - Federal PTC
 - State incentives
 - “Can-do” Vision
- Private Initiative



In Summary



Vision: The Sky is the Limit





Technology: It must be feasible





Policy: Public Support





Resources: Wise Management



Initiative: a “Can-do” Attitude





Thank You