



# Policy Incentives for Biomass

*Ohio Biomass Task Force  
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# U.S. Ethanol/Biodiesel Production

- **3.3 billion gallons of ethanol produced in 2004**
- **Currently, 78 ethanol plants in 20 states, with ten more plants under construction (increasing annual capacity by over 400 million gallons.)**
- **Current U.S. biodiesel production capacity is 150 million gallons/yr.**

# Economic Benefits of Ethanol (40 mil gal plant)

- **Provide immediate boost of \$142 million from construction**
- **Expand local economic base by \$110.2 million**
- **Create 41 full-time jobs on-site and 694 jobs to local economy**
- **Increase local price of corn by 5-10 cents/bushel**

**Source: "Ethanol and the Local Community," John Urbanchuk, AUS Consultants and Jeff Kapell, SJH & Company, June 2002**

# Why Ohio?

- **Food and Ag. industry contributes \$73 billion to state's economic growth.**
- **In 2003, 77,600 farms (91% family-owned)**
- **44 percent of farmland is classified as 'prime farmland.' (only 1 of 5 states with classification)**
- **Ranked 6<sup>th</sup> in nation for grain production of corn (2001), ethanol already leading byproduct.**
- **Ranked 6<sup>th</sup> in nation for soybean production (30,000 soybean farmers, 45 million acres harvested, 2001)**
- **394 acres of farmland disappear everyday in Ohio.**

Source: Ohio Department of Agriculture

# Federal Policy Incentives

## 2002 Farm Bill

(H.R. 2646/P.L. 107-171)

### Energy Title (Title IX)

\$405 million in mandatory funding over five years:

- **Procurement of Biobased Products**
- **Grants and Loans**
- **Research and Development**
- **CCC Bioenergy Program**

## Sec. 9002 Federal Procurement of Biobased Products (\$6 mil.)

- **Federal Agencies must purchase biobased products if comparable in price, performance, and availability to conventional products**
- **Biobased products must undergo testing before receiving certification for listing**
- **By December 31, 2004 'umbrella' rule will be reported describing categories of biobased products to be defined.**
- **Series of announcements will follow defining each category.**
- **Funding Status: House added \$2 million for total of \$3 million for program. Senate has maintained Administration's \$1 million funding level.**

# Sec. 9004 Biodiesel Fuel Education Program (\$5 mil.)

- **1 mil/yr (\$1 mil/yr FY03-07)**
- **Educate government and private fleet managers and public on benefits of biodiesel.**
- **National Biodiesel Board, U. of Idaho awarded funding**
- **Senators Harkin and Bond offered an amendment in Senate Appropriations restoring full funding for this program.**

# Sec. 9006 Renewable Energy System & Energy System Improvements Program (\$115 mil.)

- \$23 mil/yr FY03-07 for grants, loans, and loan guarantees for renewable energy systems and energy efficiency improvements
- September 2004: USDA announced awards totaling \$22.8 mil to 167 applicants in 26 states; \$9.5 mil for anaerobic digesters, \$3.1 mil for biomass/bioenergy, \$7.9 mil for wind, and \$1.8 mil for energy efficiency improvements.
- Two awardees were from Ohio: Grant for bioenergy American Ag Fuels LLC, \$500,000; grant for an anaerobic digester for Wenning Poultry, \$500,000
- Proposed rule issued with 30-day comment period ending November 4. (30-day extension to 12/15 granted)

## Sec. 9008 Biomass Research and Development Act (\$75 mil.)

- **\$14 mil/yr (FY03-07)**
- **In July 2004, USDA/DOE announced \$25.5 million in biomass research funding to 22 projects selected under a joint solicitation**

## Sec. 9010 Commodity Credit Corporation Bioenergy Program (\$204 mil.)

- **Compensates producers of ethanol and biodiesel for commodity purchases to expand production**
- **Most traditional commodities as well as cellulosic feedstocks are eligible**
- **\$150 mil/year in mandatory funding to be cut to \$100 FY05**

# Rural Development Title

## Sec. 6401 Value-added Agricultural Product Market Development Program

- Amended to allow renewable energy systems to qualify for grants
- \$28.7 million FY 2003 Value-Added Producer Grants (VAPG) to 184 projects in 40 states.
- \$13.2 million available for FY 2004. Deadline for Applications was July 30.
- FY 2004 awardees from 34 states were announced Oct. 13<sup>th</sup>. \$2.1 million went to support Renewable/Biomass Energy Proposals out of a total of \$13 million in awards.
- 97 projects were funded out of 400 applications.
- No FY04 awardees from Ohio.

# Conservation Reserve Program

- **Voluntary program for agricultural landowners. Annual rental payments and cost-share (up to 50 percent ) to remove environmentally sensitive cropland from production**
- **Acts as incentive for production of bioenergy crops like switchgrass, hybrid poplar, and hybrid willow**
- **Amended to allow wind turbines and biomass harvesting on CRP lands where consistent with soil, water, and wildlife habitat goals of CRP.**
- **As of Oct. 2004, 670,877 contracts for 395,016 farms on 34 million acres, with annual payments of \$1.7 billion. Ohio currently has 276,433 acres under contract receiving \$23.3 million/yr**

# FY2005 Appropriations: Energy Title

- **Sec. 9006 Renewable Energy System & Energy System Improvements Program (\$23 mil/yr.)**
  - Funding levels maintained at \$23 million, despite FY05 proposed cut of \$12 million.
  - Kaptur amendment restored funding
- **Sec. 6401 Value-added Agricultural Product Market Development Program (\$40 mil/yr.)**  
**\$25 million cut: FY05 budget requested only \$15.5 million**
  - Cuts maintained
- **Sec. 9010 Commodity Credit Corporation Bioenergy Program (\$150 mil/yr.)**
  - **\$50 million cut: FY05 budget requested only \$100 million**
  - Cuts maintained

# USDA/NRECA Memorandum of Understanding

- **NRECA to research, develop, promote, and encourage greater cooperative use biofuels, biobased products**
- **USDA and NRECA will develop education, outreach, technical support bioenergy education among cooperatives**
- **Technologies to be considered: biomass co-fired plants, biomass gasification power plants, animal-waste-to-electricity studies, landfill methane power plants, wind and solar**
- **Rural Utilities Service (RUS) has \$200 million renewable energy loan window. In FY03 \$71.5 million distributed to renewables. FY04 loans to date are \$12.5 million.**

# Energy Title/Value Add Contacts

**SEC. 9002 Federal Procurement of Biobased Products**

**Contact: Roger Conway, 202-401-0461**

**SEC. 9004 Biodiesel Fuel Education Program**

**Contact: Carmela Bailey, 202-401-6443**

**SEC. 9006 Renew. & Effic. / Rural Development Title Programs**

**Contact: William Hagy, 202-720-7287**

**<http://www.rurdev.usda.gov/rbs/coops/vadg.htm>**

**SEC. 9008 Biomass Research and Development Act**

**Contact: Merlin Bartz, 202-720-6519**

**<http://www.bioproducts-bioenergy.gov>**

**SEC. 9010 CCC Bioenergy Program**

**Contact: Steve Gill, 202-720-2121**

**[http://www.fsa.usda.gov/daco/bio\\_daco.htm](http://www.fsa.usda.gov/daco/bio_daco.htm)**

**SEC. 6401 Rural Business Cooperative Service**

**Contact: James Haskell, 202-720-8460**

**<http://www.rurdev.usda.gov/rbs/coops/vadg.htm>**

# What we need...

## Federal Renewable Fuels Standard (contained in 2003 Energy Bill)

- **Sets 5 billion gallon requirement, doubling renewable fuels production by 2012. Industry currently expanding, projected to meet the RFS requirements with federal support.**
- **Requirement on refiners – not on states or consumers**
- **Credits can be traded among refiners, blenders, and importers**
- **Cellulosic ethanol to be counted as 1.5 gallons of renewable fuel. Conference Report provided 2.5 credits for ethanol derived from agricultural residues.**
- **Conference report phased out MTBE by 2014 and provided MTBE producer liability waivers (However, waivers must be removed if RFS is to pass.)**

# Federal Renewable Portfolio Standard (RPS)

- **Minimum 10% national standard by 2020**
- **RPS was proposed in Senate energy bill**
- **Energy Bill Conference report (2003) had no RPS but 53 Senators signed a letter supporting RPS**

**Renewable Resource Assessment**

# What was passed this year...

## Renewable Production Tax Credit (PTC)

- 9/23 Congress passed H.R. 1308 (Working Families Tax Relief Act of 2004) with wind and closed-loop biomass extender to **12/05**
- Broader Renewable PTC language to include municipal solid waste, geothermal energy, solar energy, open-loop biomass, refined coal, and small scale irrigation was included in the Corporate Tax bill (H.R. 4520) passed Oct. 11.
- Tax credits will be awarded for renewable energy projects brought on-line between enactment and **12/05**.
- PTC for wind and closed-loop biomass, for eligible producers, will continue for 10 years. Whereas, PTC for solar, geothermal, open-loop etc will last for 5 years.
- PTC for refined coal will apply to projects that come on line before 2009 and will be awarded a 10-year credit.
- **NEEDS** credits usable for public power and cooperatives.

# Ethanol Tax Incentives Included in H.R. 4520 Corporate Tax Bill

- **Excise Tax Exemption: Refiner/Marketer pays 5.2¢/gal. less tax on 10% ethanol blend**
  - **Extension to 2010**
- **Volumetric Ethanol Excise Tax Credit (VEETC):**
  - **Current law changed to eliminate impact on Highway Trust Fund**
- **Small Ethanol Producer Credit:**
  - **Farmer co-ops eligible for 10¢/gal producers tax credit.**
  - **Changes definition to 60 mgal/yr (up from 30 mgal/yr)**

# Federal Tax Incentives for Biodiesel

- Included in H.R. 4520
- Awards \$1.00/gal agri-biodiesel and 50¢/gal for waste animal/plant oils. Runs until 12/06.
- Tax incentive for the blender awarded by the Treasury (like VEETC)

# Other National Biofuel Incentives

- **Energy Policy Act of 1992 Alternative Fuel Fleet Requirements (CAFE)**
- **Fuel Economy (CAFE) Credits for Flex-Fuel Vehicles.**

# State Renewable Energy Incentives with Biomass Provisions

<http://www.dsireusa.org/>

## **1) Financial Incentives**

- **State Grant Programs (27 states)**
- **Production Incentives for Renewable Power Generation and Fuels (50 states)**
- **Loan Programs (21 states)**
- **Property Tax Incentives (25 states)**
- **Personal Income Tax Incentives (14 states and PR)**
- **Corporate Tax Incentives (16 states)**
- **Sales Tax Incentives (14 states and PR)**
- **Industrial Recruitment Incentives (7 states)**
- **Rebate Programs (19 states)**

*Last updated 11/04*

# State Renewable Energy Incentives with Biomass Provisions (cont'd)

## **2) Rules & Regulations**

- **Construction and Design Policies (14 states and Guam)**
- **Generation Disclosure Rules (23 states and DC)**
- **Green Power Purchasing/Aggregation Policies (19 states)**
- **Net Metering Rules (36 states and DC)**
- **Public Benefit Funds (15 states)**
- **Renewable Portfolio Standards/Set Asides/Goals (20 states)**
- **Mandatory Utility Green Power Option (5 states)**

*Last updated 11/04*

# State Public Benefit Funds

- **15 states [CA, CT, DE, IL, ME, MA, MN, MT, NJ, NY, OH, OR, PA, RI, WI and DC] have enacted PBF's. More than half specifically promote biomass; MA references biodiesel and biogas, MN references biogas.**
- **Generally state-wide programs**
- **Support for renewable energy resources, energy efficiency initiatives, low-income support programs**
- **Most commonly supported through a charge to all customers on electricity consumption**

# State Renewable Portfolio Standards

- **State Level**

- 16 States have enforceable policies: AZ, CA, CT, HI, IA, MA, MD, ME, NJ, NM, NV, NY, PA, RI, TX, WI
- 2 states have voluntary goals: MN, IL
- 5 states (CO, MN, NY, TX, FL) have local, public, or utility renewable policies
- CO passed RPS November 2 with 52% of vote
- NV includes Biofuels (biodiesel, ethanol)
- MN has 2% biodiesel mandate

# What are the drivers?

- **Energy portfolio diversity: Reliability and decreased vulnerability**
- **National Security**
- **Distributed Generation**
- **Environment – air/water pollution prevention, climate change (Arctic Climate Impact Assessment released, Kyoto Protocol ratified)**
- **Public Health (higher incidences of asthma)**
- **Keeping land in agricultural production (smart growth)**
- **Jobs, Jobs, Jobs...**  
[Oct. 2004 unemployment rate in Ohio is 6.3 percent, U.S. unemployment level 5.5]

# Oil and Natural Gas Prices

- 2005 global oil demand forecast of 83.2 mb/d
- 10/04 Oil prices reached a record of \$60/barrel. 11/04 trading at \$48/barrel
- Nov. 2004, natural gas trading at \$7/Btu, up from \$2.30-\$2.50/Btu before 2000
- Volatile natural gas prices known to spike suddenly by 30-300 percent.

# U.S. is falling behind...

- **Solar PV's: 562 megawatts (MW) in 2002 to 742 in 2003, but US share fell from 120.6 MW in 2002 to 104.2 in 2003**
- **Wind Energy: MW grown 500 percent since 1997 to 39,294 MW in 2003, with the US responsible for just 16 percent and Europe for 74 percent.**
- **Europe moving on biofuels**
- **Why? Much more aggressive policies in EU and Japan**

# Example: Iogen

- **World's first cellulose ethanol fuel for commercial use**
- **Supported by Shell, Petro-Canada, and the Government of Canada**
- **Petro-Canada is the first user of cellulosic ethanol.**
- **Iogen deciding between site in Idaho and Saskatchewan for first cellulosic ethanol plant.**

# Choren: Syn Fuels

- **German-based company**
- **Producing renewable synthetic fuels (diesel) or combined heat and power from varying organic materials - wood and vegetable waste using Fischer-Tropsch process.**
- **Agreements with VW and DaimlerChrysler**



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