



# Arkansas Governor's Commission on Global Warming

Agriculture, Forestry and Waste  
Management Technical Work Group  
Meeting #6, April 29, 2008

Office of the Governor  
Center for Climate Strategies

# Welcome and Introductions

- Technical Work Group (TWG) Members
- Advisory Body Members
- Governor's Office
- Members of the Public
- Center for Climate Strategies

# Stepwise Planning Process

1. *Develop inventory and forecast of emissions*
2. Identify a full range of possible actions
3. Identify initial priorities for analysis
4. *Develop straw proposals*
5. Quantify GHG reductions and costs/savings
6. Evaluate externalities, feasibility issues
7. Develop alternatives to address barriers
8. Aggregate results
9. Iterate to final agreements
10. Finalize and report recommendations

# Agenda

1. Introductions
2. Review and Approval of Prior Call Summary
3. GCGW Process Progress
4. Consider Goals for GCGW Meeting #6 (May 19, 2008)
5. Review Example Policy Options and Potential Goals
6. Discuss Next Steps in Developing Straw Proposals
7. Review of Next Steps for TWG
8. Agenda, Date and Time for Next Meetings
9. Public Comments and Announcements

# Goals for GCGW Meeting #6 (May 19, 2008)

- Goals: Obtain GCGW approval of TWG straw proposal descriptions and design characteristics on priority policy options
- TWG Steps:
  - Draft straw proposals
  - Revise as needed
  - Approve straw proposals to forward to GCGW
- Develop recommendations for improving draft Arkansas GHG Inventory and Forecast
  - On-going - GCGW Meetings #6 - #8

# Next Steps for AFW TWG

- Develop consensus recommendations for design characteristics of AFW pending priority policy options
- Draft straw proposals for the design of policy options using a standard template (see next slide)
- Identify policies/programs in place in Arkansas related to policy options (to define baselines)
- Prepare progress update with straw proposals for next GCGW meeting

# Development of Priority Policy Options

- Design Template / Matrix
  - Policy description
  - Policy design (goals, timing, parties involved)
  - Potential implementation mechanisms
  - Related policies/programs in place (in Arkansas)
  - Type(s) of GHG reductions
  - Estimated GHG reductions and costs or cost savings
  - Key uncertainties
  - Types of additional (non-GHG) benefits and or costs
  - Feasibility issues, if needed
  - Status of group approval (reserved for GCGW)
  - Level of group support (reserved for GCGW)
  - Barriers to consensus (reserved for GCGW)

# Development of Straw Proposals for Priority Policy Options

AFW-1	Manure Management
AFW-2	Promotion of Farming Practices that Achieve GHG Benefits
AFW-3	Improved Water Management and Use
AFW-4	Expanded Use of Agriculture and Forestry Biomass Feedstocks for Electricity, Heat or Steam Production
AFW-5	Expanded Use of In-State Liquid Biofuels
AFW-6	Expanded Use of Locally Produced Farm and Forest Products
AFW-7	Forest Management and Establishment for Carbon Sequestration
AFW-8	Advanced Recovery and Recycling
AFW-9	End of Use Waste Management Practices

# Example Policy Designs

- **Title:** Expanded Use of Agriculture and Forestry Biomass Feedstocks for Electricity, Heat or Steam Production
- **Policy Design:**
- Energy Crop: Annually harvest at least 5 million dry tons of dedicated energy crop production materials by 2020, which includes:
  - Establishing 1 million acres of identified energy crop production by 2020; and
  - Transitioning 50 percent of expiring CRP contracts to energy crop production.
- Agriculture Crop Residue: Annually harvest at least 10 million tons of annual crop residue biomass for energy production by 2020.
- Forest Biomass: Annually harvest at least 1 million tons of forest products or wood residues for biomass energy production by 2020.
- Biomass Plant: Have at least one major industrial operation contracting with producers to use biomass as the primary energy source for plant operations by 2015.
- Biofuels: Have at least one biofuels production plant contracting with producers to use biomass as the primary energy source by 2015.

# Example Policy Option Goals

## Goals:

- **AFW 1 - Manure Management**

- By 2025, reduce methane emissions from animal feeding operations (AFOs) through methane capture (anaerobic digestion) projects covering X% of the State's dairies and hog operations.
- By 2025, apply improved manure handling and storage practices on X% of manure generated.

- **AFW 2 – Promotion of Farming Practices that Achieve GHG Benefits**

- By 2025, implement cultivation practices to enhance soil carbon levels on x% of the acreage that is not already using these practices.
- By 2025, implement cultivation practices to reduce nutrient application by x%.

- **AFW 3 – Improved Water Management and Use**

- Decrease use of ground water for irrigation by X% by 2025.
- Decrease energy use for water purification by X% in 2025.

# Example Policy Option Goals (Cont.)

## Goals:

- **AFW 4 - Expanded Use of Agriculture and Forestry Biomass Feedstocks for Electricity, Heat, or Steam Production**
- Agricultural Residues: Increase agricultural residues use for electricity, steam, and heat generation to utilize X% of available in-state agricultural residue biomass by 2015, X% of available biomass by 2025.
- Forest Residues: Increase forest residues use for electricity, steam, and heat generation to utilize X% of available biomass by 2015, X% of available in-state forest residue by 2025.
- Energy Crops: Increase the production of energy crops to produce biomass feedstock for electricity, steam, and heat generation by increasing acreage devoted to energy crops to X acres by 2025.
- Methane from Livestock Manure and Poultry Litter: By 2025, utilize X% of available methane from livestock manure and Poultry Litter for renewable electricity, heat and steam generation. [Note overlap with AFW-1]
- Capture of Waste Heat: By 2025, ensure that facilities using biomass are capturing X% of waste heat for use in electricity, heat and steam production.

# Example Policy Option Goals (Cont.)

## Goals:

- **AFW 5 – Expanded Production and In-state Use of Biofuels**
- Gasoline displacement goals: Achieve in-state cellulosic ethanol production equivalent to offsetting gasoline consumption in the state by X% in 2015 and X% in 2025.
- Fossil diesel displacement goals: Increase in-state biodiesel production from Arkansas feedstocks to offset diesel consumption in the state by X% in 2015 and X% in 2025.
- OR Produce X,000 gallons of biodiesel and X,000 gallons of ethanol by 2025.
- **AFW 6 – Expanded Use of Locally Grown Farm and Forestry Products**
- Farmer's Market: Increase the number of local farmer's markets in Arkansas by X% by 2015 and X% by 2025.
- Local Produce: Of the food Arkansans consume, X% would be grown or produced locally by 2025.
- Locally Grown and Processed Lumber: The amount of locally grown and processed lumber would displace imported wood by X% by 2015 and X% by 2025.

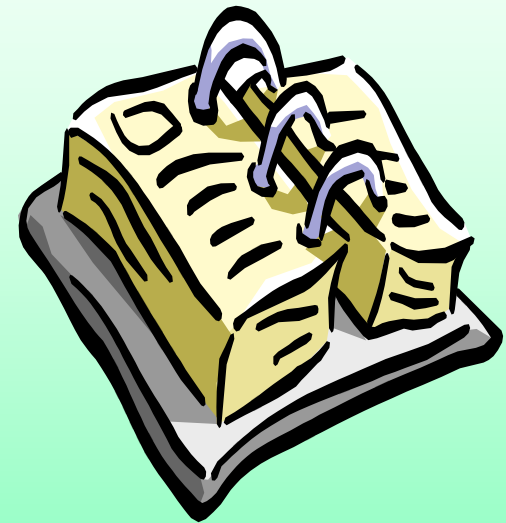
# Example Policy Option Goals (Cont.)

## Goals:

- **AFW 7 - Forest Management and Establishment for Carbon Sequestration**
- Implement sustainable forest management practices to achieve carbon benefits on X,000 acres of private land by 2025.
- Implement sustainable forest management practices to achieve carbon benefits on X% of state-owned resource lands by 2025.
- Restore/establish X,000 acres of forest by 2015 and X,000 acres by 2025.
- Implement urban tree planting and retention programs to increase the number of urban trees by X by 2015 and by X by 2025.
- **AFW 8 – Advanced Recovery and Recycling**
- Divert X% of the municipal solid waste stream to recycled materials markets by X% by 2015 and X% by 2025.
- **AFW 9 - End of Use Waste Management Practices**
- Increase the number of uncontrolled municipal solid waste landfills recovering methane as an energy source, such that X% of the landfill gas being generated at uncontrolled landfill sites is controlled by 2025.

# Next AFW TWG Meeting

- Agenda:
  - Develop straw proposals for policy description, design, and related policies/programs in place
  - Begin review of draft inventory and forecast for Arkansas
- Dates/Times for Next TWG Calls
  - AFW TWG Call #7 – Tuesday 6 April 1pm – 2:30pm Central Time



# Public Input, Announcements