

Colorado  
Climate  
Project



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Organization

# Colorado Climate Action Panel Meeting #5 August 1, 2007

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CENTER FOR CLIMATE STRATEGIES

# Agenda

- Welcome and Introductions
- Review of Day's Agenda
- Review and Approval of Draft Summary of Climate Action Panel (CAP) Meeting #4
- Review and Vote on Draft Policy Options
- Updates On Colorado Greenhouse Gas Emissions Inventory & Forecast
- Review of Next Steps for PWGs
- Agenda, Time and Date for Next Meeting
- Public Input and Announcements

# Ten Step Work Plan

- Get organized
- Develop initial GHG inventories and forecasts
- Identify possible GHG policy options
- Identify initial priorities for first round evaluation
- Draft straw design proposals for draft policy options
- Evaluate GHG reduction potential, cost/cost savings
- Identify potential barriers to consensus, alternatives
- Modify, add or subtract policy options as needed
- Evaluate cumulative results of policy options
- Finalize emissions projections, recommendations and report language

# Draft Cumulative Results

## Consumption Basis Net

	1990	2000	2012	2020
Projected CO GHG Emissions	59.4	82.9	107.0	123.3
Total GHG Reductions from CAP			28.25	82.63
Projected Emissions After Current CAP Reduction Estimates			78.8	40.7

## Consumption Basis Gross

	1990	2000	2012	2020
Projected CO GHG Emissions	86.1	109.6	133.7	150.0
Total GHG Reductions from CAP			28.25	82.63
Projected Emissions After Current CAP Reduction Estimates			105.5	67.4

## Production Basis Net

	1990	2000	2012	2020
Projected CO GHG Emissions	58.4	80.7	104.4	120.7
Total GHG Reductions from CAP			28.25	82.63
Projected Emissions After Current CAP Reduction Estimates			76.1	38.1

## Production Basis Gross

	1990	2000	2012	2020
Projected CO GHG Emissions	85.1	107.4	131.1	147.4
Total GHG Reductions from CAP			28.25	82.63
Projected Emissions After Current CAP Reduction Estimates			102.8	64.8

# Residential, Commercial, Industrial

- RCI-1: Expanded Demand Side Management
- RCI-2: Energy Efficiency in Buildings Owned by State and Local Governments
- RCI-3: Enforcement of Building Codes
- RCI-4: Planning and Design
- RCI-5: Inverted Block Rates to Fund Energy Efficiency
- RCI-6: Retrofitting Existing Buildings for Energy Efficiency
- RCI-7: Pricing and Purchasing
- RCI-8: Renewable Energy Systems on New and Existing Buildings
- RCI-9: Energy Delivery (CHP)
- RCI-10: Targeting Small and Medium Enterprises

# Break



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# Energy Supply

- ES-1: Renewable Energy Incentives Including Waste to Energy
- ES-2: Mandated Portfolio Standards
- ES-2a: Clean Energy Portfolio Standard
- ES-3: Transmission Infrastructure for Renewables
- ES-4: Cost for CO2 Emissions (Cap and Trade or Tax)
- ES-5: Public Benefit Charge Funds
- ES-6: Incentives for CHP, DG, Smart Grid
- ES-7: Carbon Capture & Storage Infrastructure
- ES-8: Pricing and Rates (Covered under RCI-7)
- ES-9: R&D for Carbon Emissions Reducing Generating Technologies
- ES-10: Promote Advanced Fossil Fuel Generation with Carbon Capture, Including IGCC

# Energy Supply

- ES-11: Small New Hydro and Efficiency Improvements at Existing Hydro, Identifying Other Small Renewables and Removing Barriers Thereto
- ES-12: Nuclear Energy
- ES-13: Efficiency Improvements for Existing Generators (Includes Heat Recovery)
- ES-14: Oil and Gas Operations
- ES-15: CO2 Emission Standards for Power Plants

# Break



# Transportation

- TLU-1: Smart Growth and Related Planning
- TLU-2: Incentives for Purchase and Operation of Low-GHG Vehicles
- TLU-3: Improve and Expand Transit Service
- TLU-4: Heavy-Duty Vehicle Idle Reduction
- TLU-5: Low Carbon Fuels Standard
- TLU-6: Clean Car Program (Pavley GHG Standards for Autos)
- TLU-7: Transit Marketing, Promotion, and Pricing Incentives
- TLU-8a: Fuel Tax
- TLU-8b: Variable-Priced Insurance
- TLU-9: Parking Management
- TLU-10: Commuter Benefits Programs
- TLU-11: Driver and Consumer Education

# Break



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# Agriculture, Forestry & Waste Management

- AFW-1: Agricultural Crop Management
- AFW-2: Manure Management and Energy Utilization
- AFW-3: Reductions in On-Farm Energy Use
- AFW-4: Biodiesel Production
- AFW-5: Ethanol Production
- AFW-6: Preserve Lands with Carbon Storage Value
- AFW-7: Biomass Feedstocks for Energy Production
- AFW-8: Forestry Programs to Enhance GHG Benefits
- AFW-9: Source Reduction, Enhanced Recycling and Composting Programs
- AFW-10: Landfill Methane Energy Programs

# Cross Cutting Issues

- CC-1: GHG Inventories and Forecasting
- CC-2: GHG Reporting
- CC-3: GHG Registry
- CC-4: Statewide GHG Reduction Goals and Targets
- CC-5: State and Local Government GHG Emissions (Lead-by-Example)
- CC-6: Comprehensive Local Government Climate Action Plans
- CC-7: Public Education and Outreach
- CC-9: Establish a Proactive Public-Private Partnership to Seek Investment Capital and Philanthropic Funding for Reducing GHG Emissions and Supporting Development of the New Energy Economy in Colorado
- CC-10: Vulnerability and Adaptation

# Water Adaptation

- WA-1: Need for Leadership
- WA-2: Consideration of Climate Change in Water Decisions
- WA-3: Colorado River Water Availability
- WA-4: Interstate Compacts
- WA-5: Climate and Hydrologic Data
- WA-6: Drought Vulnerability Assessments and Planning
- WA-7: Regional Modeling
- WA-8: Water Conservation
- WA-9: Agriculture
- WA-10: Energy and Water

# Water Adaptation

- WA-11: Information Exchanges
- WA-12: Recreation and Tourism
- WA-13: Water Quality and the Environment
- WA-14: Groundwater
- WA-15: Colorado Water Institute

# Inventory & Forecast Updates

- RCI
  - Reduce energy consumption in forecast for HB07-1146 (Energy Conservation Building Codes). Reduction in emissions accounted for under the RPS adjustment to avoid double counting
- Energy Supply
  - Lowered emissions to account for HB07-1281 (RPS) (-23.9 MMtCO<sub>2</sub>e, 2007-2020, combined reduction for Building Codes and RPS legislation)
    - IOUs to provide 20% renewable energy by 2020
    - Non-IOUs to provide 10% renewable energy by 2020
    - Incentives for in-state generation, community-based projects and solar energy

# Inventory & Forecast Updates

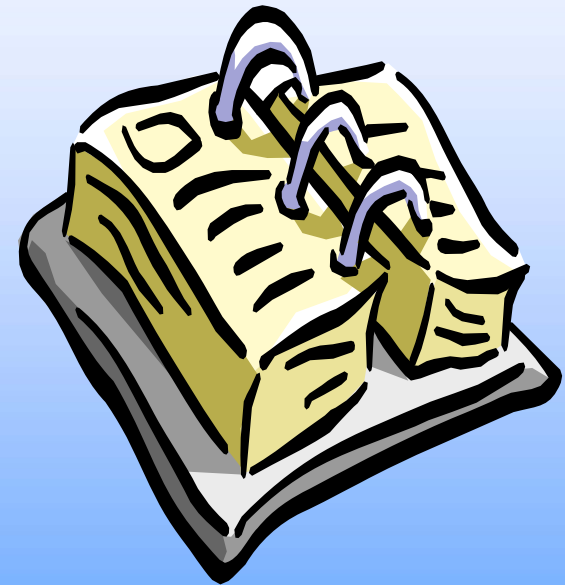
- Waste Management
  - Revisions to Municipal Solid Waste (MSW) to incorporate improvements to activity data
    - 1990 emissions decrease from 1.6 to 0.8 MMtCO<sub>2</sub>e
    - 2020 emissions decrease from 5.7 to 2.7 MMtCO<sub>2</sub>e
- Forestry
  - Remove forest soil organic carbon sink per USFS recommendations (-7.1 MMtCO<sub>2</sub>e)

# Next Steps PWGs - Final Analysis and Review

- Complete alternative policy design, analysis and implementation mechanisms, as needed, to address CAP decisions
- Complete quantification of stand-alone and cumulative GHG reductions and benefits & costs for remaining options

# Next CAP Meeting

- Agenda:
  - Review and approval of remaining draft policy options
  - Review of final report process
- September 12, 2007



# Public Input, Announcements