



Arkansas Governor's Commission on Global Warming

Meeting #8, July 31, 2008

Arkansas Governor's Office
The Center for Climate Strategies

Welcome and Introductions

- Arkansas Governor's Office
- Governor's Commission on Global Warming Members
- Advisory Group Members
- Members of the Public
- Center for Climate Strategies

Agenda

1. Welcome and Introductions
2. Review of Day's Agenda
3. Approval of Draft Summary of GCGW Meeting #7
4. Dates and Times for Next GCGW Meetings
5. Review of GCGW Process Status and Next Steps
6. Review of Approaches to GHG Reduction Goals/Targets
7. Review and Consideration of Draft Pending Priority Policy Options
8. Update on Status of Arkansas' Draft GHG Inventory and Forecast
9. Next Steps for Commission and Technical Work Groups
10. Agenda for GCGW Meeting #9
11. Public Input and Announcements
12. Adjourn

Dates for Remaining GCGW Meetings

- Meeting #8
 - July 31 (Thursday); 9:30 am – 4:30 pm
- Meeting #9
 - Sept. 9 (Tuesday); 9:30 am – 4:30 pm
- Meeting #10 (Final Meeting)
 - September 25 (Thursday); 9:30 am – 4:30 pm
- Final Report and Recommendations to Governor
 - Friday, October 31

Stepwise Planning Process

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

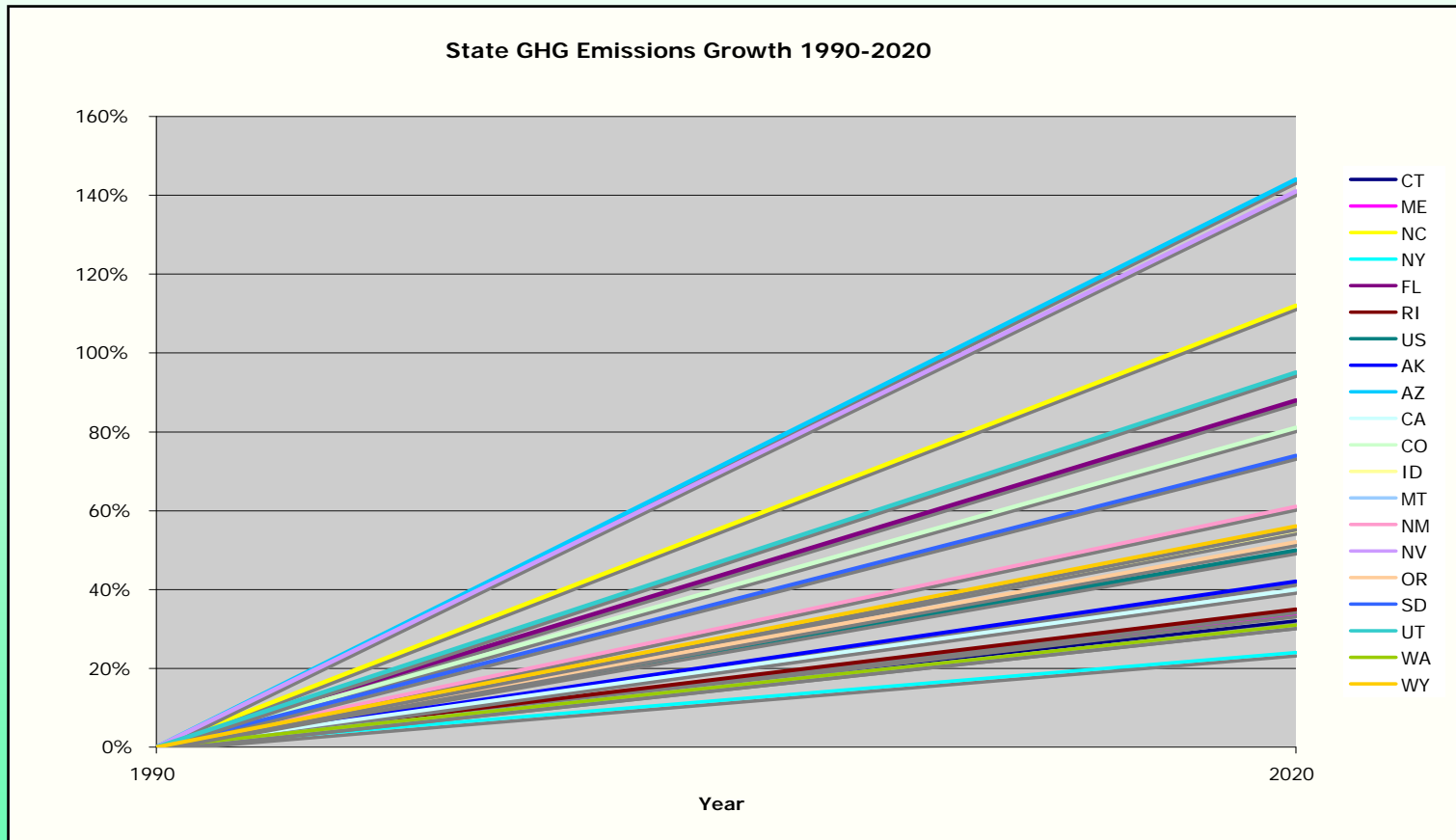
Statewide GHG Reduction Goals and Targets

- Gross vs. Net (Sinks)
- Production vs. Consumption
- Levels
- Timing

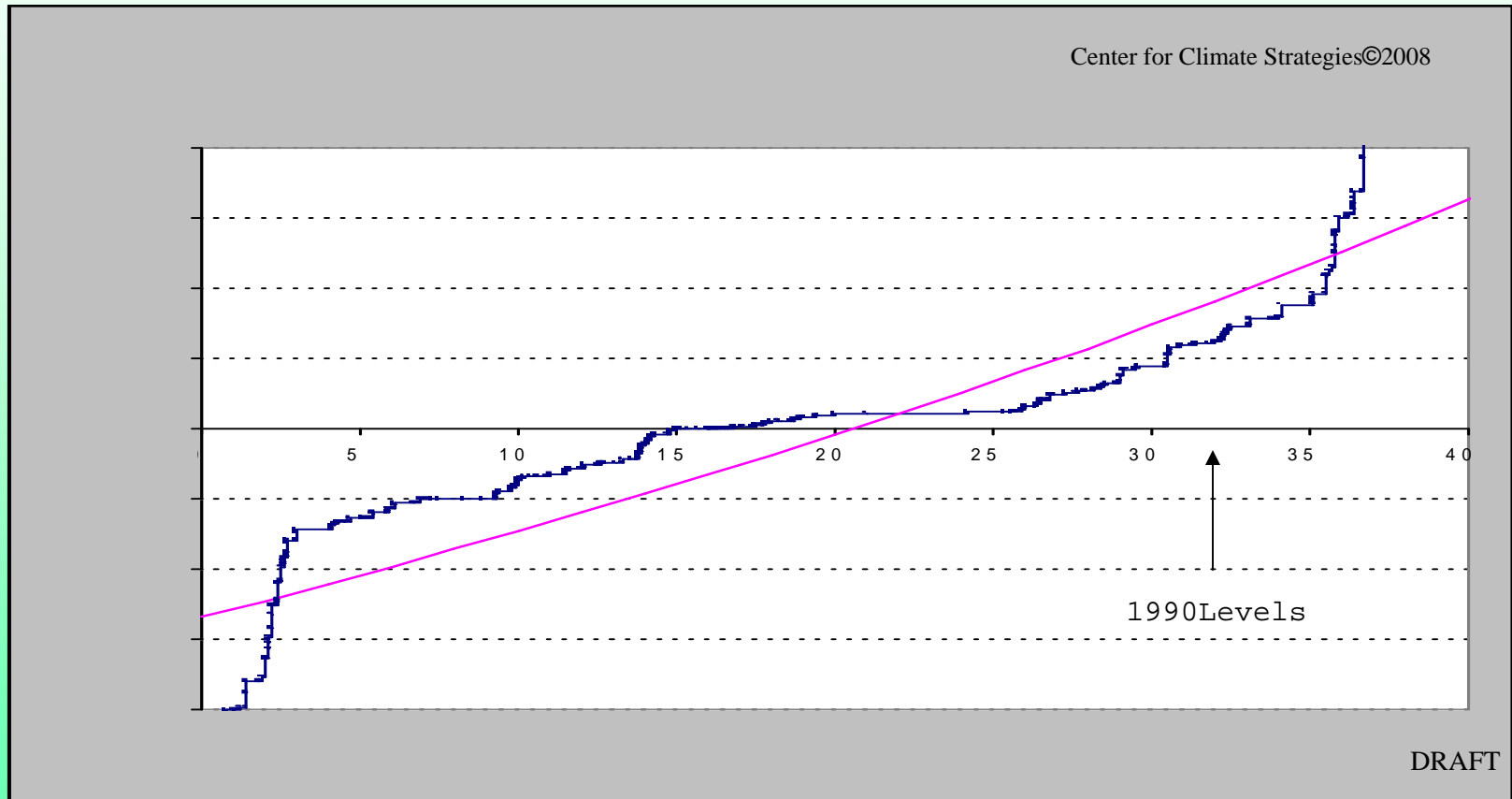
State, Province, or Region	1990-2020 GHG Forecast	State Goals	Climate Plan Coverage
Arizona	144%	<ul style="list-style-type: none"> • 2000 levels by 2020; 50% below by 2040 • 15% below 2005 levels by 2020 (WCI) 	106%
California	40%	<ul style="list-style-type: none"> • E.O.: 2000 level by 2010; 1990 by 2020; 80% below 1990 by 2050 • AB-32: 1990 levels by 2020 • 15% below 2005 levels by 2020 (WCI) 	100%
Colorado	71%	<ul style="list-style-type: none"> • 20% below 2005 level by 2020; 80% below by 2050 	75%
Connecticut	32%	<ul style="list-style-type: none"> • 1990 level by 2010; 10% below by 2020; 75% below by 2050 	100%
Florida	?	<ul style="list-style-type: none"> • 2000 level by 2017; 1990 level by 2025; 80% below 1990 by 2050 	?
Massachusetts	?	<ul style="list-style-type: none"> • 1990 level by 2010; 10% below by 2020; 75% below by 2050 	?
Maine	34%	<ul style="list-style-type: none"> • 1990 level by 2010; 10% below by 2020; 75% below by 2050 	100%
Maryland	42%	<ul style="list-style-type: none"> • Recommended: 10% below 2006 levels by 2012; 15% below 2006 levels by 2015; 25% (enforceable)-50% (science based) below 2006 levels by 2020; 90% below 2006 levels by 2050. 	100%
Minnesota	48%	<ul style="list-style-type: none"> • Next Generation Energy Act: 15% below 2005 levels by 2015; 30% by 2025; 80% by 2050 	TBD
Montana	30%	<ul style="list-style-type: none"> • 1990 level by 2020; 80% below by 2050 (consumption & production) 	89%-105%
North Carolina	113%	?	TBD
NEG/ECP	?	<ul style="list-style-type: none"> • 1990 level by 2010; 10% below by 2020; 75% below by 2050 	TBD

State, Province, or Region	1990-2020 GHG Forecast	State Goals	Climate Plan Coverage
New Jersey	28%	<ul style="list-style-type: none"> E.O. 54: 1990 level by 2020; 80% below 2006 levels by 2050 	TBD
New Mexico	65%	<ul style="list-style-type: none"> 2000 level by 2012; 10% below by 2020; 75% below by 2050 15% below 2005 levels by 2020 (WCI) 	133%
New York	24%	<ul style="list-style-type: none"> 5% below 1990 by 2010 	?
Ontario	?	<ul style="list-style-type: none"> 6% below 1990 by 2014 	n/a
Oregon	61%	<ul style="list-style-type: none"> 10% below 1990 by 2020; 75% below 1990 by 2050 15% below 2005 levels by 2020 (WCI) 	85%
Puget Sound	37%	<ul style="list-style-type: none"> 1990 level by 2010; 10% below by 2020; 75% below by 2100 	100%
Rhode Island	35%	<ul style="list-style-type: none"> 1990 level by 2010; 10% below by 2020; 75% below by 2050 	100%
South Carolina	87%	<ul style="list-style-type: none"> Recommended: 5% below 1990 levels by 2020 	99%
Vermont	26-59%	<ul style="list-style-type: none"> 25% below 1990 levels by 2012; 50% below 1990 by 2028; 75% below by 2050 	TBD
Utah	95%	<ul style="list-style-type: none"> 15% below 2005 levels by 2020 (WCI) 	TBD
Washington	40%	<ul style="list-style-type: none"> E.O.: 1990 levels by 2020; 25% below 1990 by 2035; 50% below 1990 by 2050 15% below 2005 levels by 2020 (WCI) 	TBD
WCI	54%	<ul style="list-style-type: none"> 15% below 2005 levels by 2020 (AZ, NM, CA, OR, UT, WA, BC, MB) 	TBD
British Columbia	69%	<ul style="list-style-type: none"> 15% below 2005 levels by 2020 (WCI) 	TBD
Manitoba	TBD	<ul style="list-style-type: none"> 15% below 2005 levels by 2020 (WCI) 	TBD

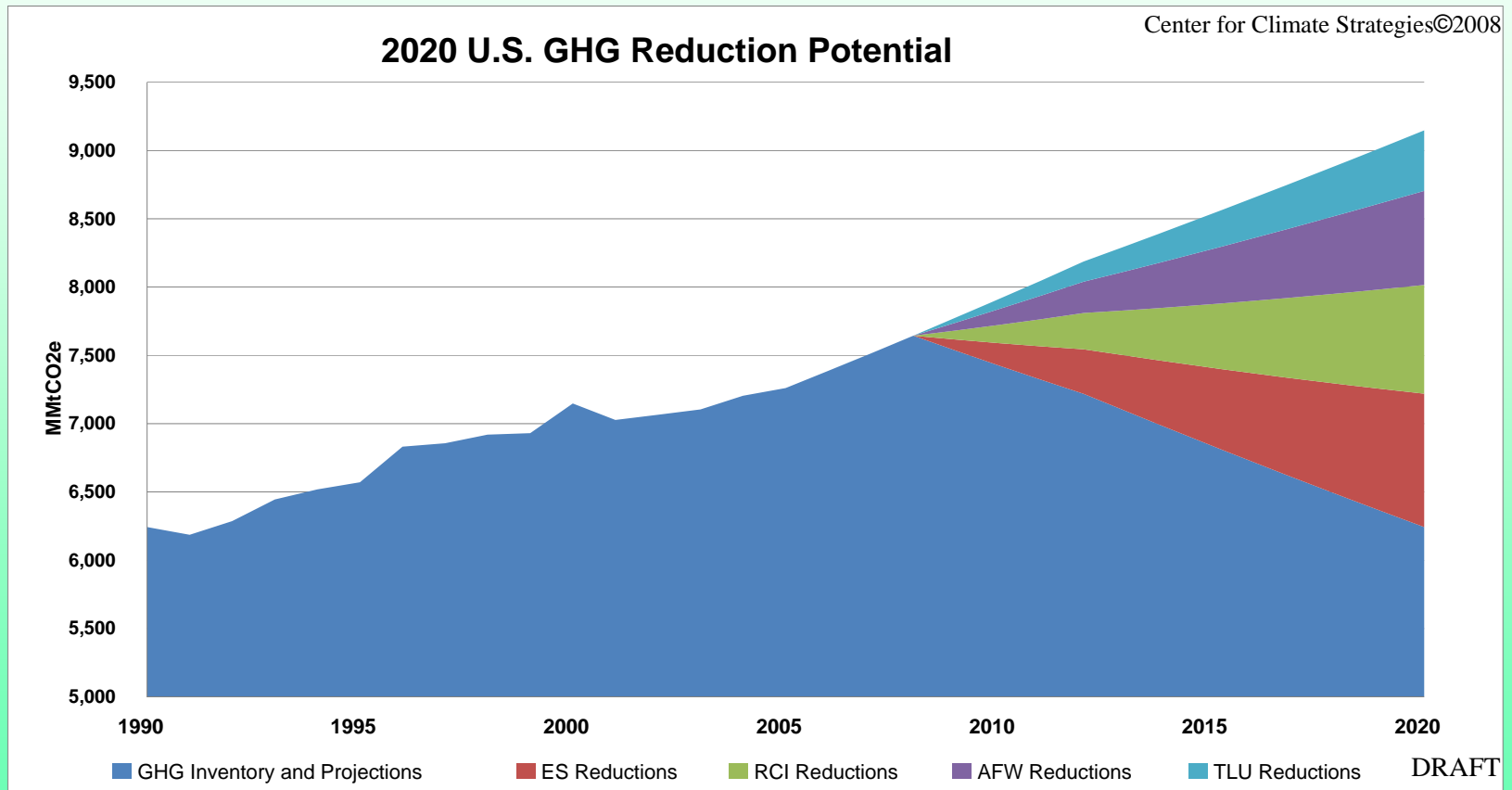
US States GHG Growth Rates (1990-2020, CCS)



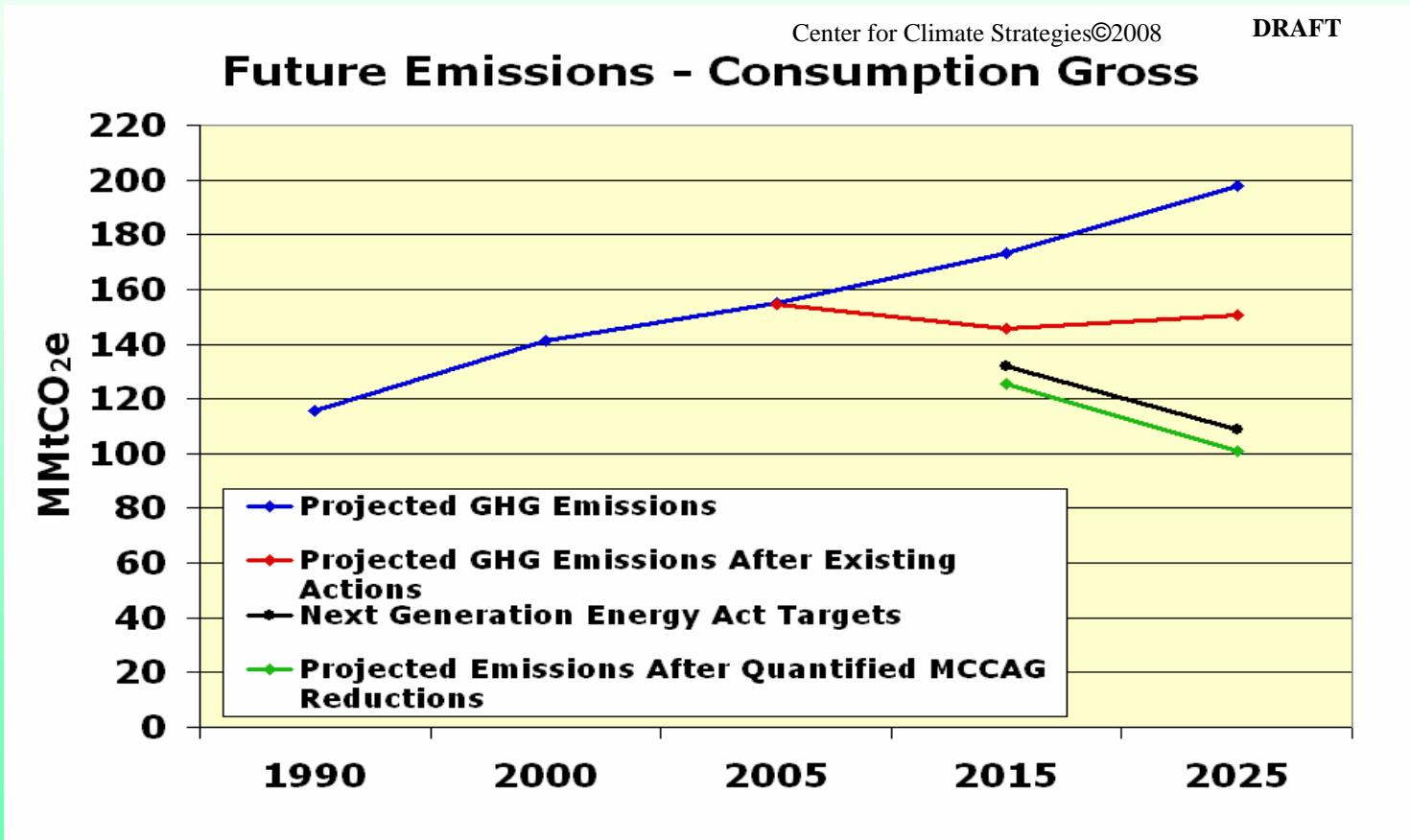
Economy Wide Supply Curve, US States (CCS, 2008)



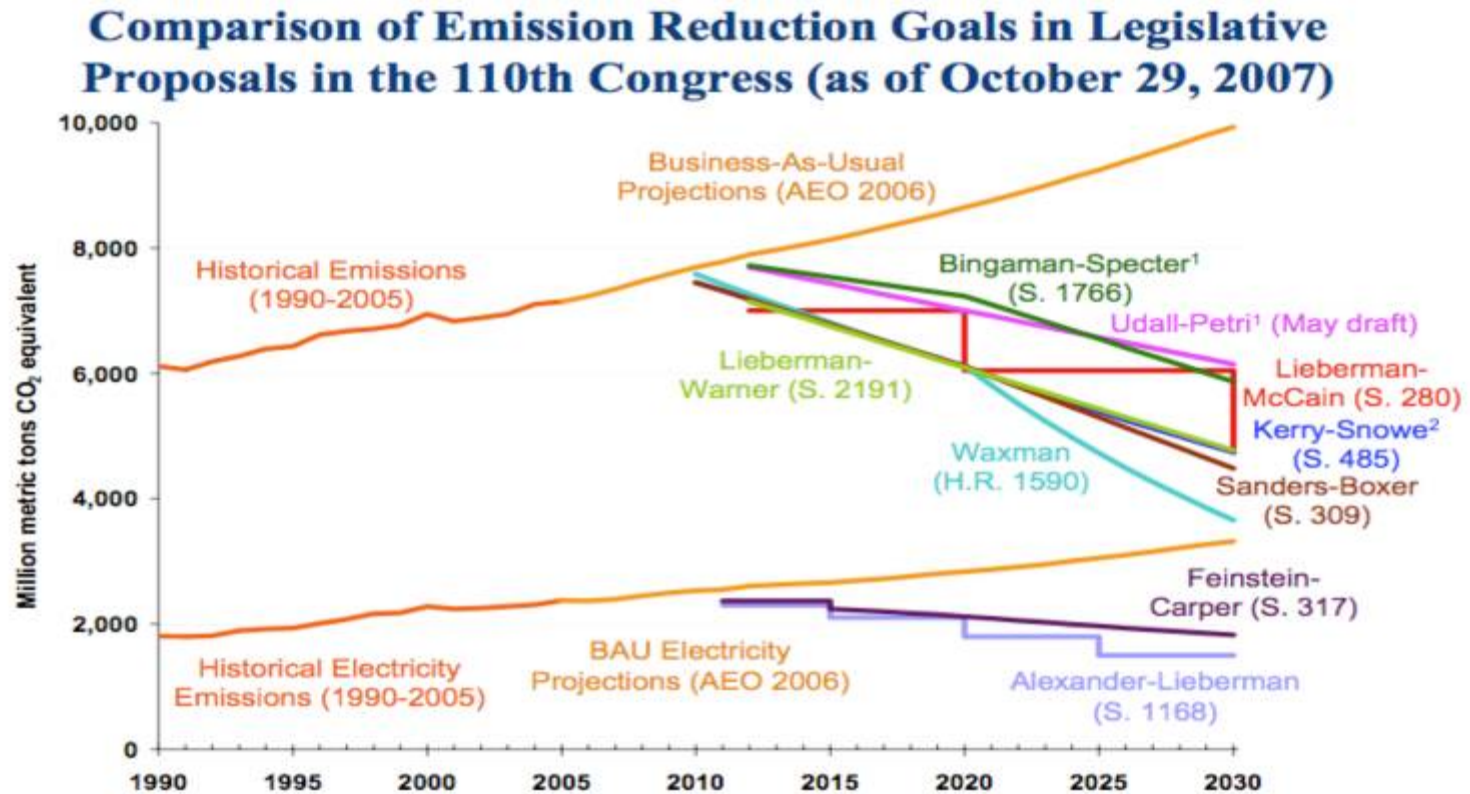
Contribution by Sector, US States (CCS, 2008)



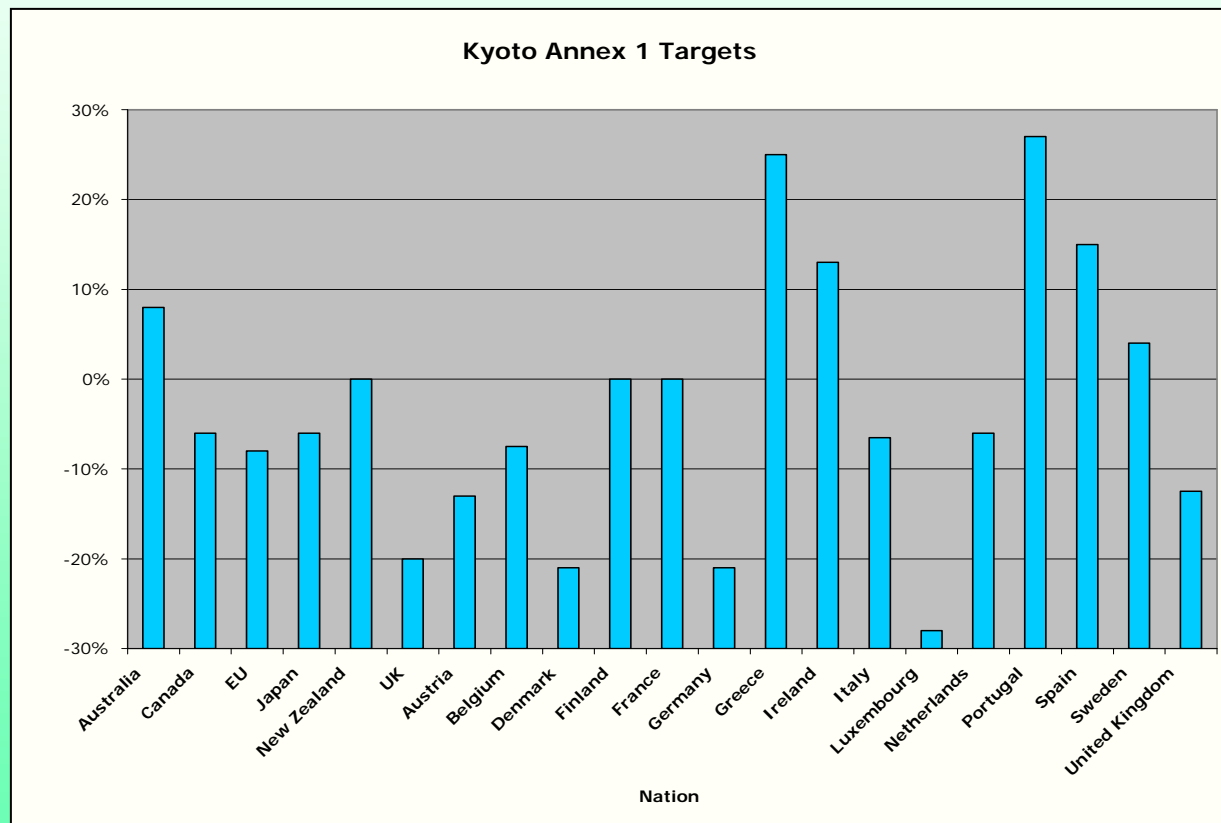
MN GHG Targets 2025 (CCS, 2008)



National Emissions and Targets (RFF, 2008)



International GHG Targets



Overlaps Between Options

Policy Option	Policy Option	Overlap Adjustment To:	Notes
CC-11 (Comprehensive Local Government Climate Action Plans)	RCI-3a (Reduced Energy Use in New and Retrofitted State-Owned Buildings) and RCI-3b (Reduced Energy Use in State-Owned Buildings)	Keep in CC-11 and RCI-3	Implementation Mechanisms language for energy audits of state facilities and activities
AFW-4 (Expanded Use of Agriculture and Forestry Biomass Feedstocks for Electricity, Heat, or Steam Production)	ES-3a (Renewable Portfolio Standard (RPS)) ES-6 (Combined Heat and Power)	AFW-4	Need to determine if full or partial overlap exists
AFW-5 (Expanded Use of Liquid Biofuels)	TLU-2 (Research and Development of Renewable Transportation Fuels) TLU-3 (Advanced Biofuels Development and Expansion)	AFW-5	Need to determine if full or partial overlap exists for the renewable energy biomass component
AFW-7 (Forest Management and Establishment for Carbon Sequestration)	RCI-3a (Reduced Energy Use in New and Retrofitted State-Owned Buildings) RCI-3b (Reduced Energy Use in State-Owned Buildings) RCI-4a (Promotion and Incentives for Improved New Building Design and Construction) RCI-4b (Promotion and Incentives for Improved Existing Buildings) RCI-9 (Support for Energy-Efficient Communities, Including Smart Growth)	AFW-7	Urban forestry component reduces heating and cooling energy requirements in RCI sectors
TLU-4 (Smart Growth, Pedestrian and Bicycle Infrastructure)	TLU-5 (Improve and Expand Transit Service and Infrastructure) TLU-6 (School and University Transportation Bundle)	TLU-5 and TLU-6	Transit and land use interact closely; school siting overlaps with land use and school access overlaps with transit
TLU-7 (Promote and Facilitate Freight Efficiency)	TLU-11 (Lower Speed Limits and Enforcement)	TLU-7	Savings in long-haul truck emissions overlap with benefits from speed reduction

Cross Cutting (CC) Issues

1. Greenhouse Gas Inventories and Forecasts
2. State Greenhouse Gas Reporting and Registry
3. Statewide Greenhouse Gas Reduction Goals or Targets
4. The State's Own Greenhouse Gas Emissions (Lead-by-Example)
5. Comprehensive Local Government Climate Action Plans
6. State Climate Public Education and Outreach
7. Optimizing Best-Scale of Reduction Policies
8. Creative Financial Mechanisms
9. Adaptation and Vulnerability
10. Climate-Change Related Economic Development
11. Regulatory Realignment in Government to Encourage Constructive Climate Action

Transportation & Land Use (TLU)

1. Study the Feasibility of Plug-In Vehicles
2. Research and Development for Renewable Transportation Fuels
- 3a. Advanced Biofuels Development and Expansion (10%)
- 3b. Advanced Biofuels Development and Expansion (12%)
4. Smart Growth, Pedestrian and Bicycle Infrastructure
5. Improve and Expand Transit Service and Infrastructure
6. School and University Transportation Bundle
7. Promote and Facilitate Freight Efficiency
8. Procurement of Efficient Fleet Vehicles (Passenger and Freight)
9. Fuel Efficiency: Clean Car Incentive
10. Public Education
11. Lower Speed Limits and Enforcement

Break



Energy Supply (ES)

1. Green Power Purchases and Marketing (Transferred to RCI-7)
2. Technology Research & Development
- 3a. Renewable Portfolio Standard (RPS)
- 3b. Renewable Energy Feed-In Tariff (REFIT)
4. Grid-Based Renewable Energy Incentives and/or Barrier Removal
5. Approaches Benefiting from Regional Application
6. Combined Heat and Power
7. Geological Underground Sequestration for New Plants
8. Transmission System Upgrades
9. Nuclear Power
10. Carbon Tax
11. Efficiency Improvements and Repowering of Existing Plants

Agriculture, Forestry & Waste Management (AFW)

1. Manure Management
2. Promotion of Farming Practices that Achieve GHG Benefits (Soil Carbon and Nutrient Efficiency)
3. Improved Water Management and Use (Increased Surface Water and Improved Purification)
4. Expanded Use of Agriculture and Forestry Biomass Feedstocks for Electricity, Heat, or Steam Production (Energy From Biomass, Energy From Livestock Manure and Poultry Litter, and Capture of Waste Heat)
5. Expanded Use of Advanced Biofuels
6. Expanded Use of Locally Produced Farm and Forest Products
7. Forest Management and Establishment for Carbon Sequestration (Urban Forestry, Sustainable Forest Management, and Afforestation)
8. Advanced Recovery and Recycling
9. End of Use Waste Management Practices

Break



Residential, Commercial, Industrial (RCI)

- RCI-1: Improved Building Codes
- RCI-2a: Utility and Non-Utility DSM for Peak Use Electricity
- RCI-2b: Utility and Non-Utility DSM and Energy Efficiency for Electricity
- RCI-3a: Reduced Energy Use in New and Retrofitted State-Owned Buildings: Government "Lead by Example"
- RCI-3b: Reduced Energy Use in Existing State-Owned Buildings: Government "Lead by Example"
- RCI-4a: Promotion and Incentives for Improved New Building Design and Construction
- RCI-4b: Promotion and Incentives for Improved Existing Building Design and Construction
- RCI-5: Education for Consumers, Industry Trades, and Professions
- RCI-6: Incentives and Funds to Promote Renewable Energy and Energy Efficiency
- RCI-7: Green Power Purchasing for Consumers
- RCI-8: Nonresidential Energy Efficiency
- RCI-9: Support for Energy-Efficient Communities, Including Smart Growth
- RCI-10: Energy-Savings Sales Tax

AR Inventory & Forecast Update

- TWGs reviewing to suggest revisions if/as needed and provide assistance
- GCGW will review and consider revisions at Meeting #9 with Final Approval by Meeting #10

Next Steps

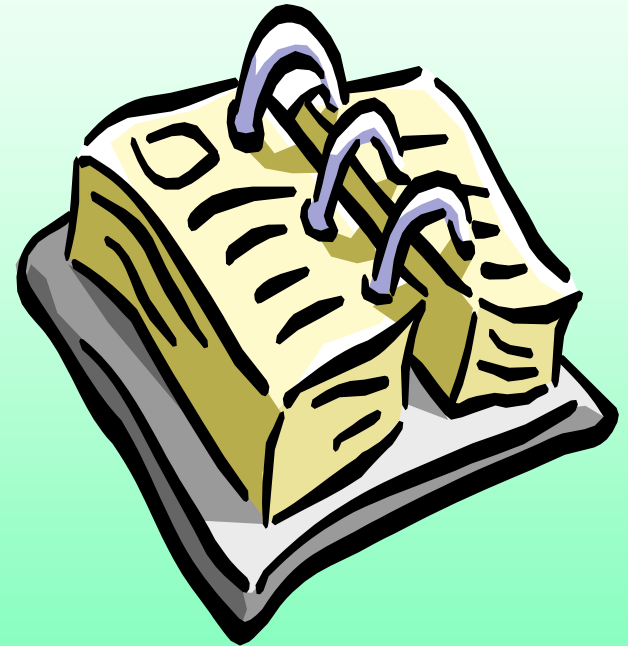
- TWGs
 - Refine pending priority policy options based on GCGW input
 - Update quantification and other elements of the policy templates if/as needed
 - Review and update the draft inventory and forecast if/as needed
- GCGW
 - Review and approve draft pending policy options
 - Review and approve final proposed revisions to the inventory and forecast

Final Report Process

- Completion of policy templates, inventory and forecast report, based on GCGW meeting results
- Production of first draft of full report and appendices by CCS for GCGW review and comment
- Final draft completed by CCS for final review and comment
- Report transmitted by CCS to the Governor on behalf of GCGW

Next Commission Meeting

- Agenda:
 - Review and approval of remaining draft pending MCCAG policy options
 - Identify alternatives for further consideration of remaining options
 - Review and approval of TWG suggested updates to Arkansas' draft GHG inventory and forecast
- Sept. 9, Little Rock



Public Input, Announcements