



# Minnesota Climate Change Advisory Group

Meeting #8  
January 24, 2008

Minnesota Department of Commerce  
Minnesota Pollution Control Agency  
The Center for Climate Strategies

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## Welcome and Introductions

- State of Minnesota
- Minnesota Climate Change Advisory Group (MCCAG)
- Members of the Public
- Center for Climate Strategies

# Agenda

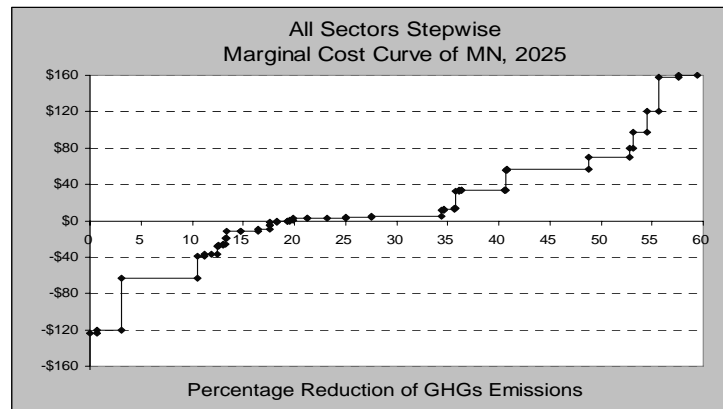
9:00 am	Introductions and Review of Day's Agenda
9:05	Review and Approval of Draft Summary of MCCAG Meeting #6 and #7
9:10	Review of MCCAG Progress and Results
9:25	Public Comment
9:35	Review and Approval of Agriculture and Waste Management Draft Policy Options
10:35	Coffee Break
10:40	Review and Approval of Cross Cutting Issues Draft Policy Options
11:00	Review and Approval of Transportation and Land Use Draft Policy Options
12:00	Lunch Break
12:30 pm	Review and Approval of Residential, Commercial and Industrial Draft Policy Options
1:00	Review and Approval of Energy Supply Draft Policy Options
2:55	Coffee Break
3:00	Review and Approval of Cap and Trade Draft Policy Options
4:50	Final report process
4:55	Public Input and Announcements
5:00	Adjourn

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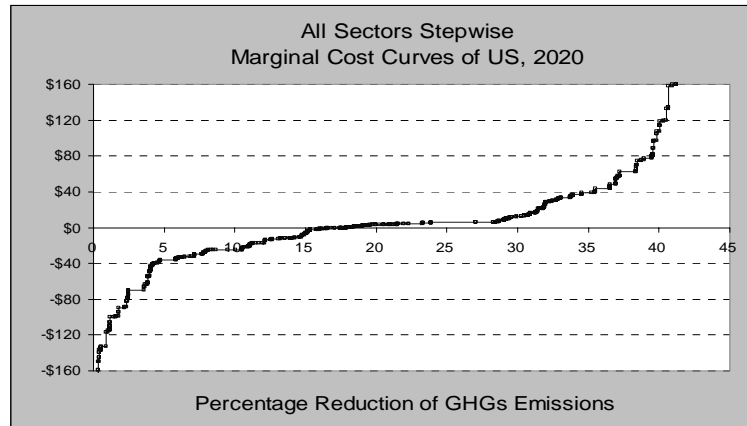
## Draft MN GHG Supply Curve (completed & pending options)



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# 12 States GHG Supply Curve (from climate action plans)



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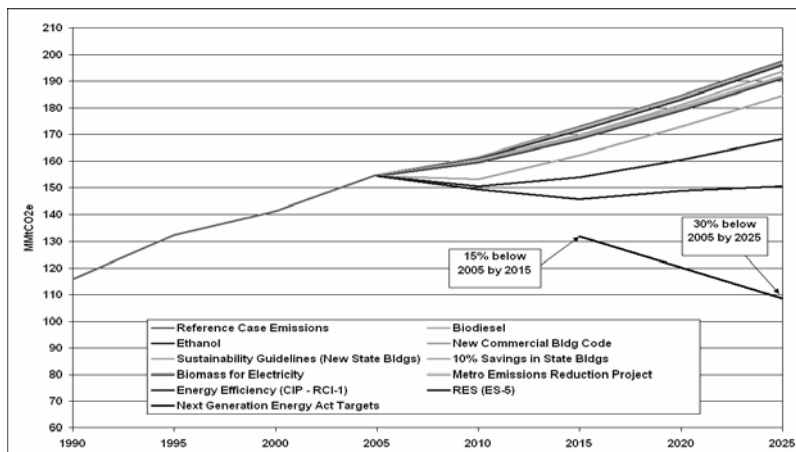
## MCCAG Actions: Cumulative Results

Planned Actions	2015	2025	2008-2025	Million\$	
	MMtCO <sub>2</sub> e	MMtCO <sub>2</sub> e		2008-2025	
	MMtCO <sub>2</sub> e	MMtCO <sub>2</sub> e	MMtCO <sub>2</sub> e	2008-2025	\$/MTCO <sub>2</sub> e
RCI (Fuels; Non-electricity)	0.6	-0.2	4.8	-\$639	-\$133.0
RCI/ES (Adjusted Overlaps)	1.5	6.9	48.4	-\$915	-\$18.9
ES	0.4	4.4	30.0	\$3,463	\$115.3
TLU	4.7	9.3	91.2	TBD	TBD
AFW	13.0	29.1	275	\$1,890	\$7.0
CC					
Subtotal	20.1	49.5	449	\$3,798	\$8.5

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# GHG Reductions – Existing Actions



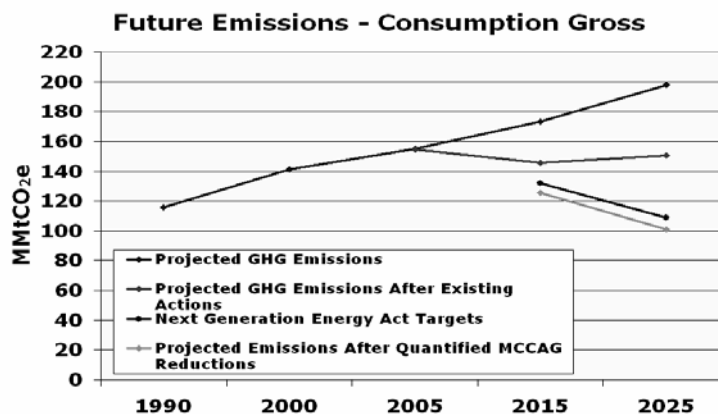
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# MN GHG Targets 2025



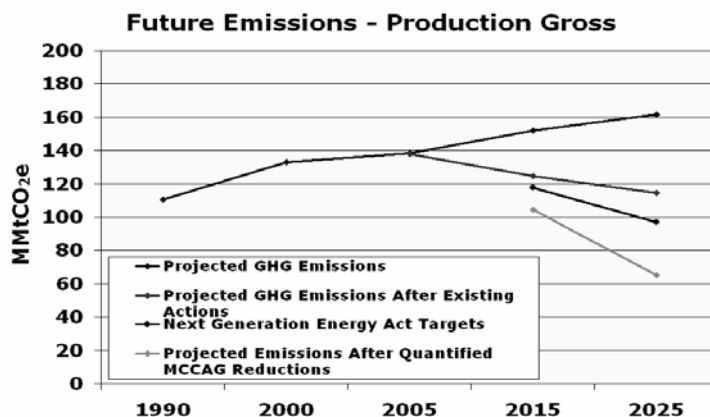
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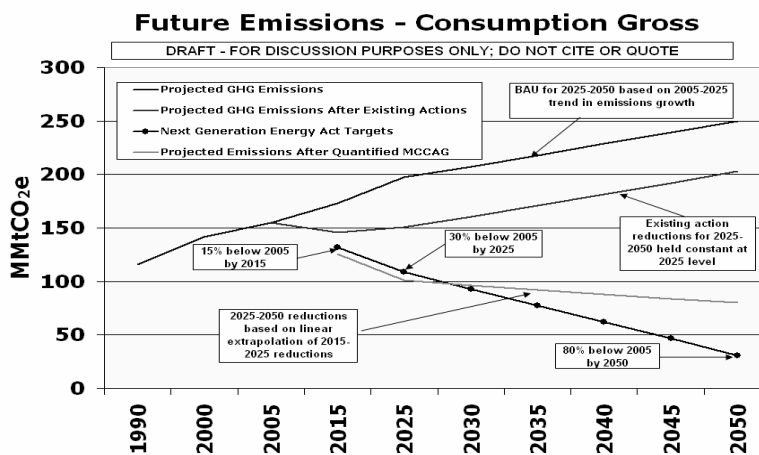
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# MN GHG Targets 2025



# MN GHG Targets 2050



# Draft Results

<b>Consumption Basis - Gross / Net Emissions</b>					
	1990	2000	2005	2015	2025
Projected GHG Emissions	115.7	141.4	155.0	173.0	197.6
Reductions from Existing Actions	0.0	0.4	0.4	27.3	47.0
Projected GHG Emissions After Existing Actions			154.6	145.8	150.6
Next Generation Energy Act Targets (NGEA)				131.8	108.5
Total GHG Reductions from MCCAG				20.1	49.5
Difference Between MCCAG Reductions & NGEA Targets				-6.2	-7.4
Projected Emissions After Quantified MCCAG Reductions				125.6	101.1
<b>Production Basis Gross / Net Emissions</b>					
	1990	2000	2005	2015	2025
Projected GHG Emissions	110.7	133.0	138.2	151.9	161.7
Reductions from Existing Actions	0.0	0.4	0.4	27.3	47.0
Projected GHG Emissions After Existing Actions			137.8	124.6	114.7
Next Generation Energy Act Targets (NGEA)				117.5	96.7
Total GHG Reductions from MCCAG				20.1	49.5
Difference Between MCCAG Reductions & NGEA Targets				-13.0	-31.5
Projected Emissions After Quantified MCCAG Reductions				104.4	65.2

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# Public Comment

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# AFW

- In-State Liquid Biofuels Production
- Front-End Waste Management Technologies
- End-of-Life Waste Management Practices

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# Break



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## CC

- Statewide GHG Reduction Goals and Targets

## TLU

- Low GHG Fuel Standard (Overlap w/ AFW-7)
- Climate-Friendly Transportation Fees
- Adopt California Clean Car Standards
- “Fix-it-First” Transportation Investment Policy and Practice
- Heavy-Duty Idle Reduction
- Voluntary Fleet Emissions Reductions
- Reduce Maximum Speed Limits
- Freight Mode Shifts: Intermodal and Rail

## Break



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## RCI

- Conservation Improvement-Type Program for Propane and Fuel Oil Efficiency
- Incentives & Resources to Promote Combined Heat and Power (CHP) – 2% Efficiency

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# ES

- Generation Performance Standard
- Nuclear Power Support and Incentives
- Advanced Fossil Fuel Technology Incentives, Support or Requirements, including Carbon Capture and Storage
- Distributed Renewable Energy Incentives and/or Barrier Removal

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# Break



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# Cap & Trade

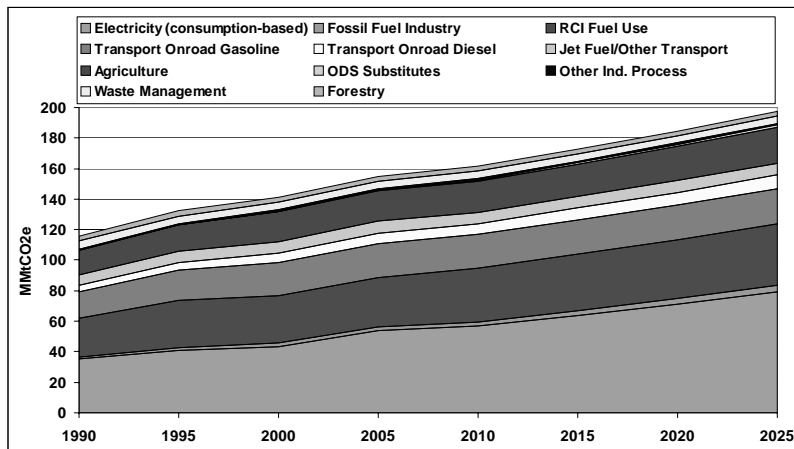
- Cap-and-Trade Program
- Carbon Tax
- Develop a Market Advisory Group
- Participate in regional and multi state GHG reduction efforts
- Develop a system for emissions credits for MN

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## Gross MN GHG Emissions By Sector, 1990-2025



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## Revisions to I&F

- ES/RCI
  - Electricity sales forecast (2005-2025) - approved by MCCAG at Meeting #7
    - Pre-CIP: Change from 1.72%/yr to 2.04%/yr
    - Post-CIP: Change from 0.50%/yr to 0.82%/yr
  - Corrected GHG reductions for RES & CIP

## Final Report Process

- Production of first draft of full report and appendices by CCS for MCCAG review and comment
  - Technical appendices from TWG policy option templates
  - Other technical appendices
  - Summary chapters based on these
  - Executive summary
- Final draft completed by CCS for final review and comment, dates TBD
- Report transmitted by CCS to DOC and PCA on behalf of MCCAG, date TBD

# Public Input, Announcements

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