



# Regional State Climate Efforts

## Midwest

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**July 24, 2008**

# Midwest Carbon Characteristics

## Significant Carbon Emissions

<b>COUNTRY</b>	<b>GHG EMISSIONS (MtCO<sub>2</sub>e)</b>	<b>% of WORLD GHGs</b>
<b>United States</b>	<b>6,872</b>	<b>20.4</b>
<b>China</b>	<b>4,963</b>	<b>14.7</b>
<b>Russia</b>	<b>1,916</b>	<b>5.9</b>
<b>India</b>	<b>1,889</b>	<b>5.6</b>
<b>Midwest</b>	<b>1,589</b>	<b>4.7</b>

Sources: WRI, CAIT US (2006-7)

# Midwest Greenhouse Gas (GHG) Accord Emissions

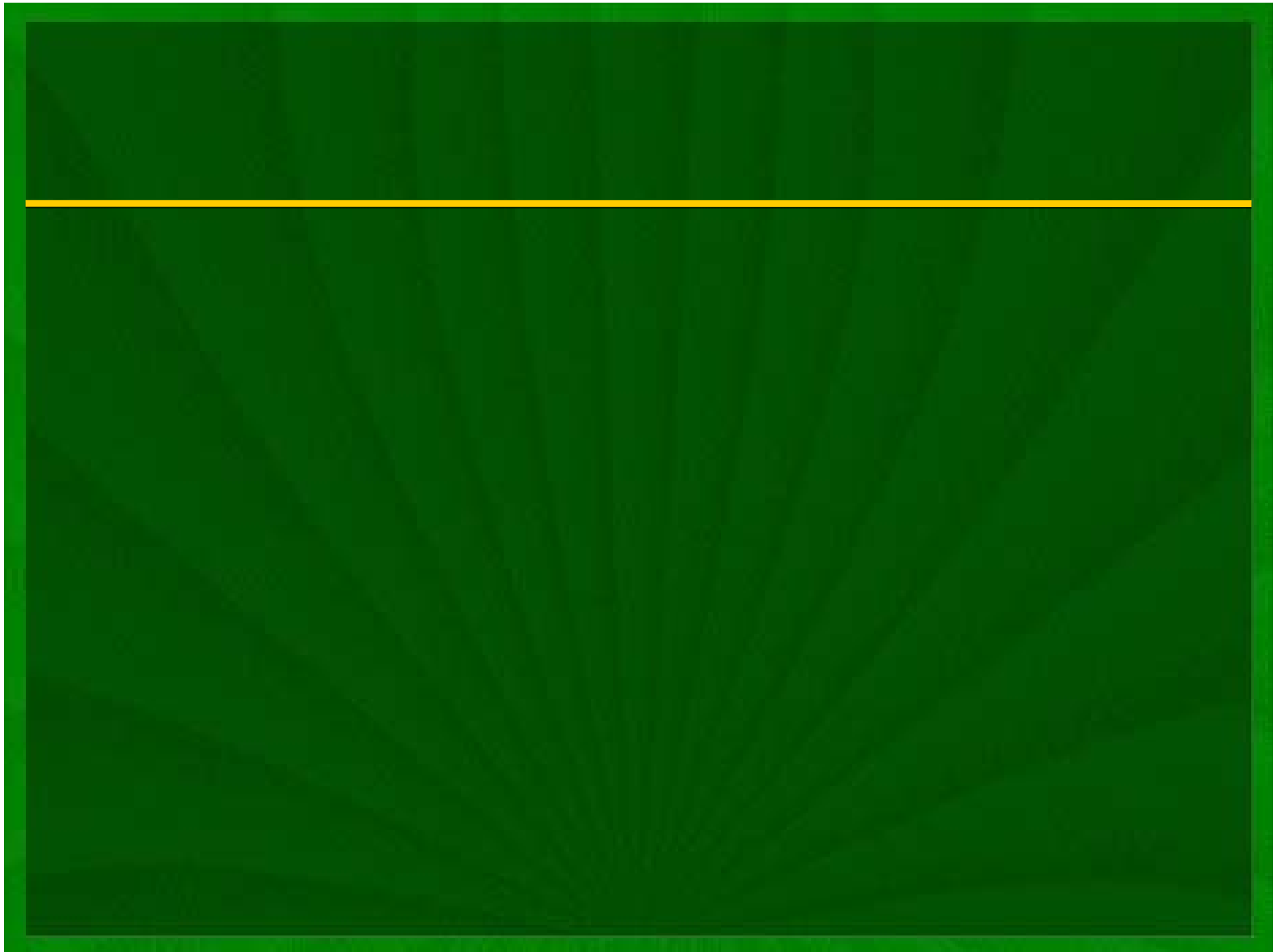
STATE	PER CAPITA	Total MtCO <sub>2</sub> e	US Rank
Illinois	21	87	6
Indiana	44	114	5
Iowa	37	36	26
Michigan	21	69	12
Minnesota	24	36	25
Missouri	28	73	11
Ohio	26	126	2
Wisconsin	23	43	19
Midwest	26	583	N/A
United States	23	2257	N/A

Sources: WRI, CAIT US (2007)

# Midwest Greenhouse Gas Accord

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- **Accord signed November 2007**
- **Participants: Iowa, Illinois, Kansas, Michigan, Minnesota, Wisconsin and Manitoba; Observers: Indiana, Ohio, South Dakota and Ontario**
- **Model Rule Developed - 2008**
- **Complete Undertaking - July 2010**

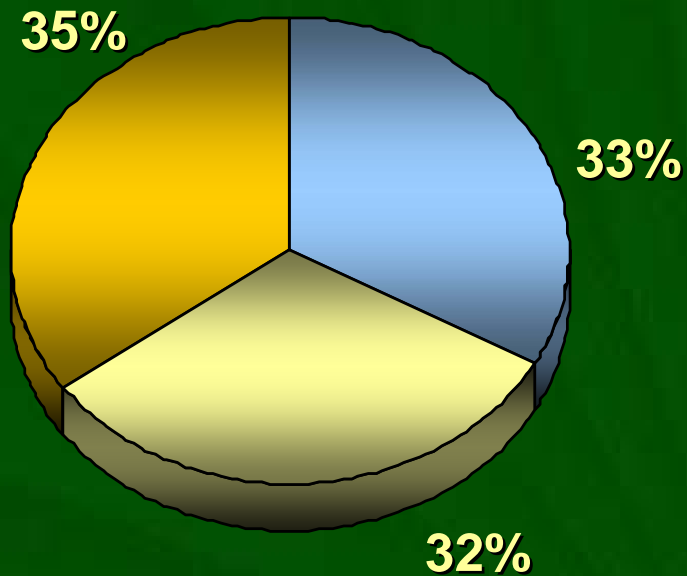


# Midwest Carbon Characteristics

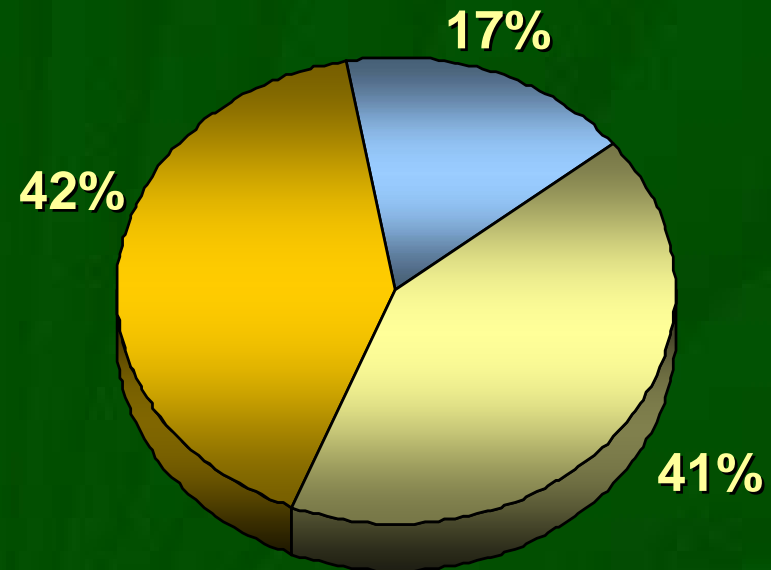
## GHG Emissions by Source

Percent

Midwest



United States



Coal

Petroleum

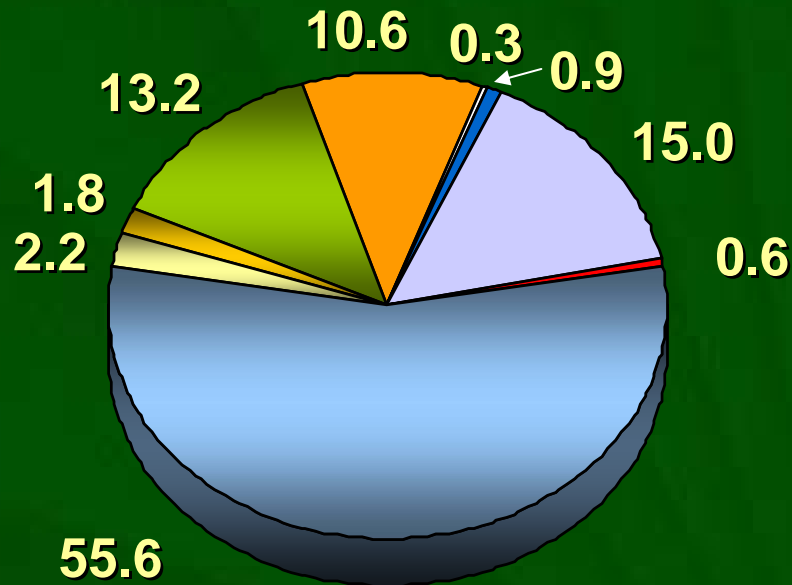
Natural Gas

Sources: WRI, CAIT-US (2007)

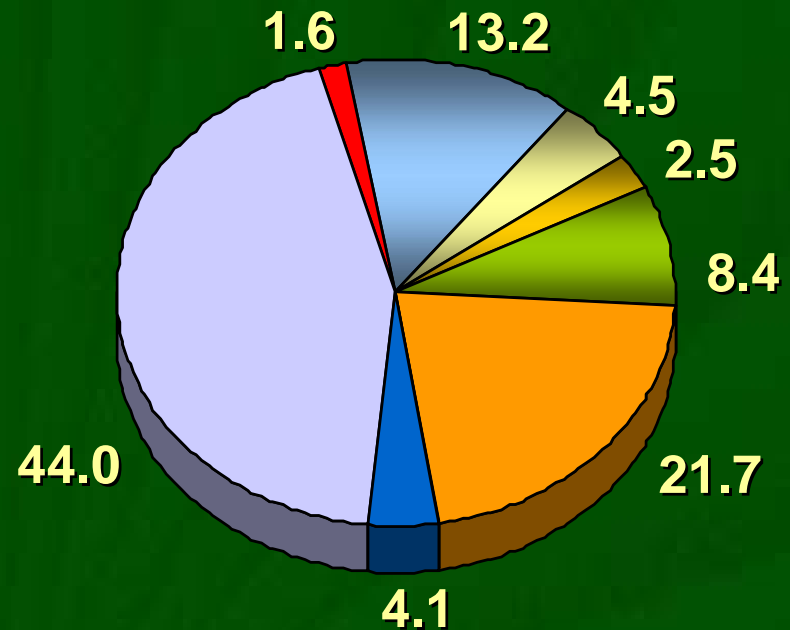
# North Dakota and South Dakota GHG Emissions by Sector

Percent

## North Dakota



## South Dakota



Electric Utilities  
 Industrial  
 Industrial Processes

Residential  
 Transportation  
 Agriculture

Commercial  
 Fugitive Emissions  
 Waste

Source: WRI, CAIT US (2007)

# Midwest Greenhouse Gas Advisory Group Schedule

	Targets, Data & Reporting	Scope	Allowances	Offsets	Modeling
<b>March</b>	<b>Establish Subgroups; Complete Work Plans</b>				
<b>April</b>	Develop Initial Target Recommendations	Develop Initial Recommendations			<b>Issue RFP; Select Vendor</b>
<b>May</b>	↓	↓			
<b>June</b>			Develop Initial Recommendations	Develop Initial Recommendations	<b>Business as Usual Case</b>
<b>July</b>	Present at July Meeting	Present at July Meeting	↓	↓	
<b>August</b>	Develop Reporting Recommendations		Present to Advisory Group in September	Present to Advisory Group in September	
<b>September</b>					<b>Policy Cases</b>
<b>October</b>	Revise Targets based on Modeling Results	Revise Initial Recommendation based on Modeling	Revise Initial Recommendation based on Modeling	Revise Initial Recommendation based on Modeling	
<b>November</b>	<b>Assemble Final Recommendation on Program Design</b>				

# Minnesota Legislative Action

State	Renewable Portfolio Standards	Demand-Side Management (annual MWh savings)	Carbon Reduction
Minnesota	30% by 2020*	1.5%	30% by 2025 (over 2005)**

## \* Timeline for RPS

15% by 2010

18% by 2012

25% by 2016

30% by 2020

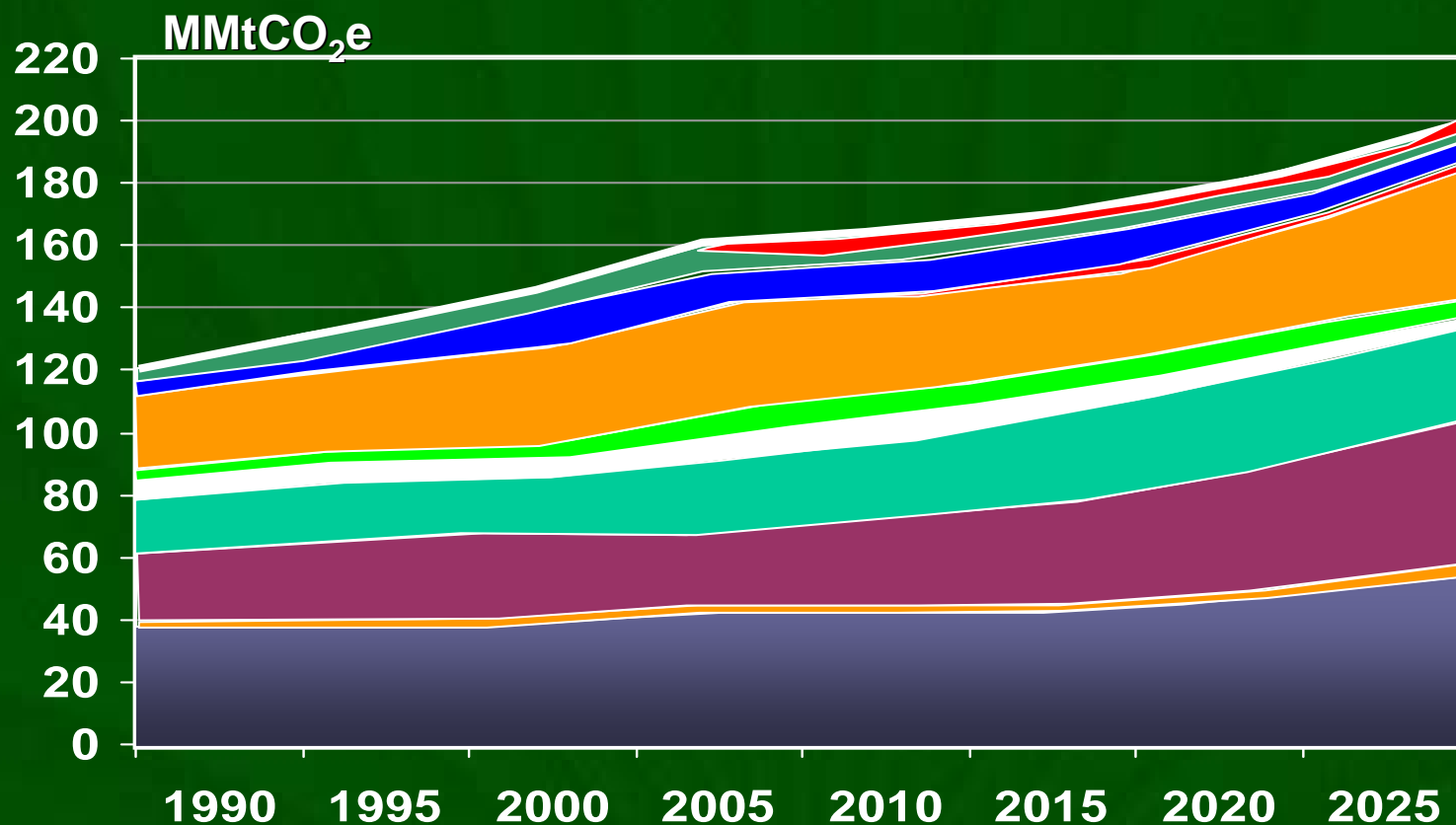
## \* \* Timeline for Carbon Reduction

15% by 2015

30% by 2025

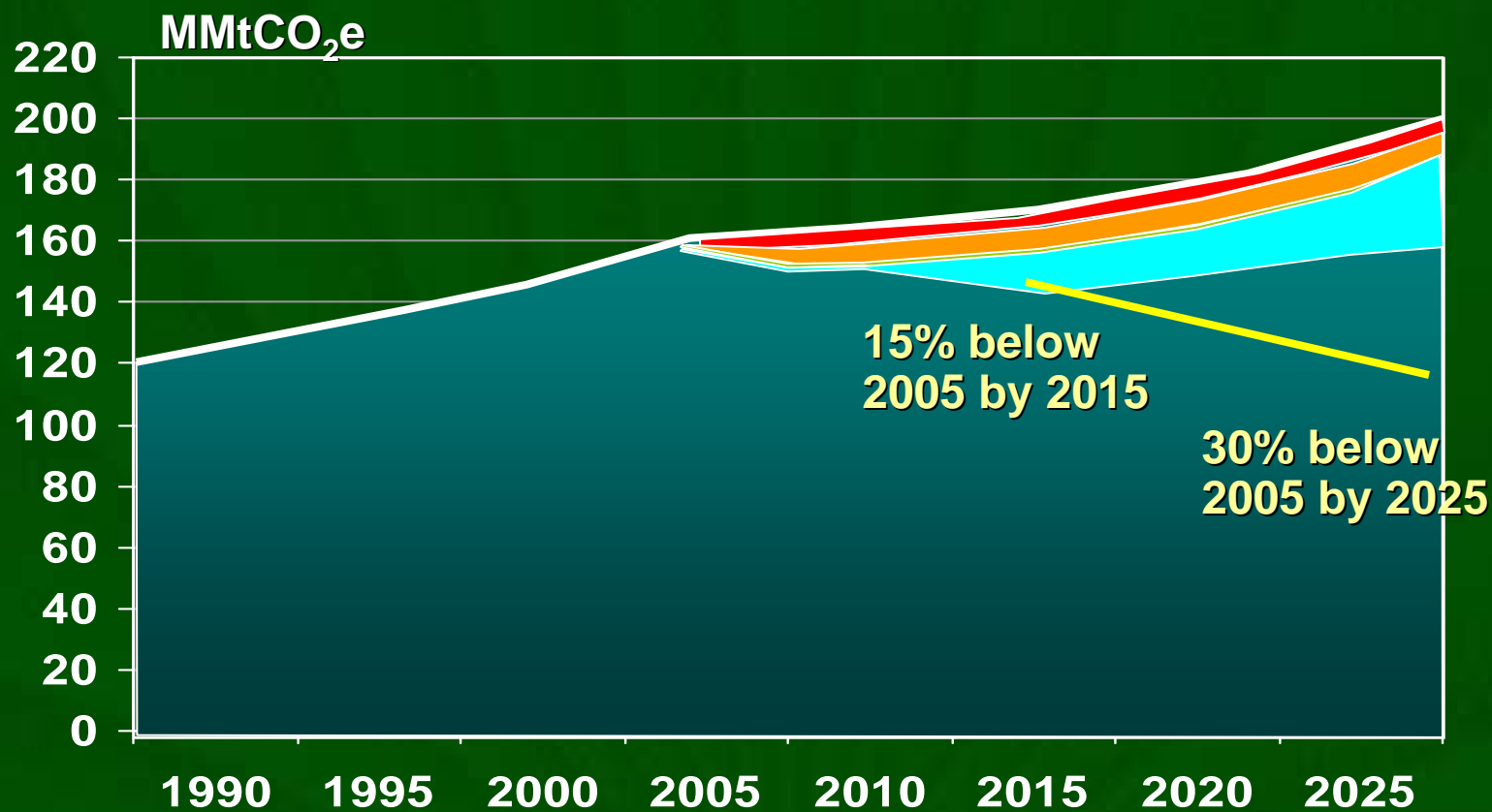
80% by 2050

# Minnesota Gross GHG Emissions by Sector, 1990-2025: Historical and Projected



- Electricity (consumption-based)
- Transport Onroad Gasoline
- Agriculture
- Waste Management
- Fossil Fuel Industry
- Transport Onroad Diesel
- ODS substitutes
- Forestry
- RCI Fuel Use
- Jet Fuel/Other Transport
- Other Ind. Process

# Minnesota Gross GHG Emissions by Sector, 1990-2025: Historical and Projected



■ State Initiatives – Other   ■ Energy Efficiency   ■ RES (ES-5)  
— Net Generation Energy Act Targets

# NSP Carbon Reduction 20+% by 2020

