

South Carolina Climate, Energy and Commerce Advisory Committee

South Carolina Climate, Energy & Commerce Advisory Committee

Meeting #7

May 9, 2008

Office of the Governor

The Center for Climate Strategies

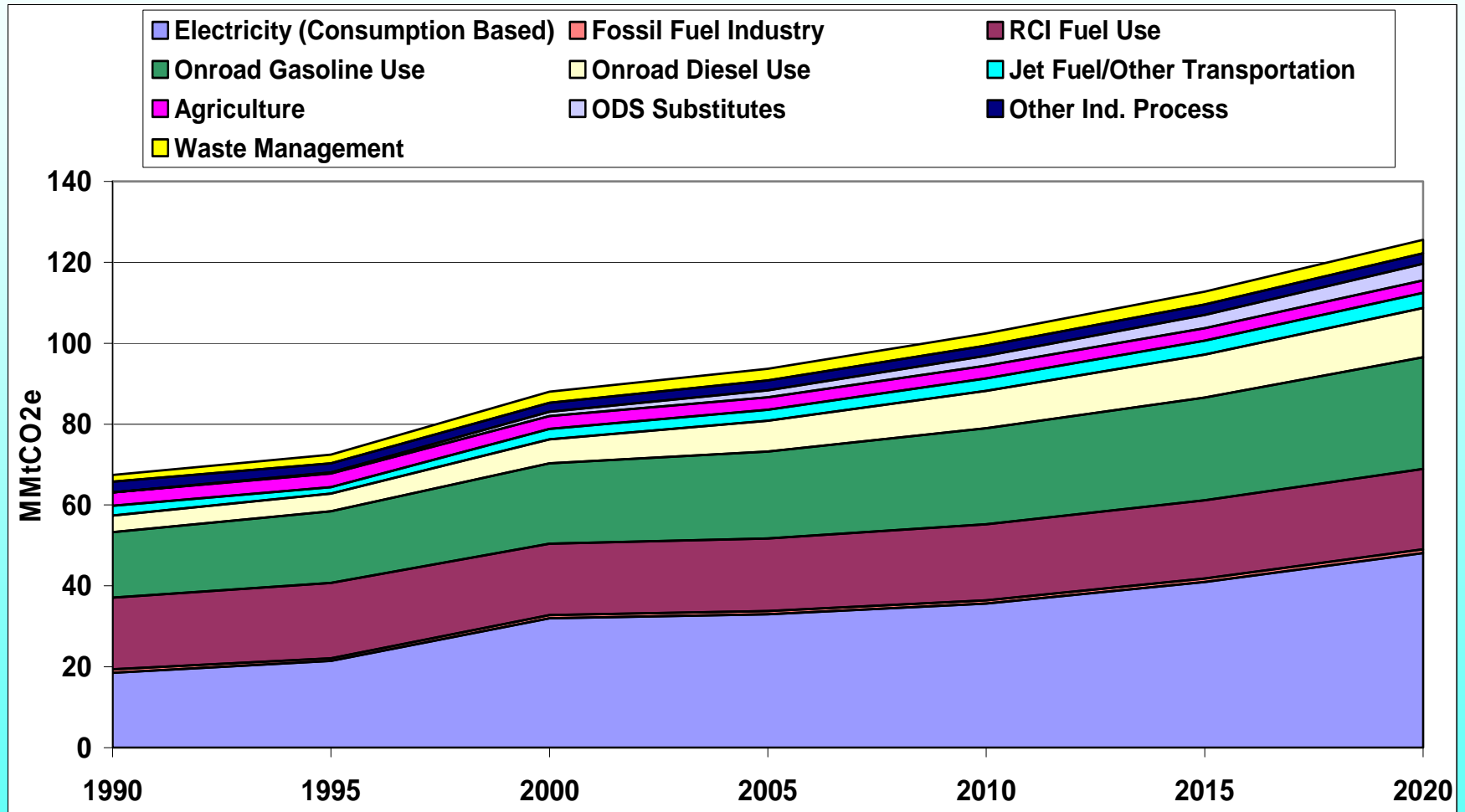
Welcome and Introductions

- Governor's Office
- Chairman, Rep. Ben Hagood
- State Agencies
- Climate, Energy & Commerce Advisory Committee (CECAC)
- Members of the Public
- Center for Climate Strategies

Agenda

- Introductions and review of day's agenda
- Approval of draft summary of CECAC Meeting #6
- Review and final approval of South Carolina's Revised Draft GHG Inventory and Forecast
- Review of CECAC progress and results
- Review and final approval of draft policy options
- Review of final report process
- Public input and announcements

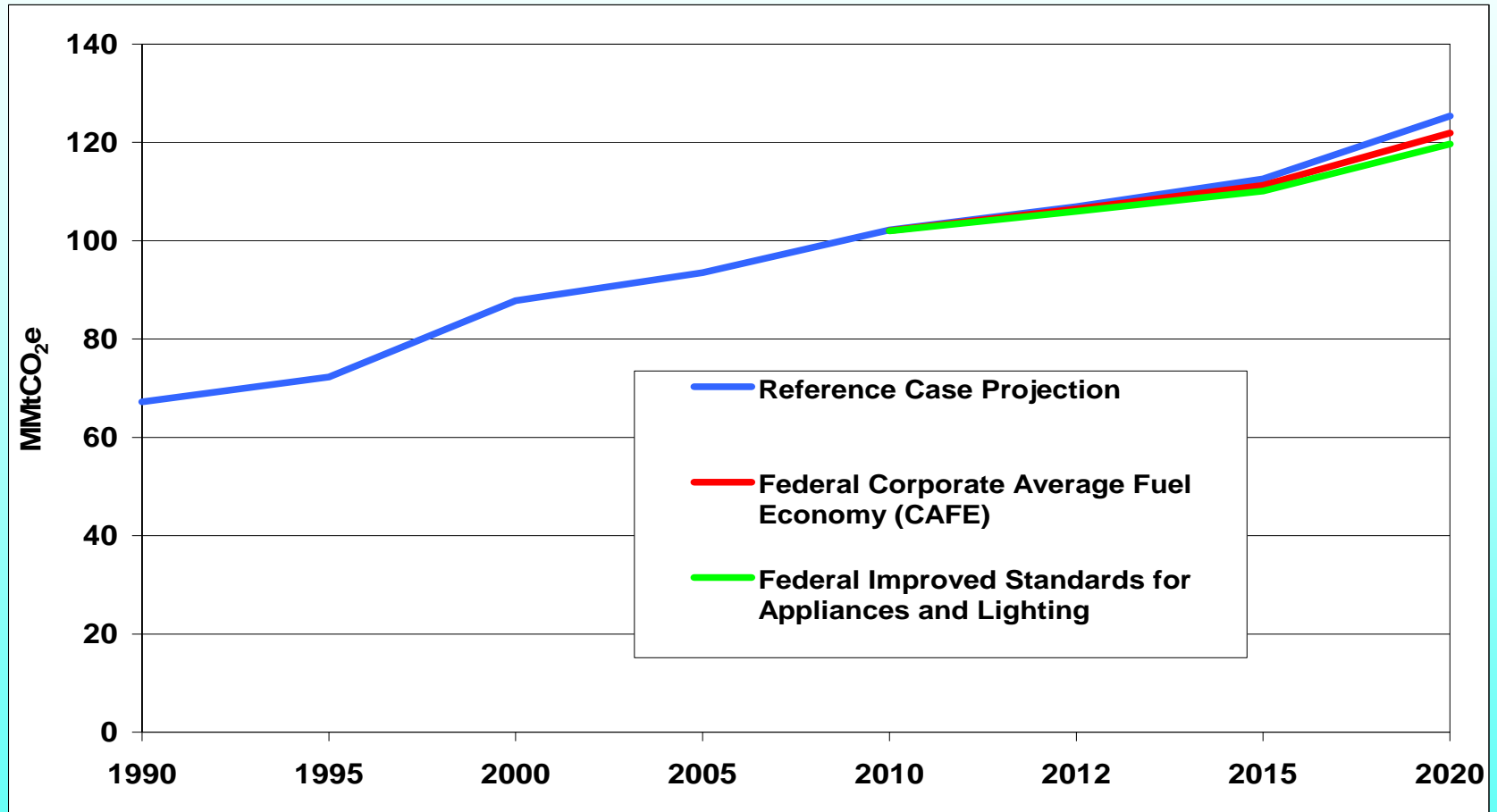
Gross SC GHG Emissions By Sector, 1990-2020



Revised Draft I&F

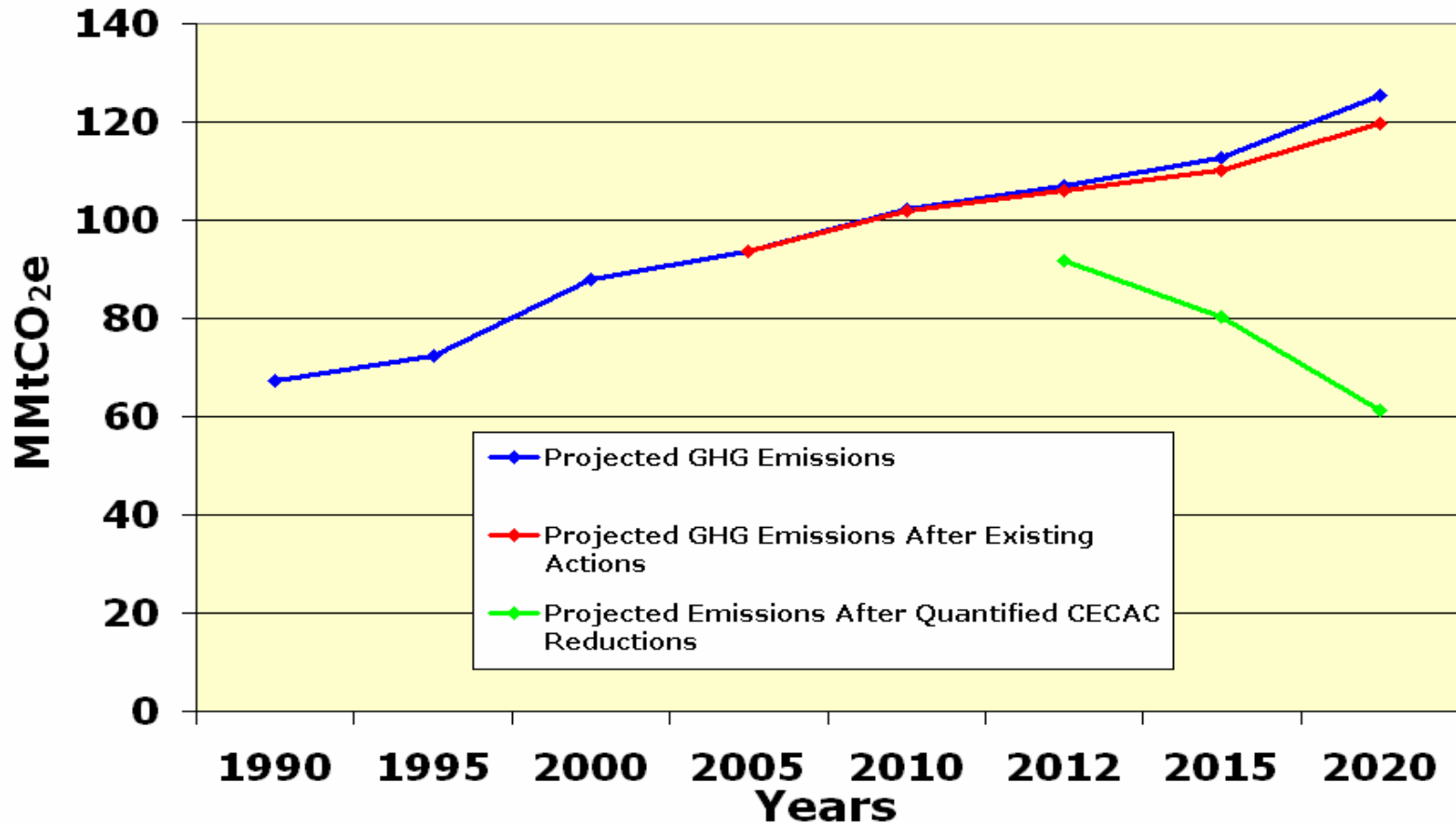
- Revised to address revisions approved by CECAC (posted on I&F page of website)
- Urban Forestry and Land Use
 - Need CECAC approval for this category
 - Carbon sinks estimated using USFS/USEPA methods
 - Estimates of stored carbon on CO₂e basis:
 - 1990: 4.38 MMtCO₂e / year
 - 2000: 2.24 MMtCO₂e / year
 - 2005-2020: 2.46 MMtCO₂e / year

GHG Reductions – Recent Federal Actions (Consumption & Production Basis, Gross Emissions)



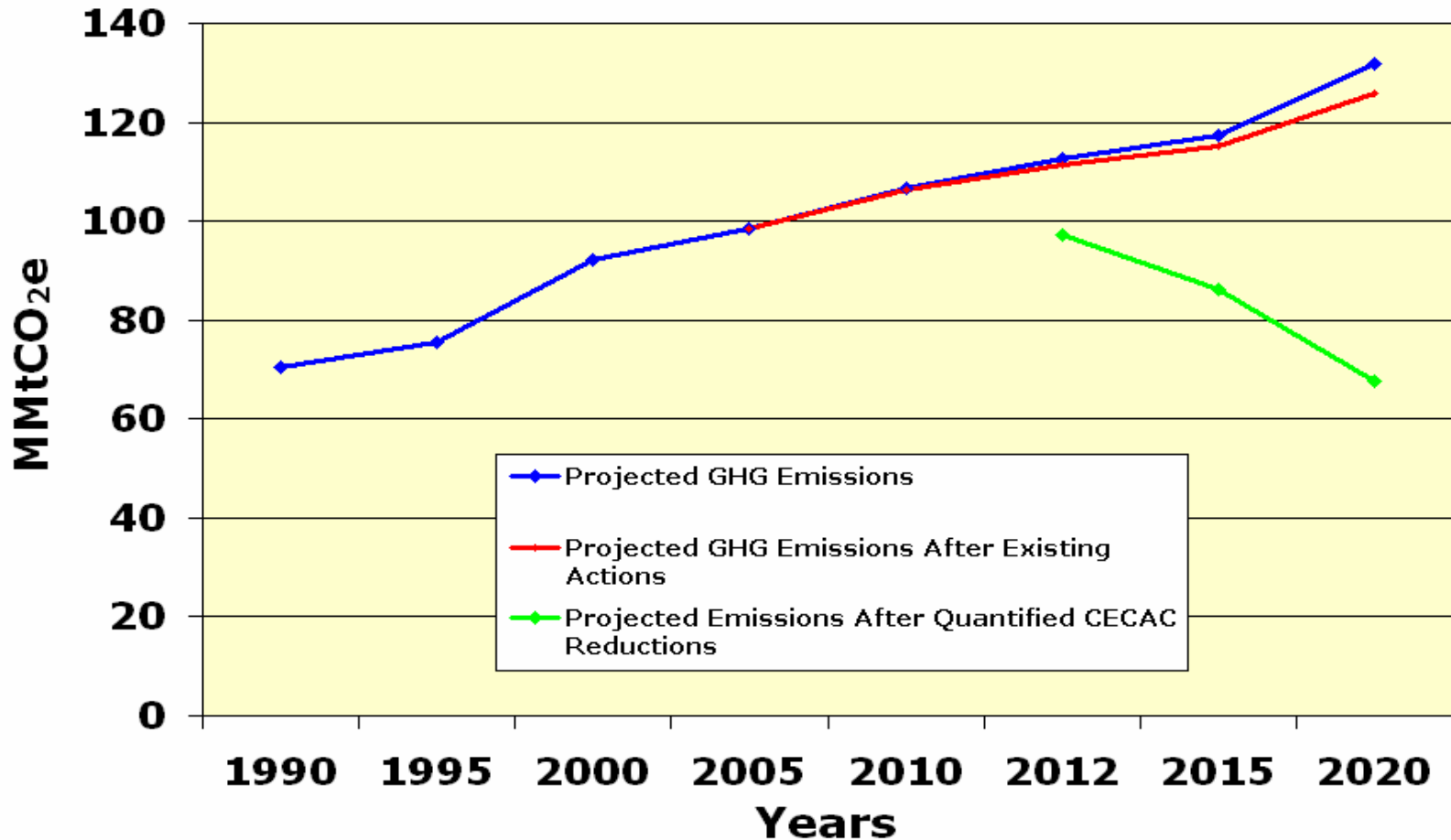
CECAC Actions – Draft Results

Future Emissions - Consumption Gross



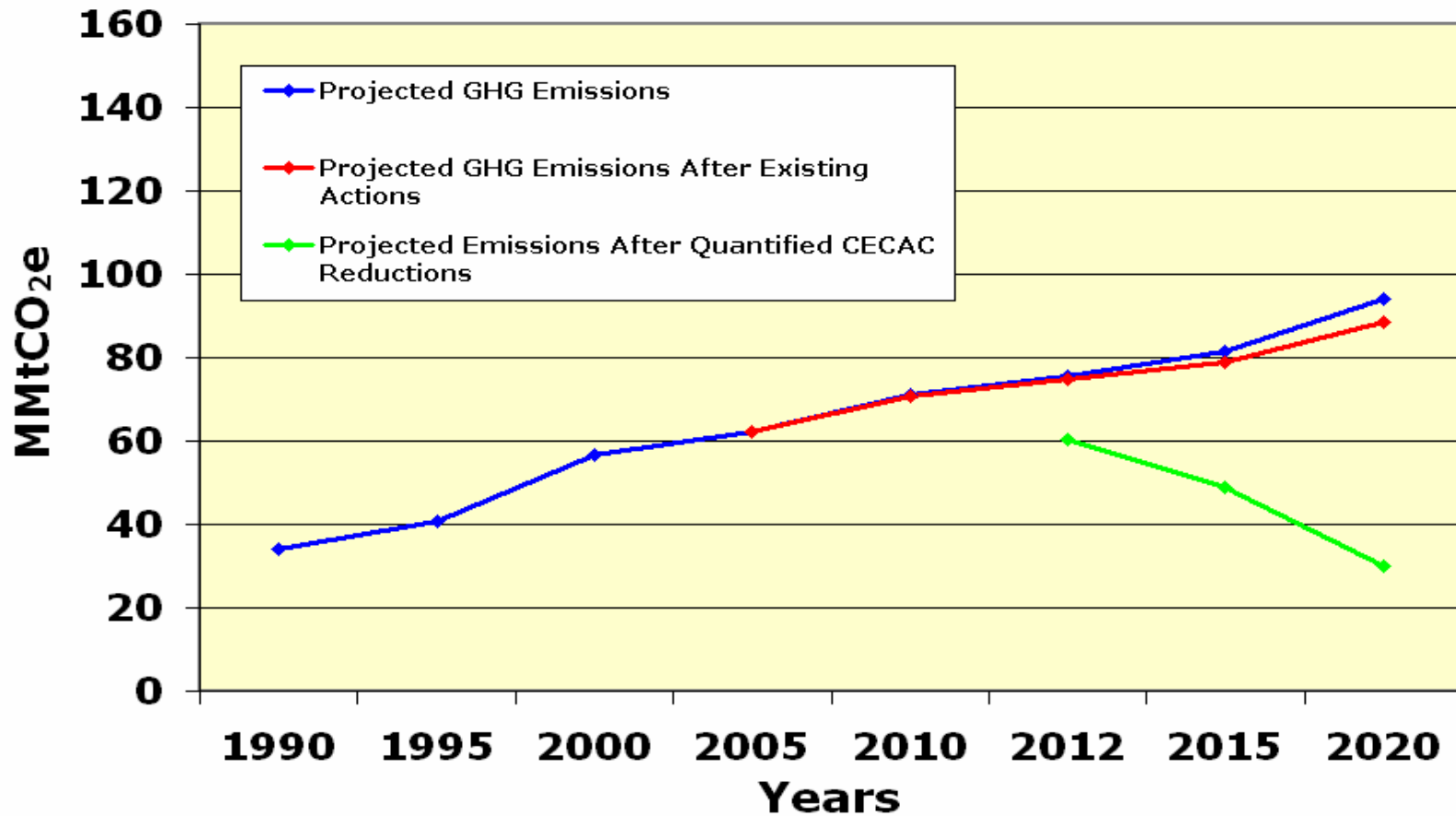
CECAC Actions – Draft Results

Future Emissions - Production Gross



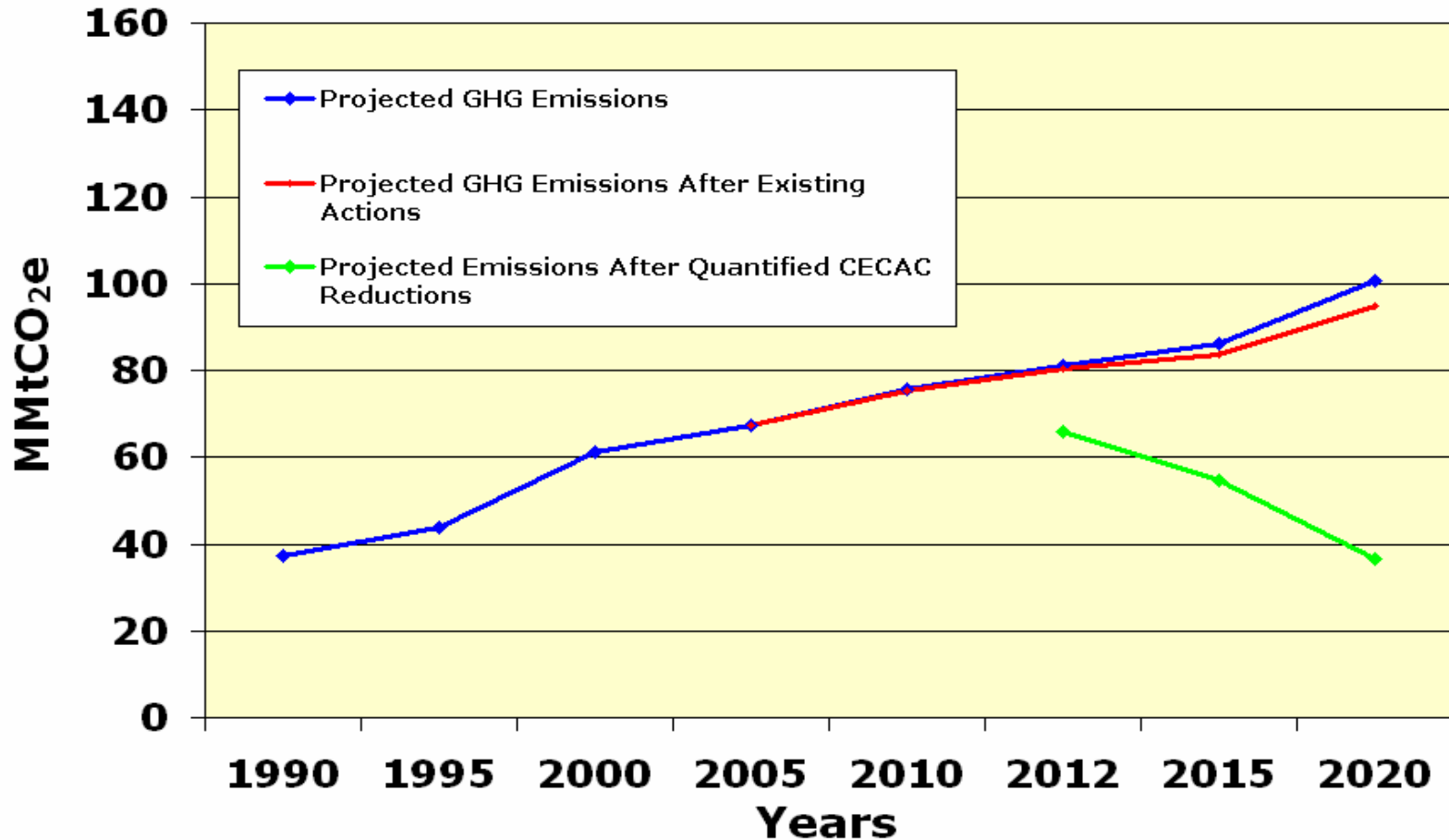
CECAC Actions – Draft Results

Future Emissions - Consumption Net



CECAC Actions – Draft Results

Future Emissions - Production Net



CECAC Actions

Draft Results – Gross Emissions

Consumption Basis - Net Emissions								
	1990	1995	2000	2005	2010	2012	2015	2020
Projected GHG Emissions	34.0	40.6	56.8	62.3	71.0	75.7	81.3	94.1
Reductions from Existing Actions				0.0	0.3	1.0	2.4	5.7
Projected GHG Emissions After Existing Actions				62.3	70.7	74.7	78.9	88.4
Targets Recommended by CECAC								
Total GHG Reductions from CECAC Policies						14.4	30.9	58.4
Difference Between CECAC Reductions & Targets						60.4	49.0	30.1
Projected Emissions After Quantified CECAC Reductions						60.4	49.0	30.1
Consumption Basis - Gross Emissions								
	1990	1995	2000	2005	2010	2012	2015	2020
Projected GHG Emissions	67.2	72.3	87.8	93.5	102.2	106.9	112.6	125.4
Reductions from Existing Actions				0.0	0.3	1.0	2.4	5.7
Projected GHG Emissions After Existing Actions				93.5	102.0	106.0	110.1	119.7
Targets Recommended by CECAC								
Total GHG Reductions from CECAC Policies						14.4	30.9	58.4
Difference Between CECAC Reductions & Targets						91.6	80.2	61.3
Projected Emissions After Quantified CECAC Reductions						91.6	80.2	61.3

CECAC Actions

Draft Results – Net Emissions

Production Basis - Net Emissions								
	1990	1995	2000	2005	2010	2012	2015	2020
Projected GHG Emissions	37.4	43.8	61.2	67.2	75.5	81.2	86.2	100.5
Reductions from Existing Actions				0.0	0.3	1.0	2.4	5.7
Projected GHG Emissions After Existing Actions				67.2	75.2	80.3	83.8	94.8
Targets Recommended by CECAC								
Total GHG Reductions from CECAC Policies						14.4	30.9	58.4
Difference Between CECAC Reductions & Targets						65.9	54.8	36.4
Projected Emissions After Quantified CECAC Reductions						65.9	54.8	36.4
Production Basis - Gross Emissions								
	1990	1995	2000	2005	2010	2012	2015	2020
Projected GHG Emissions	70.6	75.4	92.2	98.5	106.7	112.5	117.4	131.7
Reductions from Existing Actions				0.0	0.3	1.0	2.4	5.7
Projected GHG Emissions After Existing Actions				98.5	106.5	111.5	115.0	126.0
Targets Recommended by CECAC								
Total GHG Reductions from CECAC Policies						14.4	30.9	58.4
Difference Between CECAC Reductions & Targets						97.1	86.1	67.6
Projected Emissions After Quantified CECAC Reductions						97.1	86.1	67.6

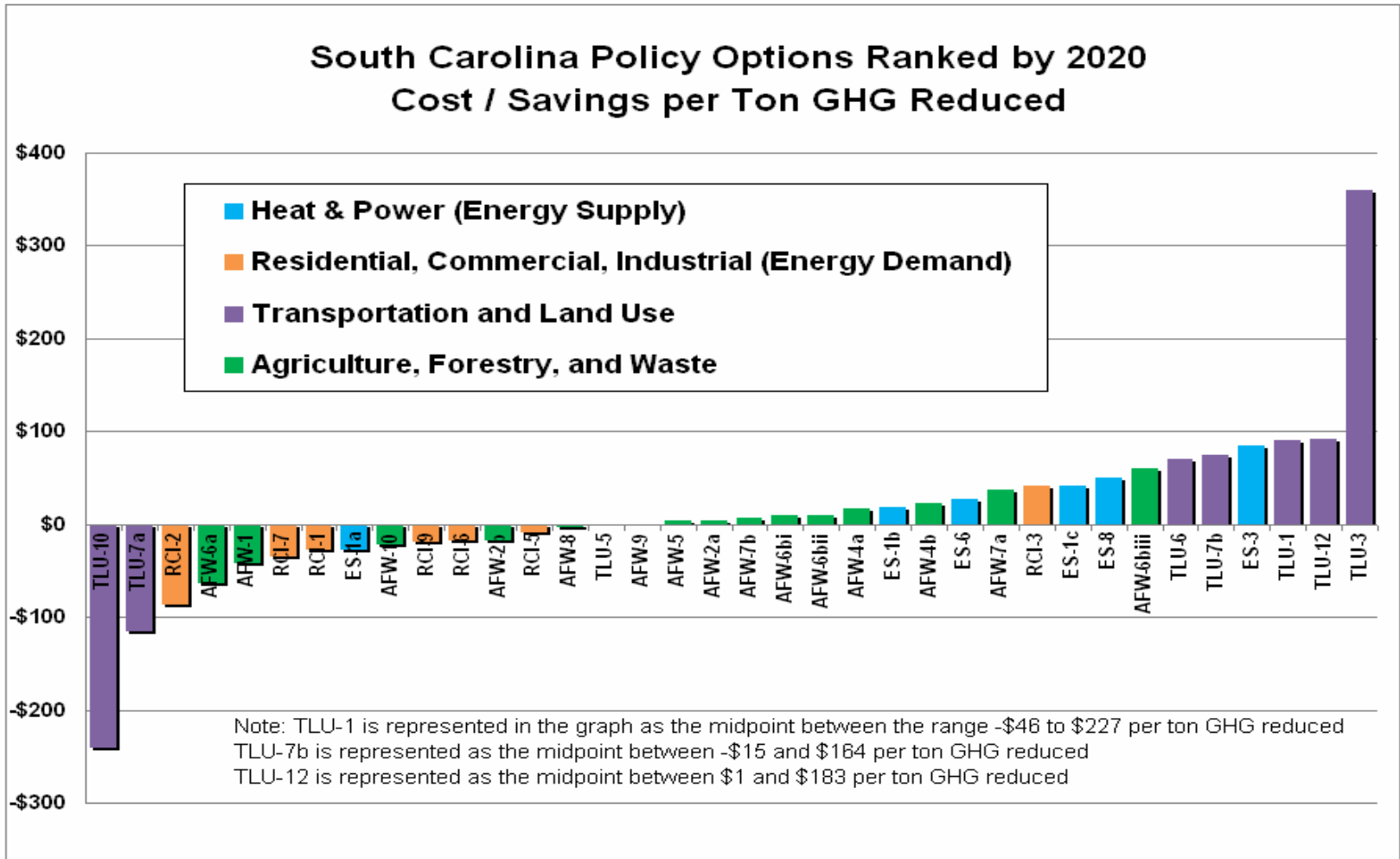
CECAC Actions

Draft Cumulative Results

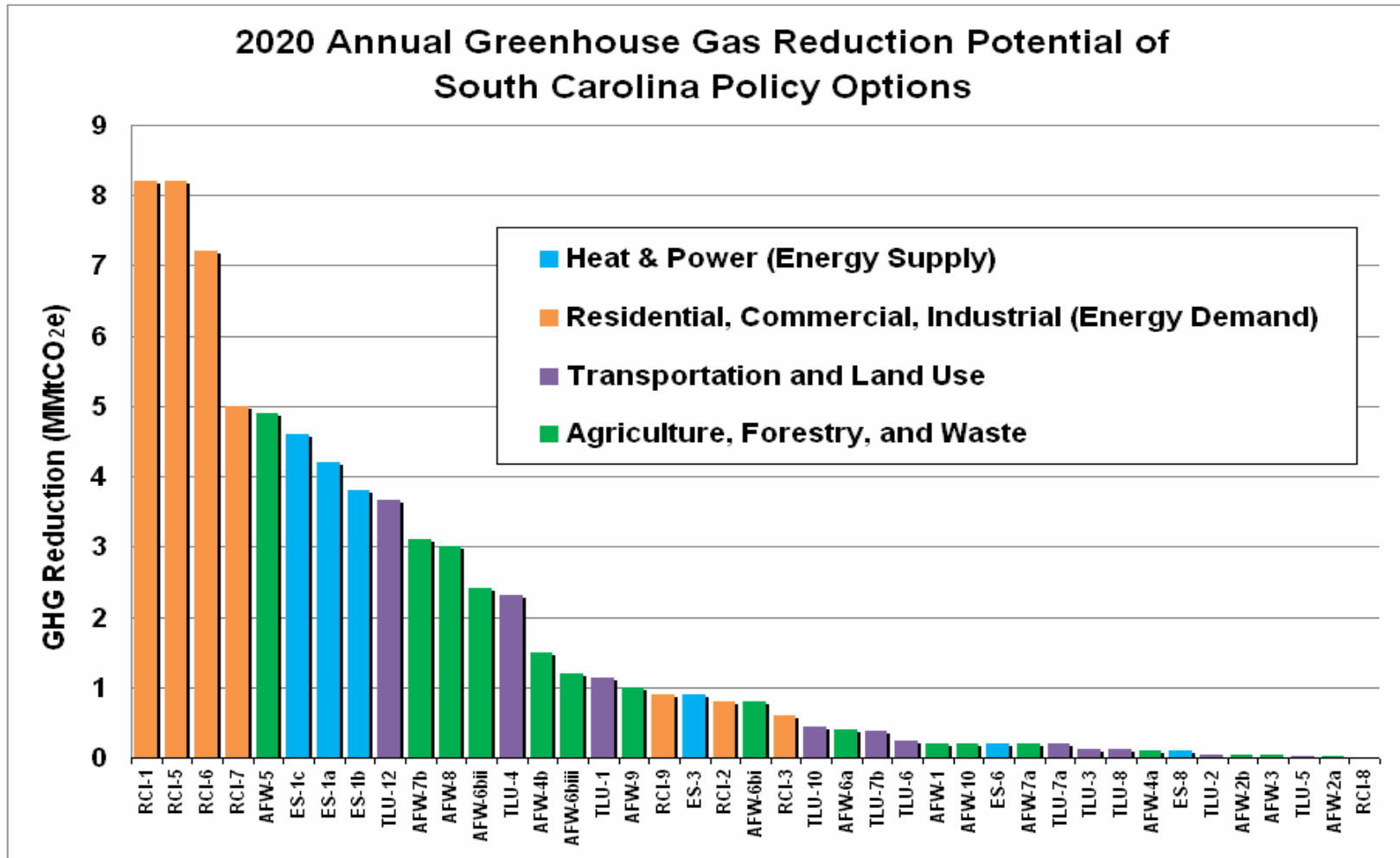
Sector	2012 MMtCO₂e	2020 MMtCO₂e	2008-2020 MMtCO₂e	Million\$ NPV 2008- 2020	\$/tCO₂e
RCI (Fuels; Non-Electric)	4.3	27.7	141.6	-\$2,941	-\$21
ES (Includes Adjustments for Overlaps with RCI)	1.3	5.5	40.0	\$1,259	\$31
TLU	0.9	6.0	32.6	\$2,582	\$79
AFW	7.8	19.2	135.0	\$987	\$7
CC					
Total	14.4	58.4	349.2	\$1,887	\$5.4

Negative values in the Net Present Value (NPV) and the Cost-Effectiveness (\$/tCO₂e) columns represent net cost savings.

Draft SC GHG Supply Curve (Completed & Pending Options)



Draft SC GHG Reductions 2020 (Completed & Pending Options)



Transportation & Land Use

- TLU-1: Adopt California Clean Car Standards
- TLU-3: Tax Credits for Efficient Vehicles
- TLU-4: Improve Development Patterns
- TLU-5: Transit & Bike-Pedestrian
- TLU-6: Alternative Fuel Infrastructure
- TLU-7: Diesel Engine Emission Reductions and Fuel Efficiency Improvements
- TLU-10: Commuter Choice
- TLU-11: Explore Available Resources for Funding Road Maintenance and Mass Transportation
- TLU-12: Low-GHG Fuel Standard
- TLU-13: Freight Vehicle Technology Improvements

Residential, Commercial, Industrial

- RCI-1: Demand-Side Management/Energy Efficiency Programs, Funds, or Goals for Electricity (including expansion of same) (Residential, Commercial, and Industrial)
- RCI-3: Incentives and Regulatory Reform To Promote Implementation of Renewable Energy Systems, Including Solar Hot Water (Residential, Commercial, and Industrial)
- RCI-8: Participation in Voluntary Industry-Government Partnerships (Including Incentives)

Break



Energy Supply

- ES-1: Efficiency and Renewable Portfolio Standard and Statement of Support for Nuclear Energy
- ES-3: Renewable Energy financing, tax incentives, loans
- ES-4: Regulatory model to equalize utility earnings on energy efficiency with earnings on traditional power supply
- ES-5: Nuclear Fuel Reprocessing
- ES-8: Distributed renewable energy incentives and/or barrier removal (Including Interconnection Rules)

Agriculture, Forestry & Waste Management

- AFW-6biii: Terrestrial Carbon Sequestration—Forestry:
Urban Forestry

Cross Cutting Issues

- CC-3: Statewide GHG Reduction Goals and Targets
- CC-4: State Government GHG Emissions (Lead-by-Example)

US State/Canadian Province GHG Reduction Goals/Targets

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	52%	<ul style="list-style-type: none"> • 1990 level by 2020; 80% below 2006 levels by 2050 	TBD
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

US State/Canadian Province GHG Reduction Goals/Targets

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%
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

Final Report Process

- Production of first draft of full report and appendices by CCS for CECAC 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 the Governor on behalf of CECAC, June 30, 2008

Public Input, Announcements