



# Governor's Action Team on Energy and Climate Change

## *State of Florida*

[www.flclimatechange.us](http://www.flclimatechange.us)

## Memo

**To:** Mike Sole, Secretary, Florida Department of Environmental Protection and Chair,  
Florida Action Team on Energy and Climate Change

**From:** The Center for Climate Strategies

**Subject:** Preparation for the Fourth Meeting of the Florida Action Team

**Date:** July 7, 2008

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At the fourth meeting of the Florida Action Team on Wednesday and Thursday, July 9-10, 2008, we will focus on review and approval of the draft Straw Policy Option proposals from the Technical Work Groups (TWGs) generated from the options approved at the last meeting. The TWGs will present their Policy Descriptions and Policy Designs for each option. Based on this discussion and any resulting adjustments made by the Action Team, the TWGs will continue to develop the options by identifying proposed Implementation Methods and the Related Policies and Programs in Place for Action Team Meeting #5. The TWGs will also begin the quantification process for the policy options.

**As preparation for our meeting, please review the attached lists of TWG-suggested draft Straw Policy Option Proposals and other background documents posted to the Action Team Web site at: [www.flclimatechange.us](http://www.flclimatechange.us).**

In terms of overall progress, the Action Team has completed key milestones since its launch of the Phase II process, including:

- Identification of a full range of potential Florida options for mitigation of greenhouse gas (GHG) emissions, including more than 300 possible state actions.
- TWG identification, by balloting, of 44 initial priorities for analysis of draft policy options, incorporating elements of 107 specific catalog policies.
- Development of evaluation criteria, a framework outline, a policy template and catalog examples for consideration of adaptation measures to address the impacts of climate change.
- Background and policy options briefings on a range of issues, such as the design of a cap-and-trade program, a carbon tax and the development of policies that promote the "greening" of Florida's economy.

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Florida Department of Environmental Protection

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- Approval of a full range of initial priorities for analysis of draft policy options at its third meeting.

The next stages of the Action Team process will include completion of the following milestones:

- Formulation of “straw proposals” for the design of these initial draft policy options for consideration by the Action Team at its fourth and fifth meetings.
- Review and revision of the Florida GHG Emission Inventory and Forecast.
- Review and revision of policy option design, analysis, and draft options as needed during TWG calls and meetings.
- Final approval of Florida policy option recommendations at our fifth, sixth and seventh meetings.
- Final approval of the Florida GHG Emission Inventory and Forecast by the final meeting.

### Summary of Action Team Progress and Next Steps:

<b>Status of Draft Policy Options</b>	
Original Number of Potential Options Presented to the Action Team from the CCS Catalog of State Actions	Approx. 300
Updated Number of Potential Options in the CCS Catalog of States Actions, Including Action Team Additions	360
Current Number of Draft Proposed Priority Policy Options for Analysis	53
Energy Supply (ESD)	11
Energy Demand (ESD)	16
Transportation and Land Use (TLU)	10
Agriculture, Forestry, and Waste Management (AFW)	10
Government Policy and Coordination (GP)	5
Cap and Trade (C&T) policies (issues)	1 (11)
Adaptation (ADP)	TBD
<b>Next Steps</b>	
Review and Approve Straw Proposals for Draft Policy Option Analysis and Design	Action Team Meetings #3 and #4
Present First Round of Analysis of Draft Policy Options and Identify Early Consensus Recommendations	Action Team Meeting #5
Approve Final Action Team Policy Option Recommendations	Action Team Meetings #5-6-7
Approve Final Report	Action Team Meeting #8

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## Energy Supply & Demand (ESD) Technical Work Group

### Summary List of Pending Priority Policy Options for Analysis

	ESD Policy Option	GHG Reductions (MMtCO <sub>2</sub> e)			Net Present Value 2009–2025 (Million \$)	Cost-Effectiveness (\$/tCO <sub>2</sub> e)	Level of Support
		2015	2025	Total 2009–2025			
ESD-1	Technology Research and Development (R&D) with Near-Term Commercial Opportunities	<i>Not yet quantified</i>					Pending
ESD-2	Technology Research and Development (R&D) with Longer-term Commercial Opportunities	<i>Not quantifiable</i>					Pending
ESD-3	Renewable Energy Incentives and Barrier Removal	<i>Not yet quantified</i>					Pending
ESD-4	Electricity Transmission and Distribution Improvements	<i>Not yet quantified</i>					Pending
ESD-5a	Renewable Portfolio Standard (RPS)	<i>Not yet quantified</i>					Pending
ESD-5b	Environmental Portfolio Standard (EPS)	<i>Not yet quantified</i>					Pending
ESD-6	Nuclear Power	<i>Not yet quantified</i>					Pending
ESD-7	Integrated Resource Planning (IRP)	<i>Not yet quantified</i>					Pending
ESD-8	Combined Heat and Power (CHP) Systems	<i>Not yet quantified</i>					Pending
ESD-9	Power Plant Efficiency Improvements	<i>Not yet quantified</i>					Pending
ESD-10	Grace Period for Replacement of Carbon-Intensive Units	<i>Not quantifiable</i>					Pending
ESD-11	Waste-To-Energy (WTE)	<i>Not yet quantified</i>					Pending

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	ESD Policy Option	GHG Reductions (MMtCO <sub>2</sub> e)			Net Present Value 2009–2025 (Million \$)	Cost-Effectiveness (\$/tCO <sub>2</sub> e)	Level of Support
		2015	2025	Total 2009–2025			
ESD-12	Demand-Side Management (DSM)/Energy Efficiency Programs, Funds, or Goals for Electricity	<i>Not yet quantified</i>					Pending
ESD-13	Incentives for Improved Building Design, Construction and Operation in the Private Sector	<i>Not yet quantified</i>					
ESD-13a	Existing Residential	<i>Not yet quantified</i>					Pending
ESD-13b	New Residential	<i>Not yet quantified</i>					Pending
ESD-13c	New Master Planned Residential Communities [formerly 20a]	<i>Not yet quantified</i>					Pending
ESD-14	Improved Building Codes for Energy Efficiency in Existing Buildings	<i>Not yet quantified</i>					Pending
ESD-15a	Training and Education for Built Environment Professionals	<i>Not quantifiable</i>					Pending
ESD-15b	Training and Education for Building Operators and Community Association Managers	<i>Not quantifiable</i>					Pending
ESD-16	More Stringent Appliance/Equipment Efficiency Standards	<i>Not yet quantified</i>					Pending
ESD-17	Consumer Education Programs	<i>Not quantifiable</i>					Pending
ESD-18	Incentives to Promote Implementation of Customer-Sited Renewable Energy Systems	<i>Not yet quantified</i>					Pending
ESD-19	Energy Efficiency Financing and Alternative Business Models	<i>Not yet quantified</i>					Pending

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	ESD Policy Option	GHG Reductions (MMtCO <sub>2</sub> e)			Net Present Value 2009–2025 (Million \$)	Cost-Effectiveness (\$/tCO <sub>2</sub> e)	Level of Support
		2015	2025	Total 2009–2025			
ESD-21	Rate Structures and Technologies to Promote Reduced Greenhouse (GHG) Emissions	<i>Not yet quantified</i>					Pending
ESD-22	Demand-Side Management (DSM)/Energy Efficiency Programs, Funds, or Goals for Natural Gas	<i>Not yet quantified</i>					Pending
ESD-23	Decoupling	<i>Not quantifiable</i>					Pending

GHG = greenhouse gas; MMtCO<sub>2</sub>e = million metric tons of carbon dioxide equivalent; \$/tCO<sub>2</sub>e = dollars per metric ton of carbon dioxide equivalent.

Note: The numbering used to denote the above pending priority policy options is for reference purposes only; it does not reflect prioritization among these important draft policy options.

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## Transportation and Land Use (TLU) Technical Work Group

### Summary List of Pending Priority Policy Options for Analysis

	Policy Option	GHG Reductions (MMtCO <sub>2</sub> e)			Net Present Value 2009–2025 (Million \$)	Cost-Effectiveness (\$/tCO <sub>2</sub> e)	Level of Support
		2015	2025	Total 2009–2025			
TLU-1	Develop and Expand Low-GHG and Alternative Fuels	<i>Not yet quantified</i>					Pending
TLU-2A	Increased Fuel Economy and GHG Emissions Standards for New Vehicles	<i>Not yet quantified</i>					Pending
TLU-2B	Add-On Technologies for Existing Vehicles and New Vehicles	<i>Not yet quantified</i>					Pending
TLU-3	Smart Growth Planning	<i>Not yet quantified</i>					Pending
TLU-4	Improving Transportation System Management	<i>Not yet quantified</i>					Pending
TLU-5	Increasing Choices in Modes of Transportation	<i>Not yet quantified</i>					Pending
TLU-6	Factoring GHG Emissions into Transportation and Land Use Planning Processes	<i>Not yet quantified</i>					Pending
TLU-7	Incentive Programs for Increased Vehicle Fleet Efficiency	<i>Not yet quantified</i>					Pending
TLU-8	Increasing Freight Movement Efficiencies	<i>Not yet quantified</i>					Pending
TLU-9	Consider Transportation System Pricing Options	<i>Not yet quantified</i>					Pending

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## Governor's Action Team On Energy And Climate Change Phase II Process

## Agriculture, Forestry, and Waste Management (AFW) Technical Work Group

### Summary List of Draft Priorities for Analysis—2015 and 2025

Option No.	AFW Policy Option	GHG Reductions (MMtCO <sub>2</sub> e)			Net Present Value 2009–2025 (Million \$)	Cost-Effectiveness (\$/tCO <sub>2</sub> e)	Level of Support
		2015	2025	Total 2009–2025			
AFW-1	Forest Retention—Reduced Conversion of Forested to Non-Forested Land Uses	<i>Not yet quantified</i>					Pending
AFW-2	Afforestation and Restoration of Non-Forested Lands	<i>Not yet quantified</i>					Pending
	A. Forest Landscape						
	B. Urban Forestry						
AFW-3	Forest Management for Carbon Sequestration	<i>Not yet quantified</i>					Pending
AFW-4	Expanded Use of Agriculture, Forestry, and Waste Management (AFW) Biomass Feedstocks for Electricity, Heat, and Steam Production	<i>Not yet quantified</i>					Pending
	A. Long-Rotation Forests						
	B. Short-Rotation Forests						
	C. Other Energy Crops						
	D. Municipal Solid Waste (MSW) Biomass						
	E. Agriculture and Forestry Residues						
AFW-5	Promotion of Farming Practices That Achieve GHG Benefits	<i>Not yet quantified</i>					Pending
	A. Soil Carbon Management						
	B. Land-Use Management That Promotes Permanent Cover						
	C. Nutrient Management						

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Option No.	AFW Policy Option	GHG Reductions (MMtCO <sub>2</sub> e)			Net Present Value 2009–2025 (Million \$)	Cost-Effectiveness (\$/tCO <sub>2</sub> e)	Level of Support
		2015	2025	Total 2009–2025			
	D. Improved Harvesting Methods to Achieve GHG Benefits						
AFW-6	Reduce the Rate of Agricultural Land and Open Green Space Conversion To Development				<i>Not yet quantified</i>		Pending
AFW-7	In-State Liquid/Gaseous Biofuels Production				<i>Not yet quantified</i>		Pending
	A. Long-Rotation Forests						
	B. Short-Rotation Forests						
	C. Other Energy Crops						
	D. MSW Biomass						
AFW-8	E. Agriculture and Forestry Residues						
	Promotion of Advanced Municipal Solid Waste (MSW) Management Technologies (Including Bioreactor Technology)				<i>Not yet quantified</i>		Pending
AFW-9	Improved Commercialization of Biomass to Energy Conversion and Bio-Products Technologies				<i>Not yet quantified</i>		Pending
	A. Manure Digestion/Other Waste Energy Utilization						
	B. WWTP Biosolids Energy Production						
	C. Other Biomass Conversion Technologies						
	D. Bio-Products Technologies & Use						
AFW-10	Programs to Support Local Farming/Buy Local				<i>Not yet quantified</i>		Pending
	<b>Sector Totals</b>						
	<b>Sector Total After Adjusting for Overlaps*</b>						

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Option No.	AFW Policy Option	GHG Reductions (MMtCO <sub>2</sub> e)			Net Present Value 2009–2025 (Million \$)	Cost-Effectiveness (\$/tCO <sub>2</sub> e)	Level of Support
		2015	2025	Total 2009–2025			
	<b>Reductions From Recent Actions</b>	–	–	–	–	–	
	<b>Sector Total Plus Recent Actions</b>	–	–	–	–	–	

GHG = greenhouse gas; MMtCO<sub>2</sub>e = million metric tons of carbon dioxide equivalent; \$/tCO<sub>2</sub>e = dollars per metric ton of carbon dioxide equivalent; TBD = to be determined.

\* See below for discussion of overlap adjustments

Note that negative costs represent a monetary savings.

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**Government Policy (GP)  
Technical Work Group (TWG)**

**Summary List of Pending Priority Policy Options for Analysis**

	GP Policy Option	GHG Reductions (MMtCO <sub>2</sub> e)			Net Present Value 2009–2025 (Million \$)	Cost-Effectiveness (\$/tCO <sub>2</sub> e)	Level of Support
		2015	2025	Total 2009–2025			
GP-1	Targets, Reporting, Funding and Accountability Measures	<i>Not Quantified</i>					Pending
GP-2	Public Awareness and Education	<i>Not Quantified</i>					Pending
GP-3	Inter-Government and Inter-Sector Planning Coordination and Assistance	<i>Not Quantified</i>					Pending
GP-4	“Green” Business Development Policies	<i>Not Quantified</i>					Pending
GP-5	Introduce Core Competencies Into Professional Licensing Programs	<i>Not Quantified</i>					Pending

GHG = greenhouse gas; MMtCO<sub>2</sub>e = million metric tons of carbon dioxide equivalent; \$/tCO<sub>2</sub>e = dollars per metric ton of carbon dioxide equivalent.

Note: The numbering used to denote the above pending priority policy options is for reference purposes only; it does not reflect prioritization among these important draft policy options.

## Governor's Action Team On Energy And Climate Change Phase II Process

## Cap-and-Trade (C&T) Technical Work Group (TWG)

### Summary List of Recommended Priority Policy Questions

Rulemaking Issue Number	Rules for the C&T Proposal Shall Include:	Key TWG Recommendations
C&T-1	Set a statewide limit or cap on the amount of greenhouse gases (GHG) emitted by major emitters.	<ul style="list-style-type: none"> <li>• What is the geographic scope of the program?</li> <li>• What sectors are covered by the program?</li> <li>• What sources within the covered sectors are included in the program?</li> <li>• What is the term of the program (e.g., starting date, reduction goal date)?</li> <li>• What reductions goal is the program expected to achieve?</li> <li>• What is the electric sector basis for calculating emissions? (Production? Consumption? Other?)</li> <li>• What reporting requirements will be imposed on regulated sources?</li> <li>• Will reporting requirements be imposed on non-regulated sources?</li> <li>• How much reporting data must be received before the program can begin?</li> </ul>
C&T-2	Establish methods, requirements, and conditions for allocating the cap among major emitters.	<ul style="list-style-type: none"> <li>• How should allowances be distributed? (Free based on historical emissions? Free based on benchmarking? Auctioned? Other?)</li> </ul>
C&T-3	Establish methods, requirements, and conditions for emissions allowances and the process for issuing emissions allowances.	
C&T-4	Establish the relationship between allowances and the specific amounts of greenhouse gas emissions they represent.	<ul style="list-style-type: none"> <li>• What is the face value of an allowance?</li> </ul>
C&T-5	Set the length of allowance periods and the time over which entities must account for	<ul style="list-style-type: none"> <li>• What is the length of a compliance period?</li> </ul>

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Rulemaking Issue Number	Rules for the C&T Proposal Shall Include:	Key TWG Recommendations
	emissions and surrender allowances equal to emissions.	
C&T-6	Set the timeline of allowances from the initiation of the program through to 2050.	<ul style="list-style-type: none"> <li>• When does the program start?</li> <li>• What is the cap for the first year?</li> <li>• What is the cap for 2025?</li> <li>• What is the cap for 2050?</li> </ul>
C&T-7	Establish a process for the trade of allowances between major emitters, including a registry, tracking, or accounting system for such trades.	<ul style="list-style-type: none"> <li>• The Energy Bill requires all major emitters participate in The Climate Registry (TCR).</li> <li>• How does TCR tie into a C&amp;T trading program?</li> <li>• How will allowances be tracked from issuance to surrender?</li> </ul>
C&T-8	Establish cost containment mechanisms to reduce price and cost risks associated with the electric generation market in Florida.	<ul style="list-style-type: none"> <li>• Should major emitters be permitted to borrow allowances from future time periods to meet their current GHG-compliance obligation?</li> <li>• Should major emitters be permitted to bank allowances in the current year to be used to meet obligations in future years? If so is there a time limit on allowance banking?</li> <li>• Should major emitters be permitted to purchase certified offsets from other entities that produce verifiable reductions in unregulated GHG emissions, or that produce verifiable reductions in GHG emissions, through voluntary practices that capture and store GHG that otherwise would be released into the atmosphere?</li> <li>• Should a safety valve mechanism be established to ensure that the market prices for allowances do not surpass a predetermined level compatible with the affordability of electric utility rates and the well-being of the state's economy?</li> </ul>
C&T-9	Establish a process to allow the Florida Department of Environmental Protection (DEP) to exercise its authority to discourage leakage of GHG emissions to neighboring states attributable to the implementation of this program.	<ul style="list-style-type: none"> <li>• Will leakage be addressed in the program design?</li> </ul>

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Rulemaking Issue Number	Rules for the C&T Proposal Shall Include:	Key TWG Recommendations
C&T-10	Establish a trial period on the trading of allowances before full implementation of a trading system.	<ul style="list-style-type: none"> <li>• Will there be a trial period? If so, for how long?</li> <li>• Will allowances issued in the trial period be honored by the program after the trial period?</li> </ul>
C&T-11	Position Florida to anticipate and influence the development of a national program.	<ul style="list-style-type: none"> <li>• What actions can Florida take now to maximize the benefits to Florida from the establishment of a national market based program to reduce GHG emissions?</li> </ul>

C&T = Cap-and-Trade; TWG = Technical Work Group; GHG = greenhouse gas; DEP = Florida Department of Environmental Protection; TCR = The Climate Registry.