



# Governor's Action Team on Energy and Climate Change

## *State of Florida*

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## 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:** Project Status of the Florida Action Team Phase II Process

**Date:** September 29, 2008

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At the seventh meeting of the Florida Action Team on Wednesday and Thursday, October 1-2, 2008, we will focus on review and approval of the remaining Policy Option proposals from the Energy Supply and Demand (ESD), Transportation and Land Use (TLU) and Cap-and-Trade (C&T) Technical Work Groups (TWGs). The TWGs will present their completed policy quantification and revised policy drafts pursuant to Action Team direction from your sixth meeting. In addition, the team will be presented with draft final report chapters and appendices for Government Policy and Coordination (GP) and Adaptation (ADP). Additional final report material will also be presented for review, comment, and if appropriate, approval.

Also in the seventh meeting you will receive a briefing on the new forecast of Florida emissions from all sectors. This forecast will show the business-as-usual projection, and then reduce it by measures contained in the executive orders, other recent actions and the set of policies under consideration by the Action Team. The net GHG reduction benefits, after elimination of double-counting and overlaps between policies will be measured against Florida's emission reduction goals for 2017 and 2025.

The Action Team will also receive the results of the Florida-specific cap-and-trade modeling of the two main proposals – Florida joining the Regional Greenhouse Gas Initiative (RGGI) and Florida joining the Western Climate Initiative (WCI).

As preparation for our meeting, please review the draft appendices (successor to the TWG policy options documents), draft final report chapters and other documents that have been forwarded and posted to the 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.

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- 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.
- Approval of a full range of initial priorities for analysis of draft policy options at its third meeting.
- Approval of draft policy designs and descriptions and coordination of policy jurisdiction among the TWGs in your fourth meeting.
- Approval of all policies from the AFW, ADP and GP TWGs.
- Quantification of the draft policies.
- Approval of the Florida GHG Emission Inventory and Forecast.

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

- Quantification of remaining policies (as needed) and integration of the analysis to eliminate overlaps and double counting.
- Final modeling of Cap and Trade policy recommendations.
- Final action on remaining Florida policy option recommendations in your seventh meeting.
- Review and act upon key design recommendations for cap and trade in your seventh meeting.
- Approval of Final Report in meeting number eight.

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**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	60
Energy Supply and Demand (ESD)	20
Transportation and Land Use (TLU)	9
Agriculture, Forestry, and Waste Management (AFW)	10
Government Policy and Coordination (GP)	5
Cap and Trade (C&T) policies (issues)	1 (11)
Adaptation (ADP)	15
Adaptation (ADP) Early Action Strategies	9
<b>Next Steps</b>	
Receive and review key program design recommendations for a Florida cap and trade program	Action Team Meeting #7
Approve remaining final Action Team Policy Option Recommendations (ESD, TLU)	Action Team Meeting #7
Approve Final Report	Action Team Meeting #7 and #8

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## Appendix F

### Adaptation (ADP) Policy Options

#### Summary List of Draft Policy Options

Option No.	ADP Policy Option	Level of Support
ADP-1	Advancing Science Data and Analysis for Climate Change	Approved
ADP-2	Comprehensive Planning	Approved
ADP-2.1	Local Government Level	Approved
ADP-2.2	Regional Government Level	Approved
ADP-2.3	State Government Level	Approved
ADP-3	Protection of Ecosystems and Biodiversity	Approved
ADP-3.1	Uplands, Freshwater and Marine Systems	Approved
ADP-3.2	Beaches and Beach Management	Approved
ADP-3.3	Species Protection	Approved
ADP-4	Water Resource Management	Approved
ADP-5	Built Environment, Infrastructure and Community Protection	Approved
ADP-5.1	Building Codes and Regulation	Approved
ADP-5.2	Flood Protection	Approved
ADP-5.3	Beaches as Infrastructure	Approved
ADP-5.4	Transportation and Other Infrastructure	Approved
ADP-6	Transportation and Other Infrastructure (moved into ADP-5)	Approved
ADP-7	Economic Development	Approved
ADP-7.1	Tourism	Approved
ADP-7.2	Other Resource-based Industries	Approved
ADP-7.2.1	Agriculture	Approved
ADP-7.2.2	Forests	Approved
ADP-7.2.3	Marine	Approved
ADP-7.2.4	Aquaculture	Approved
ADP-7.2.5	Mining	Approved
ADP-7.3	Construction	Approved
ADP-8	Insurance (Property and Casualty)	Approved
ADP-9	Emergency Preparedness and Response (Extreme Events)	Approved
ADP-10	Human Health Concerns	Approved
ADP-10.1	Health Care	Approved
ADP-10.2	Air Quality	Approved
ADP-10.3	Wastewater Treatment	Approved
ADP-10.4	Disaster Response	Approved
ADP-10.5	Medical Treatment and Biomedicine Development	Approved
ADP-11	Social Effects	Approved

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Option No.	ADP Policy Option	Level of Support
ADP-11.1	Social Justice Issues	Approved
ADP-11.2	Food and Water Security	Approved
ADP-11.3	Housing	Approved
ADP-11.4	Intersection of Climate Change and Human Behavior	Approved
ADP-12	Organizing State Government for the Long Haul	Approved
ADP-13	State Funding and Financing	Approved
ADP-14	Coordinating with Other Regulatory and Standards Entities	Approved
ADP-14.1	Federal Government	Approved
ADP-14.2	Professional Societies	Approved
ADP-15	Public Education and Outreach	Approved

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.

## Adaptation (ADP) Early Actions

Option No.	ADP Policy Option	Level of Support
ADP-1.	Advancing Science Data and Analysis for Climate Change	Approved
ADP-2.1.	[Comprehensive Planning] Local Government Level	Approved
ADP-2.3.	[Comprehensive Planning] State Government Level	Approved
ADP-3.1.	[Protection of Ecosystems and Biodiversity] Uplands, Freshwater and Marine Systems	Approved
ADP-3.2.	[Protection of Ecosystems and Biodiversity] Beaches and Beach Management	Approved

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ADP-3.3.	[Protection of Ecosystems and Biodiversity] Species Protection	Approved
ADP-4.	Water Resource Management	Approved
ADP-5.1.	[Built Environment, Infrastructure, and Community Protection] Building Codes and Regulation	Approved
ADP-15.	Public Education and Outreach	Approved

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## Appendix D

### Agriculture, Forestry, and Waste Management (AFW)

#### Summary List of Draft Priority Options for Analysis—2017 and 2025

Option No.	Policy Option	GHG Reductions (MMtCO <sub>2</sub> e)			Net Present Value 2009–2025 (Million \$)	Cost-Effectiveness (\$/tCO <sub>2</sub> e)	Energy Security Fuel Savings	Level of Support
		2017	2025	Total 2009–2025				
AFW-1	Forest Retention—Reduced Conversion of Forested to Non-Forested Land Uses	0.5	0.6	7.2	\$186	\$26		Approved
AFW-2	Afforestation and Restoration of Non-Forested Lands							
	A. Forested Landscape							Approved
	Afforestation	1.6	3.1	28	\$134	\$4.9		
	Reforestation	6.1	11.6	104	\$555	\$5.3		
AFW-3	B. Urban Forestry	4.6	8.7	78	\$759	\$10	3.5 million short tons coal, or 76,000 cubic feet natural gas	Approved
	Forest Management for Carbon Sequestration							
	A. Pine Plantation Management	0.5	0.9	7.9	\$84	\$11		Approved
	B. Non-Federal Public Land Management	0.3	0.4	3.9	\$41	\$11		Approved
AFW-4	Expanded Use of Agriculture, Forestry, and Waste Management (AFW) Biomass Feedstocks for Electricity, Heat, and Steam Production	21	40	361	\$7,432	\$21	22 million short tons coal or 486,000 cubic feet natural gas	Cond. Approval
AFW-5	Promotion of Farming Practices That Achieve GHG Benefits							
	A. Soil Carbon Management	0.5	0.9	8.0	-\$74	-\$9	5 million gallons of diesel fuel	Approved
	B. Land-Use Management That Promotes Permanent Cover	N/Q						Approved
	C. Nutrient Management	0.2	0.3	2.6	\$68	\$26		Approved
	D. Improved Harvesting Methods to Achieve GHG Benefits	N/Q						Approved

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AFW-6	Reduce the Rate of Conversion of Agricultural Land and Open Green Space to Development	0.2	0.5	4.2	\$394	\$93		Approved
AFW-7	In-State Liquid/Gaseous Biofuels Production	4.0	8.2	68	-\$532	-\$8	4,075 million gallons gasoline and 271 million gallons diesel	Approved
AFW-8	Promotion of Advanced Municipal Solid Waste (MSW) Management Technologies (Including Bioreactor Technology)	1.9	4.4	34	\$294	\$9	190,000 short tons coal or 4,000 cubic feet NG and 109 million gallons diesel	Approved
AFW-9	Improved Commercialization of Biomass-to-Energy Conversion and Bio-Products Technologies							
	A. Manure Digestion/Other Waste Energy Utilization	0.04	0.09	0.8	-\$13	-\$17	4,500 short tons coal or 100 cubic feet natural gas	Approved
	B. WWTP Biosolids Energy Production & Other Biomass Conversion Technologies	2.4	5.0	42	\$1,848	\$44	2.5 million short tons coal or 55,000 cubic feet natural gas	Approved
	C. Bio-Products Technologies and Use	0.2	0.3	2.6	-\$161	-\$62		Approved
AFW-10	Programs to Support Local Farming/Buy Local	N/Q						Approved
	<b>Sector Totals</b>	<b>44</b>	<b>85</b>	<b>752</b>	<b>\$11,014</b>	<b>\$15</b>		
	<b>Sector Total After Adjusting for Overlaps*</b>	<b>25</b>	<b>58</b>	<b>469</b>	<b>\$5,974</b>	<b>\$13</b>		
	<b>Reductions From Recent Actions</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>		
	<b>Sector Total Plus Recent Actions</b>	<b>25</b>	<b>58</b>	<b>469</b>	<b>\$5,974</b>	<b>\$13</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; N/Q = not quantified; WWTP = wastewater treatment plant.

\* See below for discussion of overlap adjustments.

Note that negative costs represent a monetary savings.

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## Appendix K Government Policy (GP)

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

Policy No.	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 to be Quantified</i>					Approved
GP-2	Public Awareness and Education	<i>Not to be Quantified</i>					Approved
GP-3	Inter-Governmental Planning Coordination and Assistance	<i>Not to be Quantified</i>					Approved
GP-4	“Green” Business Development Policies	<i>Not to be Quantified</i>					Approved
GP-5	Introduce Core Competencies Into Professional Licensing Programs	<i>Not to be Quantified</i>					Approved

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## 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.	<p>Initial analysis indicates that Florida would benefit from joining the Northeast Regional Greenhouse Gas Initiative (RRGI), and/or the Western Climate Initiative (WCI). Florida should seek ‘observer’ status with RGGI and WCI as soon as possible to closely monitor progress and prepare for membership if it is desired. Florida should reach out to the other Southern states in the hope of collaborating with our neighbors. Florida should not pursue a one-state cap and trade program.</p> <p>The Florida cap and trade program should include the electric sector at the beginning. Consideration should be also given to 1) industrial stationary source emissions; 2) residential and commercial fuel use; 3) transportation fuels, and 4) energy extraction, processing and transportation. These sectors may be better candidates for inclusion in a subsequent phase. Transportation and residential and commercial fuel use should be studied further and considered for inclusion in a subsequent phase or determined to be better suited for regulation through non-cap and trade market mechanisms.</p> <p>If Florida joins a regional climate initiative, Florida should accept the regional goal as long as it is consistent with the state’s GHG reduction goals.</p> <p>Every effort should be made so that regulated entities are required to complete only one report for both the state and the national efforts. The reporting system should be as broad as possible; a de minimus limit may be needed given administrative and cost concerns.</p>
	Establish methods, requirements, and conditions for allocating the cap among major emitters.	<p>The cap and trade program should strive to be revenue neutral to consumers as much as possible. There are five broad purposes to which allowance value (either the allowances themselves or proceeds from their sale) should be applied. These are not in any priority order:</p> <ul style="list-style-type: none"> <li>○ Promote energy efficiency investments;</li> <li>○ Mitigate impacts on ratepayers/consumers with particular attention to low income consumers;</li> <li>○ Promote renewable or non-carbon technologies.</li> <li>○ Mitigate impacts of climate change, i.e., fund adaptation strategies.</li> <li>○ Protecting regulate emitters from competitive disadvantage.</li> </ul> <p>There are a number of equally important uses of allowance value which should also be considered such</p>
	Establish methods, requirements, and conditions for emissions allowances and the process for issuing emissions allowances.	

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Rulemaking Issue Number	Rules for the C&T Proposal Shall Include	Key TWG Recommendations
		as stimulating or rewarding investment in carbon emissions abatement technologies, funding program administration, and protecting regulated emitters from economic disadvantage. It is our strong recommendation that if any revenues are generated from the sale of allowances they should never be used to supplement general revenues to the State of Florida.
	Establish the relationship between allowances and the specific amounts of greenhouse gas emissions they represent.	Not addressed.
	Set the length of allowance periods and the time over which entities must account for emissions and surrender allowances equal to emissions.	Not addressed.
	Set the timeline of allowances from the initiation of the program through to 2050.	Not addressed.
	Establish a process for the trade of allowances between major emitters, including a registry, tracking, or accounting system for such trades.	Not addressed.
	Establish cost containment mechanisms to reduce price and cost risks associated with the electric generation market in Florida.	The cap and trade program should allow offsets without limits; however, the offset program must ensure rigorous quality standards. The cap and trade program needs appropriate allowance price containment mechanisms, especially in early years. Further study is needed before the specific mechanisms can be recommended. The cap and trade program should allow unlimited banking. Borrowing is an important cost containment mechanism and should be allowed, but agreement was not reached on what conditions (Warner-Lieberman-type limits by emitter, time limits, interest, etc.) should be imposed.
	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.	Some believe leakage may not prove to be a major concern for a Florida cap and trade program, largely due to geographic and transmission infrastructure limitations. Others believe leakage is a potentially serious concern and fear that an expected reduction in the requirement for imports will create greater future opportunities to use the existing transmission infrastructure to import electricity from unregulated sources. It is recommended that DEP should further evaluate the issue.
	Establish a trial period on the trading of allowances before full implementation of a trading system.	Florida should advocate a federal program with a trial period that provides flexibility but imposes enforceable compliance obligations. Florida should accept existing regional cap and trade program requirements for trial periods.
	Position Florida to anticipate and influence the development of a national program.	By having Florida join a regional program now, the state can influence the design and development of regional rules that will likely influence a national program design. There should be a planned transition from the regional to the national program allowing for the integration of the regional program into the national one, including data transfer, full recognition of allowance value and offsets, and recognition of emissions reductions and compliance

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Rulemaking Issue Number	Rules for the C&T Proposal Shall Include	Key TWG Recommendations
		schemes.
	Grace period for retiring sources (ESD-10)	The failure of a regional program to offer such an exemption should not affect the decision to join that program. However, to the extent that it is consistent with any regional program that Florida might want to join, Florida should consider an exemption for certain generating units scheduled for zero or low-carbon replacement under certain conditions. <b>[See note in text]</b>

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

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## Appendix A

### Energy Supply and Demand (ESD)

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

Policy No.	Policy Option	GHG Reductions (MMtCO <sub>2</sub> e)			Net Present Value (See Note 2) 2009–2025 (Million \$)	Cost-Effectiveness (\$/tCO <sub>2</sub> e)	Status of Option
		2017	2025	Total 2009–2025			
<b>Tier 1</b>							
ESD-5	Promoting Renewable Electricity through Renewable Portfolio Standard (RPS), incentives and barrier removal (20% by 2020)	17	34.5	319	-\$9,274	-\$29	Pending
ESD-6	Nuclear Power	0.0	7.3	49.4	\$1,782	\$36	Pending
ESD-7	Integrated Resource Planning (IRP)	Not to be quantified					Pending
ESD-8	Combined Heat and Power (CHP) Systems	1.8	2.2	26.5	\$126	\$5	Pending
ESD-9	Power Plant Efficiency Improvements	8.4	8.9	111.4	-\$1,541	-\$14	Pending
ESD-11	Landfill Gas-To-Energy (LFGTE)	3.7	8.7	64.7	\$79	\$1	Pending
ESD-12	Demand-Side Management (DSM)/Energy Efficiency Programs, Funds, or Goals for Electricity	13.0	21.8	201.4	-\$8,566	-\$43	Pending
ESD-13a	Energy Efficiency in Existing Residential Buildings	3.4	5.4	50.4	-\$1,432	-\$28	Pending
ESD-14	Improved Building Codes for Energy Efficiency	0.0	4.9	9.9	-\$265	-\$27	Pending
ESD-15	Training and Education for Building Operators and Community Association Managers	<i>Not to be quantified</i>					Pending
ESD-17	Consumer Education Programs	<i>Not to be quantified</i>					Pending
ESD-23	Decoupling	<i>Not to be quantified</i>					Pending
<b>Recent Actions</b>							
	Building Codes for Energy Efficiency (HB 697 and Executive Order 127)	8.0	15.4	136.5	-\$4,082	-\$30	Pending
<b>Tier 2</b>							
ESD-1	Technology Research and Development (R&D) with Commercial Opportunities						Pending
ESD-4	Electricity Transmission and Distribution Improvements						Pending

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Policy No.	Policy Option	GHG Reductions (MMtCO <sub>2</sub> e)			Net Present Value (See Note 2) 2009–2025 (Million \$)	Cost-Effectiveness (\$/tCO <sub>2</sub> e)	Status of Option
		2017	2025	Total 2009–2025			
ESD-13b	Incentives for New Residential Buildings and Master Planned Communities Achieving High Energy Performance Standards						Pending
ESD-16	More Stringent Appliance/Equipment Efficiency Standards						Pending
ESD-18	Incentives to Promote Implementation of Customer-Sited Renewable Energy Systems						Pending
ESD-21	Rate Structures and Technologies to Promote Reduced Greenhouse Gas (GHG) Emissions						Pending
ESD-22	Demand-Side Management (DSM)/Energy Efficiency Programs, Funds, or Goals for Natural Gas						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; HB = House Bill.

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.

Note 2: Negative numbers in the "Net Present Value" column denote options for which the discounted value of the monetary **benefits** of the option are greater than the discounted total **costs** of the option.

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## Appendix C

### Transportation and Land Use (TLU)

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

Policy No.	Policy Option	GHG Reductions (MMtCO <sub>2</sub> e)			Net Present Value 2009–2025 (Million \$)	Cost-Effectiveness (\$/tCO <sub>2</sub> e)	Energy Security Fuel Savings (Gallons Saved 2009–2025) (million gallons)	Level of Support
		2017	2025	Total 2009–2025				
TLU-1	Develop and Expand Low-GHG Fuels	6.20	12.62	106.41	–\$15,161	–\$142	37,290	Pending
TLU-2	Low Rolling Resistance Tires and Other Add-On Technologies	0.80	1.84	13.99	–\$1,259	–\$90	3,209	Pending
TLU-3	Smart Growth Planning	Not Quantified Separately; Included in Other Analyses						Pending
TLU-4	Improving Transportation System Management (TSM)	3.05	7.20	65.91	\$820	\$12	7,452	Pending
TLU-5	Increasing Choices in Modes of Transportation	0.13	0.50	3.50	\$782	\$223	396	Pending
TLU-6	Factoring GHG Emissions Into Transportation and Land Use (TLU) Planning Processes	0.66	1.96	15.70	Net Savings	Net Savings	1,775	Pending
TLU-7	Incentive Programs for Increased Vehicle Fleet Efficiency	0.84	1.56	13.14	NQ	NQ	1,564	Pending
TLU-8	Increasing Freight Movement Efficiencies	0.59	1.10	11.52	\$21	\$2	1,302	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.