



Governor’s Action Team on Energy and Climate Change

State of Florida

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Government Policy (GP) Technical Work Group

Summary List of Pending Priority Policy Options for Analysis

	Policy Option	GHG Reductions (MMtCO ₂ e)			Net Present Value 2009–2025 (Million \$)	Cost-Effectiveness (\$/tCO ₂ e)	Level of Support
		2015	2025	Total 2009–2025			
GP-1	GHG emissions targets, reporting 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 on Climate Change into professional licensing programs	<i>Not Quantified</i>					Pending

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.

GP-1. Greenhouse Gas Emission Targets, Reporting and Accountability Measures

Policy Description

The State of Florida is committed to significant reductions in greenhouse gas (GHG) emissions and has established emissions inventory, forecasting, reporting and registry functions in state agencies, specifically in the Department of Environmental Protection (DEP). The State is also establishing a Renewable Portfolio Standards (RPS) and Energy Efficiency (EE) targets. (See Related Policies and Programs below for specifics.) HB 7135 established a new Commission on Energy and Climate demonstrating the State's long term commitment to reducing Florida's carbon footprint.

Further descriptions of these functions are included here:

Florida has a set of GHG emissions reductions targets as established under Executive Order 07-126; specifically, 10% below current levels by 2012; 25% below current levels by 2017 and 40% below current levels by 2025. This policy supports these targets but recognizes that in the future there might be a need to revise them with the benefit of new science, new opportunities or new information regarding the progress of policies already implemented. A process by which targets are reviewed and if necessary revised in the future is proposed.

GHG emissions inventories and forecasts are essential for understanding the magnitude of all emission sources and sinks (both anthropogenic and natural), the relative contribution of various types of emission sources and sinks to total emissions, and the factors that affect trends over time. Inventories and forecasts help to inform state leaders and the public on statewide trends, opportunities for mitigating emissions or enhancing sinks, and verifying GHG reductions associated with implementation of action plan and other initiatives.

GHG reporting supports the tracking and management of emissions over time. GHG reporting can help sources identify emission reduction opportunities and reduce risks associated with possible future GHG mandates. Tracking and reporting of GHG emissions can also help in the construction or revision of periodic state GHG inventories. GHG reporting is a prerequisite for sources to participate in GHG reduction programs, opportunities for recognition, and a GHG emission registry, as well as to secure "baseline protection" (i.e., credit for early reductions).

A renewable portfolio standard (RPS) is a requirement that utilities must supply a certain, generally fixed percentage of electricity from an eligible renewable energy source(s). About 20 states currently have an RPS in place. The Energy Supply and Demand TWG is proposing ESD-2 an environmental portfolio standard (EPS) that expands the notion to include energy efficiency or other GHG emissions-reducing technologies as an eligible resource. A GHG registry of some sort is required if the EPS includes GHG emissions as a component.

A GHG registry enables recording of GHG emission reductions in a central repository with "transaction ledger" capacity to support tracking, management, and "ownership" of emission reductions; establish baseline protection; enable recognition of environmental leadership; and/or

provide a mechanism for regional, multi-state, and cross-border cooperation. Properly designed registry structures also provide a foundation for possible future trading programs. Florida is a member of The Climate Registry and as such can take advantage of the programs and protocols offered by TCR to member jurisdictions.

Policy Design

To support these initiatives, mechanisms must be created to:

- Periodically review and revise established goals or targets for statewide GHG emission reductions, RPS and energy efficiency targets;
- Establish and fund RPS, EE and mandatory GHG emission reporting, inventory and forecasting functions at state agencies. Also, develop an inventory and forecast system that is aligned with national protocols and tailored to specific emissions/sinks found in Florida.
- Provide technical assistance to emissions reporters and encourage participation.
- Institute an accountability program to measure and report progress in reducing GHG emissions and proposals. An accountability program would allow the state to keep track of emission reductions and help determine what is working and what is not.
- Measure and report on research and development, job creation and new business investment resulting from related ‘green’ economy programs.
- [?] The Action Team recommends that Florida establish GHG reduction targets for state and local government operations and school districts, with an emphasis on energy efficiency for both transportation and non-transportation uses. The establishment of these targets will be helpful in setting an example for nongovernmental entities and will help agencies to focus on doing the necessary analysis. Reductions should be reported at the agency level. Thus, state and local government agencies or departments would first need to develop agency- or department-specific GHG emissions inventory data, ideally building on existing energy use reporting data. This would become the baseline data for ongoing emission reduction activities and measurement, which could be included in annual reporting for all entities. Agency and/or department reports would be aggregated into a summary report reflecting state GHG emissions. A multi-agency group should oversee the on-going climate efforts of the government’s agencies or departments, review their performance, and provide direction, guidance, resources, shared approaches, and recognition to agencies or departments and their employees that are working to reduce the government’s GHG emissions.

Goals:

1. The [Florida Energy and Climate Commission?] [DEP?] [other?] should review progress toward achieving goals annually beginning in _____, and review and affirm or propose revisions to the goals [every five years?] [other?].

2. Through the [FECC?] [DEP?] [other?] Coordinate with the U.S. Environmental Protection Agency (EPA) and The Climate Registry on the development of a mandatory federal GHG reporting rule (see FY2008 Consolidated Appropriations Amendment).¹
 - a. This GHG rule will define sources, thresholds for reporting, and frequency of reporting. The GHG rule can be used to define reporting standards for previous year's emissions.
 - b. The rule will apply to the following gases: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), sulfur hexafluoride (SF₆).
 - c. Forecasting of GHG emissions will be included as part of the state responsibilities. In forecasting future GHG emissions, treatment of uncertainties should be transparent, be as consistent as possible across sectors and time, and to the extent possible, reflect multiple scenarios.
3. Inventory related information shall be gathered for all previous years through 1990 [?].
4. Reports of progress in should be made available to the public by [publication means?] every [time period?].

Timing:

1. Implementation of a GHG inventory for previous years shall continue.
2. Timing of the current GHG inventory and forecasting efforts shall proceed as initiated under the Action Team process. Future efforts shall be based on the timing of the EPA reporting rule.

Parties Involved:

1. Florida Department of Environmental Protection, Florida Energy and Climate Commission, the Public Service Commission, state agencies, local and regional governments.
2. Forecast assistance will need to be provided by various other state agencies.

Other:

Implementation Mechanisms

TBD – [as approved by the TWG]

Related Policies/Programs in Place

Governor's Executive Order 07-126 established GHG reduction goals for state agencies of a 10% reduction from current emission levels by 2012, a 25% reduction from current levels by 2017, and a 40% reduction from current levels by 2025.

¹ 110th U.S. Congress, First Session, H.R. 2764: Consolidated Appropriations Act, 2008, <http://www.govtrack.us/congress/billtext.xpd?bill=h110-2764>, see Title II, Administrative Provisions, U.S. Environmental Protection Agency (EPA) (Including Rescission of Funds), pp. 284–285.

Governor's Executive Order 07-128 established reduction goals to 2000 levels by 2017, to 1990 levels by 2025, and by 80% of 1990 levels by 2050. The Governor's Order also required adoption of the California motor vehicle emission standards. The standard is a 22% reduction in vehicle emissions by 2012 and a 30% reduction by 2016.

The Executive Office of the Governor is tracking and reporting financial savings and emissions reductions associated with Executive Order 07-126 via the Florida Government Carbon Scorecard. Executive Order 07-128 direction provides for "Policies for emission reporting and registry that measure and document emission reductions."

Recent actions in FL: As a result of EO 07-127, the Florida Public Service Commission held a series of workshops on RPS in 2007. They took comments on how to define what is renewable, at what level the standard should be set, and what the state wishes to achieve by setting an RPS. A report will be provided to the PSC this year on the findings and recommendations will follow on rulemaking.

Florida Energy Bill – HB-7135:

Type(s) of GHG Reductions

TBD – [as needed and approved by the TWG]

Estimated GHG Reductions and Costs or Cost Savings

TBD – [as approved by the TWG]

Data Sources: [TBD, as approved by the TWG]

Quantification Methods: [e.g., Full life cycle analysis with supply/demand equilibrium adjustments on TWG approval]

Key Assumptions: [TBD, as approved by the TWG]

Key Uncertainties

TBD – [as needed and approved by the TWG]

Additional Benefits and Costs

TBD – [as needed and approved by the TWG]

Feasibility Issues

TBD – [as needed and approved by the TWG]

Status of Group Approval

Pending

Level of Group Support

TBD – [blank until Action Team meeting #7 or #8]

Barriers to Consensus

TBD – [blank until final vote by the Action Team]

GP-2. Public Awareness and Education

Policy Description

Public education and outreach efforts can support GHG emissions reduction efforts at all levels in the context of emissions reduction programs, policies, or goals. State residents need information they can act on in their roles in families, communities, businesses, schools, and civic organizations. Public education is vital to fostering a broad awareness of climate change issues and its effects (including co-benefits, such as clean air and public health) among the state's citizens. Ongoing climate education is an important part of helping residents to make sense of emerging climate science information and in preparing for long and short term changes that may affect their personal lives, homes, jobs, businesses and communities.

Policy Design

The Florida Energy and Climate Commission or another appropriate agency should have staff and resources dedicated to increase awareness and engage the general public in climate actions in personal and professional lives. This includes future generations, and community-based organizations, business leaders and visitors.

The state agency should initiate a polished ad campaign marketing the notion and the practices of reducing the carbon footprint of individuals, families, businesses, and institutions. More in-depth materials should be developed and distributed through schools and university networks, community groups, web pages and government agencies. Care should be taken to engage the diverse set of communities that make up Florida's residents, including Spanish and other language outreach.

Outreach, recognition, and education efforts targeting industrial and economic sectors can help them incorporate climate change efforts into business plans and practices. The Tourism sector is such an important part of Florida's economy it deserves special focus which includes educating recreational visitors to the state.

Implementation methods to include a Governor's conservation challenge initiative to educate and motivate all Floridians to reduce their energy consumption and take advantage of *Volunteer Florida* "Serve to Preserve" for residential energy efficiency and renewable outreach. The initiative should encourage citizens to 'sign the pledge' to assess and reduce emissions (perhaps through the internet) and provide them with easy-to-use analysis tools (carbon 'footprint' calculator) and guidance on the range and value of available alternatives to reduce emissions, as well as any economic co-benefits.

Climate change education and outreach would utilize the same practices as existing Florida Department of Environmental Protection practices. DEP has an established network for education and outreach for issues similar to climate change (e.g., pollution prevention, clean air). The education and outreach program would include aspects of climate change actions developed from other sectors (i.e., forestry, energy supply, agriculture). Collaboration with non-

governmental organizations will facilitate the public education and outreach of climate change options.

The State will provide education and outreach funding for public information messages regarding climate change in Florida in various media. Other incentives may include educational materials developed for K-12, university-level syllabi, preference in contracting for businesses that employ climate change mitigation practices and/or products. The target audiences will be evaluated periodically to determine the extent of knowledge and the efficacy of climate change outreach efforts.

Goals:

This policy address, at a minimum, the following target audiences:

Target audience: State Executive Agencies

The Governor should form a climate change education and outreach committee (coordinated by DEP) to educate the public and other audiences regarding climate change action plan, associated policies and to oversee outreach activities. The committee should be formed of appointees and supported by outreach coordinators from relevant state agencies (e.g. energy supply, forestry, agriculture, etc.). The committee should address the following:

- Create and maintain one or more “outreach coordinator” positions in relevant executive agencies specifically tasked with climate change issues.
- Assess the level (establish a baseline) of public understanding of the impacts of climate change and of (proposed) state-specific actions to deal with climate change.
- Establish a recurring awards program to recognize leadership and attainment of goals and objectives of the Florida climate change action plan.

Target Audience: General Public

Increase awareness and engage in climate change actions in personal and professional lives.

- Educate broadcasters, reporters, editorial boards, etc. about climate change, the risks it imposes, and State subset of solutions. Work with state broadcasters and print media associations to develop and run climate change public service announcements.
- Develop & maintain a state climate change website for the public including a clearinghouse of Florida-specific climate change information and resources.
- Work with existing business outreach efforts to customers to enhance awareness of climate change issues & opportunities.
- Provide—and advertise—marketplace incentives to adopt and purchase goods with the minimum climate change “footprint”.

Target Audience: Future Generations

Integrate climate change into educational curricula, post-secondary degree programs, and professional licensing to address the multidisciplinary approach to reduce adverse climate change effects.

- Ensure climate change public education (K-12) performance standards for science and social studies; identify (a) gaps in climate change education, and (b) specific curricula to fill any gaps.
- Integrate “best practices” into public school design & construction and use this as a means to educate the public about to educate students (and parents) firsthand in their communities & colleges.
- Organize groups of educators to identify, assemble, and employ climate change curricula appropriate to age groups. Make curricula and associated materials available to non-public-funded educational courses.
- Integrate climate change into core college curricula and promote research into climate change and solutions at state universities; develop university “Centers of Excellence” on climate issues, new approaches, and technologies.
- Develop assessment tools to determine the impact of climate change curricula.
- Include climate change discussions at State-funded venues, such as science centers, zoos, and museums.

Timing:

TBD.

Parties Involved: TBD.

Other: TBD – [as needed and approved by the TWG]

Implementation Mechanisms

TBD – [as approved by the TWG]

Related Policies/Programs in Place

TBD – [as needed and approved by the TWG]

Type(s) of GHG Reductions

TBD – [as needed and approved by the TWG]

Estimated GHG Reductions and Costs or Cost Savings

TBD – [as approved by the TWG]

Data Sources: [TBD, as approved by the TWG]

Quantification Methods: [e.g., Full life cycle analysis with supply/demand equilibrium adjustments on TWG approval]

Key Assumptions: [TBD, as approved by the TWG]

Key Uncertainties

TBD – [as needed and approved by the TWG]

Additional Benefits and Costs

TBD – [as needed and approved by the TWG]

Feasibility Issues

TBD – [as needed and approved by the TWG]

Status of Group Approval

Pending

Level of Group Support

TBD – [blank until Action Team meeting #7 or #8]

Barriers to Consensus

TBD – [blank until final vote by the Action Team]

CC-3. Inter-Government and Inter-Sector Planning Coordination and Assistance

Policy Description

Given the high priority of climate change mitigation in the State of Florida, numerous state and local government agencies are tasked with implementing climate policies or, at a minimum, integrating energy efficiency principles into their operations. Efficient coordination among agencies and between state and local government will enhance overall effectiveness, reduce overlap and eliminate barriers to GHG mitigation efforts. Planning agencies in particular will need to coordinate, especially those with a role in transportation infrastructure as transit offers among the most potent reduction opportunities. Further, ‘Leading-by-Example’ is the most effective way for governments to convey the importance of climate response to the broader public.

As documented in the ‘Plans and Planners’ document, there are multiple agencies and jurisdictions with overlapping authority to plan and regulate a wide range of activities that directly or indirectly impact emissions. The Action Team proposes to directly improve coordination and consistency between these agencies and jurisdictions relative to GHG issues.

Policy Design

To accomplish the goals set forth above, the following is recommended:

- Establish incentives or mandate programs for local governments to undertake inventories and GHG reduction initiatives for local government planning, facilities and operations;
- Provide technical support to local governments to enable them to access federal funding for inventories and GHG reductions;
- Work with local governments to establish a standardized methodology for emissions measurement and reporting and fund software licenses;
- Publicize and reward best practices for local governments;
- Provide information and education to policy makers at the state and local levels;
- Require state and regional agencies and departments to review policies to consider and promote emissions reductions;
- Coordinate overlapping planning authorities to promote consistent consideration of energy use and emissions reduction efforts by
 - [means]
 - [means]
 - [means]
- Coordinate diversified mass transportation planning between local, state and regional agencies for GHG reduction benefits by [means].

Goals: TBD – [as approved by the TWG]

Timing: TBD – [as approved by the TWG]

Parties Involved: TBD – [as approved by the TWG]

Other: TBD – [as needed and approved by the TWG]

Implementation Mechanisms

TBD – [as approved by the TWG]

Related Policies/Programs in Place

Legislation has been filed that contains incentives, encouragement, and assistance to local governments in establishing GHG reduction targets and plans.

Type(s) of GHG Reductions

TBD – [as needed and approved by the TWG]

Estimated GHG Reductions and Costs or Cost Savings

TBD – [as approved by the TWG]

Data Sources: [TBD, as approved by the TWG]

Quantification Methods: [e.g., Full life cycle analysis with supply/demand equilibrium adjustments on TWG approval]

Key Assumptions: [TBD, as approved by the TWG]

Key Uncertainties

TBD – [as needed and approved by the TWG]

Additional Benefits and Costs

TBD – [as needed and approved by the TWG]

Feasibility Issues

TBD – [as needed and approved by the TWG]

Status of Group Approval

Pending

Level of Group Support

TBD – [blank until Action Team meeting #7 or #8]

Barriers to Consensus

TBD – [blank until final vote by the Action Team]

CC-4. “Green” Business Development Policies

Policy Description

Climate change impacts are likely to have significant effects on all sectors of Florida’s economy. Some sectors will face acute challenges while others will enjoy substantial growth opportunities. GHG mitigation and climate adaptation are also likely to create entirely new economic and employment opportunities.

Successful state GHG reduction efforts are highly dependent on active participation of the business community, particularly in the energy, agriculture, transportation, development and manufacturing sectors. The intent of this policy is to encourage and facilitate the involvement of funding and investment sources, business interests, and entrepreneurs in pursuing business opportunities associated with GHG reductions and climate change solutions as quickly and as significantly as possible.

The State will benefit by early identification of business opportunities associated with climate change, increasing its global competitive advantage and job creation within the state.

The State may also consider providing strategic support to existing critical economic sectors such as tourism and other natural resource-based industries which may experience stress.

Potential funding sources include philanthropic organizations, high net worth individuals, or others interested in supporting innovative, environmentally effective market solutions. Recognizing that fortunes are likely to be made in the “new energy economy,” for-profit investors, pension funds, mutual funds, and/or venture capitalists may be looking to fund similar business opportunities. Although technology entrepreneurs are often cited as offering potential climate change solutions, equally progressive solutions may lie in the fields of law, accounting, marketing, production, and even government relations and lobbying. The objective of this policy option is to leverage a state’s specific talents for climate change solutions into securing the business opportunities and market advantages that well-supported “early bird” efforts are likely to reap in a carbon-constrained world.

Policy Design

Successful state GHG reduction efforts are highly dependent on active participation of the business community, particularly in the energy, agriculture, transportation, development and manufacturing sectors. The intent of this policy is to encourage and facilitate the involvement of funding and investment sources, business interests, and entrepreneurs in pursuing business opportunities associated with GHG reductions and climate change solutions as quickly and as significantly as possible.

Florida should foster research and development associated with GHG emission reduction, renewable energy and energy efficiency technologies. The state should also promote business, job development and workforce training in alternative, low carbon fuels and vehicles, and other alternative, low carbon technologies.

The DEP and the Florida Department of Commerce should undertake analysis of which state economic sectors will be negatively impacted and where new opportunities appear likely to emerge including Florida's tourism and other natural resource-based economic sectors. (See [Draft FL Adaptation Catalog](#).)

Organize existing resources and entities and those created under the 2008 Florida Energy Bill (Florida Energy and Climate Commission, Florida Energy Systems Consortium) to support businesses in greening their operations and promote business development opportunities in climate protection and adaptation including seeking or stimulating funding investments. This can be accomplished by:

- Undertaking an analysis of the assets and opportunities for 'green' industry development and targeting those technologies for which Florida has an advantage. Examples include ocean wave energy, wind power, solar energy, biofuels, [others?].
- Analyzing targeted incentives to promote private investment in these technologies/industries such as tax credits, investment in academic programs and research, grant funding [other?].
- Promoting the use of commercially-ready technologies through targeted RPS, EEPS, codes, standards, [other?].

Other measures to accomplish this might include instituting a "business incubator" program to attract and support new business development related to the new energy economy.

Florida should offer incentive points for competitive state-to-business economic development grant programs for businesses that have undertaken GHG-reduction and EE programs.

The creation of a clearinghouse-like entity may make it possible to match technology developers and other climate solution entrepreneurs with necessary financing more effectively and expeditiously. As a result, a state's ability to identify and secure early business opportunities associated with climate change may be enhanced, increasing its global competitive advantage and job creation within the state.

Promotion of low-carbon fuels and vehicles through government actions can be done with public education campaigns, tax/service and other incentives, and encouragement.

Having a government focal point for promoting the development of climate protection businesses would enhance the efficiencies of such an effort.

Goals: TBD

Timing: TBD

Parties Involved: TBD

Implementation Mechanisms

(TBD)

Related Policies/Programs in Place

The Action Team, in their Phase I deliberations, recommended further examination of ways the state can support public and private efforts to develop alternative fuels and technologies in Florida. The Action Team also recommended that policies be developed that promote the use of low-carbon vehicles. There are several state and federal grant programs, some administered through the Florida Energy Office, that attempt to incentivize the use of these fuels and vehicles.

TBD – [as needed and approved by the TWG]

Type(s) of GHG Reductions

TBD – [as needed and approved by the TWG]

Estimated GHG Reductions and Costs or Cost Savings

TBD – [as approved by the TWG]

Data Sources: [TBD, as approved by the TWG]

Quantification Methods: TBD

Key Assumptions: [TBD, as approved by the TWG]

Key Uncertainties

TBD – [as needed and approved by the TWG]

Additional Benefits and Costs

TBD – [as needed and approved by the TWG]

Feasibility Issues

TBD – [as needed and approved by the TWG]

Status of Group Approval

Pending – [until Action Team moves to final agreement at meeting #7 or #8]

Level of Group Support

TBD – [blank until Action Team meeting #7 or #8]

Barriers to Consensus

TBD – [blank until final vote by the Action Team]

CC-5. Introduce Core Competencies on Climate Change Into Professional Licensing Programs

Policy Description

Many professional associations are providing continuing education or educational opportunities to their constituencies on climate change–related building and construction efficiencies. Requiring a core competency in these areas within the state’s licensing programs would further encourage these disciplines and professional education efforts.

Policy Design

Introduce Core Competencies on Climate Change Into Professional Licensing Programs (e.g., energy efficiency in building design, construction, maintenance and operation; use of recycled materials, etc.).

Targeted professions should include:

- Architecture and design
- Civil engineering
- Building inspectors
- Code compliance officers
- Building trades (plumbing, HVAC, etc.)
- General contractors
- Real estate
- Finance (real estate)
- Building operators
- [others?]

The State of Florida should expand its relationship with universities, professional associations and other educational institutions to encourage and enable the development of curricula to carry out this mandate.

Goals: TBD – [as approved by the TWG]

Timing: TBD – [as approved by the TWG]

Parties Involved:

Other: TBD – [as needed and approved by the TWG]

Implementation Mechanisms

TBD – [as approved by the TWG]

Related Policies/Programs in Place

TBD – [as needed and approved by the TWG]

Type(s) of GHG Reductions

TBD – [as needed and approved by the TWG]

Estimated GHG Reductions and Costs or Cost Savings

TBD – [as approved by the TWG]

Data Sources: [TBD, as approved by the TWG]

Quantification Methods: [e.g., Full life cycle analysis with supply/demand equilibrium adjustments on TWG approval]

Key Assumptions: [TBD, as approved by the TWG]

Key Uncertainties

TBD – [as needed and approved by the TWG]

Additional Benefits and Costs

TBD – [as needed and approved by the TWG]

Feasibility Issues

TBD – [as needed and approved by the TWG]

Status of Group Approval

Pending

Level of Group Support

TBD – [blank until Action Team meeting #7 or #8]

Barriers to Consensus

TBD – [blank until final vote by the Action Team]