



## Brief Policy Option Descriptions of State Actions Government Policy (GP) Technical Work Group (TWG)

(Note that this listing is incomplete and will be fleshed out during the TWG process; TWG members are encouraged to provide input to the TWG facilitators on existing policies and programs, where relevant. Recently enacted policies and programs in Florida are listed where relevant in the policy options catalog notes. Additional details will be added to this document under each of the option descriptions, as they are provided)

### GP-1. Inventories, Reporting and Registries

#### 1.1 Establish and fund mandatory GHG emission inventory function at state agency

The responsibility for preparing the state's GHG inventory resides with the Department of Environmental Protection (DEP). That agency has the expertise needed to systematically compile information on GHG sources and sinks using established methods and data sources. Inventory and forecast efforts are ongoing and, over time, they reflect improvements to the accuracy and completeness of data collected.

*The DEP has prepared a preliminary inventory of Florida greenhouse gas (GHG) emissions to help guide planning efforts in the state. The Department's GHG emission inventory represents gross estimates. While more refined estimates may be obtainable over time, the preliminary inventory can be relied upon to identify the major categories of GHG emission sources and the general trend of emissions in those categories since 1990. Over the next several months, DEP, with the help of other experts in the field, will identify potential improvements to the inventory and make refinements as needed.*

#### 1.2 Establish and maintain GHG emission forecasting function

Forecasts inform state leaders and the public on statewide trends, opportunities for mitigating emissions or enhancing carbon sinks, and verification of GHG reductions associated with implementation of action plan initiatives.

*The GHG emissions inventory work within DEP's Division of Air Resources has begun to establish and maintain emission forecasting of general trends based on 10 years of emissions reporting, by accounting for growth and combining these results with utilities' and other major emitters' 10-year plans.*

### **1.3 Establish or adopt a GHG emissions reporting program**

A GHG emissions reporting program should be established to receive emissions data from Florida emitters. To ensure cost-effective investment of resources, it is essential to have accurate and current data and information about GHG emissions and impacts and also state-of-the-art computer modeling capabilities. High-quality data and accurate predictive capabilities are key elements in being able to plan strategically and track progress over time to reduce GHG emissions. It is also important to integrate the efforts of multiple entities gathering GHG data so that additional monitoring and data collection resources are effectively utilized. One example might be formation of a state climate data and analysis center to develop and provide objective, state-specific information regarding climate data, analysis, assessment of options and directions, identification of trends, development or improvement of computer modeling, and other information to government, business, and the public.

*The State of Florida is a party to the National Climate Registry.*

### **1.4 Participate in the development of a multi-state GHG emissions reduction registry**

Advantages to developing a regional or multi-state GHG emissions reduction registry would allow for a larger impact on global GHGs. Collaboration with other states in the development of a GHG reporting program could influence the development of GHG reporting practices throughout the region and nation and build consistency and reciprocity with other state or regional GHG reporting programs. Although GHG reporting is commonly voluntary, some states now require certain sources to report their annual GHG emissions. Regional approaches can offer broader and more streamlined market opportunities to reduce GHG emissions in collaboration with partner states or other organizations. Regional and multi-state organizations have formed in several parts of the country to reduce GHG emissions. Examples are the Northeast States Regional Greenhouse Gas Initiative (RGGI), the Midwestern Regional Greenhouse Gas Reduction Accord, and the Western Climate Initiative (WCI).

*Some discussion of this has taken place on the Action Team, and a recommendation was made to investigate Florida's participation in existing regional carbon credit trading mechanisms.*

### **1.5 Provide assistance in reporting and registering GHG emissions**

Assistance to Florida's major emitters could be provided by state government to educate them on the need and transition them into compliance.

### **1.6 Recruit members for Registry statewide**

Identifying the state's major emissions sources for GHGs and recruiting them to supply their emissions data to the inventory would allow the inventory to better define the statewide GHG emissions and would enhance forecasting.

### **1.7 Create "Environmental Attribute Registry"**

An Environmental Attribute Registry would have the technical expertise and data access to determine and certify emission reductions and credits for a carbon trading program. The registry

could certify GHG emission reductions, carbon credits, water pollution credits, or other efforts within market-based environmental programs.

## **GP-2. Energy/Climate Government Policy Coordination**

### **2.1 Establish goals or targets for statewide GHG emission reductions**

Establishing goals for statewide GHG emission reductions is the first step in reducing those emissions in Florida.

*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.*

*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.*

### **2.2 Institute an accountability program**

An accountability program would allow the state to keep track of emission reductions and help determine what is working and what is not.

*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."*

### **2.3 Participate in development of accountability programs in other states**

Participating in the development of accountability programs in other states within our region would be helpful in standardizing the general approach to such programs in the region.

### **2.4 Further examine the role of nuclear energy**

Further examine the role of nuclear energy in addressing the state's goals of reducing GHGs and pursuing energy security to include public outreach and engagement. This examination should address issues associated with the transport and storage of nuclear waste.

*This was a recommendation of the Action Team in Phase I of their deliberations.*

### **2.5 Develop policies to reward early emission reductions**

Early emission reductions by individuals and businesses could be incentivized by developing policies to reward those entities who make efforts to reduce GHGs in advance of regulatory pressure to do so.

*This was a recommendation of the Action Team in Phase I of their deliberations.*

## **2.6 Other policies for efficiently reducing emissions in Florida**

Other policies for efficiently reducing emissions in Florida in conjunction with or independent of regional, national, or international agreements.

*The Action Team, in Phase I of their deliberations, made three recommendations along these lines. The Action Team recommended further examination of the issue of statewide energy conservation and efficiency targets; stepwise improvements in building efficiency targets beyond 2009; and further examination of all energy technologies with low carbon emissions in addressing the state's goals of reducing GHGs and pursuing energy security that includes public outreach and engagement.*

## **2.7 Development of an effective carbon credit system**

If the state were to develop an effective carbon credit system, it would allow the state itself to act as an intermediary and purveyor of the credits and act as the certification entity for private carbon credit exchanges. The TWG deliberations should also examine a means to allow state government to purchase and sell credits.

## **2.8 Climate-neutral bonding**

Bonding mechanisms that might be available, or be made available, for carbon-neutral activities.

## **2.9 Encourage and assist in the development of local government planning efforts**

Local government planning efforts to establish their own targets and reduce emissions should be encouraged through policy and incentives.

*In Phase I of their deliberations, the Action Team recommended incentives to assist municipalities, counties, and schools in the development of programs that achieve the Green Standards and designation or similar applicable standards, involve cost-efficient solutions, improve quality of life, and strengthen Florida's economy. It may be appropriate to enable, assist, and otherwise encourage local governments to pursue comprehensive, multi-sector climate action plans within their jurisdictions. Analogous to the state's effort, local climate planning initiatives could involve local stakeholders, identify and address local mitigation opportunities, establish local emission inventories and/or forecasts, set local GHG reduction goals or targets, consider local climate impacts and possible adaptation responses, and develop long-term sustainability plans. The state should encourage local governments in such efforts and contribute technical and other assistance to the extent possible.*

## **2.10 Develop and implement regional climate reduction initiatives**

Regional climate reduction initiatives need to be explored to capture the economies of scale available in a regional approach to GHG reduction.

## **2.11 Formation of a state climate data and analysis center**

In order to focus state-wide efforts to reduce climate change, the TWG should consider the possibility of a state climate data and analysis center.

*Governor's Executive Order 07-128 provided that there be an examination of the possibility for a focal point in government for Climate Change, including existing program consolidations.*

**2.12 Identify opportunities for the state to join with other state or regional GHG reduction efforts**

Regional climate reduction initiatives need to be explored to capture the economies of scale available in a regional approach to GHG reduction.

*In Phase I of their deliberations, the Action Team proposed that the sale of carbon credits from emission offset projects developed in Florida be enabled. For that purpose, the Action Team recommended that Florida pursue emission offset monitoring and verification programs and agreements including but not limited to a Memorandum of Understanding with RGGI. The Action Team further recommended exploration of linkages to other emerging markets domestically and abroad as a feature of the market design process recommended for Phase 2*

**2.13 Incentive programs for local governments**

State incentives should be considered to encourage local governments to undertake inventories and GHG reduction programs.

*The work group has proposed this recommendation for discussion.*

**2.14 Provide technical support to local governments**

Technical support from the state to local governments may need to be provided in order to facilitate access to federal funding for inventories and GHG reductions.

*The TWG has proposed this recommendation for discussion.*

**2.15 Standardized methodology for emissions measurement and reporting for local governments**

The state government should work with local governments to establish and standardize a methodology for measurement of emissions, including the funding for software licenses utilized in measuring and reporting emissions.

*The TWG has proposed this recommendation for discussion.*

**2.16 State should seek ways to claim carbon credits for individual actions**

The state government should find ways to get carbon reduction credits for homeowner retrofits and construction measures to reduce GHGs and to use the proceeds to reward those homeowners.

*The TWG has proposed this recommendation for discussion.*

**2.17 Offer incentive points for competitive state-to-local grant programs**

The state should determine and offer incentives within state-to-local grant programs for communities that undertake their own GHG reduction.

*The TWG has proposed this recommendation for discussion.*

**2.18 Encourage governments to change the basis of measurement**

The state should examine its practices and change existing measures to comport with GHG reduction as a priority. For instance, using vehicle miles traveled in addition to the existing miles per gallon basis for fleet management.

*The TWG has proposed this recommendation for discussion.*

**2.19 Diversified mass transportation planning**

The state should diversify and better coordinate mass transportation planning between local, state, and regional agencies.

*The TWG has proposed this recommendation for discussion.*

**GP-3. Government Leadership by Example**

**3.1 Establish targets for reductions in state GHG emissions**

The state should lead by example in establishing GHG reductions in state government.

*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. A Phase I Action Team recommendation was to build upon the 15% increase in energy performance of new construction by 2009 as directed by Governor Crist in Executive Order 07-127; the Action Team also recommended stepwise improvements in building efficiency targets beyond 2009.*

*Executive Order 07-128 directed the implementation of additional GHG emission reduction strategies beyond those directed in Executive Order 07-127, as well as an overall blueprint for development of actions; to implement policies to enhance energy efficiency and conservation, including statewide targets; and to implement policies to reduce GHG emissions from state and local governments not addressed in Executive Order 07-126.*

**3.2 Oversee ongoing state, local, and regional climate efforts**

In order to better coordinate state, local, and regional climate efforts, Florida may need a central office or administering body where such efforts are focused.

**3.3 Disaggregate the state’s own GHG emissions**

Each state agency should be responsible for its own GHG reductions, and data should be available down to the agency level.

**3.4 Institute an accountability program to measure and report progress**

An accountability program would need to accumulate data and report on progress with regard to state government GHG emissions.

*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.*

### **3.5 Require evaluation of GHG emissions in Environmental Impact Statements**

Environmental Impact Statements (EISs) are documents that must be filed when the government takes a major action that significantly affects the quality of the human environment. Typically, an EIS is composed of a statement of the purpose and need for the proposed action, a description of the affected environment, a range and discussion of options as alternatives to the action, and an analysis of the proposed impacts.

*The Action Team, in their Phase I deliberations, recommended the development of life cycle analyses for various transportation fuels and the use of those analyses to determine appropriate pathways to protect natural resources required for sustainability.*

### **3.6 Review sources of renewable energy**

There are numerous sources of renewable energy, including solar, solar photovoltaics (PV), wind, ocean current, hydrogen fuel cell technology, and others. The technologies are established and in varying degrees of practical application in Florida.

*The TWG added “including a study of renewable potential.” Extensive discussion of renewable energy sources has taken place on the Action Team. The Department of Agriculture and Consumer Services has implemented Farm to Fuel grants to promote renewable fuels. The Florida Energy Office at FDEP administers several grant and tax incentive programs for the promotion of renewable energy technology, including solar and hydrogen fuel cell as well as many others.*

### **3.7 Apply pollution prevention principles to GHG emission reductions**

During the first few decades of environmental protection regulation in the United States, the focus was on containing or cleaning up pollution after it was generated (P1). Faced with the limitations inherent in such pollution management strategies as containment and remediation, many sectors of government and industry are shifting toward a more preventive, proactive approach. This emerging approach, referred to as pollution prevention (P2), offers a promising means for protecting the environment and achieving more efficient use of resources. It involves identifying the root causes of waste and figuring out ways to minimize its creation, often by using energy and materials more efficiently.

### **3.8 Promote carpooling and use of public transit by state employees**

Carpooling and use of public transit by state employees is a practical measure when available, but would require lifestyle changes on the part of most employees that can be a difficult adjustment. A program that encouraged this would require some sort of incentive such as a more liberal work schedule or possibly an offering in combination with a telecommuting schedule.

*The TWG added the phrase “use of public transit.”*

**3.9 Encourage and assist in the development of local government planning efforts**

Many local governments in Florida are already developing planning efforts designed to reduce GHGs and establishing targets. Encouragement and assistance in developing and coordinating these plans would be helpful.

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

**3.10 Climate-neutral bonding**

Climate-neutral means that there is no net increase in GHG emissions within the bond-issuing agency's geographical jurisdiction after the project becomes operational. A climate-neutral bonding policy can be implemented immediately, without the need for an extensive survey of GHG emissions data. Setting a baseline GHG emission goal of zero would mean any GHGs emitted after the bond-financed project becomes operational would have to be offset.

**3.11 Incentivize or require local government planning efforts to provide for GHG emission reductions**

As mentioned in 3.9, many local governments are already developing GHG reduction plans and setting targets. Mandating such a plan by the legislature, as opposed to encouraging or incentivizing it, would require state funding.

**3.12 Introduce core competencies on climate change into professional licensing programs**

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.

**3.13 State land acquisition strategies for sequestration or storage benefits**

Geological carbon sequestration is the burial of liquefied carbon that has been captured from emissions within geological strata. The process is a developing science with concerns including leakage, monitoring, and chemical reactions with groundwater and subsurface strata being explored in numerous pilot projects across the United States, particularly in the Gulf Coast area from Texas to Louisiana in work funded by oil companies and utilities.

**3.14 Government agencies share and implement policies and actions to reduce GHG emissions**

Leadership by example in state government provides private industry with a form to follow in instituting private sector programs to reduce GHGs.

*The TWG added this option. In July 2007, Governor Charlie Crist signed the “Leadership by Example” executive order to require the state to lead by example by establishing more sustainable choices in public service operations. The benefits of such institutional commitment include reduced operating and capital costs, reduced liability risks, increased employee productivity, greater health and well-being of employees, property value increase, and greater*

*environmental responsibility. Legislation has been filed to extend the provisions of the governor’s executive order to other areas of state government outside the executive branch agencies.*

**3.15 Comprehensive review of state policies with respect to public investments and land use changes**

A comprehensive review of state policies pertaining to land use and public investments could result in coordinated benefits addressing climate change impacts.

**3.16 Create a property tax exemption**

Create a property tax exemption for the value of energy efficiency improvements on properties. Tax exemptions of various sorts (sales, property, corporate tax) have been used to great advantage by the legislature to promote certain behavior and actions on the part of the public.

*This option was added by the TWG.*

**3.17 Ban deforestation and disturbance of public lands**

Ban deforestation and disturbance of public lands by 2020. Great care will need to be taken in fashioning a precise recommendation on this option, particularly with regard to what constitutes “disturbance” of public lands. There are efforts now in the legislature that would allow electrical easements across public lands, for instance. In addition, a careful examination of what constitutes “public lands” would be in order because many easements are acquired by state government (e.g., conservation easements, development easements, and public access easements) in addition to lands acquired in fee simple.

*This option was added by the TWG.*

**3.18 Examine state agency programs that promote energy intensive activities**

A close examination of state programs and statutory directives that promote energy intensive activities may reveal such activities as well as unintended redundancies or overlap.

*This option was added by the TWG.*

**3.19 Revise state food purchasing and production**

Transportation emissions are among the largest volume emissions of GHGs. Closely examining the relationships between consumer, distributor, and producer can reveal economies both fiscally and in the reduction of GHGs.

**3.20 Renewable energy demonstration projects in state parks**

Renewable energy demonstration projects situated in public places would advantage both the technology, as a practical usage, and public confidence/interest. Such displays on public lands, including state parks, greenways and trails, and other public venues can appreciably advance these advantages.

*This option was added by the TWG.*

**GP-4. Greening Florida’s Economy**

**4.1 Promoting alternative, low-carbon fuels and vehicles**

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

*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.*

**4.2 Promoting alternative, low-carbon technologies**

Promotion of low-carbon technologies, as in the promotion of low-carbon fuels and vehicles in 4.1, can be done in a number of ways.

*As also mentioned in 4.1, there are state and federal grant programs, some administered through the Florida Energy Office, that attempt to promote and incentivize these technologies.*

**4.3 Promote a low-carbon energy market**

Low-carbon energy markets have grown tremendously in recent years, but they depend on a radical public transition. Low-carbon markets would include renewable technologies such as energy production from solar, wind, small hydro, biomass, ocean thermal, tidal and wave, geothermal, fuel cells, and related energy storage and conversion technologies.

**4.4 Create or designate an entity to promote business development opportunities**

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

*The TWG added the phrase “or designate.”*

**4.5 Recognize business efforts to reduce GHG emissions**

Recognition of Florida’s businesses that make an effort to reduce their GHG emissions or that produce or utilize low-carbon products could greatly enhance public education and outreach efforts through an awards system.

**4.6 Voluntary business actions to reduce GHGs**

Government encouragement of voluntary GHG reductions in Florida’s businesses could be accomplished through a focused program utilizing education and incentives.

#### 4.7 Institute a “business incubator” program

A business incubator would focus exclusively on low-carbon energy economy products and services by accommodating and supporting organizations that are developing sustainable energy products and technologies, including fuel cells, hydrogen infrastructure technology, photovoltaic technology, wind energy, wave/tidal energy, and bio-fuels. Such a business incubator might also provide access to resources, networks, information and communication technology (ICT) infrastructure, and training and start-up services including grants and debt and equity finance where applicable.

*The Florida Energy Office administers several programs authorized and funded by statute to provide grants and tax incentives for promotion of renewable energy technology businesses in the state including solar and hydrogen fuel cell as well as many others.*

#### 4.8 Funding and investment in climate solutions

Current structures for financing and commercializing innovative technologies are failing to deliver much-needed low-carbon technologies to market. Efforts to grow the pace of low-carbon technology innovation by creating broadscale financing and commercialization could achieve results.

*The Action Team, in its Phase I deliberations, recommended further examination of ways the state can support the public and private efforts to develop alternative fuels and technologies in Florida. The Action Team also recommended consideration of an organizational model that fosters greater public–private cooperation for the development of a low-carbon energy market in Florida.*

#### 4.9 Incentive points for competitive state-to-business economic development grant programs

Offer incentive points for competitive state-to-business economic development grant programs for businesses that have undertaken GHG reduction programs. Incentive points could increase the extent of business participation in various state-to-business grant programs by rewarding higher levels of participation.

*This option was added by the TWG.*

### GP-5. Education and Outreach

#### 5.1 State government education and outreach actions

State government outreach and education actions should reflect the state’s emphasis on climate change and GHG emission reductions.

*The Action Team recommends further examination of all energy technologies with low carbon emissions in addressing the state’s goals of reducing GHGs and pursuing energy security that includes public outreach and engagement.*

**5.2 Target audience: policy makers**

Targeting policy makers with outreach and education efforts would help climate change efforts gain traction. Climate change can play a part in many, if not all, policy decisions made for state government.

**5.3 Target audience: future generations**

Integrating climate change into the educational curriculum and professional licensing can bring greater awareness of the impact that climate change has on all personal and public actions.

**5.4 Target audience: community leaders and community-based organizations**

Outreach, recognition, and education that targets local community leaders and community based organizations can greatly enhance the message.

**5.5 Target audience: general public**

Outreach and education efforts to increase awareness of climate change in the general public can help people understand how to incorporate this awareness into their private and professional lives.

**5.6 Target audience: industrial and economic sectors**

Outreach, recognition, and education efforts targeting industrial and economic sectors can help them incorporate climate change efforts into business plans and practices.

**5.7 Governor's conservation challenge initiative**

Personal admonition by the governor to Floridians to conserve and reduce their energy consumption will help influence the public to make these practices a part of their daily lives.

**5.8 Volunteer Florida "Serve to Preserve" for residential energy efficiency and renewable outreach**

Volunteer Florida is an organization that helps develop, promote, and implement volunteerism and service throughout the state. The organization works through AmeriCorps volunteers and others in communities around the state and coordinates volunteerism through Volunteer Centers and with grant funding. The organization could take on a Serve to Preserve component that emphasized residential energy efficiency and education/outreach on renewables and low-carbon technologies. Public education and outreach can comprise and/or support GHG emissions reduction programs, policies, or goals. Public education and outreach are vital to fostering a broad awareness of climate change issues and effects among a state's citizens (e.g., co-benefits such as clean air and public health). Ultimately, public education and outreach are the foundation for the long-term success of all policy initiatives.