



Governor’s Action Team on Energy and Climate Change

State of Florida

Catalog of State Actions

Energy Supply & Demand Technical Work Group

A catalog of state-level, GHG-reducing actions and policy options based on actions undertaken or considered by state, local, and private actors.

Key to Future Rankings of Options in the Following Tables

Potential GHG Emission Reductions*	Potential Cost or Cost Savings* [†]
High (H): At least 1.0 million metric tons of carbon dioxide equivalents (MMtCO ₂ e) per year by 2020	High (H): \$50 per tCO ₂ e or above
Medium (M): From 0.1 to 1.0 MMtCO ₂ e per year by 2020	Medium (M): \$15–\$50/tCO ₂ e
Low (L): Less than 0.1 MMtCO ₂ e per year by 2020, or 1 MMtCO ₂ e by 2050	Low (L): Less than \$15/tCO ₂ e
Uncertain (U): Not able to estimate at this time	Negative (Neg): Net cost savings
	Uncertain (U): Not able to estimate at this time

* Several measures may overlap in terms of emissions reductions and/or cost impacts. Estimates assume measures would be implemented independently from other measures.

[†] Costs are denoted by a positive number. Cost savings (i.e., “negative costs”) are denoted by a negative number.

Definition of “Priorities for Analysis”:

High: High priority options will be analyzed first.

Medium: Medium priority options will be analyzed next, time and resources permitting.

Low: Low priority options will be analyzed last, time and resources permitting.

Option No.	GHG Reduction Policy Option	Potential GHG Emissions Reduction	Cost per Ton	Energy Security, Externalities, Feasibility Considerations	Priority for Analysis	Notes / Related Actions in Florida
ESD-1	EMISSIONS POLICIES AND OVERARCHING ITEMS					
1.1	Generation performance standards and/or mitigation requirements for electricity	L, M, H	U, H			Department of Environmental Protection is currently engaged in rule-making to implement the Governor's Executive Order that calls for an economy wide reduction of GHG in Florida
1.2	Integrated resource planning (IRP)	H	U, L, H			IRP is currently conducted within the context of the PSC PPSA process, but does now include GHG emissions. In addition, the PSC also reviews future plans of Investor-Owned Utilities (IOUs) via a 10-Year Site Plan.
1.3	Voluntary GHG commitments	L, M, H	L, M-H			
1.4	Technology Research & Development	M, H	U, M-H, H			The Florida Energy Office (FEO) administers a renewable energy grant program that includes R&D. Also, the FEO assists the Department of Revenue with corporate tax incentives that includes R&D
ESD-2	RENEWABLE ENERGY AND ENERGY EFFICIENCY					

Option No.	GHG Reduction Policy Option	Potential GHG Emissions Reduction	Cost per Ton	Energy Security, Externalities, Feasibility Considerations	Priority for Analysis	Notes / Related Actions in Florida
2.1	Renewable and/or Environmental Portfolio Standard (RPS/EPS)	H	U, M, H			The PSC is currently working on the development of a RPS as a result of EO 07-127 in which Governor Crist requested a 20% RPS with a strong emphasis on solar and wind. Suggestion to include nuclear in the numerator.
2.2	Grid-based renewable energy incentives and/or barrier removal; emphasis on rate recovery for renewable investment	M, H	L, M, H			<p>The Florida Energy Office (FEO) administers:</p> <ul style="list-style-type: none"> (1) renewable energy grant program that includes incentives for renewable energy; (2) Solar rebate program available to all residents in Florida; and (3) tax incentives for investing in renewable energy. <p>Department of Agriculture has a Farm-to-Fuel grant program.</p> <p>The Florida PSC approved standard offer contracts to streamline the process of signing Power Purchase Agreements (PPA), and the PSC recently issued a proposed rule regarding net metering as a result of request from Governor Crist under EO 07-127.</p>

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2.3	Distributed renewable energy incentives and/or barrier removal	L, L/M, H	L, M, H			The Florida Public Service Commission recently issued a proposed rule regarding net metering. The PSC is addressing comments filed by IOUs on March 4, and the rule is expected to be in place by April 1, 2008.
2.4	Green power purchases and marketing	U, L, H	L, M, H			All IOUs and several muni's in Florida have a voluntary green pricing program for their customers
2.5	Combined Heat and Power (CHP) standards, incentives and/or barrier removal	L, M, H	L, M, H			<p>Florida has a Renewable Energy Production Tax Credit that provides a corporate income tax credit equal to one cent (\$0.01) for each additional kilowatt hour of electricity produced from renewable energy sources at a new or expanded Florida facility. This incentive program is capped at \$10 million.</p> <p>Also, the PSC approved standard offer contracts to facilitate and streamline the PPA between renewable generators and IOUs.</p>
2.6	Pricing strategies to promote renewable energy and/or CHP (e.g. net metering)	M, H	U, L, H			See above: 2.3; 2.4; and 2.5 Check successful approaches used in Germany and elsewhere

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2.7	Renewable energy development issues (zoning, siting, transmission line access, financing, etc.)	L, H	L			* http://www.dep.state.fl.us/energy/Permitting_Info/Permitting_Overview.htm
2.8	Technology-focused initiatives (biomass co-firing, energy storage, fuel cells, etc.)	U, L, M	U, L, M, H			Florida has two tax incentive programs, a renewable energy grant program, a renewable energy production tax credit, and a Farm-to-Fuel grant program
2.9	Public Benefits Charge	L, H	L, M, H			None in Florida, note that the Florida Energy Commission is exploring this issue in 2008
2.10	RECs valuation – treatment of in-state vs. out-of-state RECs	U, L, M, H	U, L			Should examine definition of renewable for RECs
2.11	Solar/thermal incentives for off-setting water heating using fossil fuel	M, H	L, M			
2.12	TRC-based conservation test for generator efficiency and conservation programs	L, H	L, M, H			
2.13	Energy efficiency resource standards	M, H	U, L, M			
ESD-3	FOSSIL FUEL AND NUCLEAR ELECTRICITY					

Option No.	GHG Reduction Policy Option	Potential GHG Emissions Reduction	Cost per Ton	Energy Security, Externalities, Feasibility Considerations	Priority for Analysis	Notes / Related Actions in Florida
3.1	Advanced fossil fuel technology (e.g., IGCC, CCSR) incentives, support, or requirements	U, L, H	U, H			<p>There is advanced cost recovery for IGCC technology whereby the PSC determines prudence on an annual basis.</p> <p>There is a Public/Private CCS working group underway. This partnership involves consortium of utilities, DEP and the Southern States Energy Board</p>
3.2	New Nuclear Power – include issues related siting barriers and safe transportation, handling, storage and reprocessing of waste	M, H	N, H			<p>Advanced cost recovery for nuclear facilities whereby the PSC determines prudence on an annual basis.</p> <p>All existing commercial facilities are undergoing uprates.</p> <p>In addition, Progress Energy proposed a new nuclear unit in green field; FPL proposed two units in a “brown field,” and Gulf is looking at one unit in a green field but has not selected the location.</p>
3.3	Relicensing/Up-rating Existing Nuclear Power	L, H	N/L, M, H			See 3.2; This is already occurring in Florida.
3.4	Efficiency improvements and repowering existing plants	M, H	N, M, H			Includes new and existing natural gas combined cycle

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3.5	Technology-focused initiatives	U, H	N/L, U, H			Florida has advanced cost recovery for nuclear and IGCC power plants. These two technologies undergo annual prudency reviews for cost recovery, opposed to, cost recovery upon completion of the project
3.6	Technology to optimize and reduce water management, use and reuse for generation	U, L, M	U, L, M, H			
3.7	Advanced cost-recovery for replacement generation and transmission built to address climate change legislation/ regulation or an RPS	L, H	L, M, H			Concept of a “grace period” for transition to nuclear
3.8	A ‘grace period’ of up to 5 years where coal or gas units slated to be replaced by nuclear generation are exempted from any CO ₂ tax or penalty up to the COD of the nuclear replacement unit.	L, M, H	L, H			Could potentially prevent having to build additional gas generation to bridge to a nuclear unit and will reduce the cost of complying with climate change legislation
ESD-4	FUEL PRODUCTION, PROCESSING AND DELIVERY					
4.1	Oil and gas production: GHG emission reduction incentives, support, or requirements	U, L, M, H	U, L, H			
4.2	Natural gas transmission and distribution	L, M, H	M, H			FGT is proposing a \$2.1 billion pipeline from Alabama to South Florida

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4.3	Oil Refining: GHG emission reduction incentives, support, or requirements	N/A, U, L	U, M, H			Florida has no oil refineries.
4.4	Coal Production: GHG emission reduction incentives, support, or requirements	N/A, L	U, L, M, H			Florida has no coal production.
4.5	Coal-to-liquids Production: GHG emission reduction incentives, support, or requirements	N/A, U, L	U, H			Florida has no coal to liquids production.
4.6	Low-GHG Hydrogen production incentives and support	L, M, H	U, H			Florida has a Hydrogen project manager in its Energy Office and he is managing several projects. Florida has grants and tax incentives for fixed installation hydrogen projects.
4.7	LNG development	L, M, H	U, L, H			
ESD-5	CARBON CAPTURE AND STORAGE OR REUSE					
5.1	CCSR incentives, requirements and/or enabling policies (administration, regulation, liability, incentives)	U, L, H	U, H			
5.2	R&D for CCSR	U, L, H	U, H			See above 3.1: Florida has a Public/Private consortium looking into CCS. DEP and various utilities are involved in digitizing Florida geological structures
ESD-6	OTHER ENERGY SUPPLY OPTIONS					

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6.1	Transmission system upgrading	L, M, H	U, L, H			
6.2	Reduction of transmission and distribution line losses	M, H	U, L, H			
6.3	General distributed generation support for renewable energy (interconnection rules, net metering, etc.)	L, M, H	L, H			See 2.3: The PSC issued a rule on this where comments were filed. It will go final no later than May.
6.4	Environmental (GHG emissions) disclosure	L, M, H	L			Phase I Action Team report recommended mandatory reporting for all emitting utilities to The Climate Registry
6.5	Landfill Gas Recovery (see also Waste)	L, M, H	L, M, H			
6.6	Waste to Energy, including barrier removal for new generation and expansion of existing WTE operations	L, M, H	U, L, M, H			Florida has a lot of waste-to-energy facilities in state. Currently, half of the state's renewable energy is waste derived from waste to energy
6.7	N ₂ O Reduction Co-benefit	U, H	U, L, H			
6.8	Smart Grid	U, L, H	N, U, L, M, H			
ESD-7	ENERGY EFFICIENCY PROGRAMS, FUNDS, AND GOALS					

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7.1	Demand-Side Management (DSM)/Energy Efficiency Programs, Funds, or Goals for Electricity (including expansion of same)	M, H	L, M, H			The Florida PSC has had active DSM programs for over 25 years. Currently use the RIM, TRC and participants tests. Should have access to residential consumption data and end-user profiles to assess DSM performance. Consider “back-loading” incentives to ensure that projected results are realized.
7.2	Demand-Side Management (DSM) Energy Efficiency Programs, Funds, or Goals for Natural Gas, Propane, and Fuel Oil	L, H	L, H			See 7.1
7.3	Regional Market Transformation Alliance	U, L, M, H	U, L			Governor Crist is the co-chair of the Southern Energy Efficiency Alliance which encompasses all 11 southern states.
7.4	Energy Efficiency Financing (Loans)	L, H	L, H			Some utilities offer low interest loans for energy efficiency. An energy audit is a prerequisite for such loan.
7.5	DSM for Muni’s and Co-ops	M, H	L, M			Consider “back-end loaded” incentives based on actual results.
7.6	Provide Public Access to Residential Energy Consumption Data and Establish Community Baselines	L, M, H	L			Florida’s public energy utilities (GRU, JEA, OUC) operate in the “sunshine” making residential utility bills accessible.

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ESD-8	BUILDINGS					
8.1	Improved Building Codes for Energy Efficiency	L, H	L, M, H			Address both new and existing portions of the sector. The Florida Building Commission has initiated rule making to increase building efficiency requirements of the Florida Energy Code by 15%. Requirements effective October 1, 2008.
8.2	Promotion and Incentives for Improved Design and Construction (e.g., LEED and “beyond LEED” green buildings) in the Private Sector	M, H	L, M			Report of Green Building Public Awareness Campaign, Florida Solar Energy Center. Address both new and existing portions of the sector
8.3	Improved Design and Construction in new and existing state and local government buildings, “Government Lead-by-example”	M, H	L, M, H			Governor’s Executive Order 07-126 required new building constructed by state government to conform with LEED standards—direction to “strive for platinum.”
8.4	Support for Energy Efficient Communities Planning, “Smart Growth”	U, L, H	U, L, H			
8.5	Increased Use of Blended Cement (substituting fly ash or other pozzolans for clinker reduces CO ₂ emissions)	U, L, H	U, L, M			

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8.6	Reduction of Emissions from Diesel Engines Used in New Construction Developments	U, L, M	U, L, M, H			
8.7	Training and Education for Builders and Contractors (e.g., heating, ventilation, and air conditioning [HVAC] sizing, duct sealing)	L, M	U, L, M			
8.8	Energy Management Training/Training of Building Operators	L, M, H	U, L, M			
8.9	Energy efficiency requirements for low income for new and existing residential units	L, M, H	L, M			
8.10	Energy rating systems for new and existing homes	L, M, H	L, M			
8.11	Incentives for investments at rental properties	L, M, H	U, L, M, H			
ESD-9	APPLIANCE STANDARDS					
9.1	More Stringent Appliance/Equipment Efficiency Standards	M, H	L, M, H			Governor Crist directed the Department of Community Affairs to increase efficiency standards of products regulated under 9B-44, FAC, by 15% by 2009
9.2	Support for Federal-level Appliance Efficiency Standards	M, H	L, M, H			Report of Green Building Public Awareness Campaign, Florida Solar Energy Center.

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9.3	Federal DOE "regional" air conditioning equipment efficiencies pursuant to new authority established by 2007 US Energy Security Act.	U, M, H	U, L, M, H			
9.4	Uniform labeling standards for appliances	L, M, H	L			
ESD-10 EDUCATION AND OUTREACH						
10.1	Consumer Education Programs	L, M, H	U, L, M			Legislature approved \$250,000 for education and outreach during 2007 session.
10.2	Energy Efficiency and Environmental Impacts Awareness in School Curricula	M, H	U, L, M			See 10.1. In addition, the FEO works with the FSEC under a "Sunsmart School Program."
10.3	Post-secondary Specialist Education and Certification for Building Energy Efficiency Experts and Related Trades	L, M, H	U, L, H			
10.4	Post-secondary College and University Programs	U, L, M	L, H			
10.5	Provide Support for Coordinated Statewide Delivery of Energy Education and Outreach Services	U, L, M, H	L			
10.6	Education of Realtors	L, M	U, L			Include relevant info on MLS to better inform buyers

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ESD-11 PRICING AND PURCHASING						
11.1	Green Power Purchasing for Consumers	L, M, H	L, M, H			All Florida IOUs have a voluntary green pricing for consumers.
11.2	Net-metering for Distributed Generation and Combined Heat and Power	L, M, H	U, L, M, H			See 2.3: The PSC issued a rule on this where comments were filed. The rule will become final on April 1.
11.3	Rate structures and Technologies to Promote Reduced GHG Emissions	L, M, M/H, H	U, L, H			New Policy Options descriptions made by combining two others.
11.4	Bulk Purchasing Programs for Energy Efficiency or Other Equipment	L, M, H	L, H			
11.5	Third party PPAs for renewable energy transmission and distribution	L, M, H	U, L, M, H			
ESD-12 CUSTOMER-SITED DISTRIBUTED ENERGY AND COMBINED HEAT AND POWER						
12.1	Incentives to Promote Implementation of Renewable Energy Systems	L, M, H	L, M, H			Solar Rebate Program for PV, Solar thermal and solar pool. Also, FL has the Renewable Energy Grant Program.
12.2	Incentives and Resources to Promote Combined Heat and Power (CHP, or “cogeneration”)	L, M, H	L, M, H			Florida’s Renewable Energy Grant Program.
12.3	Retention of credits (revenue) by DG and CHP sources	U, L, H	U, L, H			

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ESD-13 GHG EMISSIONS-SPECIFIC GOALS AND POLICIES, INCLUDING PROCESS EMISSIONS						
13.1	Switching to Lower GHG Fuels	L, M, H	L, M, H			Gulf Power has a rebate program for geothermal pumps (residential).
13.2	Policies and/or Programs Specifically Targeting Non-energy GHG Emissions	U, L, M, H	U, L, M, H			
13.3	Negotiated/Voluntary Emissions or Energy Savings Agreements	L, M, M-H, H	U, L, M, M-H			Florida law allows for Energy Saving Contracts for use by state and local governments. Phase I Action Team report recommended that these provisions be revised to increase the use of these vehicles by state agencies.
ESD-14 TECHNOLOGY-SPECIFIC POLICIES						
14.1	White Roofs, Rooftop Gardens, and Landscaping (including Shade Tree Programs)	L, M, H	U, L, M			Progress Energy has a financial incentive for "cool roofs."
14.2	Focus on specific end-uses/technologies	U, L, M, H	U, L, M, H			
14.3	Improved residential duct work and air handlers in conditioned space	M, H	U, L, M, H			
ESD-15 NON-ENERGY EMISSIONS (HFCS, PFCS, SF₆, CO₂ PROCESS EMISSIONS)						
15.1	Participation in Voluntary Industry-Government Partnerships	L, M, H	U, L, M, H			

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15.2	Process Changes/Optimization	U, L	U, L, M			
15.3	Leak Reduction /Capture, Recovery and Recycling of Process Gases	U, L, H	U, M, H			
15.4	Appliance Recycling/Pick-Up Programs	L, M	U, L, M			
ESD-16	OTHER					
16.1	Focus on specific market segments: existing homes (weatherization), new construction, apartments, low income, etc.	M, H	U, L, M, H			
16.2	Municipal Energy Management	L, M, H	U, L, M, H			
16.3	Industrial ecology/ by-product synergy	U, L, H	U, L, M			
16.4	Industrial Audits	U, L, H	U, L, M, H			