



Catalog of State Actions Transportation and Land Use Subcommittee

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 Tables that Follow:

Potential GHG Emission Reductions <u>1/</u>	Potential Cost or Cost Savings <u>1/ 2/</u>
High (H): At least 1.0 million metric tons (MMt) carbon dioxide equivalent (CO ₂ e) per year by 2020	High (H): \$50 per metric ton CO ₂ e (tCO ₂ e) or above
Medium (M): From 0.1 to 1.0 MMtCO ₂ e per year by 2020	Medium (M): \$5-50/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 \$5/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
<p><u>1/</u> Several measures may overlap in terms of emissions reductions and/or cost impacts. Estimates assume measures would be implemented independently from other measures.</p> <p><u>2/</u> Costs are denoted by a positive number. Cost savings (i.e., “negative costs”) are denoted by a negative number.</p>	

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.

Notation of Options:

* **Options marked in bold and asterisk (*)** indicate some of the related state actions that are approved or underway, as described further in the companion options description document. Subcommittee members are encouraged to provide information on other relevant actions.

Catalog of State Actions Transportation and Land Use (TLU) Working Group

Option No.	GHG Reduction Policy Option	Potential GHG Emissions Reduction	Cost per Ton	Energy Security, Externalities & Feasibility Considerations	Priority for Analysis	Notes
TLU-1	PASSENGER VEHICLES					
TLU-1.1	PASSENGER VEHICLE TECHNOLOGY					
1.1.1	New Vehicle Standards: Tailpipe GHG and Fuel Economy*					EO 07-127 Initiative – Adopt California motor vehicle emission standards. DEP Air Office has initiated rulemaking as called for in EO 07-127
1.1.2	Zero Emission Vehicles (ZEV)/Low Emission Vehicle (LEV-2) implementation*					DEP Air Office is considering the full CA emissions program in context of GHG tailpipe standard noted above in 1.1.1.

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1.1.3	Research and development and bringing to market lower-GHG vehicle technologies*					DEP Energy Office is currently funding hydrogen research, development and demonstration projects for hydrogen internal combustion and hydrogen fuel cell vehicles in Orlando.
1.1.4	Vehicle add-on technologies (low friction oil, fuel efficient tires)					
1.1.5	Support stronger federal CAFÉ standards*					This is within federal jurisdiction. Florida is supportive of recent congressional action and would support further strengthening of CAFÉ standards
1.1.6	Programs for GHG emission consumer information for newly purchased cars					
1.1.7	Develop infrastructure for plug-in vehicles					

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TLU-1.2	PASSENGER VEHICLE OPERATIONS					
1.2.1	Enforce speed limits					
1.2.2	Vehicle maintenance and driver training					
1.2.3	Improved transportation system management (eg traffic signal synchronization and intelligent transportation systems)					
1.2.4	Driver information technologies, including pay-as-you-drive insurance					Provides feedback on driving habits.
1.2.5	Tune-up services including tire pressure checks and making the Free Air Initiative at gas stations easier.					
1.2.6	Passenger vehicle idling restrictions*					EO 07-127 Initiative – Adopt diesel engine idle reduction standard DEP Air Office has initiated rulemaking
1.2.7	School education programs					
1.2.8	Public Education					

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1.2.9	Mandate periodic vehicle inspections					
TLU-1.3 PASSENGER VEHICLE INCENTIVES AND DISINCENTIVES						
1.3.1	Procurement of efficient fleet vehicles*					Includes government and large private sector fleets EO 07-126 directs state government to procure vehicles with the greatest fuel efficiency in a given class
1.3.2	Feebates (state-specific or regional) and establishing a carbon emission tax modeled after the Clean Air Discount Bill.					
1.3.3	CO ₂ -based registration fees and vehicle licensing fees					
1.3.4	Tax credits for efficient vehicles					
1.3.5	Vehicle scrappage					This is an incentive to replace low fuel economy vehicles sooner.
1.3.6	Emission-based tolling (discounts for clean vehicles)					This is an incentive to replace light-duty vehicles sooner.

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1.3.7	Establish a fleet replacement grant program					
1.3.8	Provide a tax incentives for bicycles					
1.3.9	Support alternative travel in the advertising mainstream					
TLU-1.4	FUEL RELATED MEASURES					
1.4.1	Low-GHG fuel standard (e.g. renewable)*					Also known as a low-carbon fuel standard. Phase I Report Recommendation – Develop policies which promote the use of low carbon emission vehicles & evaluate a low carbon fuel standard to be developed into a regional standard with other southern states.
1.4.2	Low-GHG for state fleets (e.g., CNG, biodiesel)*					EO 07-126 All state agencies shall use ethanol or biodiesel fuels when locally available

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1.4.3	Alternative fuels expansion (biodiesel, CNG, LPG, cellulosic, ethanol, liquid fuels, gas fuels, energy electrons, hydrogen)*					Current efforts include: <ul style="list-style-type: none"> • DACS Florida Farm to Fuel program which in FY 07-08 included \$25M in grants; • FDEP Renewable Energy Technologies Grant Program which funded some liquid biofuels in FY 06-07; • \$20M FY 07-08 to UF IFAS for cellulosic ethanol.

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1.4.4	Alternative fuel infrastructure development*					Phase I Report Recommendation – Support existing tax incentives for the development of alternative fueling transportation infrastructure Current efforts include: <ul style="list-style-type: none"> • Sales tax exemption for fueling equipment • Corporate income tax credit for production and fueling equipment
1.4.5	Fund research and development for a full range of renewable transportation fuels*					Phase I Report Recommendation See 1.4.3 above
1.4.6	Develop life cycle analyses of transportation fuels to determine the appropriate pathways to sustainably protect natural resources*					Phase I Report Recommendation
1.4.7	Provide incentives for biodiesel engine vendors					

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1.4.8	Encourage state standards that optimize the blending of alternative fuels					
1.4.9	Mandate or include incentives for E10 by 2010					
1.4.10	Mandate or include incentives for biodiesel concentration similar to E10					
1.4.11	Mandate or include incentives to phase-in, requirements in major urban areas for E85 distribution centers					
1.4.12	Mandate or include incentives for the inclusion of all state, county, and municipal vehicles for phase in of E85 / bio-diesel					
1.4.13	Establish best practices for all new tankage and establish a phase out of older / less efficient emission reduction technologies.					
1.4.14	Set up incentive program for major corporate fleet owners including rental car and taxi companies.					

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TLU-2	LAND USE EFFICIENCY AND MODAL OPTIONS					
TLU-2.1	GENERAL LOCATION EFFICIENCY					
2.1.1	Statewide growth management plan*					Phase I Report Recommendation – That GHG emission reduction strategies be incorporated into state, regional, and local growth management and transportation planning processes.
2.1.2	Include GHG evaluations in state policies					
2.1.3	Shape investment to maximize GHG reductions					
2.1.4	Provide technical and financial support to local agencies					
2.1.5	Smart growth planning, modeling, tools					
2.1.6	Land use, zoning, tax and building code reform					
2.1.7	State congressional advocates for federal action					

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2.1.8	Use of flexible federal transportation funding					
2.1.9	Downtown revitalization					
2.1.10	Brownfield redevelopment					
2.1.11	Infill redevelopment					
2.1.12	Transit-oriented Development*					Phase I Report Recommendation
2.1.13	Traffic calming					
2.1.14	Targeted open space protection					
2.1.15	Balance economic development with agriculture, protection of natural resources, and preserving rural character*					Phase I Report Recommendation
2.1.16	Rolling Stop Right Turns					
2.1.17	Restrict light trucks to the same lanes where 16-wheelers are limited					
2.1.18	Readdress transportation concurrency requirements					

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2.1.19	Jobs-School-Housing balancing policy requirement					
2.1.20	Increase tree canopy via parks					
2.1.21	Require carbon footprint and economic assessment of transportation infrastructure and improvement.					
2.1.22	Develop zones within cities with fees for entering and flat rate cab fares within that zone					
2.1.23	Require carbon footprint assessment of land development					
2.1.24	Encourage public / private partnerships (P3)					
2.1.25	Utilize public right-of-way for energy production. Ex. Photovoltaic solar panels on highway guardrails					
2.1.26	Replace traditional impact fees with VMT based impact fees, encouraging the reduction of VMT					Address differences in carbon footprint for different vehicles
TLU-2.2	INCREASING LOW-GHG TRAVEL OPTIONS					

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2.2.1	Make full use of Congestion Mitigation and Air Quality (CMAQ) funds—with application reviews considering GHG reductions					
2.2.2	Improve transit service (frequency, convenience, quality)					
2.2.3	Transit marketing and promotion, (including individualized transit marketing)*					Phase I Report Recommendation – Promote energy efficient mass and rail transit wherever feasible
2.2.4	Expand transit infrastructure (rail, bus, bus rapid transit)					
2.2.5	Transit prioritization (signal prioritization, HOV lanes)					
2.2.6	Guaranteed ride home					
2.2.7	Create regional intermodal transportation centers					
2.2.8	Bike and pedestrian infrastructure					
2.2.9	HOV lanes					
2.2.10	Van pooling and car pooling					

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2.2.11	Park-and-ride lots					
2.2.12	Car sharing					
2.2.13	Telecommute, live-near-your-work, and compressed work week					
2.2.14	Require government agencies to use telecommuting					
2.2.15	Telecommuting centers, support, and incentives					
2.2.16	E-commerce					
2.2.17	Require bike and pedestrian path ways when building new roads					
2.2.18	Reform parking requirements					
TLU-2.3	INCENTIVES AND DISINCENTIVES					
2.3.1	Commuter choice programs / parking cash out					
2.3.2	Adopt best workplaces for commuters policies					
2.3.3	Issue free bus passes to downtown workers, students, and retired people					
2.3.4	Transit pricing incentives					

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2.3.5	Free downtown parking to carpoolers					
2.3.6	Reserve parking spaces for high-occupancy vehicles and car-share programs					
2.3.7	Benefits for low-GHG vehicles (preferential parking, use of HOV lanes)					
2.3.8	Location-efficient mortgages					
2.3.9	VMT charges*					DCA has proposed a pilot program for this in their 2008 proposed legislation
2.3.10	Increased fuel tax (with targeted use of revenue toward travel alternatives)					
2.3.11	Pay-as-you-drive insurance					
2.3.12	Congestion pricing (with targeted use of revenue toward travel alternatives)					
2.3.13	Emission-based tolls (with targeted use of revenue toward travel alternatives)					

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2.3.14	Urban and intercity road rolls (with targeted use of revenue toward travel alternatives)					
2.3.15	Cordon Pricing					
2.3.16	Parking pricing, excise tax, and/or supply restrictions					
2.3.17	VMT / GHG offset requirements for large developments					
2.3.18	Research the impact of GHG emission reduction strategies on transportation revenue sources*					Phase I Report Recommendation
2.3.19	Research alternative ways to fund transportation that creates incentives to drive less*					Phase I Report Recommendation
2.3.20	CO ₂ Conformity Requirements					
2.3.21	Incentivize large developments to incorporate trip capture within their developments					
2.3.22	Provide incentives for rail lines to provide path ways for bikes and pedestrians					

Option No.	GHG Reduction Policy Option	Potential GHG Emissions Reduction	Cost per Ton	Energy Security, Externalities & Feasibility Considerations	Priority for Analysis	Notes
2.3.23	Incentivize workforce housing near employment centers					
TLU-3	HEAVY DUTY VEHICLES					
TLU-3.1	HEAVY DUTY VEHICLE TECHNOLOGIES					
3.1.1	Vehicle technology improvements (e.g., aerodynamics)					
3.1.2	R&D on low-GHG vehicle technology					
3.1.3	Black carbon control technologies (e.g., use of particulate traps, other complementary technologies)					Black carbon can affect climate by absorbing sunlight and heating the air, thereby altering large-scale atmospheric circulation and the hydrologic cycle.
3.1.4	Facilitate adoption of new clean technologies—rail and marine engines					
3.1.5	Single-wide tires, low resistance radials, automatic tire inflation					
3.1.6	Hybrid Buses					
TLU-3.2	HEAVY DUTY VEHICLE OPERATIONS					

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3.2.1	Freight logistics improvements / GIS					
3.2.2	Enforce speed limits					
3.2.3	Improve traffic flow					
3.2.4	Increased size and weight of trucks					
3.2.5	Pre-clearance at scale houses					
3.2.6	Truck stop electrification*					EO 07-127 Initiative – Adopt diesel engine idle reduction standard Specific implementation details of initiative yet to be determined by the DEP Division of Air
3.2.7	Enforce anti-idling*					EO 07-127 Initiative – Adopt diesel engine idle reduction standard Specific enforcement mechanisms yet to be determined by the DEP Division of Air

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3.2.8	Clean freight operating improvements					Example: particulates from freight, including coal train coal dust
3.2.9	Freight villages / consolidation centers					
TLU-3.3	INCREASING LOW-GHG HEAVY DUTY TRAVEL OPTIONS					
3.3.1	Intermodal freight initiatives					
3.3.2	Feeder barge container service					
3.3.3	Increase rail capacity, and address rail freight system bottlenecks					
3.3.4	Shift freight movements from truck to rail					
3.3.5	Promote strategies to ease the movement of freight in more GHG-efficient ways*					Phase I Report Recommendation

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TLU-3.4 HEAVY DUTY VEHICLE INCENTIVES AND DISINCENTIVES						
3.4.1	Procurement of efficient fleet vehicles (public, private, or other)*					DMS is directed In EO 07-126 that when procuring new vehicles, to approve only those with the greatest fuel efficiency in a given class
3.4.2	Incentives to retire or improve older less efficient vehicles					
3.4.3	Maintenance and driver training					
3.4.4	Increased emission-based truck tolls or highway user fees					
TLU-4 INTERCITY PASSENGER TRAVEL: AVIATION, RAIL, & BUS						
4.1	High-speed rail*					In 2000 Florida voters authorized the funding of a high speed rail. In 2004 Florida voters repealed the 2000 decision
4.2	Integrated aviation, rail, light rail, bus networks (planning, governance, and investment)					
4.3	Aircraft emissions					

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4.4	Airport ground equipment					
4.5	Intercity bus incentives and subsidies					
TLU-5	OFF-ROAD VEHICLES (CONSTRUCTION EQUIPMENT, OUTBOARD MOTORS, ATVS, ETC.)					
5.1	Incentives for purchase of efficient vehicles and equipment					
5.2	Improved operations, operator training					
5.3	Increased use of alternative fuels or low-sulfur diesel					
5.4	Adopt green port strategy (port land-side: clean up port dwelling and cargo handling equipment operations)					
5.5	Low-carbon fuel (off road and recreational marine)					

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5.6	Locomotive idling reductions*					EO 07-127 Initiative – Adopt diesel engine idle reduction standard Specific implementation details of initiative yet to be determined by the DEP Division of Air
5.7	Inclusion of Idling reduction requirements*					EO 07-127 Initiative – Adopt diesel engine idle reduction standard Specific implementation details of initiative yet to be determined by the DEP Division of Air
5.8	All port-related strategies including diesel cranes, port-electrification or other GHG-reducing alternatives					
5.9	“Shore power” at port sites					
5.10	Regulations or incentives for the Florida cruise industry (related to fuel)					

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5.11	Regulations or incentives for more efficient engines, lower emissions for petroleum and general cargo vessels and tug barges calling at Florida ports					
5.12	Carl Moyer type program, provide incentives / cost-sharing for cleaner-than-required engines, equipment, and other sources of pollution					