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 1/	Potential Cost or Cost Savings 1/ 2/
High (H): At least 1.0 million metric tons (MMt) carbon dioxide equivalent (CO_2e) per year by 2020	**High (H)**: $50 per metric ton CO_2e (tCO_2e) or above
Medium (M): From 0.1 to 1.0 $MMtCO_2e$ per year by 2020	**Medium (M):** \$5-50/tCO_2e
Low (L): Less than 0.1 $MMtCO_2e$ per year by 2020, or 1 MMtCO2e by 2050	**Low (L):** Less than \$5/tCO_2e
Uncertain (U): Not able to estimate at this time	**Negative (Neg):** Net cost savings
	Uncertain (U): Not able to estimate at this time

1/ Several measures may overlap in terms of emissions reductions and/or cost impacts. Estimates assume measures would be implemented independently from other measures.
2/ 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.

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	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"					
1.1.2	ZEV/LEV-2 implementation					
1.1.3	Research and development and bringing to market lower-GHG vehicle technologies					
1.1.4	Vehicle add-on technologies (low friction oil, fuel efficient tires)					
1.1.5	Hybrid buses					
1.1.6	Support stronger federal CAFÉ standards					This is within federal jurisdiction.
1.1.7	Programs for GHG emission consumer information for newly purchased cars					

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1.1.8	Develop infrastructure for plug-in vehicles					
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					
1.2.6	Passenger vehicle idling restrictions					
1.2.7	School education programs					
1.2.8	Public Education					
TLU-1.3	PASSENGER VEHICLE INCENTIVES AND DISINCENTIVES					
1.3.1	Procurement of efficient fleet vehicles					Includes government and large private sector fleets
1.3.2	Feebates (state-specific or regional)					

Option No.	GHG Reduction Policy Option	Potential GHG Emissions Reduction	Cost per Ton	Externalities, Feasibility Considerations	Priority for Analysis	Notes
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.
1.3.7	Establish a carbon emission tax modeled after the Clean Air Discount Bill					
1.3.8	Establish a fleet replacement grant program					
1.3.9	Provide a tax incentives for adult bicycles					
1.3.10	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.
1.4.2	Low-GHG for state fleets (e.g., CNG, biodiesel)					
1.4.3	Biodiesel expansion (biodiesel, CNG, LPG, cellulosic, ethanol)					

Option No.	GHG Reduction Policy Option	Potential GHG Emissions Reduction	Cost per Ton	Externalities, Feasibility Considerations	Priority for Analysis	Notes
1.4.4	Alternative fuel infrastructure development					
1.4.5	Fund research and development for a full range of renewable transportation fuels					
1.4.6	Develop life cycle analyses of transportation fuels to determine the appropriate pathways to sustainably protect natural resources					
TLU-2	**LAND USE EFFICIENCY AND MODAL OPTIONS**					
TLU-2.1	GENERAL LOCATION EFFICIENCY					
2.1.1	Statewide growth management plan					
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					

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2.1.7	State congressional advocates for federal action					
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					
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					
TLU-2.2	INCREASING LOW-GHG TRAVEL OPTIONS					
2.2.1	Make full use of CMAQ funds—with application reviews considering GHG reductions					
2.2.2	Improve transit service (frequency, convenience, quality)					

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2.2.3	Transit marketing and promotion, (including individualized transit marketing)					
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					
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					

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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					
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					
2.3.10	Increased fuel tax (with targeted use of revenue toward travel alternatives					
2.3.11	Pay-as-you-drive insurance					

Option No.	GHG Reduction Policy Option	Potential GHG Emissions Reduction	Cost per Ton	Externalities, Feasibility Considerations	Priority for Analysis	Notes
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					
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					
2.3.19	Research alternative ways to fund transportation that creates incentives to drive less					
2.3.20	CO_2 Conformity Requirements					
TLU-3	**HEAVY DUTY VEHICLES**					
TLU-3.1	HEAVY DUTY VEHICLE TECHNOLOGIES					

Option No.	GHG Reduction Policy Option	Potential GHG Emissions Reduction	Cost per Ton	Externalities, Feasibility Considerations	Priority for Analysis	Notes
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					
TLU-3.2	HEAVY DUTY VEHICLE OPERATIONS					
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					

Option No.	GHG Reduction Policy Option	Potential GHG Emissions Reduction	Cost per Ton	Externalities, Feasibility Considerations	Priority for Analysis	Notes
3.2.5	Pre-clearance at scale houses					
3.2.6	Truck stop electrification					
3.2.7	Enforce anti-idling					
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.					

Option No.	GHG Reduction Policy Option	Potential GHG Emissions Reduction	Cost per Ton	Externalities, Feasibility Considerations	Priority for Analysis	Notes
TLU-3.4	HEAVY DUTY VEHICLE INCENTIVES AND DISINCENTIVES					
3.4.1	Procurement of efficient fleet vehicles (public, private, or other)					
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					
4.2	Integrated aviation, rail, bus networks (planning, governance, and investment)					
4.3	Aircraft emissions					
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					

Option No.	GHG Reduction Policy Option	Potential GHG Emissions Reduction	Cost per Ton	Externalities, Feasibility Considerations	Priority for Analysis	Notes
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)					
5.6	Locomotive idling reductions					
5.7	Inclusion of Idling reduction requirements					
5.8	Diesel cranes at port-electrification or other GHG-reducing alternatives					
5.9	“Shore power” at port sites					