



Catalog of State Actions

Transportation and Land Use

Draft Prepared for Climate, Energy, and Commerce Advisory Committee (CECAC)
Meeting #3, continued

A catalog of state-level, GHG-reducing actions and policy options prepared by the Center for Climate Strategies (CCS) and South Carolina Department of Health and Environmental Control (DHEC) based on actions undertaken or considered by South Carolina and other states, including regional, state, local and private actions.

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

Note on ballot and TWG process for selecting Policy Options:

1. TWG members had the option of balloting for bundle(s) of options, as shown in the table below.
2. CCS presented numeric results to the TWG.
3. Where there was not unanimity on which options belonged together in a bundle, the bundle was worked out and approved for recommendation to the CECAC at the TWG meeting.

Transportation and Land Use (TLU)

# of Ballots	Option No.	GHG Reduction Policy Option	Ballots for Priority for Analysis, with proposed bundles (options recommended by the TWG to the CECAC highlighted in grey)
	TLU-1		
	TLU-1.1		
5	1.1.1	Tailpipe GHG Emission Standards	BRAD WYCHE BRIAN BARNES (BUNDLE 1.1.1, 1.1.2) ERIKA HARTWIG; BARRY BEASLEY; JOHN HARTZ
	1.1.2	ZEV/LEV-2 Implementation	BRIAN BARNES (BUNDLE 1.1.1, 1.1.2) JOHN GARDNER
	1.1.3	R&D on Low-GHG Vehicle Technology (e.g., fuel cell)	REP. BEN HAGOOD (BUNDLE 1.3.3, 1.1.4) BARRY BEASLEY
	1.1.4	Add-on Technologies (Low Friction Oil, Low-Rolling Resistance Tires)	REP. BEN HAGOOD (BUNDLE 1.3.3, 1.1.4)
	TLU-1.2		
3	1.2.1	Enforce Speed Limits	REP. BEN HAGOOD (BUNDLE 1.2.1, 1.2.2, 1.2.3) BRIAN BARNES (BUNDLE 1.2.2, 3.2.2); JOHN HARTZ
	1.2.2	Vehicle Maintenance, Driver Training	BRAD WYCHE; REP. BEN HAGOOD (BUNDLE 1.2.1, 1.2.2, 1.2.3)
6	1.2.3	Transportation System Management	REP. BEN HAGOOD (BUNDLE 1.2.1, 1.2.2, 1.2.3), LANNEAU H. SIEGLING ERIKA HARTWIG; JOHN GARDNER; BARRY BEASLEY; JOHN HARTZ (BUNDLE 1.2.3, 2.2.1, 3.2.2, 3.2.3, 3.2.5)

# of Ballots	Option No.	GHG Reduction Policy Option	Ballots for Priority for Analysis, with proposed bundles (options recommended by the TWG to the CECAC highlighted in grey)
	TLU-1.3		
	1.3.1	Procurement of Low GHG Fleet Vehicles	REP. BEN HAGOOD (BUNDLE 1.3.1, 1.3.4) JOHN GARDNER
	1.3.2	Feebates	BRAD WYCHE (BUNDLE 1.3.2, 1.3.3, 1.3.4) JOHN HARTZ (BUNDLE 1.3.2, 1.3.3, 1.3.4, 1.3.5, 3.4.1, 3.4.2, 5.1)
	1.3.3	CO ₂ -based registration fees	BRAD WYCHE (BUNDLE 1.3.2, 1.3.3, 1.3.4) JOHN HARTZ (BUNDLE 1.3.2, 1.3.3, 1.3.4, 1.3.5, 3.4.1, 3.4.2, 5.1)
4	1.3.4	Tax Credits for Efficient Vehicles	BRAD WYCHE (BUNDLE 1.3.2, 1.3.3, 1.3.4); REP. BEN HAGOOD (BUNDLE 1.3.1, 1.3.4); LANNEAU H. SIEGLING JOHN HARTZ (BUNDLE 1.3.2, 1.3.3, 1.3.4, 1.3.5, 3.4.1, 3.4.2, 5.1)
	1.3.5	Vehicle Scrappage	JOHN HARTZ (BUNDLE 1.3.2, 1.3.3, 1.3.4, 1.3.5, 3.4.1, 3.4.2, 5.1)
	TLU-2		
	TLU-2.1		
4	2.1.1	Infill, Brownfield Re-development	BRAD WYCHE (BUNDLE 2.1.1, 2.1.2, 2.1.3) REP. BEN HAGOOD (BUNDLE 2.1.1, 2.1.2, 2.1.3, 2.1.4) BARRY BEASLEY (BUNDLE 2.1.1, 2.1.2, 2.1.3) JOHN HARTZ (BUNDLE 2.1.1, 2.1.2, 2.1.3)
5	2.1.2	Transit-Oriented Development	BRAD WYCHE (BUNDLE 2.1.1, 2.1.2, 2.1.3) REP. BEN HAGOOD (BUNDLE 2.1.1, 2.1.2, 2.1.3, 2.1.4) JOHN GARDNER BARRY BEASLEY (BUNDLE 2.1.1, 2.1.2, 2.1.3) JOHN HARTZ (BUNDLE 2.1.1, 2.1.2, 2.1.3)
7	2.1.3	Smart Growth Planning, Modeling, Tools	BRAD WYCHE (BUNDLE 2.1.1, 2.1.2, 2.1.3) REP. BEN HAGOOD (BUNDLE 2.1.1, 2.1.2, 2.1.3, 2.1.4) BRIAN BARNES, ERIKA HARTWIG, JOHN GARDNER BARRY BEASLEY (BUNDLE 2.1.1, 2.1.2, 2.1.3) JOHN HARTZ (BUNDLE 2.1.1, 2.1.2, 2.1.3)

# of Ballots	Option No.	GHG Reduction Policy Option	Ballots for Priority for Analysis, with proposed bundles (options recommended by the TWG to the CECAC highlighted in grey)
2	2.1.4	Targeted Open Space Protection	BRAD WYCHE REP. BEN HAGOOD (BUNDLE 2.1.1, 2.1.2, 2.1.3, 2.1.4)
	2.1.5	“Fix-it-First” Schools	
	2.1.6	South Carolina Environmental Protection Act	
	2.1.7	Commission for a Sustainable South Carolina	
	TLU-2.2		
	2.2.1	Make full use of CMAQ funds	BRAD WYCHE (BUNDLE 2.2.1-2.2.9, 2.2.11, 2.2.12) JOHN HARTZ (BUNDCL 1.2.3, 2.2.1, 3.2.2, 3.2.3, 3.2.5)
7	2.2.2	Improve Transit Service (frequency, convenience, quality)	BRAD WYCHE (BUNDLE 2.2.2, 2.2.3, 2.2.4, 2.2.5, 2.2.13, 2.2.14, 2.2.15, 2.3.8, 2.3.9) REP. BEN HAGOOD (BUNDLE 2.2.1-2.2.9, 2.2.11, 2.2.12) BRIAN BARNES (BUNDLE 2.2.2, 2.2.13, 2.3.8) ERIKA HARTWIG JOHN HARTZ (BUNDLE 2.2.2, 2.2.3, 2.2.5, 2.2.6, 2.2.8, 2.2.10-2.2.16, 2.3.8, 2.3.9) JOHN GARDNER BARRY BEASLEY (BUNDLE 2.2.2, 2.2.3, 2.2.5)
4	2.2.3	Transit Marketing and Promotion	BRAD WYCHE (BUNDLE 2.2.2, 2.2.3, 2.2.4, 2.2.5, 2.2.13, 2.2.14, 2.2.15, 2.3.8, 2.3.9) REP. BEN HAGOOD (BUNDLE 2.2.1-2.2.9, 2.2.11, 2.2.12) BARRY BEASLEY (BUNDLE 2.2.2, 2.2.3, 2.2.5) JOHN HARTZ (BUNDLE 2.2.2, 2.2.3, 2.2.5, 2.2.6, 2.2.8, 2.2.10-2.2.16, 2.3.8, 2.3.9)

# of Ballots	Option No.	GHG Reduction Policy Option	Ballots for Priority for Analysis, with proposed bundles (options recommended by the TWG to the CECAC highlighted in grey)
6	2.2.4	Bike and Pedestrian Infrastructure	BRAD WYCHE (BUNDLE 2.2.2, 2.2.3, 2.2.4, 2.2.5, 2.2.13, 2.2.14, 2.2.15, 2.3.8, 2.3.9) REP. BEN HAGOOD (BUNDLE 2.2.1-2.2.9, 2.2.11, 2.2.12) LANNEAU H. SIEGLING ERIKA HARTWIG JOHN GARDNER JOHN HARTZ
5	2.2.5	Expand Transit Infrastructure (rail, bus, BRT)	BRAD WYCHE (BUNDLE 2.2.2, 2.2.3, 2.2.4, 2.2.5, 2.2.13, 2.2.14, 2.2.15, 2.3.8, 2.3.9) REP. BEN HAGOOD (BUNDLE 2.2.1-2.2.9, 2.2.11, 2.2.12) ERIKA HARTWIG BARRY BEASLEY (BUNDLE 2.2.2, 2.2.3, 2.2.5) JOHN HARTZ (BUNDLE 2.2.2, 2.2.3, 2.2.5, 2.2.6, 2.2.8, 2.2.10-2.2.16, 2.3.8, 2.3.9)
	2.2.6	HOV lanes	BRAD WYCHE (BUNDLE 2.2.1-2.2.9, 2.2.11, 2.2.12) JOHN HARTZ (BUNDLE 2.2.2, 2.2.3, 2.2.5, 2.2.6, 2.2.8, 2.2.10-2.2.16, 2.3.8, 2.3.9)
	2.2.7	“Fix-it-First”	BRAD WYCHE (BUNDLE 2.2.1-2.2.9, 2.2.11, 2.2.12) BARRY BEASLEY
	2.2.8	Transit Prioritization (signal prioritization, HOV lanes)	BRAD WYCHE (BUNDLE 2.2.1-2.2.9, 2.2.11, 2.2.12) JOHN HARTZ (BUNDLE 2.2.2, 2.2.3, 2.2.5, 2.2.6, 2.2.8, 2.2.10-2.2.16, 2.3.8, 2.3.9)
	2.2.9	Telecommute and Live-Near-Your-Work	BRAD WYCHE (BUNDLE 2.2.1-2.2.9, 2.2.11, 2.2.12)
	2.2.10	Car sharing	JOHN HARTZ (BUNDLE 2.2.2, 2.2.3, 2.2.5, 2.2.6, 2.2.8, 2.2.10-2.2.16, 2.3.8, 2.3.9)
	2.2.11	E-Commerce	BRAD WYCHE (BUNDLE 2.2.1-2.2.9, 2.2.11, 2.2.12) JOHN HARTZ (BUNDLE 2.2.2, 2.2.3, 2.2.5, 2.2.6, 2.2.8, 2.2.10-2.2.16, 2.3.8, 2.3.9)

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	2.2.12	Promoting use of alternative Commuting options	BRAD WYCHE (BUNDLE 2.2.1-2.2.9, 2.2.11, 2.2.12) JOHN HARTZ (BUNDLE 2.2.2, 2.2.3, 2.2.5, 2.2.6, 2.2.8, 2.2.10-2.2.16, 2.3.8, 2.3.9)
5	2.2.13	State Mass Transit Aid Program	BRAD WYCHE (BUNDLE 2.2.2, 2.2.3, 2.2.4, 2.2.5, 2.2.13, 2.2.14, 2.2.15, 2.3.8, 2.3.9) BRIAN BARNES (BUNDLE 2.2.2, 2.2.13, 2.3.8) ERIKA HARTWIG (BUNDLE 2.2.13, 2.2.14, 2.2.15) JOHN GARDNER JOHN HARTZ (BUNDLE 2.2.2, 2.2.3, 2.2.5, 2.2.6, 2.2.8, 2.2.10-2.2.16, 2.3.8, 2.3.9)
3	2.2.14	State Mass Transit Capital Assistance Program	BRAD WYCHE (BUNDLE 2.2.2, 2.2.3, 2.2.4, 2.2.5, 2.2.13, 2.2.14, 2.2.15, 2.3.8, 2.3.9) ERIKA HARTWIG (BUNDLE 2.2.13, 2.2.14, 2.2.15) JOHN HARTZ (BUNDLE 2.2.2, 2.2.3, 2.2.5, 2.2.6, 2.2.8, 2.2.10-2.2.16, 2.3.8, 2.3.9)
3	2.2.15	State Mass Transit Demonstration Program	BRAD WYCHE (BUNDLE 2.2.2, 2.2.3, 2.2.4, 2.2.5, 2.2.13, 2.2.14, 2.2.15, 2.3.8, 2.3.9) ERIKA HARTWIG (BUNDLE 2.2.13, 2.2.14, 2.2.15) JOHN HARTZ (BUNDLE 2.2.2, 2.2.3, 2.2.5, 2.2.6, 2.2.8, 2.2.10-2.2.16, 2.3.8, 2.3.9)
	2.2.16	State Van Pool Program	JOHN HARTZ (BUNDLE 2.2.2, 2.2.3, 2.2.5, 2.2.6, 2.2.8, 2.2.10-2.2.16, 2.3.8, 2.3.9)
	2.2.17	State Multi-Modal Transportation Plan	
	2.2.18	High Speed Rail	
	TLU-2.3		
3	2.3.1	“Commuter Choice”/Parking Cash Out	REP. BEN HAGOOD (BUNDLE 2.3.1, 2.3.11) LANNEAU H. SIEGLING JOHN GARDNER
	2.3.2	VMT Tax	BRAD WYCHE
	2.3.3	Pay As You Drive Insurance	

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3	2.3.4	Increased Fuel Tax (w/ targeted use of revenue towards travel alternatives)	BRAD WYCHE ERIKA HARTWIG ;JOHN HARTZ
	2.3.5	Location-Efficient Mortgages	
	2.3.6	Congestion Pricing (or tolls) (w/ targeted use of revenue towards travel alternatives)	LANNEAU H. SIEGLING JOHN GARDNER
	2.3.7	Parking Pricing or Supply Restrictions	
3	2.3.8	Transit Repositioning	BRAD WYCHE (BUNDLE 2.2.2, 2.2.3, 2.2.4, 2.2.5, 2.2.13. 2.2.14, 2.2.15, 2.3.8, 2.3.9) BRIAN BARNES (BUNDLE 2.2.2, 2.2.13, 2.3.8) JOHN HARTZ (BUNDLE 2.2.2, 2.2.3, 2.2.5, 2.2.6, 2.2.8, 2.2.10-2.2.16, 2.3.8, 2.3.9)
	2.3.9	Transit Pricing Incentives	BRAD WYCHE (BUNDLE 2.2.2, 2.2.3, 2.2.4, 2.2.5, 2.2.13. 2.2.14, 2.2.15, 2.3.8, 2.3.9) JOHN HARTZ (BUNDLE 2.2.2, 2.2.3, 2.2.5, 2.2.6, 2.2.8, 2.2.10-2.2.16, 2.3.8, 2.3.9)
	2.3.10	VMT/GHG Offset Requirements for Large Developments	BARRY BEASLEY
	2.3.11	Benefits for Low GHG Vehicles (preferential parking, use of HOV lanes)	REP. BEN HAGOOD (BUNDLE 2.3.1, 2.3.11)
	TLU-2.4		
3	2.4.1	Low-GHG Fuel Standard (e.g., renewable)	BRAD WYCHE REP. BEN HAGOOD (BUNDLE 2.4.1, 2.4.2, 2.4.3, 2.4.4) BRIAN BARNES (BUNDLE 2.4.1, 2.4.4)
	2.4.2	Low-GHG Fuel for State Fleets (e.g., CNG, biodiesel)	REP. BEN HAGOOD (BUNDLE 2.4.1, 2.4.2, 2.4.3, 2.4.4)

# of Ballots	Option No.	GHG Reduction Policy Option	Ballots for Priority for Analysis, with proposed bundles (options recommended by the TWG to the CECAC highlighted in grey)
	2.4.3	Biofuel expansion (biodiesel, CNG, LPG, cellulosic ethanol)	BRAD WYCHE (BUNDLE 2.4.3, 2.4.4) REP. BEN HAGOOD (BUNDLE 2.4.1, 2.4.2, 2.4.3, 2.4.4)
4	2.4.4	Alternative Fuel Infrastructure Development	BRAD WYCHE (BUNDLE 2.4.3, 2.4.4) REP. BEN HAGOOD (BUNDLE 2.4.1, 2.4.2, 2.4.3, 2.4.4) BRIAN BARNES (BUNDLE 2.4.1, 2.4.4) BARRY BEASLEY
	2.4.5	State Emergency Energy Plan	
	TLU-3		
	TLU-3.1		
	3.1.1	Port Improvements	LANNEAU H. SIEGLING JOHN HARTZ (BUNDLE 3.1.1 (A AND B), 3.1.2, 3.1.4, 3.2.1, 3.2.5, 3.2.6, 3.2.7, 3.3.1, 3.4.3)
3	3.1.1	Vehicle Technology Improvements (e.g., aerodynamics)	BRIAN BARNES BARRY BEASLEY JOHN HARTZ (BUNDLE 3.1.1 (A AND B), 3.1.2, 3.1.4, 3.2.1, 3.2.5, 3.2.6, 3.2.7, 3.3.1, 3.4.3)
	3.1.2	R&D on Low-GHG Vehicle Technology	JOHN HARTZ (BUNDLE 3.1.1 (A AND B), 3.1.2, 3.1.4, 3.2.1, 3.2.5, 3.2.6, 3.2.7, 3.3.1, 3.4.3)
	3.1.3	Low-sulfur diesel	
	3.1.4	Black carbon control technologies (e.g., use of particulate traps, other complementary technologies)	JOHN HARTZ (BUNDLE 3.1.1 (A AND B), 3.1.2, 3.1.4, 3.2.1, 3.2.5, 3.2.6, 3.2.7, 3.3.1, 3.4.3)
	3.1.5	Pupil Transportation	
	TLU-3.2		
	3.2.1	Freight Logistics Improvements/GIS	JOHN HARTZ (BUNDLE 3.1.1 (A AND B), 3.1.2, 3.1.4, 3.2.1, 3.2.5, 3.2.6, 3.2.7, 3.3.1, 3.4.3)

# of Ballots	Option No.	GHG Reduction Policy Option	Ballots for Priority for Analysis, with proposed bundles (options recommended by the TWG to the CECAC highlighted in grey)
3	3.2.2	Enforce Speed Limits	REP. BEN HAGOOD (BUNDLE 3.2.2, 3.2.3, 3.2.5, 3.2.6, 3.2.7) BRIAN BARNES (BUNDLE 1.2.2, 3.2.2) JOHN HARTZ (BUNDLE 1.2.3, 2.2.1, 3.2.2, 3.2.3, 3.2.5)
	3.2.3	Improve Traffic Flow	REP. BEN HAGOOD (BUNDLE 3.2.2, 3.2.3, 3.2.5, 3.2.6, 3.2.7); LANNEAU H. SIEGLING JOHN HARTZ (BUNDLE 1.2.3, 2.2.1, 3.2.2, 3.2.3, 3.2.5)
	3.2.4	Increased Size & Weight of Trucks	
4	3.2.5	Pre-clearance at Scale Houses	REP. BEN HAGOOD (BUNDLE 3.2.2, 3.2.3, 3.2.5, 3.2.6, 3.2.7) BRIAN BARNES JOHN HARTZ (BUNDLE 1.2.3, 2.2.1, 3.2.2, 3.2.3, 3.2.5) JOHN HARTZ (BUNDLE 3.1.1 (A AND B), 3.1.2, 3.1.4, 3.2.1, 3.2.5, 3.2.6, 3.2.7, 3.3.1, 3.4.3)
5	3.2.6	Truck Stop Electrification	REP. BEN HAGOOD (BUNDLE 3.2.2, 3.2.3, 3.2.5, 3.2.6, 3.2.7); LANNEAU H. SIEGLING ERIKA HARTWIG BARRY BEASLEY (BUNDLE 3.2.6, 3.2.7) JOHN HARTZ (BUNDLE 3.1.1 (A AND B), 3.1.2, 3.1.4, 3.2.1, 3.2.5, 3.2.6, 3.2.7, 3.3.1, 3.4.3)
4	3.2.7	Enforce Anti-Idling	REP. BEN HAGOOD (BUNDLE 3.2.2, 3.2.3, 3.2.5, 3.2.6, 3.2.7); LANNEAU H. SIEGLING BARRY BEASLEY (BUNDLE 3.2.6, 3.2.7) JOHN HARTZ (BUNDLE 3.1.1 (A AND B), 3.1.2, 3.1.4, 3.2.1, 3.2.5, 3.2.6, 3.2.7, 3.3.1, 3.4.3)
	TLU-3.3		
	3.3.1	Intermodal Freight Initiatives	REP. BEN HAGOOD JOHN HARTZ (BUNDLE 3.1.1 (A AND B), 3.1.2, 3.1.4, 3.2.1, 3.2.5, 3.2.6, 3.2.7, 3.3.1, 3.4.3)
	3.3.2	Feeder Barge Container Service	

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	TLU-3.4		
	3.4.1	Procurement of Efficient Fleet Vehicles (public, private or other)	JOHN HARTZ (BUNDLE 1.3.2, 1.3.3, 1.3.4, 1.3.5, 3.4.1, 3.4.2, 5.1)
	3.4.2	Incentives to Retire or Improve Older Less Efficient Vehicles	JOHN HARTZ (BUNDLE 1.3.2, 1.3.3, 1.3.4, 1.3.5, 3.4.1, 3.4.2, 5.1)
	3.4.3	Maintenance and Driver Training	JOHN HARTZ (BUNDLE 3.1.1 (A AND B), 3.1.2, 3.1.4, 3.2.1, 3.2.5, 3.2.6, 3.2.7, 3.3.1, 3.4.3)
	3.4.4	Increased Truck Tolls or Highway User Fees	LANNEAU H. SIEGLING JOHN HARTZ
	TLU-4		
	4.1	High-speed Rail	REP. BEN HAGOOD (BUNDLE 4.1, 4.2)
	4.2	Integrated Aviation, Rail, Bus Networks	REP. BEN HAGOOD (BUNDLE 4.1, 4.2)
	4.3	Aircraft emissions	
	4.4	Airport Ground Equipment	
	TLU-5		
	5.1	Incentives for Purchase of Efficient Vehicles/Equipment	BRIAN BARNES; JOHN HARTZ (BUNDLE 1.3.2, 1.3.3, 1.3.4, 1.3.5, 3.4.1, 3.4.2, 5.1)
	5.2	Improved Operations, Operator Training	BRIAN BARNES
	5.3	Maintenance Improvements	
	5.4	Increased Use of Alternative Fuels or Low Sulfur Diesel	