



Florida Climate Action Plan

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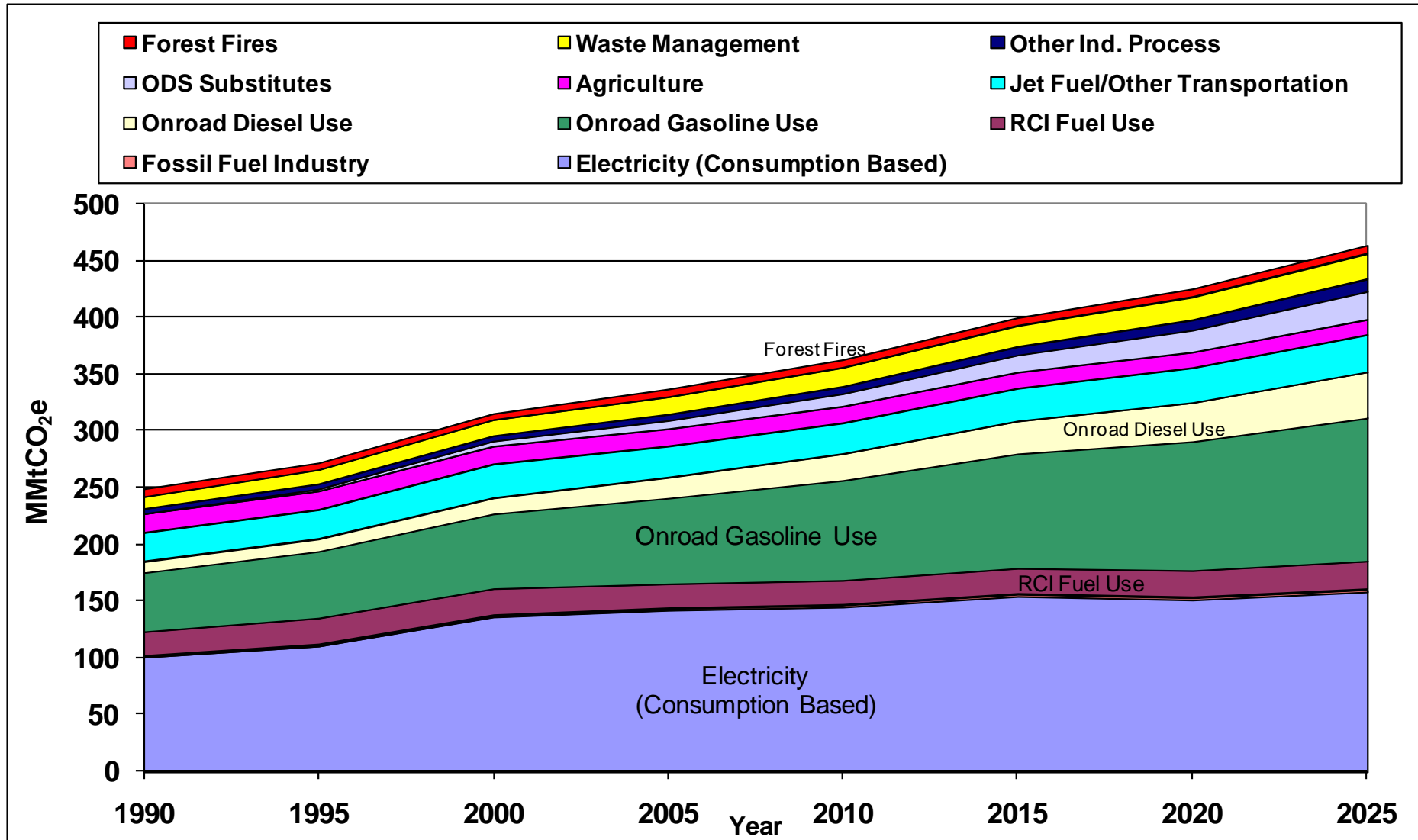
Executive Office of the Governor

State of Florida

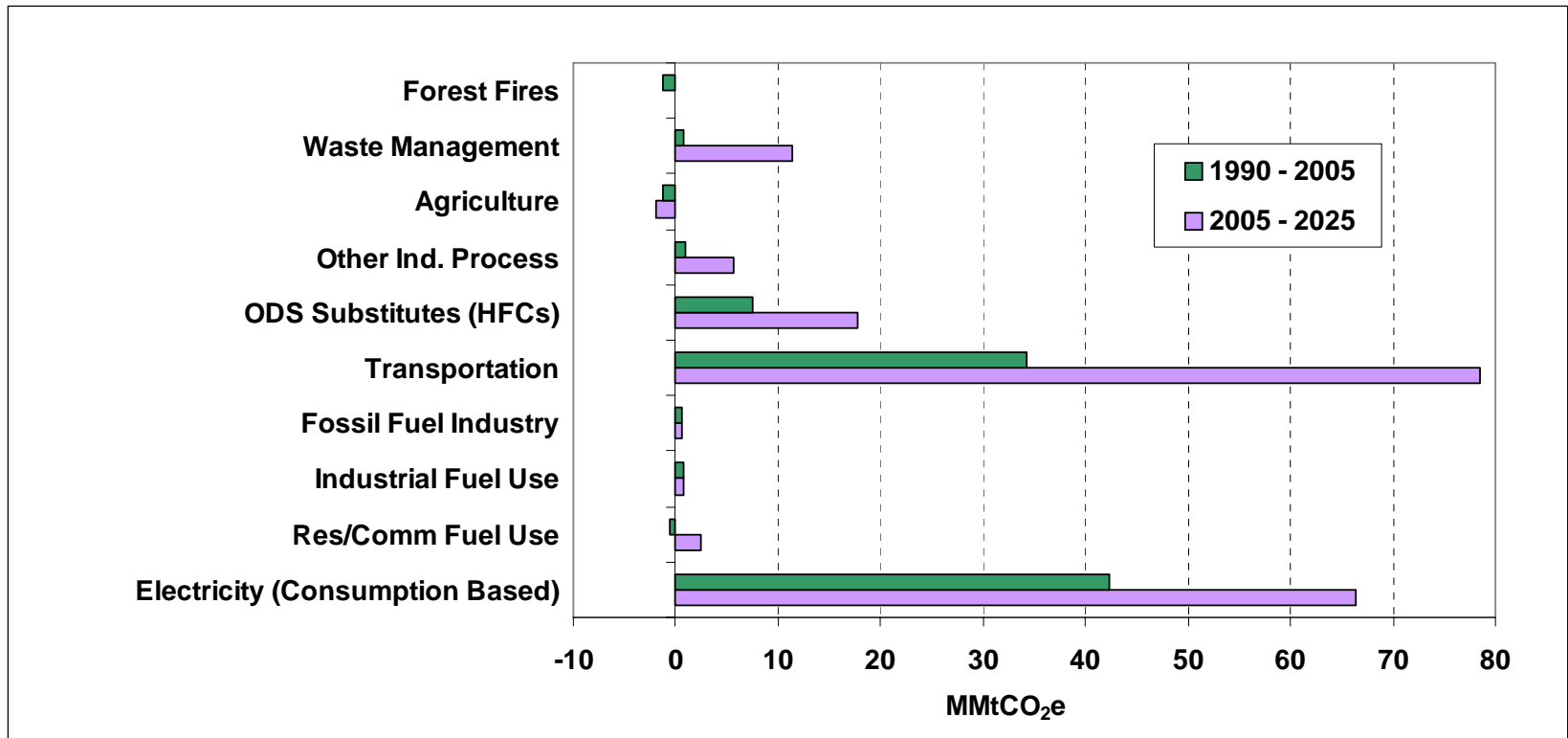
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Greenhouse Gas Emissions by Sector, 1990-2025



Florida Gross Emissions Growth (MMtCO₂e, Consumption Based)



Florida's Actions

- Florida is very vulnerable to the effects of climate change
- Governor Crist's "Serve to Preserve, A Florida Summit on Global Climate Change", July 2007
- Three Executive Orders signed
 - Executive Order 07-126 – Directing State government "Leadership by Example"
 - Executive Order 07-127 – Immediate Actions to Reduce Emissions in Florida
 - Executive Order 07-128 – Governor's Action Team on Energy and Climate Change

Executive Order 07-127

- By 2017 – reduce greenhouse gas emissions to 2000 levels
- By 2025 – reduce greenhouse gas emissions to 1990 levels
- By 2050 – reduce greenhouse gas emissions by 80% of 1990 levels

Action Team on Energy & Climate Change

- Created by Executive Order 07-128
- The Governor's Action Team on Energy and Climate Change was created to develop a comprehensive Energy and Climate Change Action Plan that will fully achieve or surpass targets for greenhouse gas reduction.

Action Team on Energy & Climate Change – Phase I

- A diverse team of 21 members representing interests, including the environmental community, utility providers, government and businesses.
- Met four times for a total of 36 hours
- The Phase I Report was released November 1, 2007. It contains:
 - 35 findings and 30 recommendations under each of the 11 charges
 - Divided into three distinct sectors - power generation, transportation and land use and local/state government activities

Action Team on Energy & Climate Change – Phase II

- A diverse team of 21 members expanded to 28 members to include agriculture, waste, and financial sectors as well as municipal utilities
- Contracted with the Center for Climate Strategies (CCS) to run a facilitated stake-holder process
- Creation of Technical Working Groups
- Met nine times for more than 60 hours
- Built on the recommendations from the Phase I Report
- Vetted more than 300 actions
- Developed 50 policy recommendations
- The Phase II Report was released October 15, 2008.

Technical Work Group Roles

- Assist Climate Action Team
 - Identify full range of potential state actions
 - Identify suggested priorities for analysis
 - Suggest straw policy designs
 - Assist with analysis, development and review of options
 - Assist with development of policy alternatives
 - Assist with input to and review of Action Team reports
 - Review and assist with the state GHG inventory and forecast

Technical Work Groups

- Energy Supply and Demand
 - Heat and power generation; locus for cap-and-trade or carbon tax policy
 - Energy efficiency & conservation, industrial process, waste management
- Cap-and-Trade
- Transportation and Land Use
 - Vehicle efficiency, alternative fuels & demand reduction programs
- Agriculture, Forestry, and Waste
 - Land protection, forest restoration, sustainable forest management, bioenergy, sustainable wood products, waste reduction, recycling
- Government Policy Coordination
 - Greening Florida's economy, energy/climate policy coordination, lead by example, reporting and registries
- Adaptation

Transportation and Land Use

- Comprised of 20 members from a cross section of transportation and land use fields
- Met for a total of 14 teleconferences for about 28 hours

Transportation and Land Use

- TLU-1 Develop and Expand Low-GHG and Alternative Fuels
- TLU-2 Add-on Technologies for Existing Vehicles and New Vehicles
- TLU-3 Smart Growth Planning
- TLU-4 Improving Transportation System Management (TSM)
- TLU-5&6 Land Use Planning Processes and Increasing Choices in Modes of Transportation
- TLU-7 Incentive Programs for Increased Vehicle Fleet Efficiency
- TLU-8 Increasing Freight Movement Efficiencies

Transportation & Land Use - #1

- Develop and Expand Low-GHG Fuels
 - Seeks to reduce GHG emissions by decreasing the carbon intensity of vehicle fuels sold
 - The state would develop a set of standards for low-carbon fuels, which include biodiesel, cellulosic ethanol, hydrogen, compressed natural gas, liquefied petroleum gas, electricity, and low-carbon ethanol blends such as E10 or E85
 - Fuel providers annually report that the fuel mixtures meet the low-carbon fuel standard

Transportation & Land Use - #2

- Low Rolling Resistance Tires and Other Technologies
 - Improve the fuel economy of the light-duty vehicle fleet by reducing the rolling resistance of replacement tires without reducing tire lifetime
 - Consumers could purchase more tires currently available that have lower rolling resistance
 - State could set minimum energy efficiency standards for replacement tires and require that greater information about Low Rolling Resistance replacement tires be made available to consumers at the point of sale

Transportation & Land Use - #3

- Smart Growth Planning
 - Looks at how land use planning, site planning and urban design at the community level can help achieve carbon and GHG emission reduction goals
 - Work to establish a policy framework, guidelines and measurement parameters for the development of new and the redevelopment of older communities that will have a net-zero carbon effect on the environment and reduce GHG emissions
 - The state could achieve reductions by providing incentive and promoting redevelopment projects that establish more energy-efficient land use patterns. It could also maximize opportunities by retrofitting existing buildings to meet LEED or other approved certification programs that reduce energy consumption and GHG emissions.

Transportation & Land Use - #4

- Improving Transportation System Management (TSM)
 - Reduce the amount of trips taken by single occupancy vehicles , shorten trips lengths, reduce vehicle delay, increase the reliability of the transportation network, and reduce idling and other transportations actions that result in increased GHG emissions.
 - The goal is to reduce the daily VMT per capita on the transportation network
 - The state could develop and implement policies and strategies including program funding, financial and development incentives, infrastructure investment, and regulatory requirements

Transportation & Land Use - #5 & 6

- Land Use Planning Process and Increasing Choices in Modes of Transportation
 - Seeks to ensure that local and state land use and transportation planning consider the impact of land use and transportation decisions on the reduction of GHG emissions
 - Aims to double transit ridership, increase the percentage of people that walk, bike, carpool, vanpool, or telecommute
 - Would work to develop and implement policies and strategies that include program funding and financial incentives that expand non-automobile infrastructure and provide modal alternatives to single occupancy vehicle travel

Transportation & Land Use - #7

- Incentive Programs for Increase Vehicle Fleet Efficiency
 - Encourages the purchase of low-GHG-emission vehicles through monetary and convenience rewards and incentive throughout the state:
 - Tax credits for efficient vehicles
 - Incentive programs for major corporate fleet owners, including rental car and taxi cab companies
 - CO₂-based registration fees and vehicle licensing fees
 - Procurement of efficient fleet vehicles
 - Operating incentives for low-GHG vehicles
 - CO₂-based excise taxes
 - CO₂-based product labeling

Transportation & Land Use - #8

- Increasing Freight Movement Efficiencies
 - Aims to reduce the trucking industry's carbon footprint and GHG emissions, while maintaining the current level of service
 - Encourage the development and expansion of intermodal and long-distance rail capacity to support both local and transcontinental rail service
 - The state can utilize two strategies to achieve these goals:
 - Technical strategies, which modify a piece of equipment or its fuel to reduce emissions; and
 - Operating strategies, which change how a piece of equipment or its fuel is used resulting in lower emissions

Florida TLU GHG Reduction Potential Estimates

Policy Option	Policy Option Description	2017 MMTCO ₂ e (Annual)	2025 MMTCO ₂ e (Annual)	2009-2025 MMTCO ₂ e (Cumulative)
TLU-1	Develop and Expand Low-GHG Fuels	6.20	12.62	106.41
TLU-2	Add-On Technologies for Existing Vehicles and New Vehicles	0.80	1.84	13.99
TLU-3	Smart Growth Planning	NQ	NQ	NQ
TLU-4	Improving Transportation System Management (TSM)	3.94	6.98	63.91
TLU-5&6	Land Use (TLU) Planning Processes and Increasing Choices in Modes of Transportation	1.77	3.54	28.29
TLU-7	Incentive Programs for Increased Vehicle Fleet Efficiency	0.84	1.56	13.14
TLU-8	Increasing Freight Movement Efficiencies	0.59	1.10	11.52

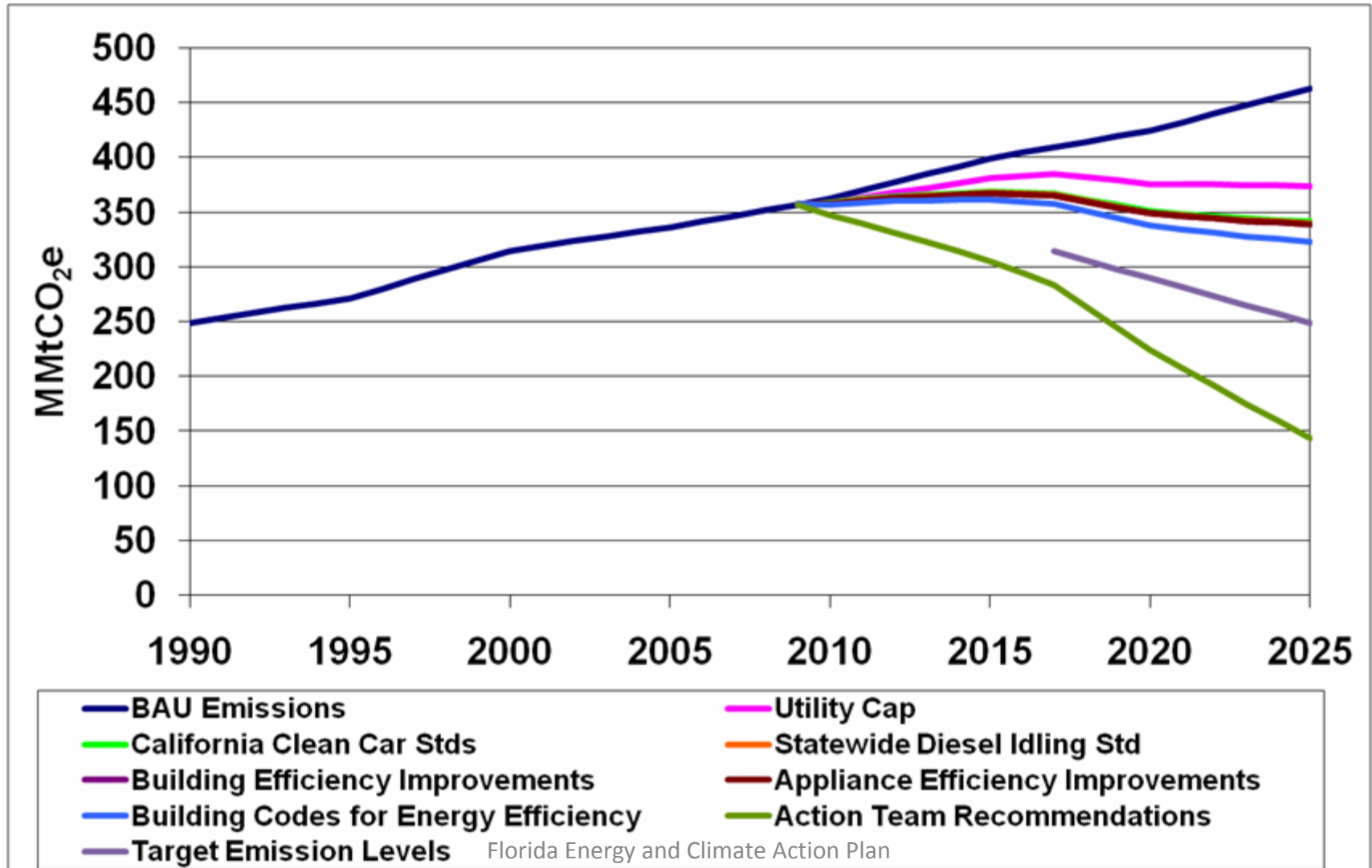
Transportation and Land Use recommendations summary table

Policy No.	Policy Recommendation	GHG Reductions (MMtCO ₂ e)			Net Present Value 2009–2025 (Million \$)	Cost-Effective-ness (\$/tCO ₂ e)	Energy Security Fuel Savings (Gallons Saved 2009–2025) (million gallons)	Level of Support
		2017	2025	Total 2009–2025				
TLU-1	Develop and Expand Low-GHG Fuels	6.20	12.62	106.41	–\$15,161	–\$142	37,290	Approved
TLU-2	Low Rolling Resistance Tires and Other Add-On Technologies	0.80	1.84	13.99	–\$1,259	–\$90	1,665	Approved
TLU-3	Smart Growth Planning	Not Quantified Separately; Included in Other Analyses						Approved
TLU-4	Improving Transportation System Management (TSM)	3.94	6.98	63.91	–\$5,106	–\$80	7,858	Approved
TLU-5&6	Land Use (TLU) Planning Processes and Increasing Choices in Modes of Transportation	1.77	3.54	28.29	NQ	NQ	3,200	Approved
TLU-7	Incentive Programs for Increased Vehicle Fleet Efficiency	0.84	1.56	13.14	NQ	NQ	1,564	Approved
TLU-8	Increasing Freight Movement Efficiencies	0.59	1.10	11.52	\$21	\$2	1,302	Approved
	Sector Totals	14.14	27.64	237.26	–\$21,505	–\$91	52,879	
	Sector Total After Adjusting for Overlaps	12.73	25.14	214.35	–\$18,400	–\$86	48,786	
	Reductions from Recent Actions	19.10	34.11	307.24				
	Sector Total Plus Recent Actions	31.83	59.25	521.59				

Action Teams Principal Conclusions

- Florida expected to experience significant impacts if GHG emission levels are not reversed;
- Early action can result in energy security benefits and position the state to become a hub of green technology innovation and investment;
- Energy efficiency, demand-side management, and energy conservation present opportunities to reduce energy costs and make the state's business sector more cost-competitive;
- Investments today in low-carbon energy sources will stimulate the economy;
- Market-oriented regulations will efficiently guide a low-carbon economy while protecting energy consumers, maintaining agriculture and building sustainable communities.

GHG Reductions from Recent and Planned Actions/Recommendations



Impact of the Recommendations:

- GHG emission reductions would surpass the EO 07-127 targets for 2017 and 2025 by 115 and 34%, respectively;
- Energy security would increase by reducing dependence on fossil fuels resulting in a total fuel savings of:
 - 53.5 billion gallons of petroleum,
 - 200.2 million short tons of coal, and
 - 6.394 billion cubic feet of natural gas during the period of 2009 through 2025
- Economy would see a net benefit through investments in energy efficiency, low-carbon energy sources, and other GHG reduction strategies resulting in an estimated savings of more than \$28 billion from 2009 to 2025.

- To view the Phase I and Phase II report, please visit www.dep.state.fl.us/climatechange or www.flclimatechange.us