Adaptation
Action Summary Matrix
October 10, 2008
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Goal	Proposed Actions	Geographic Implementation State, Regional, National	Temporal Implementation Short, Medium, Long	Mechanism Executive Order, Legislation, Public/Grassroots Effort, Education	Responsible Party Legislators, Local Gov., Resident, State Agencies	Cost of Implementation	Potential Cost Benefit
Adaptation							
	ADP Action 1 – Develop and Distribute Critical Information on Climate Change	State	Short-term	Executive Order; Collaborative Partnerships	State and Local Government; Private Sector; and Academia	Not Quantified	Not Quantified
	ADP Action 2 – Promote Policies and Actions to Help Populations Most at Risk	State	Short-term	Collaborative Partnerships	State and Local Public Health Officials; and Non-profit organizations	Not Quantified	Not Quantified
	ADP Action 3 – Charge and Empower Public Health Officials to Prepare for Climate Change	State	Short-term	Collaborative Partnerships	Legislators; NHDES; DHHS; State and Local Public Health Officials; and Non-profit organizations	Not Quantified	Not Quantified
	ADP Action 4 – Strengthen Protection of New Hampshire's Natural Systems	State & regional	Short-term	Legislation; and Development of new regulations	National, State and Local Government; Non-profit and Private Entities; and Academia	Not Quantified	Not Quantified
	ADP Action 5 - Increase Resilience to Extreme Weather Events	State	Short-term	Legislation; and Modification of existing regulations	National, State and Local Government; and Private Entities	Not Quantified	Not Quantified
	ADP Action 6 - Strengthen the Adaptability of New Hampshire's Economy to Climate Change	State	Short-term	Legislation; Education; and Regulations	National, State and Local Government; Non-profit and Private Entities; and Educators	Not Quantified	Not Quantified
	ADP Action 7 - Establish a Permanent Climate Change Advisory Council	State	Short-term	Legislation	State and Local Government; Non-profit and Private Entities	Not Quantified	Not Quantified

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Energy Sector	NH Business as Usual (BAU) Energy-Related Emissions Projection [MMTCO2e/year]		
	2012	2025	2050
Transportation	9.74	12.66	18.27
Electricity Generation	7.63	9.26	12.39
Residential, Commercial, and Industrial (non-electric)	6.38	7.37	9.28
TOTAL	23.75	29.29	39.94

Agriculture, Forestry and Waste Action Summary Matrix

October 10, 2008

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Goal	Proposed Actions	Geographic Implementation State, Regional, National	Temporal Implementation Short, Medium, Long	Mechanism Executive Order, Legislation, Public/Grassroots Effort, Education	Responsible Party Legislators, Local Gov., Resident, State Agencies	CO_2 Reductions ($MMTCO_2e$) [2025]	Cost of Implementation [2025]	Potential Cost Benefit [2025]
AFW Goal 1 - Carbon Sequestration								
	AFW Action 1.1 - Build up Soil Carbon							
	AFW Action 1.1.1 - Increase Cover Crops	State	Short- to Mid-Term	Education	Dept. of Ag; Cooperative Extension; and Farms and Farmers	<0.01	Moderately Low	Moderately Low
	AFW Action 1.1.2 - Increase Conservation Tillage/No-Till Farming Practices	State	Short- to Mid-Term	Education	Dept. of Ag; Cooperative Extension; and Farms and Farmers	<0.01	Low	Low
	AFW Action 1.1.3 - Protect Agriculture Land	State	Short- to Mid-Term	Conservation Easement Funding Expansion	National, State and Local Government; and Non-Profit Entities	Action not individually quantified; quantified as part of TLU Smart Growth Actions	Moderately Low	Moderately Low
	AFW Action 1.2 - Avoid Forest Land Conversion	State	Short- to Mid-Term	Legislation; Regulations; and Education	LCHIP and NGO Land Trusts; Local Conservation Commissions; DRED; RPCs; and Forest Land Owners	0.35	Moderately High	Moderate
	AFW Action 1.3 - Promote Durable Wood Products	State	Short- to Mid-Term	Education	Cooperative Extension; DRED	0.1	Low	Moderate
AFW Goal 2 - Fuel and Electricity Generation								
	AFW Action 2.1 - Encourage the Use of Bioreactors for Landfills	State	Short-term	Revised Regulations; and Education	State Government; and Landfill owners	Not quantified	Moderately Low	Low
	AFW Action 2.2 - Maximize Availability of Biomass for Electricity and Heating within Sustainable Limits					Wood for res heat = 0 Wood for electricity = - 0.45		
	AFW Action 2.2.1 - Maintain Infrastructure for Biomass Production and Support Regulatory and Business Efficiencies	State	Short-term	Legislation; and Revised Regulations	State and Local Government	Action not individually quantified; quantified as part of AFW Goal 2	Moderately Low	Moderate
	AFW Action 2.2.2 - Ensure Biomass Consumption is within Sustainable Limits	State and Regional	Short- to Mid-Term	Study; Education; and Third Party Cert.	Energy Generators; and Public and Private Landowners.	Action not individually quantified; quantified as part of AFW Goal 2	Low	Supporting mechanism
	AFW Action 2.2.3 - Ensure the Most Efficient Use of Energy/Biomass Stock	State and Regional	Short- to Mid-Term	Funding for Education	DRED	Action not individually quantified; quantified as part of AFW Goal 2	Low	Supporting mechanism
	AFW Action 2.3 - Increase the Development and Use of Secondary Feedstocks for Biodiesel	State	Short- to Mid-Term	Executive Order; and Capital Investment	State and Local Government; and Investors	Analysis not yet completed		
	AFW Action 2.4 – Encourage the Use of Biogenic Waste Sources for Energy Generation	State	Short- to Mid-Term	Legislation; and Revised Regulations	State and Local Government	Analysis not yet completed		
AFW - Goal 3: Recycling and Source Reduction								
	AFW Action 3.1 - Implement a Pay-As-You-Throw Initiative (PAYT)	State	Short- to Mid-Term	Local Ordinances	Local Government	Analysis not yet completed	Moderately Low	Moderate
AFW – Goal 4: Reduced Food System Emissions								
	AFW Action 4.1 – Strengthen Local Food Systems	State	Short-term	Education; and State Support Programs	Dept. of Ag; Cooperative Extension; and Farms and Farmers	<0.01	Low	Moderately Low

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Electric Generation
Action Summary Matrix
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EGU Goal 1 – Increase Demand Response, Energy Efficiency, and								
	EGU Action 1.1 - Revenue Decoupling	State	Short-term	PUC Order	NH PUC; and Utilities	Action not individually quantified; quantified as part of EGU Action 1.2	Low	Supporting mechanism
	EGU Action 1.2 - Energy Efficiency Procurement	State & Regional	Mid-term	PUC Order	NH PUC; and Utilities			
	5% reduction in NH consumption by 2020	-	-	-	-	0.29	Moderate	Moderately High
	10% reduction in NH consumption by 2020	-	-	-	-	0.59	Moderate	High
	15% reduction in NH consumption by 2020	-	-	-	-	0.88	Moderately High	High
	20% reduction in NH consumption by 2020	-	-	-	-	1.17	Moderately High	Very High
	24% reduction in NH consumption by 2020	-	-	-	-	1.41	Moderately High	Very High
	EGU Action 1.3 - Combined Heat & Power Resource Standard [9% reduction in NH consumption by 2020]	State	Short- to Mid-term	PUC Order	NH PUC; and Utilities	0.53	Moderately High	High
EGU Goal 2 – Reduce Supply-Side Emissions from Existing Generation								
	EGU Action 2.1 - Renewable Portfolio Standard (RPS)	State	Short-term	PUC Rules	NH PUC; and Utilities	1.40	Moderately Low	Moderate
	EGU Action 2.2 - Regional Greenhouse Gas Initiative (RGGI) [*This relatively large emissions reduction target is achieved by other Actions]	State	Short-term	Rules Development	Legislators; State and Local Gov.; DES; PUC; and RGGI Inc.	2.79	Moderate	Moderately High
	EGU Action 2.3 - New Source Performance Standard (NSPS)	State & Regional	Mid-term	Legislation; and Rules Development	Legislators; and DES			
	250lbsCO2/MWh	-	-	-	-	1.44	Moderately High	Low
	300lbsCO2/MWh	-	-	-	-	1.33	Moderately High	Low
	400lbsCO2/MWh	-	-	-	-	1.10	Moderately High	Low
	500lbsCO2/MWh	-	-	-	-	0.87	Moderately High	Low
	600lbsCO2/MWh	-	-	-	-	0.64	Moderately High	Low
	700lbsCO2/MWh	-	-	-	-	0.41	Moderately High	Low
	800lbsCO2/MWh	-	-	-	-	0.18	Moderately High	Low
	EGU Action 2.4 – Low- and Non-CO2-Emitting Supply-Side Resources	State & Regional	Short- to Mid-term	Legislation; and PUC Rules	Legislators; PUC; DES; and Utilities	Action not individually quantified	Low	Support mechanism
	EGU Action 2.5 - Nuclear Power Capacity	State & National	Mid-term	Application Review	NRC; and Energy Facility Site Evaluation Committee			
	Nuclear Case 1: Replace nuclear capacity with natural gas in 2030	-	-	-	-	0.00	High	Low
	Nuclear Case 2: Business as Usual (Renew license and maintain capacity)	-	-	-	-	0.00	-	-
	Nuclear Case 3: Replace petroleum, coal and a portion of natural gas base generation with new 1000MW nuclear	-	-	-	-	6.23	Very High	Low
	Replace petroleum, coal and a portion of natural gas base generation with 1000MW of new renewables	-	-	-	-	6.23	-	-
	Replace coal base generation with an equivalent amount of new renewable generation	-	-	-	-	4.22	-	-
	Replace coal base generation with an equivalent amount of new of NG generation	-	-	-	-	2.60	-	-
EGU Supplemental Scenario Analyses	EGU Action 2.6 - Importation of Non-CO2-Emitting Power – (*Mainly Quebec Hydro*)	State & Regional	Short-term	PUC order; and positive legislative support	PUC; utilities or customers purchasing power from Canadian supplier; and FERC	6.09	Low	Moderately High
	EGU Action 2.7 - Regulated Low- and Non-CO2-Emitting Supply-Side Resources	State & Regional	Short- to Mid-term	Legislation; and Revised Permitting Process	Legislators; DES; PUC; New Hampshire Site Evaluation Committee; and regulated utilities.	0.56	Low	Moderate
	EGU Action 2.8 – Deployment of Smart Technologies and the Establishment of a Smart Grid	State & Regional	Short- to Mid-term	Study; PUC Orders; and Incentives	NH PUC; DES; OEP and Utilities	Analysis Not Conducted		
	EGU Action 2.9 – Promoting Low CO2e-Emitting and Renewable Distributed Generation	State & Regional	Short- to Mid-term	Study; PUC Orders; and Incentives	NH PUC; DES; OEP; Local Government; and Utilities			

Note: 2.6 & 2.7 economic costs and benefits provided directly from PSNH and the CSNE economic team did not receive sufficient information from PSNH to conduct its own independent economic analysis

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Residential, Commercial, and Industrial (non-electric)	6.38	7.37	9.28
TOTAL	23.75	29.29	39.94

Government Leadership and Action
Summary Matrix
October 10, 2008

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Goal	Proposed Actions	Geographic Implementation State, Regional, National	Temporal Implementation Short, Medium, Long	Mechanism Executive Order, Legislation, Public/Grassroots Effort, Education	Responsible Party Legislators, Local Gov., Resident, State Agencies	CO_2 Reductions ($MTCO_2e$) [2025]	Cost of Implementation [2025]	Potential Cost Benefit [2025]
GLA Goal 1 – Position State Government to Lead-by-Example								
	GLA Action 1.1 - Establish an Energy Management Unit	State	Short	Legislation	Legislature; DAS; OEP; and DES	Reductions a function of each of the individual Actions	Analysis Underway	
	GLA Action 1.2 - Establish an Energy Consumption and GHG Emissions Baseline Inventory for State	State	Short	Program development and implemention	DAS; OEP; and DES	Supporting action - not individually quantified		
	GLA Action 1.3 - Establish a Self-Sustaining Fund for Energy Efficiency Projects in State Government	State	Short	Legislation	Energy Management Unit (to be formed)	Supporting action - not individually quantified		
	GLA Action 1.4 - Provide for the Establishment of Local Energy Commissions	State	Short	Legislation	Legislature; RPCs; and Local Government	Supporting action - not individually quantified		
	GLA Action 1.5 – Include Climate Change Adaptation and Mitigation in Programs and Planning	State	Short	Executive Order	Governor's Office; RPCs; all State Agencies	Supporting action - not individually quantified		
GLA Goal 2 – Reduce Energy Use in Government Buildings								
	GLA Action 2.1 – Apply High-Performance Building Standards to New Construction and Renovations	State	Short	Legislation; and Rule Development	Legislature; Energy Management Unit (to be formed); DAS; OEP; and DES	100	Analysis Underway	
	GLA Action 2.2 – Maximize Energy Efficiency in Existing Government Buildings	State	Short, Medium	Legislation; and Rule Development	Legislature; Energy Management Unit (to be formed); DAS; OEP; and DES	13,000		
	GLA Action 2.3 – Revise State Appliance and Equipment Procurement Policies	State	Short	Executive Order	Energy Management Unit (to be formed); and DAS	13,000		
	GLA Action 2.4 – Implement Energy Reduction Measures for State Employees	State	Short	Executive Order	Energy Management Unit (to be formed)	Supporting action - not individually quantified		
	GLA Action 2.5 – Implement Energy Reduction Measures for State Facilities	State	Short	Executive Order	Energy Management Unit (to be formed); DAS; and other Agencies as applicable	Supporting action - not individually quantified		
	GLA Action 2.6 – Increase CHPS Funding for Public Schools	State	Short	Executive Order	NH Dept of Education; and Jordan Institute	Supporting action - not individually quantified		
GLA Goal 3 – Increase Use of Renewable Energy Resources and Energy-Efficient Technologies								
	GLA Action 3.1 – Encourage Renewable Energy and Energy Efficiency Projects for Existing State-Owned Buildings and Facilities	State	Short, Medium	Program development and implemention	Energy Management Unit (to be formed); DAS; Budget Committees; and Building Energy Managers	Supporting action - not individually quantified	Analysis Underway	
	GLA Action 3.2 – Use Renewables for Building Heat and Hot Water	State	Short, Medium	Program development and implemention	Energy Management Unit (to be formed); DAS; Budget Committees; and Building Energy Managers	30% - 7,750 50% - 13,000 80% - 18,500		
GLA- Goal 4 – Reduce Emissions through Vehicle Choice and Technology								
	GLA Action 4.1 – Revise State Vehicle Procurement	State	Short					
	GLA Action 4.1.1 – Increase Overall Efficiency of State Vehicle Fleet	State	Short	Program development and implemention	Energy Management Unit (to be formed); and State Agenices with fleets	4000		
	GLA Action 4.1.2 – Increase Use of Cleaner Fuels and Advanced Technologies	State	Short, Medium	Legislation; and Policy Development	Legislature; and Energy Management Unit (to be formed)	2000		

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	GLA Action 4.2 – Reduce Emissions from Existing Vehicles during State Activities	State	Short				Analysis Underway	
	GLA Action 4.2.1 – Reduce Diesel Particulate Emissions through Use of Retrofit Devices	State	Short	Executive Order; and Policy Development	Energy Management Unit (to be formed); and State Agenices with fleets	DOCs - 3000-6000z FTFs - 5000-11250		
	GLA Action 4.2.2 – Increase Fuel Economy through Improved Vehicle Maintenance and Technology	State	Short	Program development and implemention	Energy Management Unit (to be formed); and State Agenices with fleets	550		
GLA Goal 5 - Reduce Fuel Consumption by State Fleet								
	GLA Action 5.1 – Modify Driver Behavior in State	State	Short				Analysis Underway	
	GLA Action 5.1.1 - Implement a State Vehicle Idling Policy	State	Short	Executive Order; and Policy/Program Development	Energy Management Unit (to be formed); and State Agenices	Analysis underway		
	GLA Action 5.1.2 – Promote Improved Driver Habits	State	Short	Executive Order; and Policy/Program Development	Energy Management Unit (to be formed); and State Agenices	350		
	GLA Action 5.2 – Reduce State Business-Related Travel	State	Short, Medium	Executive Order; and Policy/Program Development	Energy Management Unit (to be formed); and State Agenices	2000		
	GLA Action 5.3 – Apply Smart Growth Principals to State Office Locations	State	Short, Medium	Legislation or Executive Order; and Policy/Program Development	Energy Management Unit (to be formed); and State Agenices (or their contractors)	Supporting action - not individually quantified		
GLA Goal 6 – Reduce Fuel Consumption by State Employee Vehicles								
	GLA Action 6.1 – Promote Employee Travel Reductions	State	Short	Policy/Program development and implemention	Energy Management Unit (to be formed); and State Agenices	8000	Analysis Underway	

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Transportation	9.74	12.66	18.27
Electricity Generation	7.63	9.26	12.39
Residential, Commercial, and Industrial (non-electric)	6.38	7.37	9.28
TOTAL	23.75	29.29	39.94

Residential Commercial and Industrial Action Summary Matrix

October 10, 2008

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RCI Goal 1 - Maximize Energy Efficiency in New Construction and Existing Buildings								
	RCI Action 1.1 - Maximize Efficiency in New Construction	State	Short	Legislation; regulation; and education	State and Local Gov, NHDES, OEP and PUC Utilities, Building owners Developers, Contractor and Building Design Professionals			
	30 % More Efficient	-	-	-		0.86	Moderate	Moderately High
	70 % More Efficient	-	-	-		2	Moderately High	High
	100 % More Efficient	-	-	-		2.85	Very High	Very High
	RCI Action 1.2 – Maximize Energy Efficiency in Existing Residential Buildings	State	Short	Existing regulations and new funding sources	NHDES, OEP and PUC Utilities, Building owners Developers, Contractor and Building Design Professionals			
	30,000 homes/yr; 15% more efficient	-	-	-		0.82	Moderately Low	Moderately High
	30,000 homes/yr; 30% more efficient	-	-	-		1.64	Moderate	High
	30,000 homes/yr; 60% more efficient	-	-	-		3.29	High	Very High
	15,000 homes/yr; 15% more efficient	-	-	-		0.41	Moderately Low	Moderately High
	15,000 homes/yr; 30% more efficient	-	-	-		0.83	Moderate	Moderately High
	15,000 homes/yr; 60% more efficient	-	-	-		1.65	High	High
	RCI Action 1.3 – Maximize Energy Efficiency in Existing Commercial, Industrial, and Municipal Buildings	State	Short	Existing regulations and new funding sources	NHDES, OEP and PUC Utilities, Building owners Developers, Contractor and Building Design Professionals			
	15% more efficient	-	-	-		0.69	Moderate	Moderately High
	30% more efficient	-	-	-		1.38	Moderate	High
	50% more efficient	-	-	-		2.29	Moderately High	Very High
	RCI Action 1.4A - Upgrade Building Energy Codes	State	Short	Legislation	State and Local Gov, Building Code Review Board, Building owners Developers, Contractor and Building Design Professionals			
	25% more efficient	-	-	-		0.44	Moderate	Moderately High
	50% more efficient	-	-	-		0.87	Moderately High	High
	RCI Action 1.4B – Improve Building Energy Code Compliance	State	Short	Legislation or administrative rules	State and Local Gov, Building owners Developers, Contractor and Building Design Professionals			
	50% compliance (3% more efficient thermal)	-	-	-		0.05	Low	Moderately Low

Goal	Proposed Actions	Geographic Implementation State, Regional, National	Temporal Implementation Short, Medium, Long	Mechanism Executive Order, Legislation, Public/Grassroots Effort, Education	Responsible Party Legislators, Local Gov., Resident, State Agencies	CO_2 Reductions ($MMTCO_2e$) [2025]	Cost of Implementation [2025]	Potential Cost Benefit [2025]
	80% compliance (6.6% more efficient thermal)	-	-	-		0.12	Low	Moderate
	RCI Action 1.5 - Establish an Energy Properties Section in MLS Listings	State	Short	Criteria development and education	State and Local Gov, NHDES, Energy Efficiency and Sustainable Energy Board, NH Assoc. of Realtors	Supporting action - not individually quantified	Moderately Low	Supporting mechanism
	RCI Action 1.6 – (*Became RCI Action 4.4*)							
	RCI Action 1.7 – Preserve Older Buildings and Neighborhoods as Components of Sustainable Communities	State	Medium-Long	Existing regulations and legislation	NH Dept. of Cultural Affairs, NH Dept. of Safety, Municipal Code and Safety Officers, Zoning and Planning Boards	Supporting action - not individually quantified	Low	Supporting mechanism
	RCI Action 1.8 – Conserve Embodied Energy in Existing Building Stock	State	Short	Existing regulations and new committees	State and Local Gov, Governor's Office, Executive Council, State Agencies	Supporting action - not individually quantified	Moderately High	High
RCI Goal 2 - Maximize Energy Efficiency in Commercial, Industrial, and Municipal Processes								
	RCI Action 2.1 – Create Incentive Programs to Install Higher-Efficiency Equipment, Processes, and Systems	State	Short	New administrative rules	Energy Efficiency and Sustainable Energy Board, Utilities, Energy Service Companies, NH DRED	Supporting action - not individually quantified	Moderate	Supporting mechanism
	RCI Action 2.3 – Require Annual CO2 Emissions Reporting	State	Medium-Long	Administrative rule change	NHDES	Supporting action - not individually quantified	Low	Supporting mechanism
	RCI Action 2.4 – Develop Best-Practice Guidelines for Energy-Efficient Process Equipment	State	Short	Education and Outreach	State Gov, Utilities, and Industry	Supporting action - not individually quantified	Low	Supporting mechanism
	RCI Action 2.5 – Promote Net-Zero or Minimal-Emissions Industrial and Commercial Clusters	State and Regional	Medium	Education and Outreach	DRED, DES, OEP	Supporting action - not individually quantified	Moderately Low	Supporting mechanism
RCI Goal 3 - Install Renewable Energy and Low-CO2e Thermal Energy Systems								
	RCI Action 3.1 - Promote Renewable Energy and Low-CO2e Thermal Energy Systems				PUC, OEP Fossil Fuel Industry	0.13	Moderate	Moderate
RCI Goal 4 – Implement Educational/Behavioral Changes								
	Action 4.1 - Include Energy Efficiency and Conservation in School Curriculum				NHDES, Energy Efficiency and Sustainable Energy Board, NH Board of Education, NH Schools	Action not individually quantified	Low	Supporting mechanism
	Action 4.2 - Increase Energy Efficiency through Building Management Education Programs				DES, OEP, PUC Utilities Community Colleges	Action not individually quantified	Moderately Low	Moderately High
	Action 4.3 - Reduce Residential Energy Demand through Education and Outreach				DES, OEP NH Carbon Challenge	Action not individually quantified	Low	Supporting mechanism
	Action 4.4 - Establish a Comprehensive Energy Efficiency and Renewable Energy Education Program				State and Local Gov Utilities DES, OEP Community Colleges	Action not individually quantified	Moderately Low	Moderate
	Action 4.5 - Create an Energy Efficiency and Sustainable Energy Systems Web Portal				DES, OEP	Action not individually quantified	Low	Supporting mechanism

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Transportation and Land Use Action Summary Matrix October 10, 2008

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TLU Goal 1 – Reduce Vehicle Emissions per Vehicle Mile Traveled								
TLU Goal 1.A Influence the Vehicle Market through Regulatory Standards								
	TLU Action 1.A.1 - Support Stricter Corporate Average Fuel Economy Standards	State and National	Short-, Medium, and Long-term	State and National Legislation	Legislators; NHDES NH Congressional Delegation; NHTSA; and Auto Manufacturers			
	35 MPG	-	-	-	-	1.13	Moderately High	High
	40 MPG	-	-	-	-	1.64	Moderately High	High
	45 MPG	-	-	-	-	2.04	Moderately High	Very High
	50 MPG	-	-	-	-	2.37	Moderately High	Very High
	TLU Action 1.A.2 – Support Fuel Economy Standards for Heavy-Duty Vehicles	National	Medium- and Long-term	State and National Legislation	State Government; USEPA; and Fleet/Vehicle Owners/Operators	0.94	Moderately High	Moderate
	TLU Action 1.A.3 - Adopt California Low Emission Vehicle (CALEV) Standards	State	Short-term	Legislation	State Government	1.78	Moderate	Moderately High
TLU Goal 1.B Influence Consumer Demand for Higher Fuel Economy Vehicles								
	TLU Action 1.B.1 - Create a Point-of-Sale Financial Incentive for Higher Efficiency Vehicles	State	Short-term	Legislation; and Rule Change	DOS; DMV; DES; and Local Government			
	Feebate of $500 per 0.01 gallon/mile (new vehicles 14% more fuel efficient)	-	-	-	-	0.73	Low	High
	Feebate of $1000 per 0.01 gallon/mile (new vehicles 22% more fuel efficient)	-	-	-	-	1.07	Low	High
	TLU Action 1.B.2 - Implement a Carbon-Based Vehicle Registration Fee Structure	State	Short- to Medium-Term	Legislation	State and Local Government	0.73	Low	High
TLU Goal 1.C Increase the Use of Cleaner Fuels and Advanced Technologies								
	TLU Action 1.C.1 - Adopt a Low-Carbon Fuel Standard	State and Regional	Short- to Medium-Term	Regional Model Rule; Legislation; and/or Executive Order	State Government; Fuel Providers; and Vehicle Manufacturers	0.89	Low	Moderate
	TLU Action 1.C.2. - Promote Advanced Technology Vehicles and Supporting Infrastructure	State and Regional	Short-term	Federal and State Funding	State Government; Fuel Providers; Utilities; and Env. Non-Profits	Complementary action but not individually quantified	Moderately High	Very High
	TLU Action 1.C.3 - Install Retrofits to Address Black Carbon Emissions	State and Regional	Short-term	Executive Order; and Education	State Government; Diesel Vehicle Owners and Fleet Managers			
	Employ DOCs (reduce PM emissions by 25%)	-	-	-	-	0.40	Moderate	Low
	Employ FTFs (reduce PM emissions by 50%)	-	-	-	-	0.80	Moderate	Low

Goal	Proposed Actions	Geographic Implementation State, Regional, National	Temporal Implementation Short, Medium, Long	Mechanism Executive Order, Legislation, Public/Grassroots Effort, Education	Responsible Party Legislators, Local Gov., Resident, State Agencies	CO_2 Reductions ($MMTCO_2e$) [2025]	Cost of Implementation [2025]	Potential Cost Benefit [2025]
	Employ DPFs (reduce PM emissions by 85%, increase diesel fuel use by 3%)	-	-	-	-	1.30	Moderately High	Low
TLU Goal 1.D Decrease GHG Via Changes in Driver Behavior and Reducing Congestion								
	TLU Action 1.D.1 - Address Highway Travel Speeds	State, Regional and National	Short-term	Executive Order; and Legislation	Legislators; State and Local Government			
	Enforce Current Speed Limits on Highways	-	-	-	-	0.18	Low	Moderate
	Lower Posted Speed Limits on Highways	-	-	-	-	0.35	Low	Moderately High
	TLU Action 1.D.2 - Address Vehicle Idling	State	Short-term	Legislation and Regulation Development	Legislators; NHDES and other State and Local entities	0.02	Low	Moderately Low
	TLU Action 1.D.3. - Improve Traffic Flow.	State	Short-term	Incorporation into Standard Operations	NHDOT and Municipalities	0.04	Low	Moderately Low
	TLU Action 1.D.4 - Reduce Emissions through Enhanced Vehicle Inspection Programs	State	Short- to Medium-Term	Legislation	Legislators; DOS; DMV; and DES	0.09	Moderately Low	Low
TLU Goal 2 – Reduce Vehicle Miles Traveled								
TLU Goal 2.A – Change Consumer Behavior to Reduce Travel Demand								
	TLU Action 2.A.1 - Implement Commuting Trip Reduction Initiative	State	Short-, Medium, and Long-term	Education and Incentive Program Development	Employers and State and Local Transportation Entities	0.13	Moderately Low	Moderately High
	TLU Action 2.A.2 - Implement Congestion Pricing	regional and State	Medium-Term	Legislation	NHDOT and NHDOS	0.03	Moderate	Moderate
	TLU Action 2.A.3 - Create a VMT-Based Insurance Premium Structure	State	Medium-Term	Program Development	State Government; and Insurance Companies			
	2.7% reduction in total light duty VMT	-	-	-	-	0.16	Moderately Low	Moderately High
	5% reduction in total light duty VMT	-	-	-	-	0.30	Moderately Low	Moderately High
	7% reduction in total light duty VMT	-	-	-	-	0.42	Moderately Low	High
	TLU Action 2.A.4 - Implement VMT-Based Vehicle Registration Fees	State	Medium-Term	Legislation	State Government			
	2.7% reduction in total light duty VMT	-	-	-	-	0.16	Low	Moderately High
	5% reduction in total light duty VMT	-	-	-	-	0.30	Low	Moderately High
	7% reduction in total light duty VMT	-	-	-	-	0.42	Low	High
	TLU Action 2.A.5 - Increase the State Gasoline Tax	State	Medium-Term	Legislation	Legislators	0.67	High	Very High
	TLU Action 2.A.6 - Apply a Surcharge to High Carbon Fuels	State	Medium-Term	Legislation	Legislators; and Fuel Providers	Complementary action but not individually quantified; quantified as part of TLU Goal 2	Study	supporting mechanism
	TLU Action 2.A.7 - Create Initiative to Reduce Availability of Free and Inexpensive Parking	State	Medium-Term	Legislation; Local policy Changes; and Funding Changes	Legislators; Local Government; Regional Planning Commissions	Complementary action but not individually quantified; quantified as part of TLU Goal 2	Low	supporting mechanism
TLU Goal 2.B – Establish a Balanced, Integrated, Multi-modal Transportation System								
TLU Subgoal 2.B.1 – Increase the Use of Alternative Modes for Local/Intra-city Travel								
	TLU Action 2.B.1.a - Expand Local/Intra-Regional Transit (Bus) Service	Local and State	Short-term	Legislation; and Collaborative Program Development	Legislators; NHDOT; MPOs; RPCs; and Local Govern.	Quantified together with 2.B.1.b		

Goal	Proposed Actions	Geographic Implementation State, Regional, National	Temporal Implementation Short, Medium, Long	Mechanism Executive Order, Legislation, Public/Grassroots Effort, Education	Responsible Party Legislators, Local Gov., Resident, State Agencies	CO_2 Reductions ($MMTCO_2e$) [2025]	Cost of Implementation [2025]	Potential Cost Benefit [2025]
	TLU Action 2.B.1.b - Improve Existing Local/Intra-Regional Transit (Bus) Service	Local and State	Short-term	Legislation; and Collaborative Program Development	Legislators; NHDOT; MPOs; RPCs; and Local Govern.	0.11	Moderately Low	Moderate
	TLU Action 2.B.1.c - Expand and Improve Bicycle and Pedestrian Infrastructure	Local and State	Short-term	Legislation; and Collaborative Program Development	Legislators; NHDOT; MPOs; RPCs; and Local Govern.	0.08	Moderately Low	Moderately High
TLU Subgoal 2.B.2 – Increase the Use of Alternative Modes for Inter-city/Longer-distance Travel								
	TLU Action 2.B.2.a - Maintain and Expand Passenger Rail Service	State and Regional	Short-term	Legislation; Revised Zoning Ordinances; Education; and Funding Priority Changes	NHDOT; NH Rail Authority; State and Local Government; Planning agencies; and Business Community	0.05	Moderate	Very High
	TLU Action 2.B.2.b - Maintain and Expand Freight Rail Service	State and Regional	Short-term	Legislation; Revised Zoning Ordinances; Education; and Funding Priority Changes	NHDOT; NH Rail Authority; State and Local Government; Planning agencies; and Business Community	*Analysis underway*		
	TLU Action 2.B.2.c - Implement a Stable Funding Stream to Support Public Transportation	State	Short-term	Legislation	Legislators and Voters	Essential action but not individually quantified; quantified as part of TLU Goal 2	Study	Supporting mechanism
	TLU Action 2.B.2.d -Implementation Recommendations of the I-93 Transit Investment Study	regional	Short-term	Identify Funding Sources	FHWA; NHDOT; and State Police	0.13	Moderately High	Moderately High
	TLU Action 2.B.2.e - Expand Park-and-Ride Infrastructure	State	Short-term	Identify Location and Funding Source	NHDOT; MPOs & RPCs; and Local Government	0.04	Moderately Low	Moderate
	TLU Action 2.B.2.f - Provide Financial Support of Transportation Management Associations	regional	Medium-term	Legislation and NHDOT Support	NHDOT; MPOs & RPCs; and Local Government	Complementary action but not individually quantified; quantified as part of TLU Goal 2	Low	supporting mechanism
	TLU Action 2.B.2.g - Expand Inter-City Bus Service	Local and regional	Medium-term	NHDOT Support	NHDOT; and Commercial Bus Carriers	Quantified together with TLU Action 2.B.1.b.		
	TLU Action 2.B.2.h - Improve Existing Inter-City Bus Service to Increase Ridership	Local and regional	Short-term	NHDOT Support	NHDOT; and Commercial Bus Carriers	0.02	Moderately Low	Moderately High
TLU Goal 2.C – Develop Land Use Patterns that Support a Balanced Multi-Modal Transportation System and Disincent VMT								
	TLU Action 2.C.1.a - Assess GHG Development Impact Fees	State	Short-term	Legislation and Rule Development	Legislators; and State and Local Government	Essential action but not individually quantified; quantified as part of TLU Goal 2	Low	supporting mechanism
	TLU Action 2.C.1.b - Streamline Approvals for Low-GHG Development Projects	State	Short-term	Legislation and Rule Revision	Legislators; and State and Local Government	Essential action but not individually quantified; quantified as part of TLU Goal 2	Low	supporting mechanism
	TLU Action 2.C.2 - Develop Model Zoning to Support Bus/Rail Transit	State	Short-term	Legislation; Executive Order; and Voluntary Program Development	Legislators; OEP; DOT; DES; and RPCs	Essential action but not individually quantified; quantified as part of TLU Goal 2	Low	supporting mechanism
	TLU Action 2.C.3 - Develop Model Zoning for Higher-Density, Mixed-Use Development	State	Short-term	Voluntary Program (Education and Incentive Program Development); or Mandatory (Legislation)	Legislators; OEP; DES; RPCs and Local Government	Complementary action but not individually quantified; quantified as part of TLU Goal 2	Low	supporting mechanism
	TLU Action 2.C.4 - Use State Funding and Grants to Encourage Low-GHG-Impact Development	State	Medium-term	Legislation and Administrative Rule Change	Legislators; and State and Local Government	Complementary action but not individually quantified; quantified as part of TLU Goal 2	Low	supporting mechanism

Goal	Proposed Actions	Geographic Implementation State, Regional, National	Temporal Implementation Short, Medium, Long	Mechanism Executive Order, Legislation, Public/Grassroots Effort, Education	Responsible Party Legislators, Local Gov., Resident, State Agencies	CO_2 Reductions ($MMTCO_2e$) [2025]	Cost of Implementation [2025]	Potential Cost Benefit [2025]
	TLU Action 2.C.5 - Enable/Apply a Two-Rate Tax Structure Based on GHG-Impact	State	Medium-term	Legislation; and Municipal Adoption	Legislators; and State and Local Government	Complementary action but not individually quantified; quantified as part of TLU Goal 2	Low	supporting mechanism
	TLU Action 2.C.6 - Promote Availability and Use of Location Efficient Mortgages	State	Medium-term	Program Development	Mortgage Providers	Complementary action but not individually quantified; quantified as part of TLU Goal 2	Low	Moderately Low
	TLU Action 2.C.7 - Establish Entity(ies) to Support Compact Land Use Patterns and Open Space Preservation	State	Short-term	Legislation (Mandatory Adoption); Funding Identification (Incentivized); and Education (Voluntary)	Legislators; State Agencies; MPOs; RPCs; and Local Government	Complementary action but not individually quantified; quantified as part of TLU Goal 2	Low	supporting mechanism
	TLU Action 2.C.8 - Continue/Expand Funding, Education and Technical Assistance to Municipalities	State	Short-term	Education and Technical Assistance; and Potential Legislation to increase Funding	OEP; DES; Coop Ext. RPCs and other Planning Entities; and other municipal support entities.	Essential action but not individually quantified; quantified as part of TLU Goal 2	Low	supporting mechanism