



Catalog of States Climate Mitigation Actions, ©EESI/CCS, 2006

Prepared by The Center for Climate Strategies (CCS) based on actions undertaken or considered by US states.

Tables of State Level Climate Mitigation Actions:

Table	Sectors Covered
3	Transportation and Land Use (TLU)

Table 3 - Transportation and Land Use (TLU)

Option No.	GHG Reduction Policy Option	Priority for Analysis	Potential GHG Emissions Reduction	Potential Cost or Cost Savings	Ancillary Impacts, Feasibility Considerations	Notes
TLU-1 PASSENGER VEHICLE GHG EMISSION RATES						
TLU-1.1 VEHICLE TECHNOLOGY						
1.1.1	Tailpipe GHG Emission Standards					
1.1.2	ZEV/LEV-2 Implementation					
1.1.3	R&D on Low-GHG Vehicle Technology (e.g., fuel cell)					University of Minnesota and Council (Transit) research on auxiliary power options to minimize idling. PHEV Car modification for???
1.1.4	Add-on Technologies (Low Friction Oil, Low-Rolling Resistance Tires)					
TLU-1.2 VEHICLE OPERATION						
1.2.1	Enforce Speed Limits					Stricter enforcement of traffic ordinances is a strategy in the adopted regional Transportation Control Plan for controlling CO emissions.
1.2.2	Vehicle Maintenance, Driver Training					Anti-Idle campaign?

Option No.	GHG Reduction Policy Option	Priority for Analysis	Potential GHG Emissions Reduction	Potential Cost or Cost Savings	Ancillary Impacts, Feasibility Considerations	Notes
1.2.3	Transportation System Management					With CMAQ funds, Minneapolis has implemented computerized traffic signals for better traffic flow. The 2007 CMAQ solicitation contains a funding program for TSM. Freeway on-ramp metering program.
TLU-1.3 INCENTIVES & DISINCENTIVES						
1.3.1	Procurement of Efficient Fleet Vehicles					
1.3.2	Feebates (state-specific or regional)					
1.3.3	CO ₂ -based registration fees					
1.3.4	Tax Credits for Efficient Vehicles					
1.3.5	Vehicle Scrappage					

Option No.	GHG Reduction Policy Option	Priority for Analysis	Potential GHG Emissions Reduction	Potential Cost or Cost Savings	Ancillary Impacts, Feasibility Considerations	Notes
TLU-2	LAND USE AND LOCATION EFFICIENCY					
TLU-2.1	GENERAL					
2.1.1	Infill, Brownfield Re-development					Metropolitan Livable Communities Program Tax Base Revitalization Account grants have funded projects throughout the metropolitan area to clean up polluted land and buildings for redevelopment, creating new jobs and affordable housing, and directing growth to central cities and older suburbs where costly infrastructure is already in place.
2.1.2	Transit-Oriented Development				Encourage higher density development along transit corridors; online <i>Transit Oriented Development Handbook</i> provided as a resource for local communities.	Metropolitan Livable Communities Program provides Livable Communities Demonstration Account grants to metropolitan area communities for projects that result in connected development patterns that link housing, jobs and services, and use regional infrastructure efficiently. Many projects served by bus and LRT infrastructure have been funded.

Option No.	GHG Reduction Policy Option	Priority for Analysis	Potential GHG Emissions Reduction	Potential Cost or Cost Savings	Ancillary Impacts, Feasibility Considerations	Notes
2.1.3	Smart Growth Planning, Modeling, Tools				Plan for the orderly and economical development of the metropolitan region and manage growth in a way that ensures efficient delivery of regional services. Under state law all metropolitan area communities must prepare local comprehensive plans which are consistent with regional plans.	The MC's <i>2030 Regional Development Framework</i> and the policy plans that implement it are intended to help accommodate the region's growth in an orderly, efficient manner and guide the expansion of four regional systems: transportation; aviation; water resources (inc. wastewater collection and treatment) and regional parks and open space.
2.1.4	Targeted Open Space Protection				<i>Development Framework</i> policy to "work with local and regional partners to reclaim, conserve, protect and enhance the region's vital natural resources." <i>Natural Resource Digital Atlas</i> as a tool to help local communities.	Some counties have sold bonds to protect open spaces. MC plans to increase regional park and open space system from 53,000 acres to 80,000 acres.

Option No.	GHG Reduction Policy Option	Priority for Analysis	Potential GHG Emissions Reduction	Potential Cost or Cost Savings	Ancillary Impacts, Feasibility Considerations	Notes
TLU-2.2 INCREASING LOW-GHG TRAVEL OPTIONS						
2.2.1	Make full use of CMAQ funds				The MC has fully allocated all CMAQ funding since 1991.	The MC/TAB programmed \$181 million in CMAQ funds for transit expansion projects and \$53 million for transportation demand and system management since the beginning of the program, which are prioritized based on CO, NO _x and VOC reduction. The MC expects to program \$52 million in CMAQ funding in the 2007 solicitation.
2.2.2	Improve Transit Service (frequency, convenience, quality)					Weak
2.2.3	Transit Marketing and Promotion					Weak

Option No.	GHG Reduction Policy Option	Priority for Analysis	Potential GHG Emissions Reduction	Potential Cost or Cost Savings	Ancillary Impacts, Feasibility Considerations	Notes
2.2.4	Bike and Pedestrian Infrastructure				MC has fully allocated most Enhancement funds to bicycle/pedestrian infrastructure and has a stand-alone STP funding category for infrastructure for bicycle commuting.	MC/TAB programmed \$95.6 million in Enhancement and STP funds since 1992. Transit for Livable Communities is implementing a \$25 million federal pilot program for bicycling/walking. This year the MC expects to program \$16 million in Enhancements funding and \$92 million in STP funding, a portion of which will go toward bicycle commute infrastructure in the 2007 solicitation. MPCA – needs work
2.2.5	Expand Transit Infrastructure (rail, bus, BRT)					MC has a goal of doubling transit ridership by 2030 and increasing it by 50% by 2020. Improvements included additions of LRT, commuter rail, BRT and increased regular bus route service to reach this goal. In 2006 Minnesota voters approved a constitutional amendment requiring dedication of motor vehicle sales tax funds to transit which will result in increased funding.

Option No.	GHG Reduction Policy Option	Priority for Analysis	Potential GHG Emissions Reduction	Potential Cost or Cost Savings	Ancillary Impacts, Feasibility Considerations	Notes
2.2.6	HOV lanes					MC region has 2 HOV lanes (I-394 and I-35W). I-394 is a HOT lane which allows SOV's to use the HOV lane for a fee. MC and MNDOT are working on a HOT lane study; construction of I-35W/62 Crosstown commons section beginning this year. MOU between MC and MNDOT to consider additional HOT lanes in future highway improvements.
2.2.7	"Fix-it-First"					Regional highway plan in MC Transportation Policy Plan states that highway expansion investments are only considered after preservation and management investments have been funded.
2.2.8	Transit Prioritization (signal prioritization, HOV lanes)					Buses travel in HOV/HOT lanes on I-394 and I-35W. The region has 358.46 miles of bus shoulder lanes allowing busses to bypass congestion.
2.2.9	Telecommute and Live-Near-Your-Work					HourCar

Option No.	GHG Reduction Policy Option	Priority for Analysis	Potential GHG Emissions Reduction	Potential Cost or Cost Savings	Ancillary Impacts, Feasibility Considerations	Notes
2.2.10	Car sharing					Neighborhood Energy Connection's (NEC) HourCar program; Zipcar at U of MN.
2.2.11	E-Commerce					
TLU-2.3	INCENTIVES & DISINCENTIVES					
2.3.1	Commuter Choice/Parking Cash Out					
2.3.2	VMT Tax					MNDOT currently studying this finance mechanism.
2.3.3	Pay As You Drive Insurance					
2.3.4	Increased Fuel Tax (w/ targeted use of revenue towards travel alternatives)					
2.3.5	Location-Efficient Mortgages					
2.3.6	Congestion Pricing (or tolls) (w/ targeted use of revenue towards travel alternatives)					I-394 is HOT lane. MOU between MC and MNDOT to consider additional HOT lanes in future highway improvements.
2.3.7	Parking Pricing or Supply Restrictions					MC studied these 5 years ago.
2.3.8	Transit Repositioning					
2.3.9	Transit Pricing Incentives					Metropass program is an employer-based transit incentive program.
2.3.10	VMT/GHG Offset Requirements for Large Developments					

Option No.	GHG Reduction Policy Option	Priority for Analysis	Potential GHG Emissions Reduction	Potential Cost or Cost Savings	Ancillary Impacts, Feasibility Considerations	Notes
2.3.11	Benefits for Low GHG Vehicles (preferential parking, use of HOV lanes)					
TLU-2.4 FUEL MEASURES						
2.4.1	Low-GHG Fuel Standard (e.g., renewable)					
2.4.2	Low-GHG Fuel for State Fleets (e.g., CNG, biodiesel)					

Option No.	GHG Reduction Policy Option	Priority for Analysis	Potential GHG Emissions Reduction	Potential Cost or Cost Savings	Ancillary Impacts, Feasibility Considerations	Notes
2.4.3	Biofuel expansion (biodiesel, CNG, LPG, cellulosic ethanol)					<p>Metro Mobility uses the highest level of biofuel allowable by operating conditions and vehicle manufacturers.</p> <ul style="list-style-type: none"> ▪ B5 used by Metro Transit ▪ Testing B20 ▪ Considering use of B10 by mid-2007 pending B20 test results. ▪ Looking for other engine technology that uses other types of renewable fuels. <p>Formation of the NextGen Energy Board to determine how state can invest most efficiently to achieve energy independence - \$90 million from 2010 – 2020</p>

Option No.	GHG Reduction Policy Option	Priority for Analysis	Potential GHG Emissions Reduction	Potential Cost or Cost Savings	Ancillary Impacts, Feasibility Considerations	Notes
2.4.4	Alternative Fuel Infrastructure Development					<p>Grants are available to partially reimburse service station owners who install E85 pumps.</p> <p>Auto dealers are required to provide written notice that new flex fuel vehicles can run on E85.</p> <p>To create energy parity, the state fuel tax on E85 is 14.2 cents/gallon, versus E10 that is taxed at 20 cents/gallon.</p>
TLU-3 FREIGHT						
TLU-3.1 VEHICLE TECHNOLOGY						
3.1.1	Vehicle Technology Improvements (e.g., aerodynamics)					<p>Metro Transit buses with Voith transmissions have been upgraded to utilize an auto neutral feature that disengages the transmission at stops to reduce fuel consumption.</p> <p>MPCA – small business loans</p>
3.1.2	R&D on Low-GHG Vehicle Technology					<p>U of MN and Metro Transit studying auxiliary power options to minimize idling and power more auxiliary systems electrically.</p>

Option No.	GHG Reduction Policy Option	Priority for Analysis	Potential GHG Emissions Reduction	Potential Cost or Cost Savings	Ancillary Impacts, Feasibility Considerations	Notes
3.1.3	Low-sulfur diesel (Fed)					Metro Transit using ULSF
3.1.4	Black carbon control technologies (e.g., use of particulate traps, other complementary technologies)					Metro Transit future bus purchases will utilize particulate filters. Green Fleet – diesel retrofit
TLU-3.2	VEHICLE OPERATION					
3.2.1	Freight Logistics Improvements/GIS					Truck companies
3.2.2	Enforce Speed Limits					
3.2.3	Improve Traffic Flow					
3.2.4	Increased Size & Weight of Trucks					
3.2.5	Increase the Number of Rest Areas					
3.2.6	Pre-clearance at Scale Houses					
3.2.7	Truck Stop Electrification					
3.2.8	Enforce Anti-Idling					
TLU-3.3	INCREASING LOW-GHG TRAVEL OPTIONS					
3.3.1	Intermodal Freight Initiatives					
3.3.2	Feeder Barge Container Service					
TLU-3.4	INCENTIVES & DISINCENTIVES					
3.4.1	Procurement of Efficient Fleet Vehicles (public, private or other)					Metro Transit is in the process of increasing its fleet of 3 hybrid electric buses to 153 electric hybrids by 2011.

Option No.	GHG Reduction Policy Option	Priority for Analysis	Potential GHG Emissions Reduction	Potential Cost or Cost Savings	Ancillary Impacts, Feasibility Considerations	Notes
3.4.2	Incentives to Retire or Improve Older Less Efficient Vehicles					Metro Transit schedules 40' and 60' bus replacements at 12 years to replace old buses/engines and emission technology while meeting FTA's minimum requirement for service life.
3.4.3	Maintenance and Driver Training					
3.4.4	Increased Truck Tolls or Highway User Fees					
TLU-4 INTERCITY TRAVEL: AVIATION, HIGH SPEED RAIL, BUS						
4.1	High-speed Rail					
4.2	Integrated Aviation, Rail, Bus Networks					
4.3	Aircraft emissions					
4.4	Airport Ground Equipment					
TLU-5 OFF-ROAD VEHICLES (CONSTRUCTION EQUIPMENT, OUT-BOARD MOTORS, ATVS, ETC)						
5.1	Incentives for Purchase of Efficient Vehicles/Equipment					
5.2	Improved Operations, Operator Training					
5.3	Maintenance Improvements					
5.4	Increased Use of Alternative Fuels or Low Sulfur Diesel					