

New Policy

CLEAN CAR CONSUMER INCENTIVES

Policy summary: There are various means by which the Commonwealth could provide incentives for consumers to shift their vehicle purchases to more fuel-efficient (or lower GHG) models. This includes varying the rates on new car sales taxes, annual auto excise (property) taxes, and registration fees, with rates raised on low-MPG vehicles and reduced on high-MPG ones. The change could be designed to be revenue-neutral to consumers as a whole and to the state.

Economy-wide GHG emissions reduced in 2020	0.2 - 0.4 million metric tons; 0.2% - 0.5%
Motor fuel savings (at \$3.34/gallon ⁵⁰) in 2020	\$110 - \$230 million
Cumulative net benefits (discounted) 2011-2020 for higher end of annual benefits	\$570 million
Jobs gained in 2020 (direct and indirect)	1,700 jobs

Clean energy economy impacts: Large reductions in fuel costs for consumers, and less spending on imported fuel, which keeps more money in the Massachusetts economy and thereby creates jobs. For a tax or fee that varies with CO₂ but is still a percentage of vehicle price or value, and is revenue neutral to the state, costs would fall for a majority of auto buyers or owners (possibly around 60 percent), because the most expensive vehicles also tend to get the worst MPG and these would bring in much greater revenues.

Rationale: Transportation is expected to account for close to 40 percent of total GHG emissions in Massachusetts in 2020, and light vehicles by themselves (cars, SUVs, minivans, pickups) around 28 percent of the total. The efficiency of the vehicles themselves is probably the easiest factor to influence among the several that determine vehicle emissions (the others being miles traveled and carbon content of the fuel). Although the federal government preempts authority over setting efficiency standards for automakers, the state does have the ability to influence consumer choice through tax and fee policies. Given the state's budget realities, a policy that combines incentives and disincentives can be accomplished without a loss of tax revenue.

Design issues: The simplest design, which has been proposed in California and Europe, is a charge measured in cents per gram of carbon per mile driven, or cents per gallon per mile driven, varying linearly from a minimum to a maximum rate. This would provide the strongest incentive, but would not be tied to the price of the vehicle. A tax or fee that varied by carbon emissions but was a percentage of vehicle sales price or current value (for vehicle property taxes or registration fees) would concentrate the impact on buyers of more expensive vehicles, but would provide a weaker incentive to buy fuel-efficient vehicles.

In addition, there could be rate variations designed to assist particular groups of drivers, such as those with large families who need vehicles with seating capacity for six or more, or contractors who need trucks for their businesses.

The tax or fee design could be revenue-neutral to the state and to consumers as a whole, with reductions and increases in payments balancing out. The sales tax on motor vehicles in

⁵⁰ EIA forecast for 2020, in constant 2009 dollars.

Massachusetts is currently 6.25 percent, as for all non-exempt products. Preliminary modeling by the state, with the rates varying from 0 percent to twice the current sales tax rate, found that expensive, low-MPG vehicles would yield a large tax revenue increase. In order to maintain revenue neutrality, the entire tax schedule would shift down, with the most efficient vehicles (hybrids) having a negative rate (receiving a rebate) while the top rate would be significantly below 12.5 percent.

GHG impact: For a variable sales tax, the impact would vary from around 0.2 million to 0.4 million metric tons, due to an improvement of 1 percent to 2 percent in average vehicle fuel efficiency, as estimated by Cambridge Systematics, Inc. For a change to vehicle excise taxes or registration fees, the dollar amounts are lower and the impact would be lower. In the table above, the larger impact is from a straight fee on CO₂ emitted per mile driven, that replaces the current sales tax, as has been proposed by California. The smaller impact is from a fee that varies according to CO₂ emissions but is a percentage of vehicle purchase price.

Other benefits: Fewer large, heavy vehicles on the road will reduce injury and death rates from accidents. Reduced fuel usage will cut emissions of other air pollutants that cause human health damage.

Costs: Minimal costs to administer. The state would devise tax or fee rate schedules and provide these to auto dealers or the Registry of Motor Vehicles (RMV). Dealers already handle the sales tax through an electronic connection to the RMV.

Equity issues: Lower-income households tend to buy used cars, whose sales tax rates will not change under this proposal. For new vehicles, size, weight and gas consumption are highly correlated with purchase price, so the tax increases will tend to be felt by higher-income purchasers, with buyers of smaller, cheaper cars seeing decreases in their sales taxes. Beyond the initial purchase price, virtually all drivers whose vehicle choice is modified by the incentive mechanism will see substantial savings in gasoline costs over time.

Experience in other states: California has proposed a version of the sliding-scale sales tax, with the tax varying directly with CO₂ emissions, in their climate planning process, and legislation is pending.

Legal authority: Legislation is required to change the tax rates. In some cases, fees such as registration fees can be changed by agencies without new legislation. EEA and MassDOT will conduct a study to examine critical implementation challenges and possible regulatory or legislative paths forward.

Implementation issues: Changes will be needed to the RMV's computer systems. In order to maintain revenue neutrality, it will probably be necessary to adjust fees, rebates or tax rates over time.

Uncertainty: The degree of consumer response to changes in taxes or fees is not precisely known, so the gains in reduced emissions and the exact tax revenues will only be seen with experience.