

Workgroup Recommendations and Other Potential Control Measures
Gasoline Cars & Trucks Workgroup

CT004 – Efficient Vehicle Purchase Incentives/Disincentives

Overview

Much has been made recently of the huge growth in popularity of trucks and SUVs, instead of more fuel-efficient passenger cars. This divergence is all the more evident with the advent of several very high efficiency vehicles, such as those with hybrid power trains. Since emissions rates generally track with fuel consumption, any program that can improve the efficiency of the NJ fleet will be beneficial. This program would attempt to influence the decision of NJ motorists considering the purchase of a new vehicle by providing incentives towards high efficiency vehicles and away from low efficiency vehicles.

Details

Consumers weigh many factors when deciding what vehicle to buy, and fuel economy is one, but not often a major one. This program would provide financial incentives in the form of sales tax rebates or income tax credits that would lower the effective purchase price of a high efficiency vehicle and sales tax surcharges or additional registration fees that would raise the initial purchase price of a low efficiency vehicle. The exact nature and mechanism for affecting these price impacts is left for future discussion and deliberation. Those motorists considering a vehicle in the middle of the current range of vehicle efficiencies would face no impact on their purchase price. In effect, this proposal would involve a sliding scale of incentives/disincentives that would provide a varying degree of purchase assistance for vehicles with fuel efficiency in, say, the top ten percent of the current model year offerings and charge a premium on those with fuel efficiency in the bottom ten percent. Such a program could be structured to be revenue neutral or revenue positive for the state.

Stakeholders

- NJ motorists
- New car dealers
- Vehicle manufacturers

Cost/Benefit

This proposal has the potential to be revenue neutral or revenue positive for the state. Therefore, a sizable incentive for high efficiency vehicles and a sizable disincentive for low efficiency vehicles could be offered without any burden on the state budget.

According to the Motor Vehicle Commission (MVC), New Jersey motorists purchase 600,000 new vehicles each year. Assuming that purchasing habits in New Jersey are comparable with those throughout the United States, nearly half of these are SUVs, trucks, or other low-efficiency vehicles, and around 14% are hybrid electric or other high-efficiency vehicles, or 300,000 low-efficiency and 84,000 high-efficiency

Workgroup Recommendations and Other Potential Control Measures
Gasoline Cars & Trucks Workgroup

CT004 – Efficient Vehicle Purchase Incentives/Disincentives

vehicles. The remainder fall somewhere in the middle and would not be effected by this control measure. Next one must estimate what impact this program would have on the purchasing decisions of New Jersey motorists. A 2% change at both ends of the efficiency spectrum is assumed for illustrative purposes. This would mean that 6,000 fewer low-efficiency vehicles and 1,684 additional high-efficiency vehicles would be purchased each year due to the program. Calculating the emissions benefit requires use of average emissions rates for the three types of vehicles assuming that the new vehicle fleet in New Jersey falls under the LEV I standards as described by CARB and EPA.

Table 4 – Vehicle Emissions Classes	NO _x Std		VOC Std	
Low-Efficiency (LDT TLEV)	0.7		0.16	
Moderate Efficiency (LEV)	0.2	0.2	0.075	0.075
High-Efficiency (ULEV)		0.2		0.04
LDT TLEV to LEV	0.5		0.085	
	LEV to ULEV	0		0.035

Overall emissions benefits from a 2% effectiveness of this control measure are in the range of 40 tons per year NO_x and 8 tons per year VOC assuming that annual VMT is around 12,000 for all classes of vehicles and that no motorist goes from purchasing a low-efficiency vehicle directly to a high-efficiency vehicle. A 20% effective program, which would require higher incentives and disincentives, would result in 10 times the benefits estimated above and could still be structured to be revenue neutral or revenue positive for the State. It should be noted that these estimates do not address the impacts of the recent adoption of the California low emission vehicle (LEV) standards here in New Jersey. The LEV program can be expected to improve the emissions from all classes of vehicles sold in New Jersey and therefore will likely reduce the impact of this incentive/disincentive program.