

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

CT003 – Vehicle Trip Reduction

Overview

It has often been said that today's gasoline vehicles are so clean that further emissions reductions can no longer easily be obtained through technology, but will have to come from simple reduction in the number of miles driven (vehicle miles traveled – VMT) and the number of trips taken (reducing cold starts and the associated higher emissions). In a culture addicted to cars, promoting such reductions is a very challenging endeavor. A large portion of our driving that is for the purpose of commuting to and from work or school, makes it the most obvious target for any trip and VMT reduction program.

Details

Methods for reducing commuting mileage are numerous and include both mass transit based solutions and work schedule modifications.

- Carpool and Rideshare Matching
- Mass Transit Passes and Reduced Fares
- Tax Incentives for Mass Transit Users
- Tele-Commuting
- Compressed Work Week Programs
- Parking Management and Pricing Schemes (tends to only reduce VMT, not number of trips)

The key is including enough of these components into an umbrella program, so that individual employers and employees have the flexibility to develop a custom program that best suits their needs. Without this, the success of voluntary trip reduction programs is likely to be very limited.

New Jersey is fortunate in that many of these trip reduction measures are already being pursued on a voluntary basis by the Transportation Management Associations (TMAs) and various NJTransit/NJDOT programs. New Jersey programming of Federal Congestion Mitigation & Air Quality (CMAQ) funds over the next three years includes about \$100Million/Year for transit projects, about \$10Million/Year for Park & Ride and other TDM projects, and about \$6Million/Year for TMA funding. What this proposal recommends is to put further emphasis on these programs and extend these efforts even further.

Stakeholders

- NJ employers
- NJ workers
- NJTransit

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Cost/Benefits

Trip reduction programs are likely to run from the inexpensive, primarily education and out reach based, to expensive incentive programs that aim to offset the costs or perceived costs to employers involved in changing their operations or overcome employees' desire for the flexibility of single-occupancy vehicle commuting. Effectiveness is expected to be low to start but can grow as new behavior patterns are formed. The key to trip reduction programs of any kind is in recognizing that they require a long-term commitment in order to effect lasting permanent behavior changes.

According to the New Jersey Department of Labor (NJ DOL), there are approximately four million non-farm employees statewide and 44% of them work at facilities with more than 100 employees – a breakpoint at which implementing such programs is considered feasible. Assuming participation by 10% of the employers and then 10% of their employees; 176,000 employees would participate in one of these programs. Data from NJTPA indicates that the average commuting trip length is around 9 miles, (other estimates are as high as 14 miles). Assuming that 5% of the trips can be eliminated over a standard 250-day work year, then 79,200,000 commuting miles are eliminated. Using rough average emissions rates available from a variety of sources (US DOT, US EPA, CARB) for NO_x (0.7 gm/mi) and VOC (0.6 gm/mi), the potential benefit from this control measure could be as high as 61 tons per year of NO_x and 52 tons per year of VOC. A similar analysis by Michael Baker Jr., Inc predicts benefits of 98 tons per year of NO_x and 119 tons per year of VOC.

It should be noted that this is a very simplified analysis of the potential benefits of a voluntary trip reduction program. Additional benefits have been suggested due to the substantial number of workers who take midday trips for lunch or to run errands. Many of these trips might be eliminated or at least moved to another time of day or day of the week if workers switched to a form of mass transit or ride sharing rather than single occupancy commuting. Another area of this analysis that requires further study is the proportion of New Jersey commuters already relying on mass transit, particularly for travel into New York City and Philadelphia.