

Transportation Control Measures - Review and Process

Background

TCMs have been extensively analyzed as part of past planning activities associated with state and federal plans. The federal ozone plan includes 26 TCMs for ozone, and five new TCMs would be added once EPA approves the 2001 Ozone Attainment Plan. The need for additional TCMs will be determined when new estimates of tonnages needed to attain and maintain attainment are developed as part of the current ozone planning process, sometime in mid 2003. Recent work has included evaluation of five Further Study Measures and collaboration on future transportation control strategies in a stakeholder process sponsored by the California Air Resources Board.

TCM Definition

A working definition of transportation control measures can be found in state law, as: “*any strategy to reduce vehicle trips, vehicle use, vehicle miles traveled, vehicle idling, or traffic congestion for the purpose of reducing motor vehicle emissions.*”

Process

Because there has been extensive discussion and analysis of TCMs, and a number of potential categories have been explored in one way or another, it will be essential to develop a process for screening new suggestions. This process would first identify new ideas and then determine if they are “reasonably available control measures” using the EPA guidance for this type of evaluation. As a starting point, the RACM analysis in the last federal ozone plan is instructive. General requirements for RACM are listed below:

- 1) Emissions reductions are not *de minimis*. This would screen out proposed TCMs that have little or no significant emission reductions. As the vehicle fleet gets cleaner over time, the impact of individual TCMs that reduce vehicle trips also becomes lower as each trip produces fewer pollutants.
- 2) TCMs would not expedite attainment. If a proposed TCM does not contribute to attainment of the standard by 2006 or shorten the attainment period, it would be eliminated. Since historically studies have shown the region needs greater VOC reductions than NO_x, TCMs that reduce VOC and NO_x or those that reduce NO_x more than VOC would be less effective in helping attain/maintain the federal air quality standards.
- 3) Economically and technologically infeasible. There may be no technological means to implement a TCM or there may be adverse economic impacts that outweigh the potential for emission benefits. In addition, the economic screen would consider the need to provide funding for the TCM over the life of its implementation.
- 4) Legal Authority to Implement Measure. A TCM would not be proposed if the authority to implement and enforce the TCM does not currently reside with one of the co-lead agencies. In part this screen relates back to the criteria for expeditious attainment, because a process to change current legislation to seek expanded authority could be lengthy, and extend well beyond the 2006 attainment date.
- 5) Cost effectiveness. Once a TCM is found to be worthy of further evaluation, cost effectiveness will become a consideration in the further evaluation phase. For transportation projects, TCM costs would include capital as well as operating costs.

State TCMs

The State Clean Air Plan, includes TCMs that in some ways overlap, but also are more global in their reach than the federal TCMs. The State TCMs are intended to meet more stringent State air quality standards, but do not have the same legal requirements as the federal TCMs. MTC and the Air District annually report on the status and progress of the State TCMs, and a few new TCMs have been added to this list over time. This process will be used to identify new or modified TCMs, for inclusion in the state plan as well.

Carbon Monoxide

Original air quality plans in the early 80's and 90's included TCMs to reduce carbon monoxide. However, the Bay Area and all of California is in attainment for the federal carbon monoxide standard, so strategies to further reduce emissions are no longer required. These reductions have largely been achieved through the winter blend of fuels use in all motor vehicles.

Mobile Sources and Transport

Transport of pollutants, primarily NO_x, to the Central Valley has been a continuing issue in air quality planning, and led to recent legislative action to implement the Enhanced Smog Check program in the Bay Area. Although this program provides reductions in VOCs, its primary benefits are to better monitor NO_x coming out of the tailpipe under more realistic driving conditions. The need for TCMs that reduce NO_x will largely be driven by the state planning process which is where NO_x transport issues are being addressed.

Other Mobile Measures

Mobile sources are a large and declining portion of the emission inventory. Reductions in mobile sources will contribute over 70% of the estimated VOC reductions and 80% of the NO_x reductions in the federal ozone plan between 2000 and 2006. These large reductions, due to a progressively cleaner vehicle fleet, will be even larger after the introduction of the Enhanced Smog Check Program in the Bay Area. This program was established by the State legislature to help downwind air districts in Sacramento and the San Joaquin Valley with their ozone problems. In addition to the new Enhanced Smog Check Program, other measures to improve the effectiveness of the existing smog check program will continue to be reviewed, including the possibility of remote sensing to identify cars that are gross emitters, and bringing more vehicles into the inspection program.