

NEW JERSEY CLEAN AIR COUNCIL

Public Hearing, Monday April 23, 1995
Trenton, New Jersey

SUBJECT: STRATEGIES FOR MEETING CLEAN AIR GOALS

SCOPE

The 1995 Clean Air Council public hearing sought information and suggestions for implementing current CAAA (Clean Air Act Amendments). Present strategies for reducing air pollution in New Jersey, especially those affecting the personal automobile, have been the subject of controversy. The Council sought statements from affected groups concerning the effectiveness of current strategies. The Council also sought recommendations for new approaches or tactics for cleaning up New Jersey's air and positioning the State for compliance with federal Clean Air mandates.

Because enhanced I&M, reformulated gasoline and employee trip reduction programs have met with opposition, the Council decided to provide a forum where alternative solutions could be presented. The 1995 Hearing encouraged the presentation of strategies and comments on current programs required to comply with the Clean Air Act Amendments.

BACKGROUND

Stationary and mobile sources of air pollution in New Jersey have been the subject of legislation and regulation in order to bring the State into compliance with the requirements of the Clean Air Act Amendments (CAAA). The first federal Clean Air Act (1970) set standards for ambient air quality in the United States. Each state was directed to write a State Implementation Plan (SIP) describing its strategy for meeting these federal standards. When an area does not meet the Clean Air Act air quality standards, it is said to be "not in attainment." New Jersey is not in attainment for carbon monoxide and ozone.

Although great strides have been made in New Jersey toward cleaner air (lead has been all but eliminated as an air pollutant), ground level ozone and carbon monoxide are still persistent problems. In

1994 exceedences for carbon monoxide numbered three (3) days and ozone seven (7) days.

At the present time, regulating auto emissions offers the most economical way to reach clean air goals. Controlling auto emissions is less costly than further reduction from stationary sources. Although cars are cleaner than in the past (vehicles built before 1981 emit 10 to 15 times as much pollution as a new vehicle), the number of cars on New Jersey roads increases yearly and the number of VMT (vehicle miles traveled) increases as well. Therefore, yearly gains in pollution control have been countered with yearly increases in the number of VMT and the number of cars on New Jersey roads. However, changes involving personal automobile use are not well received by the public. Protests against reformulated fuels and enhanced I&M have been common.

Additional modalities such as alternative fuel vehicles, selective tree planting, reordering of municipal zoning and reduction in VMT (vehicle miles traveled) are among the suggestions made at this hearing.

Alternative fuel vehicles offer a possible approach to the problem of the older polluting car. Targeting the polluting cars would seem to produce the greatest benefit. Since 10% of all vehicles produce 60% of carbon monoxide (CO) emissions and 40-50% of hydrocarbon (HC) emissions, it would seem logical to target older cars. Scrappage of these cars has been a component of State Implementation Plans (SIPs) in California and Texas, but these programs have not met with great success. If the problem of convenient refueling can be solved, natural gas conversions offer a viable solution to the problem of the older car.

Selective tree planting is another possible way to minimize the air pollution caused by the heat-island effects and excessive summer energy use. However, the potential for additional reactive organic compounds in the atmosphere due to emissions from these trees needs to be evaluated. A recent cost/benefit analysis of hydrocarbon (HC) emissions from twelve shade trees in the Los Angeles, California Air Basin showed that there are large differences in emission rates among different tree species. Specific tree emissions need to be factored into the decision regarding which shade trees to plant. Studies in eastern Georgia and western Alabama involving the contribution of isoprene and terpene emissions to the atmosphere have some applicability to New Jersey. Such common species as Ash and Maple were found to produce negligible emissions, whereas Oak and Sweetgum were high producers of isoprene.

Reduction in VMT (vehicle miles traveled) is another strategy for improving New Jersey's air quality. Employee trip reduction programs attempt to address the problem of VMT. However, they do not seem to be the answer to this problem since the work commute comprises only a limited and shrinking portion of total travel.

Targeting work trips alone will not effect significant gains in air quality. Recommendations from the State Plan for town centers would reduce car dependence and encourage mass transit. Sprawl generates more vehicle miles of travel than more compact forms of development. Although New Jersey has more miles of highway per square mile than any other state, over 60 percent of the State's interstate system is operating at or above capacity during peak periods of use. The State Plan recommends the development of centers or "compact forms of development" in order to reduce the need for additional roads and to reduce car dependence.

New Jersey has long been in the forefront of programs aimed at clean air. It was the first state to implement an inspection and maintenance program for motor vehicles in February of 1974. In 1983 it was the first state to require Stage II gasoline pumps to trap gasoline vapors. Marine vapor controls to capture fuel vapors during marine transfer operations were another New Jersey innovation. In its 1983 SIP, New Jersey committed to improved control on major industrial sources of volatile organic emissions. Innovative and long range solutions to air quality problems is a continuing tradition in the State.

RECOMMENDATIONS

* Consistent with recommendations in previous hearing reports, the Council recommends a continuing comprehensive statewide public education program aimed at increasing the public's understanding of the air pollution problem and the action needed to correct the problem. This program should continue to describe the relationship between air pollution and automobile use.

* The Council recommends that in keeping with the State Plan, municipalities, as well as the county and state administrations should include in their Master Plans the coordination of land-use and transportation planning in order to link residents with mixed-use centers for employment, commerce and recreation. These Master Plans should reflect the fact that the reduction of vehicle miles traveled (VMT) results in cleaner air.

* Testimony was presented to the Council that New Jersey motorists receive taxpayer subsidies of more than \$700 million each year to build and maintain roads in the State and for other motor vehicle related expenditures. To reduce VMT, or to prevent continuing increases in VMT, New Jersey needs to improve mass transit throughout the State by appropriate planning and by increasing funding for public and private mass transit operations.

* The Council supports the reformulated fuel program (RFG) and recommends that the State continue to evaluate its effectiveness and to educate consumers regarding its beneficial role in air quality improvements.

* The Council recommends a pilot program in retrofitting high polluting older cars with natural gas conversions. A decrease in tax on fuels such as natural gas would provide incentives for this new technology. Additional financing for such a project could come from funding for the employee trip reduction program.

* The Council recommends that the Bureau of Forest Management investigate the effect of trees on air pollution. The Council also supports further study regarding the role that trees play in energy conservation.

* The Council continues to support enhanced inspection and maintenance as a key component in reducing air pollution in the state.

* The Council supports the formulation of a statewide Environmental Master Plan that would provide a comprehensive approach to improvements in air quality and other environmental problems.

* Consistent with recommendations in previous reports, the Council recommends appropriate, consistent funding of local agencies, such as the CEHA Agency. As inspections are delegated to local authorities, the State's general revenues should provide the funding for mandated local inspections.

* The research and testing of alternate technologies, such as onboard diagnostics and remote sensing, aimed at reducing auto emissions are supported by the Council.

ORAL TESTIMONY

Robert Shinn, Commissioner of the New Jersey Department of Environmental Protection.

The state of New Jersey needs to balance the need to attain clean air quality standard with improving the state's business climate.

The Department of Transportation, (DOT) the Department of Environmental Protection (DEP), the Division of Motor Vehicles (DMV) the Attorney General, and the Governor have proposed a number of strategies that will help achieve the goal of clean air.

1. Reformulated gasoline - We hope to replace the state's oxyfuel with federally reformulated gasoline (RFG). This will reduce carbon monoxide as well as VOC and air toxics.

2. Enhanced inspection and maintenance. - Governor Whitman successfully negotiated an agreement with the Environmental Protection Agency (EPA) to use the ASM 50-15 instead of the IM-240 test with inspection every other year. The legislature is also considering a diesel inspection program.

3. Low Emission Vehicles - We recently moved to amend the low emission vehicle strategy to allow for the adoption of a forty-nine state vehicle program. The electric car will be a factor in our overall emission reduction program.

Major changes in the Air Pollution Control Act will involve the following changes:

1. Adoption of New Technology Requirements - DEP will focus efforts on the largest polluters, those 10 % of the sources producing 90% of the air contaminants. Long term pollution agreements and emission trading programs will be supported.

2. Fees - Fees for the operating permit program are based on the amount of pollution each facility emits. Companies may reduce their fees by reducing their emissions.

3. Creation of Facility Wide Permits - One operating permit per facility will replace numerous operating certificates for individual equipment. This will improve efficiency.

4. Adoption of Long Term Pollution Reduction Agreements - Fifteen year agreements will allow for significant emission reduction in return for less command and control as long as there is progress.

5. Emission Trading - This program will harness market forces to create incentives for compliance.

In addition to these changes, DEP will adopt an amnesty program for businesses that voluntarily audit their processes, submit any necessary permit applications and achieve compliance within a set time frame. Thus far, over 1100 applications for equipment were submitted by 235 companies. We expect this to result in cleaner air.

Additionally, beginning July 1, 1995, the air program will be funded out of the General Fund, shifting the focus to cleaning the air rather than collecting fines and fees. New Jersey was the highest state in the nation for fines and fees. The DEP is committed to measuring progress against meaningful environmental indicators, rather than counting the number of permits issued or fines imposed.

Cathy Cowan - Assistant Commissioner for Environmental Regulation

The proposed budget for the Air Program will increase, but we will not increase our staff. We will contract for writing operating permits and we will streamline our operations using more electronic data transfer. The budget will increase, but the staff will not.

William Baker - Chief, Air Programs Branch EPA Region 2

I would like to focus on the underlying soundness of the Clean Air Act. Much of the criticism of the Act focuses on individual strategies that the public does not like - oxygenated fuel, enhanced I&M and car pooling. An overview of the 1970 legislation confirms that the government must determine how clean the air must be in order to protect human health. Most people agree that we need a uniform national standard to define clean air. It is strategy selection that generates debate.

Initially congress was not prescriptive, but air quality standards were not being met and states were more comfortable having control requirements mandated by the federal government. As cost-effective strategies were developed, these also became mandated. Today some feel that the Clean Air Act is too prescriptive.

In response to this, EPA has become more flexible in motor vehicle inspection, operating permits and in emissions trading regulations. However, there are some things that should not change.

1. The fact that the protection of public health will come through reduction in emissions.

2. The biggest emission reductions are obtainable from the largest sources of emissions. In the Northeast, this means significant controls on motor vehicle emissions

3. Transport of pollution across state boundaries is real, but it only accounts for a small part of the problem. Modeling has shown that sources in the Ohio River Valley account for less than five percent of New Jersey's ozone problem.

4. It is highly unlikely that some miraculous technological advance will solve our air quality problems. Scientists and engineers have fairly well defined the easy and cheap reductions.

In summary, New Jersey's strategies for attaining the standards of the Clean Air Act lie mainly in the implementation of enhanced I/M and the Operating Permits Program. New Jersey needed extra time to complete modeling of transport problems and EPA is allowing the submittal of attainment regulations in two phases, one due the end of this year and the second due in mid-1997.

Dr. Steven Paul - Princeton Plasma Physics Laboratories

Current trip reduction programs are not the most effective way to clean the air because the work commute comprises a shrinking portion of total transportation. It comprises only 26 percent of trips taken in 1990; down from 32 percent in 1969. The problem with trip reduction as a strategy is that it's too blunt. The problem should be addressed selectively. Data shows that 10 percent of all vehicles on the road produce 50 to 60 percent of highway CO emissions, 40 to 50 percent of hydrocarbons and 20 to 30 percent of NOX. Alternative fuel vehicles can selectively focus on reducing pollution without radically disrupting American lifestyle choices. Because there is no financial incentive for the older car owner to spend large amounts of money to comply with the law, other incentives must be created. By offering that owner a free compressed natural gas conversion, pollution could be drastically reduced.

Natural gas conversions are practical because these components are movable from automobile to automobile and can be easily reused. The cost is about \$3,500.00 per car. It makes sense to find the most polluting automobiles and fix them. The same components in a 1995 car would not yield any pollution savings. But, the older cars are such gross polluter that conversions make sense. It also makes sense to give the employers benefit for the amount of pollution that they actually reduce.

Refueling will be problematic. There are a number of natural gas stations in the state, but none of them are accessible to the public. To make this program work, these stations would have to be convenient. Because the economies of gas conversion are borderline, the program would need to have reduced fuel taxes on alternative fuels. As an infant industry, it should receive the same breaks to develop an infrastructure as petroleum had.

Propane gas is an excellent fuel but very expensive in relation to gasoline. However, accessibility to refill is excellent and that

possibility might be explored. Natural gas is safer than gasoline regarding flash point and fuel-to-air mixture needed to explode. This is not a new technology, there are 300,000 natural gas vehicles in Italy and virtually most of the cars in New Zealand run on natural gas.

Scrappage as a method of targeting the high polluters is a problem. One reason is the fact that not all old cars are polluters. The dirtiest 20 percent of 1995 automobiles pollute more than the cleanest 10 percent of 1980 automobiles. Another reason is that a lot of cars that would be scrapped anyway now are worth \$700.00. This program involves tremendous taxpayer investment for a dubious result.

New Jersey cars produce 482 tons per day in hydrocarbons. If the older polluting cars were retrofitted for natural gas, hydrocarbons would be reduced by 137 tons per day. That would mean full compliance with the Clean Air Act.

William Wells - New Jersey Natural Gas Company, Consultant in Marketing for New Jersey Natural Gas

Stationary sources of air pollution have long been regulated, but mobile sources have grown with little oversight. The Clean Air Act Amendments attempts to remedy this situation with stricter emissions standards.

Natural gas can help meet new clean air standard because it is a plentiful and safe source of energy, which is primarily produced in the United States. Vehicles powered with natural gas produce significantly lower levels of harmful pollutants, 90 percent less carbon monoxide and 85 percent less hydrocarbons. Natural gas also contains no particulates. New Jersey Natural Gas Company has been using natural gas vehicles since 1990 and currently has 60 NGVs on the road. The refueling station is located in Lakewood and construction of a second natural gas refueling station is scheduled to begin later this year.

A natural gas transportation and storage network is already in place. It consists of 1.2 million miles of underground pipeline which is accessible to all 50 states. The infrastructure and capability to deliver natural gas to the end user currently exists and is unmatched worldwide. NGV fuel compressor stations could be located at strategic locations throughout New Jersey and would represent the last 1 percent of infrastructure that remains to be built.

New Jersey Natural Gas believes that advanced technology vehicles, including these that operate on natural gas, should be allowed to play an integral role in any formal program adopted by New Jersey and the Ozone Transport Commission. The technology for natural gas vehicles has existed since World War II with thousands of vehicles

with proven safety records. Larger vehicles also benefit more in terms of pollution reduction because of the economics of fuel consumption in vehicles such as buses.

Bifuel vehicles are also a feasible alternative. United Parcel Service is one of the largest private carriers utilizing natural gas. The recently converted some vans in Brooklyn to this system and are now converting vehicles in Hartford. Tax incentives as well as utility support are essential for these programs.

Lester Alpaugh - New Jersey State Forester

The state's Forest Management Program oversees 1.8 million acres of forestland. These trees are a natural, cost-effective and efficient combatant in the fight against air pollution. Certain species of trees remove carbon monoxide, nitrous oxide and some precursors of ozone from the air. Trees can also contribute to lower utility bills. That means less fuel burned and therefore less pollution. A recent study in the city of Chicago estimated that in 1991 the value of pollution removal by trees totaled 9.2 million. It is only recently that scientists have begun estimating the monetary value of trees in saving energy and consuming pollution. Certain species of trees are more efficient at cleaning the air and certain species produce isoprene and terpene, which contribute to ozone formation. Careful selection and planting of trees can help to mitigate air pollution in the state.

There are currently 2 million street tree vacancies in the state. For every four trees removed, only one tree is planted. As part of a clean air initiative, the planting of appropriate trees in the urban areas and the protection of the state's forests should be a priority. The planting of roadside forest to help reduce pollutants should be considered.

Stella Pyrttek Blond - National Motorists Association and Vintage and Classic Cars

I inform approximately 3 million people who are antique collectors of classic automobiles. The public is disillusioned with legislative solutions to the problems of air pollution, especially enhanced I&M. More public involvement is needed regarding cleaning up the air. A pollution prevention campaign might help. Behavior modification on the part of the public would be more helpful than all of this legislation.

Current programs are not working well. There is a lot of resistance to the employee trip reduction program and there is a 60 percent failure rate with the enhanced I/M program. That program

and the scrappage program will adversely affect the repair industry. It appears that some of these regulations are aimed at getting people out of their cars. Too much legislation in this area is an infringement of freedom.

DAN GABY - Inset Industries

The Inset Fuel Stabilizer, which we market, consistently reduces emissions to virtually zero. It causes a virtually perfect burn of any fossil fuel which passes through it, thus preventing the emissions of carbon monoxide, hydrocarbons and particulates and it significantly reduces NOX. It also increases fuel efficiency, typically by 10 percent or more. Because hydrocarbon deposits are prevented, lubricating oil changes are far less frequent, spark plugs remain clean longer and maintenance cycles are spread out. Engine life is significantly extended and lower grades of fuel can be used. The fuel stabilizer pays for itself in anywhere from 9 to 36 months. Its useful life could be as long as 75 years. The cost is about \$1,500.00.

The Fuel Stabilizer is a very simple seven inch long cylinder which has no moving parts and once installed never needs maintenance of any kind. It can be applied to every vehicle and boiler without redesign or retrofitting. The stabilizer works because an energy field is created around it, when the fuel passes through the stabilizer, molecules of fuel are aligned perfectly when they enter the combustion process creating a perfect burn.

The New Jersey Institute of Technology (NJIT) studied the Fuel Stabilizer at the request of the legislature and found no significant trends that they were able to detect. The company has filed a lawsuit against NJIT, because they believe that the report was inaccurate and damaging. NJIT's results were not good because the engine was burning existing carbon within the engine and the reduction in emissions was not immediately apparent. The carbon burning process takes approximately 10 percent of the driven miles. The engine used for testing at NJIT was old, carbon deposits needed to be burned off and thus the stabilizer did not produce immediate results.

BOB GEIGER - Environmental Regulatory Affairs for Public Service
Electric & Gas Company

PSE & G has long been actively working to help the state attain national air quality standards. The ozone attainment issue directly affects our fossil fuel operations and thus, we have concentrated largely on reducing NOX emissions. Supporting the need for region wide emission standards for large boilers, has led PSE & G to join with Merck and Texaco to work for regional NOX

emissions standards throughout the ozone transport region. PSE & G supports a 0.2 NOX ozone transport region standard, the adoption of the low emission vehicle (LEV) and a emissions trading system.

Essential to working effectively in the Ozone Transport Region is accurate baseline inventory agreed to by all parties. A reduction of 75 percent of ozone production for both the inner and outer zones of the regions by the year 2003 was included in the transport region's Memorandum of Understanding. PSE & G established a more stringent goal involving a 60 percent reduction in NOX emissions by 1995 and 80 percent by the year 2000. All of the northeast utilities have joined MOCA (Modeling Ozone Cooperative Project). This modeling should help the parties understand the solutions needed for attainment in the northeast. Various testing and monitoring sites in New Jersey as well as New York, Connecticut and Pennsylvania have been supported by PSE & G.

Another area of progress lies in emissions trading. In 1990 the estimated cost to reduce SO2 by one ton was \$1500.00. Today, that same emissions trade can be purchased for \$150.00 per ton. The advantage is that the trading is open to all sources, large and small. This allows a small industry to make a worse case assumption as to their emissions and then purchase offsets for that rather than installing emission monitoring equipment that might cost more than the emissions trade. That kind of flexibility makes economic sense. A vehicle scrappage program could also produce credits to be traded. The net gain to the environment comes from the requirement that 10 percent of the tonnage needed for compliance must be retired.

Currently, PSE & G has 128 natural gas vehicles in their own fleet. This spring will see the dedication of the first retail natural gas fueling station in Jersey City. Local municipalities and authorities will be able to refuel at this station. Natural gas is taxed as a motor vehicle fuel and gross receipts and franchise taxes must also be paid. Legislative changes could provide incentives for conversions if the taxes were not so regressive. In addition to natural gas vehicles, PSE & G has 13 electric vehicles in the fleet. The company's goal is to achieve a 60 percent alternative fuel fleet by the year 2000.

Recommendations from PSE & G include support of the open market emission trading concept, regional emission standards beyond the Ozone Transport Region and adoption of the 49 state car, as well as the development of natural gas vehicles for the state.

JOHN MAXWELL - Associate Director of the New Jersey Petroleum Council

Environmental regulation has resulted in an improvement in air quality. Lead is almost eliminated as an air pollutant, carbon monoxide and particulates are down sharply and sulfur emissions

have fallen by a third since 1970. Nitrogen dioxide has fallen 12 percent since 1988. A 1995 model car emits just 1 percent of the pollution per mile of a 1970 vehicle. Reformulated gasoline also reduces pollution by removing the lead, cutting the vapor pressure and adding oxygen to reduce the carbon monoxide. This gasoline will be reformulated again in the year 2000 to cut smog-forming emissions by at least 25 percent.

Strategies to be explored include remote sensing and a new breakthrough catalyst, which coats vehicle radiators to scoop pollutants out of the air. Strategies to be avoided include those that alienate the public and harm the state's competitive position in relation to other states. Assuming that petroleum is the problem and that alternative fuel vehicles will be the answer is not acknowledging the economics of the situation. The Highway Trust Fund is clearly financed by petroleum taxes.

FRANCIS JANUSZ - Councilman, Rahway

We have a large Inspection Station in the city of Rahway and people come to the Council with questions regarding inspection and the proposed changes with enhanced I/M. The materials that I have read seem to indicate that the ASM - 5015 test will be more efficient than the IM-240. It will also cost one third of the IM-240. I introduced a resolution in Rahway City Council endorsing the Governor's plan to use the ASM test. It passed unanimously on November 11, 1994, and copies were sent to the appropriate state and federal officials. I received a letter back from William Mashinski of the regional office of the EPA. He criticized the resolution and suggested that the ASM test was inferior. Our position seemed justified when Governor Whitman negotiated with the EPA for the ASM test.

Our concern is connected to the fact that we have an incinerator in our town and some of the changes that had to be made after the utility was built created hardships for the city of Rahway. This brings me to stationary sources of air pollution. We are concerned that the Rahway incinerator is allowed to emit almost the same amount of mercury as the Essex incinerator even though it is about half the capacity. We had to fight hard to get mercury control devices installed. Another major concern is the dioxin emissions. We were told that dioxin testing will only occur every five years because of the cost.

Recent reports concerning a low temperature catalytic agent which will reduce emissions, especially carbon monoxide and NOX emissions and clean air on high-smog days should be explored. This could perhaps be used on our incinerator in Rahway. I think the Clean Air Council should take the lead on this issue.

Enhanced I/M installations in Texas, Maryland, Pennsylvania and California have met with problems because EPA regulations forced

compliance before the technology of testing was fully developed. Flexibility on the part of the federal government is needed if we are not going to spend the taxpayers money unnecessarily.

The issue of oxygenated fuel also needs reassessment. The newspapers have reported that gas additives have turned up in drinking water. Further testing is needed before we subject the environment to more pollution.

MARIE CURTIS - Executive Director, New Jersey Environmental Lobby

In this most densely populated state with the second worse air quality in the country, we must use a variety of programs to achieve ambient air quality in the future. The death rate from asthma is rising nationally and the incidence of childhood asthma in some cities such as Elizabeth varies 25 percent depending on the location in the city.

We must publicize and specify the connection between polluted air and its negative effects on health. Enlightened self interest will assist all of the clean air programs, once the dangers are known.

The Environmental Lobby supports enhanced I&M proposals, the LEV/ZEV requirements and operating permits. However, even with all of these improvements in place the long term solution to clean air demands some radical re-thinking of the way we structure the society. A large proportion of air pollution in New Jersey comes from mobile sources and this results from a dispersed, auto-dependent society. Hardly anyone can walk to a store or local library. Therefore, the long term solution to mobile source reduction will come through planned re-development. Unfortunately, current laws and regulations guarantee more dispersal and auto dependency. Municipal zoning ordinances rarely favor mixed-use development, but segregate the residential areas from business or commercial areas.

We cannot undo suburban sprawl or auto-dependent development overnight. We can, however, recognize the source of the problem and begin to change our land use patterns. We could require a circulation element in each municipal land use master plan. Currently, it's optional. A recent report produced by the Tristate Transportation Campaign sets forth the relative cost benefit analysis between public transit systems and automobile use. New Jersey Transit completed a study on the land use transit transportation connection and they are advocating mixed use around the transit station to make the area transit and pedestrian friendly. Current public education about these matters don't go far enough. We urge the Council to pursue a broad public education campaign about all of these approaches to clean air, including a reexamination of zoning and development.

SAL RISALVITO - Owner, Riverdale Texaco - Chairman of the Guardian Advisory Council for the Federation of Independent Businesses

The Federation represents 11,000 small business owners in New Jersey and approximately one thousand of those are service stations and auto repair shops. Regarding clean air regulations, in order to have individual small business owners participate, there needs to be more incentive. Moving to enhanced I & M will cost \$30,000.00 to \$40,000.00 per service center. To spend that is a big decision for the small business owner. If the small shops do not participate, then people are going to have to use the state lanes and lines are going to be longer. They are too long now.

Another disincentive built into the system is the two year inspection program and the fact that the service station can only inspect a vehicle that is four years old or newer. That radically decreases volume. It also allows people to pollute for two years instead of one. The fact that vehicles four years old or newer are under warranty cuts into the service station's business for the repair. The waiver system is also a disincentive. The motorist is able to authorize spending \$200.00 or getting a waiver. The waiver allows him to continue polluting the air. We need to calculate the return on that kind of investment. With current regulations only a few stations will be able to afford the equipment.

JIM SINCLAIR - New Jersey Business and Industry Association

The public information program is absolutely needed to have a frank discussion about strategies ranging from mobile sources to fixed sources. In the last 25 years, the business community has spent 1.2 trillion dollars on pollution control equipment. Currently the yearly rate is \$100 billion in investments for pollution control. This is a tax on competitive industries, although a necessary tax. From 1988 to 1993 there has been a 60 percent reduction in emissions from the sources reporting. That is a huge reduction in emissions.

We support an enhanced I&M program because it will remove 193 tons of pollution per day. We would prefer remote sensing to the ASM program, because we believed that it would be more efficient. We also support privatization of the inspection stations because we believe in market forces. We would like to have seen a seasonal focus on ozone reduction because it really is a summer problem.

Although the Business and Industry Association believes that there is a role for the county and local government in the air process, our argument has been that we don't want dual registration and we want focused enforcement.

Regarding the Employee Trip Reduction Program, the Association members have made every effort to comply with that program. If initially, this program had been voluntary and had given credits, it would have been received enthusiastically. However, the policy seems to be shifting and our current position is to advise our members not to spend a lot of money on that program.

The move to computerize the permitting process is strongly supported by the Association. If the industries are running the same software as the DEP then there will be no chance of having a permit rejected. This should expedite the process. It should be a model for all of the other permitting programs. It will provide instantly accessible, usable information that will help the DEP with decision making. The only decision left in the operating permit program is the fee. The Association wants New Jersey's fee program to look like the rest of the nation in terms of that dollar figure. New Jersey must remain competitive.

WRITTEN TESTIMONY

GEORGE B. DAWSON - Independent Writer and Researcher on Energy and Environmental Issues

The major cause of the public's lack of acceptance of New Jersey's clean air mandates lies in the state's failure to articulate with clarity the reasonableness of its goals. The effort to bring ground-level ozone down to a 1 hour maximum of 120 parts per billion has been supported by ample epidemiological, clinical and laboratory evidence. Recognizing that no one strategy will bring clean air, makes it necessary to consider every facet of fuel and chemical use. Unfortunately, the introduction of MTBE (methyl tertiary butyl ether) resulted in public outcry in New Jersey and Alaska. Studies, however, have been inconclusive regarding its detrimental effects. Despite studies showing no relationship between MTBE and adverse health problems, New Jersey dropped its oxygenation requirement on March 1. This is important to note because it illustrates the wide gap between perception and reality in clean air strategies.

Gasoline reformulation represents not only the most significant clean-air strategy implemented under the 1990 Clean Air Act Amendments to date, but necessarily a major component of any state implementation plan. New Jersey air will be noticeably cleaner this summer because of reformulated gasoline. (Appendix 5) Therefore, information services to promote this important improvement should be increased rather than cut.

STEVEN F. DRAGOS, President of RideWise of Raritan Valley

RideWise supports the Employee Trip Reduction Program (ETRP) and its effectiveness in reducing single occupant vehicle trips to work. There has been a reduction in congestion and air pollution in Raritan Valley and hence New Jersey. Since 1991 RideWise has been Raritan Valley's Transportation Management Association. We support corridor management, town center revitalization and mixed use development, shared services and open space. The Association is concerned with the mixed messages coming out of Trenton and Washington as regards the Clean Air Act Amendments and ETRP. Because of this back-pedaling, we want to express support for the following: The employee trip reduction program, education concerning the CAAA, HOV (High Occupancy Vehicle Lanes), poolmatching, park and ride lots, suburban transit and methods to reduce vehicle emissions.

JOSEPH T. PONESSA, Ph.D - Specialist in Housing & Energy, Rutgers Cooperative Extension

Although the Clean Air Council has engaged in extensive discussions concerning the role of the automobile in New Jersey's air pollution, to my knowledge, there has been no analysis of the cost and benefits of public transportation in improving air quality. We need to know what the most cost effective choice. We need to analyze what provides the best environmental benefit at the least cost.

KIM BALL KAISER - Clean Air Project Director for the Association of New Jersey Environmental Commissions

New Jerseyans drive an average of 161 million mile a day and these automobiles emit about half of all of the state's air pollution. Technical solutions have not solved the problem and it is time to look at development patterns in order to alleviate air pollution. ANJEC suggests the following:

1. Small grants to municipalities through the Transportation Trust Fund to rewrite master plans and ordinance to encourage walking, bicycling and mass transit.
2. The development of municipal centers zoned for mixed use, thus permitted pedestrian, bicycle and public transit mobility.
3. A program of education that will establish the connection between polluted air and ill-health and will encourage the modification of personal driving habits to combine trips, carpool and avoid drive-in windows.

NEW JERSEY MOTOR BUS ASSOCIATION

The state's private motor bus operators carry one third of all bus passengers in the state. Bus use reduces the amount of pollutants by reducing the volume of polluting vehicles as well as the amount of time these vehicles idle in traffic.

The Association supports a coordinated fare policy between the state provider of public transportation and the private provider. This coordination could take the form of a Bus Card for use on all buses in the state in order to satisfy the mandates of the Clean Air Act. The Bus Card is a monthly pass issued by New Jersey Transit for its own passengers which allows them to ride the state's bus system by simply showing the driver the current card. The program offers an incentive to utilize the system as well as an appropriate way to monitor a company's compliance with the Clean Air Act.

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