

New Jersey's Response to Air Pollution

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I. Introduction

Scientific research and findings have shown that the climate of the Northeast has been steadily changing over time. The temperatures have gradually been getting warmer as a result of the increasing emissions of greenhouse gases. There are many negative consequences of the rising temperatures. According to the New Jersey Environmental Protection Agency (EPA), “one study projects that a 2-3°F warming could increase heat-related deaths during a typical summer fivefold” (*Climate Change and New Jersey*, 1997). Infants, the elderly, and people with heart or respiratory problems are specifically susceptible to heat stress (New Jersey Department of Environmental Protection, 2005). The warmer temperatures could also cause an increase in mosquitoes and ticks, which could spread more disease. Another negative impact of this increase in temperature is the rise in the sea level. One study points out “New Jersey, with its 127 miles of coastline and millions of coastal residents, is susceptible to negative impacts from global warming since much of land area of the state is low-lying” (Dutzik, Liou, and Mattola, 2006). Scientists have estimated that New Jersey’s average temperature in the 1971-2005 period was about 1.0 °F warmer than the average temperature from 1895-1970. Besides the rising sea level, scientists worry that more severe and varying weather could be another problem that would affect New Jersey as a result of the rise in temperatures.

A greenhouse gas is a substance that slows the rate at which heat can radiate into space. This trapped heat stays in the earth’s atmosphere causing an increase in the earth’s temperature. Greenhouse gases include carbon dioxide (CO₂), water vapor,

methane, nitrous oxide, ozone, chlorofluorocarbons, and hydrofluorocarbons (New Jersey Department of Environmental Protection, 2005).

New Jersey's emissions of carbon dioxide from energy use increased by 8 percent between 1990 and 2002. The transportation sector produces about 52 percent of New Jersey's carbon dioxide pollution, followed by electricity generation with 16 percent, the direct use of fossil fuels in homes with 13 percent, industry's direct use of fossil fuels with 11 percent, and business's direct use with 8 percent. A study done by Dutzik, Liou, and Mottola estimates that without steps taken to reduce pollution, New Jersey's emissions of carbon dioxide could increase by about 26 percent over 2000 levels by 2025.

Clearly steps need to be taken by New Jersey to stop the increasing emissions of greenhouse gases. This paper examines some of the steps New Jersey has taken in the past in response to air pollution. It will then analyze New Jersey's most recent endeavor, the Regional Greenhouse Gas Initiative (RGGI). The RGGI is a regional cap-and-trade program of the Northeast aimed at reducing carbon dioxide emissions in the electric power sector by the year 2020. This paper will examine the economic implications of RGGI and the different methods possible of allocating emissions allowances to different producers of electricity.

II. Past Actions Taken by New Jersey to Reduce Air Pollution

In 1986 it was reported by the Federal government that New Jersey's air quality was improving at a slower rate than the rest of the country; however, this was due to the fact that New Jersey had already been making efforts to reduce air pollution beginning in the late 1960s (Naurus 1986).

Command-and-control methods of pollution reduction are what the government has traditionally used in the past. Under command-and-control, the government enforces strict regulations on the amount of pollution that companies can produce. These regulations are uniform across companies. The problem with this is that it does not take into consideration the different in costs of pollution abatement between firms. There is also a uniform technology mandate for all the firms. However, a uniform technology mandate is unlikely to provide the cheapest pollution control for all the different firms and it also discourages new technologies from being developed, firms are satisfied with using the best available control technology. The following policy actions taken by the state of New Jersey are examples of command-and-control regulation.

In November of 1990, President Bush signed a tougher Clean Air Act bill which required New Jersey to cut automobile emissions between 30 and 60 percent, and cut toxic chemicals industries released into the air by 90 percent (Orr 1990). The bill gave the state deadlines by which it had to reduce ozone, carbon monoxide and other pollutants. According to Orr, "The DEP has long blamed the state's inability to meet federal pollution standards at least in part of dirty air coming into the state from outside its borders. And while New Jersey has enacted some of the nation's toughest air pollution regulations, air quality has failed to meet federal standards." Under the new Clean Air Act bill, the states surrounding New Jersey were required to restrict the flow of air pollution into New Jersey.

The EPA passed new automobile emission testing requirements in November of 1993. Automobiles would be tested under simulated driving conditions which would be able to more accurately measure their emissions. There was debate surrounding the new

emissions testing program. People living in New Jersey had the option of taking their car to a state-run testing center or a privately owned station where cars could be tested and fixed at the same location. It was argued that no privately owned station would be able to meet the standards required by the EPA (Johnson 1992). Legislatures from New Jersey did not want the new emissions testing to go into place unless other states surrounding New Jersey adopted the same standards. They argued that this new type of emissions testing would be very costly for New Jersey; however the state could still not meet the federal clean air goals because of pollution entering New Jersey from the surrounding states (Johnson 1995).

In 1993, New Jersey and eleven other states asked the EPA to order less polluting cars to be sold in the Northeast region. This request was made in response to the Clean Air Act of 1990. Lower-emission cars were already required in California at the time. New Jersey, along with the other eleven states, were having difficulties in having their individual state legislatures adopt these stricter standards on automobiles. The oil companies argued against these new standards saying “Requiring California Law Emission Vehicles in these states is not a cost-effective air pollution control measure. The California car will only marginally improve air quality in these states, but the cost to Northeast consumers and their economies is significant” (qtd. in “Jersey Joins Alliance for ‘Clean’ Car” 1993). The state legislatures were reluctant to pass these automobile standards as a region-wide law because they feared it would override each individual state’s power to come up with their own pollution control measures (“Jersey Joins Alliance for ‘Clean’ Car” 1993). They argued that this plan was fit for California because

of the critical pollution problem there, but that this measure would not be appropriate or cost-effective for New Jersey and other states in the Northeast region.

In October of 2003, New Jersey, along with eleven other states, sued the Environmental Protection Agency over changes made to the Clean Air Act (Borenstein 2003). The changes made it easier for companies to upgrade and modernize their industrial facilities without adding more pollution controls. Before this new law was enacted, when companies did anything more than “routine maintenance” on their facilities, they were required to install more devices limiting pollution. (Lane 2003). It specifically affected power plants and facilities built before the 1977 Clean Air Act, many of which did not have modern pollution control devices. This new amendment to the clean air act expanded what would be considered by the EPA as “routine maintenance.” President Bush said the old rules created a “perverse incentive” for these older power plants to not increase efficiency. While this new ruling would help the profitability of these older facilities, it would lessen the effectiveness of the Clean Air Act in abating air pollution. NJ along with several other states announced that they would come up with their own stricter regulations for the older coal-powered plants

In January of 2004, Governor James E. McGreevey signed the Clean Cars Act, which will go into effect in 2009 (“Governor Signs ‘Clean Car Bill’ Into Law” 2004). The bill was modeled after a similar program, the California Low Emission Vehicle Program, which calls for the reduction of nitrogen oxide and hydrocarbon emissions from passenger cars, sport utility vehicles, and light-duty trucks. This plan is expected to reduce smog by 19% by the year 2020. The program also stipulates that car

manufacturers must start supplying more technology-advanced cars such as hybrid vehicles and ultra-clean gasoline powered cars.

In 2006, New Jersey adopted the Renewable Energy Portfolio Standard (Dutzik, Liou, & Mottola 2006), the goal of which is to have 20% of New Jersey's electricity powered by clean, renewable sources by 2020. These renewable resources include solar power, biomass fuel, wind energy, geothermal energy, etc. One problem with this plan is that power generators have the option of not using these renewable energy resources and instead paying the state a fee so that they can continue to use non-renewable sources of energy. In order for this program to be effective, the state would have to set the fees high enough so that it would be more cost-effective for the companies to develop cleaner energy producing sources.

There are other methods of pollution control aside from the traditional command-and-control which may prove to be more effective at reducing pollution. Incentive-based regulation, such as cap-and-trade programs, will most likely be more economically effective.

III. A Market for Pollution

Sandor, Bettelheim and Swingland examine the concept of a market for trading CO₂ emissions. They state, "Emissions trading has been developed to meet the demand to reduce pollution while avoiding economic disruption. . . . The early evidence indicates that environmental sustainability can be compatible with the maximization of shareholder value," (2002). In the past, natural resources such as air and water were viewed as not having a price and were therefore free for everyone in society to use as they wished, which caused over-consumption. By treating these natural resources as a commodity and

a scarce resource, and placing a value/price on them, a more efficient use of these resources can be created. This helps to eliminate “the tragedy of the commons,” (Sandor, Bettelheim, & Swingland, 2002). Because RGGI uses emissions trading, it can be argued that it will help provide an efficient solution to the problem of carbon dioxide emissions.

Under the Tragedy of the Commons, free access and unrestricted demand for a finite resource ultimately dooms the resource through over-exploitation; meaning the resource is used to the point of extinction. The benefit of exploitation for an individual is that each person is motivated to maximize his or her own use of the resource, while the costs of exploitation are distributed between all those to whom the resource is available. As individuals, no one has incentive to cut down on their use of resources, because if everyone else does not cut down, that person will not benefit. In other words, the actions of self-interested individuals do not promote the public good. The Tragedy of the Commons is eliminated by putting a price or value on the resource, which leads into the Coase Theorem.

The Coase Theorem states that if polluter and victim can bargain easily and effectively, private negotiation should arrive at the efficient outcome regardless of who has the initial right to pollute or prevent pollution. For example, the government could pay firms to reduce their air pollution, or firms could have to pay for each unit of air pollution emitted. However, efficiency is better served under a polluter pays principle. If the polluter must pay, there is more incentive to reduce pollution, plus other firms have less incentive to enter the market because it will be more expensive for them. Cap-and-trade programs are a type of system in which the polluter pays to emit pollution.

Cap-and-trade is an example of incentive-based pollution regulation. It works by making polluting an expensive activity. Under cap-and-trade, permits are issued only up to a certain target level of emissions. It lowers the costs of pollution control because it leaves decisions about how to specifically reduce pollution up to the firms.

A cap-and-trade program can be seen as more efficient than command-and-control methods of pollution reduction. According to Sandor, Bettelheim, and Swingland, “It is widely believed that traditional ‘command and control’ regulations fail to exploit the least-cost opportunities to cut pollution, and do little to reward innovative pollution avoidance and reduction efforts.” Charles M. Schmidt also discusses the benefits of a cap-and-trade program over traditional command-and-control methods of reducing pollution. A cap-and-trade program provides economic incentive for firms to further reduce their emissions of greenhouse gases. Under command-and-control, the government enforces strict regulations on the amount of pollution that companies can produce. The benefit of a cap-and-trade program is that if a company reduces their pollution emissions they may sell their excess allowances and make a profit. Furthermore, under command-and-control, many times the Environmental Protection Agency will tell companies what kind of methods and technologies should be used to achieve reductions in pollution. Schmidt goes on to say that if a new and better technology is developed for reducing pollution, the EPA must review it which wastes time. Under a cap-and-trade program, the companies are left on their own to figure out the most cost-effective way for them to reduce pollution (Schmidt, 2001). RGGI is a method of cap-and-trade pollution control that New Jersey has recently adopted that most

likely will be more economically efficient than the traditional command-and-control methods.

IV. The Regional Greenhouse Gas Initiative

The Regional Greenhouse Gas Initiative was launched in April 2003. New Jersey and several other northeastern states joined together to create a regional cap-and-trade program to limit carbon dioxide emissions from the electric power sector. In December 2005 New Jersey, New York, Connecticut, Delaware, Maine, New Hampshire, and Vermont signed a Memorandum of Understanding which is an agreement to reduce the current levels of carbon dioxide emissions by 10 percent below 2009 levels by 2019. It is estimated that without the actions of RGGI, carbon dioxide emissions would increase by 7 percent between 2009 and 2019 (taking into consideration the steps New Jersey has already taken to reduce carbon dioxide emissions). The RGGI's goal is to "build a U.S. carbon market that can value and promote emissions reductions" (Burtraw & Palmer, 2006). Each state will be given a certain amount of allowances for carbon dioxide emissions which will be allocated to different emitters who may use the allowances, sell them if they are in excess, or bank them for future use. A study done by the Center for Energy, Economic and Environmental Policy (CEEE) at the Edward J. Bloustein School of Planning and Public Policy, Rutgers University hypothesizes that a cap-and-trade program such as RGGI will most likely be economically successful. The environmental goals will be reached because the total amount of emissions in the region will be capped; and the companies who can reduce their emissions at lower costs will be able to sell their excess allowances to companies who are experiencing higher costs (2005).

The CEEE paper goes on to explain how RGGI will reduce CO₂ emissions on both the supply and the demand side. The demand for electricity will be reduced because of the increased costs of producing electricity caused by the added variable costs of the emissions allowances and increased spending on energy efficiency programs and new energy policies implemented by the states. For the supply side, the paper goes on to say “reductions in CO₂ would occur when more efficient units (facilities that burn less fuel per unit of electricity produced), or those that burn less carbon intensive fuels, displace less efficient units or those that burn more carbon intensive fuels” (CEEE 2005).

In the RGGI region, there are more than 2,000 different types units of fuels used. However, the twelve main categories units are coal steam (older), coal steam (newer), oil steam (older), oil steam (newer), gas steam, gas combined cycle (older), gas combined cycle (newer), efficient gas turbine, older diesel turbine, nuclear, hydro, and renewable energy sources. The current largest source of energy is nuclear, which does not release CO₂ emissions, but has other negative drawbacks.

There are two main reasons why RGGI will initially target power plants as the source of CO₂ pollution. The first reason is that while the federal government has control over emissions from cars and other modes of transportation, the state governments have control over the production of electricity. Under RGGI, each state will come up with its own regulations for CO₂ emissions. The second reason is that electricity generated by power plants is easier to monitor; “in contrast, the other sources of global warming emissions, such as oil and natural gas to heat buildings and run industrial processes, are far smaller, more numerous, and harder to directly regulate” (Bogdonoff & Rubin, 2007).

Under RGGI, states also have the option of covering 3.3 percent of their total emissions by using “offsets.” Offsets are less expensive methods of reducing other greenhouse gas emissions besides CO₂. The purpose of these offsets is to give companies a break by letting them use less expensive means to reduce other polluting gases. While these companies would not eliminate as much carbon dioxide, they would reduce other gases. Such methods could include planting trees to absorb CO₂ or capturing and burning methane gas (which is released in much smaller quantities than CO₂ but is much more harmful to the environment). One criticism of the offset program is that it is difficult to enforce and monitor. Companies could end up producing higher emissions of carbon dioxide than should be allowed under RGGI without the equivalent reductions in other greenhouse gas emissions (Dutzik, Liou, & Mottola, 2006).

Several issues have been raised concerning RGGI and its potential effectiveness. There is the question of whether a regional program to reduce carbon dioxide makes sense because of the fact that CO₂ travels throughout the atmosphere, affecting other areas than just the one it is produced in. Joseph Kruger and William A. Pizer argue that “Ton for ton, CO₂ emitted in the northeastern United States matters no more for climate change in the region than CO₂ emitted in China. . . . If state actions do not lead to longer-term, comprehensive federal and international action, they will not make a significant impact on climate change.” RGGI is important, though, because it provides a model for other areas of the country and other countries to use in the future if RGGI is found to be a successful program.

Another major criticism of RGGI is that companies may transfer their CO₂ emissions to areas of the country that are not regulated by RGGI, a problem called “leakage.” It is hard to determine at this point how large of a problem leakage will pose for RGGI. However, it is anticipated that those companies producing electricity outside of the RGGI region benefit from being able to export their product into the RGGI region and sell it at a higher cost. The CEEE n paper states “when leakage occurs, it mitigates the electricity impact due to RGGI, which lowers the impact on consumers, the additional profit generators earn from higher electricity prices and the overall environmental benefit of the program” (2005). If the price of electricity does not increase because cheaper electricity can be imported from other areas of the country, the demand side reduction of RGGI will be canceled out, and emissions might not decrease as much as is expected and needed.

The electricity generators in this region are in a competitive market. They submit bids to Independent System Operators which set the hourly energy prices. These electricity generators submit bids that are close to their variable costs in order to maximize their profits. The market clearing price is the price of the most expensive bid that is accepted. Under RGGI, the cost of the allowances would be included in the companies’ variable costs. Many of the generators in the RGGI region have experience incorporating the allowance costs for sulfur dioxide and nitrogen oxide into their variable costs (because of cap-and-trade programs already in place for these two pollutants). Allowances for carbon dioxide emissions would work the same way. As explained in the CEEE paper, “For any cap that is lower than current levels of emissions, cap-and-trade

allowance programs will increase electricity prices because they generally increase the cost to generation unit owners of producing electricity.” In order to emit carbon dioxide, the generators are going to have to use one of their allowances. There are different methods under consideration for the allocation of these allowances. If the company purchased the allowance at an auction, the price they paid for the allowance is going to be added to their variable costs. If they received the allowance under the historical or updating method, the opportunity cost of using the allowance and not selling it to another country is going to be added to their variable cost. The different methods of allocating the allowances will be discussed in the next section of this paper. This added variable cost, no matter which method is used to allocate the allowances, is going to increase the cost of electricity. This increased cost to consumers should lower their demand for electricity.

V. Methods of Allocating Emissions Allowances Being Considered Under RGGI

Both Burtraw, Kahn, and Palmer’s paper and the CEEE paper examine the three different possible methods of distributing the carbon dioxide allowances and how each of those methods will affect the electricity sector. The three different methods examined are to distribute allowances based on historic measures of electricity generation, to update the allowance distribution regularly, or to sell allowances through auction.

Allocating based on historical generation would distribute allowances to companies based either on carbon dioxide emissions or electricity generation in a given year. Allocation based on electricity generation would reward the lower-emitting firms who would be able to produce electricity using fewer allowances than the other companies. Allocations based on carbon dioxide emissions would “spread the burden of reduction most evenly as unit owners are allocated based on actual emissions” (CEEE,

2005). Allocation using updating would be similar to the historical method (it would either be based on carbon dioxide emissions or electricity production), however the amount of allowances allocated to each company would be updated regularly. Under the auction method of allocation, CO₂ emission allowances would be sold to electricity generators and others interested in purchasing allowances in an open action. The revenue raised from these actions might be used to finance programs seeking to improve energy efficiency or explore different means of renewable energy. The CEEE paper cites another benefit of the auctions; they “would also provide an immediate and clear price signal of the value of a CO₂ allowance, which is important in establishing a new market” (2005).

The historic and auction methods of allocation act in the same manner as to how the generators will use the allowances. The updated allocation method, however, creates inefficiencies because it encourages the producers to use more allowances. The more allowances a producer uses in one year, the more allowances they will be allocated the next year. In this case, the allowances act as a subsidy for the generator to produce carbon dioxide emissions. The Bloustein paper goes on to say “To maximize efficiency, the link between the allocation method and future production of CO₂ should be completely severed.”

The historic method of allocation and the auction method are both consistent with Coase’s idea of efficiency. The updating method of allocation creates inefficiencies because there is less incentive for companies to decrease their carbon dioxide emissions. What needs to be considered when deciding to use the historic based method or the auction method is which one is going to be the most fair.

VI. Conclusion

It cannot be denied that global warming is a problem that is going to need a solution. Although the emissions of carbon dioxide is a global issue, New Jersey can serve as an example to other states if the government can come up with an effective means of combating air pollution (Dutzik, Liou, & Mottola 2006). The Regional Greenhouse Gas Initiative is one of the first pioneering programs of its time, and if successful could be used as a model for other states and other countries. Cap-and-trade programs, such as RGGI, are both economically and environmentally successful. The level of emissions will be capped, which will achieve the environmental goals of the program. At the same time, companies will be able to figure out the most cost-effective way for them to reduce their carbon dioxide emissions. If they can reduce emissions at very low costs, they will be able to sell their excess allowances for a profit. If it proves very costly for a specific company to reduce their CO₂ emissions, they may purchase more allowances from other companies.

In order to be most effective in meeting its goals, it seems RGGI should use the auction-based method of allocation. It is beneficial because it will provide an immediate value and price on the allowances. It will also allow companies to purchase how many allowances they think they will need, and will not favor companies who may already be producing energy without emitting carbon dioxide in large quantities, which the historic method tends to do. The auctions will also eliminate the inefficiency caused by the updating method in which the more allowances a company uses in a given year, the more they are “rewarded” by getting more allowances the next year.

References

- (1993, October 21). Jersey Joins Alliance for “Clean” Car. The Star Ledger.
- (2004, January 14). *Governor Signs ‘Clean Car Bill’ Into Law: First step in reducing air pollution by 20 percent.* [news release]. State of New Jersey Governor’s Office. NJnewsline. Retrieved April 9, 2007 from the World Wide Web:http://www.state.nj.us/cgi-bin/governor/njnewsline/view_article_archives.pl?id=1699
- (2006). “The Changing Northeast Climate: Our Choices, Our Legacy.” Union of Concerned Scientists. Retrieved February 20, 2007 from The World Wide Web: <http://www.climatechoices.org/assets/documents/climatechoices/The-Changing-Northeast-Climate.pdf>
- Borenstein, Seth. (2003, October 16). N.J. and other states plan tighter air-pollution rules: Pa. also may join the group, which formed in response to the federal government’s looser emissions restrictions. The Philadelphia Inquirer, p. B01.
- Bogdonoff, Sondra & Rubin, Jonathan. (March 2007). “The Regional Greenhouse Gas Initiative.” Environment, 49(2), 8-16.
- Burtraw, Dallas, Kahn, Danny, & Palmer, Karen. (December 2005). “CO₂ Allowance Allocation in the Regional Greenhouse Gas Initiative and the Effect on Electricity Investors.” Resources for the Future. Retrieved February 20, 2007 from The World Wide Web: <http://www.rff.org/Documents/RFF-DP-05-55.pdf>
- Burtraw, Dallas and Karen Palmer. (September 2006). “Summary of the Workshop to Support Implementing the Minimum 25 Percent Public Benefit Allocation in the Regional Greenhouse Gas Initiative.” Resources for the Future. Retrieved February 12, 2007 from the World Wide Web: <http://www.rff.org/Documents/RFF-DP-06-45.pdf>
- Center for Energy, Economic and Environmental Policy, Edward J. Bloustein School for Planning and Public Policy, Rutgers University. (June, 2005). Evaluation of CO₂ Emission Allocations as Part of the Regional Greenhouse Gas Initiative, Final Report. New Brunswick, NJ. Center for Energy, Economic and Environmental Policy, Edward J. Bloustein School for Planning and Public Policy, Rutgers University.
- Dutzik, Tony, Liou, Suzane Leta, & Mottola, Dena. (September 2006). “A Blueprint for Action: Policy Options to Reduce New Jersey’s Contribution to Global Warming.” Environment New Jersey Research and Policy Center. Retrieved February 12, 2007 from The World Wide Web: <http://www.uspirg.org/uploads/uG/-F/uG-F3LFqG8ufsf6ySy0VUA/A-Blueprint-for-Action-Policy-Options-to-Reduce-New-Jerseys-Contribution-to-Global->

Warming.pdf

- Johnson, Tom. (1992, November 6). New U.S. Auto Emission Rules Could End Private Inspections. The Star Ledger.
- Kruger, Joseph & Pizer, William A. "Regional Greenhouse Gas Initiative: Prelude to a National Program?" Resources for the Future. Retrieved February 23, 2007 from The World Wide Web: http://www.weathervane.rff.org/solutions_and_actions/United_States/RGGI/RFF-BCK-RGGI_REV.pdf
- Lane, Alexander. (2003, October 28). Jersey Joins 12 states in fight against new air pollution rules. The Star Ledger, p. 024.
- Narus, Bob. (1986, May 11). The Environment. The New York Times, p. NJ26.
- New Jersey Department of Environmental Protection. (2005). New Jersey's Environment 2005: Trends. Trenton, New Jersey: New Jersey Department of Environmental Protection: <http://www.nj.gov/dep/dsr/trends2005/>
- Orr, J. Scott. (1990, November 16). Bush Signs Tougher Clean Air Law Crafted to Let Jersey Breathe Easier. The Star Ledger.
- Sandor, R.; Bettelheim, E., & Swingland, I. (August 2002). "An Overview of a Free-Market Approach to Climate Change and Conservation." Philosophical Transactions: Mathematical, Physical and Engineering Sciences, 360(1797), 1607-1620.
- Schmidt, Charles W. (August, 2001). The Market for Pollution." Environmental Health Perspectives, 108(8), A378-A381.
- (September 1997). "Climate Change and New Jersey." United States Environmental Protection Agency. Retrieved February 20, 2007 from the World Wide Web: [http://yosemite.epa.gov/oar/globalwarming.nsf/UniqueKeyLookup/SHSU5BVJH3/\\$File/nj_impct.pdf](http://yosemite.epa.gov/oar/globalwarming.nsf/UniqueKeyLookup/SHSU5BVJH3/$File/nj_impct.pdf)
- State of New Jersey Governor's Office. (January 14, 2004). Governor Signs "Clean Car Bill" Into Law: First Step in Reducing Air Pollution by 20 Percent. Trenton, New Jersey. http://www.state.nj.us/cgibin/governor/njnewslines/view_article_archives.pl?id=1699