

Environmental law, the regulation of air quality

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ENFORCEMENT OF AIR QUALITY REGULATION STANDARDS Enforcement of Air Quality Regulation Standards Regulation of air quality across the United States has been the product of the observed increase in particulate matter and volatile or greenhouse compounds in the atmosphere, contributing to various environmental problems such as deaths resulting from living in areas with high rates of air pollution, and of increased ground surface temperature as the result of greenhouse gas emissions (Costa, 2011). Efforts taken to reduce air pollution through various means have been successful for the past 40 years, but still need additional regulations and testing the effectiveness of these through pilot tests for implementations in several key cities. These are important in order to find out any weak points in the regulations, to check for possible improvements in laws, and to obtain sufficient data to support or debunk regulations as needed. As such, initiating test runs for these policies and regulations can contribute to long-term solutions to air quality issues by supporting efforts to implement these at the earliest possible time.

For the last four decades, sources of large-scale air pollutants such as cement factories and petroleum drilling sites were identified to pose high hazards in greatly-affecting air quality for large areas. However, in recent decades the contribution of automobile emissions were also seen as sources of particulate matter and greenhouse gases due to the gasoline combustion process in these vehicles. These results prompted the US Environmental Protection Agency, EPA to create regulations for the reduction of toxic pollutants and the release of particulate matter into the atmosphere. The successful reduction of air pollutants were tied with the implementation of the Clean Air Act Amendment of 1970, and at present has reduced emissions

by up to two-thirds of emission rates during the 1960's (Costa, 2011).

However, the EPA still recognizes the need to further reduce vehicle emission rates through the generation of greener automobile technologies, thus the initiation of the National Program to further reduce greenhouse gas emissions and improve fuel economy for cars to be released in the years 2017-2025, which are based on the standards under the Clean Air Act (US Environmental Protection Agency, EPA, 2013). It is expected that through the implementation of these new emission standards, carbon dioxide emissions will be reduced to an average of 163g/mile, there will be lesser dependence on oil due to higher efficiency rates, and in turn will benefit consumers a net of \$3, 400 to \$5, 000 worth of fuel savings and save more than \$8, 000 in fuel costs for consumers who will buy their vehicles in model year 2025. These results rest on the premise that current emission standards will be further improved by the year 2017, thus most of these information are the projected savings of implementing the updated air quality and vehicle emission standards.

While the EPA continually strives to develop regulations for long term improvements, independent analyses are conducted to assess the applicability and effectiveness of existing regulation. For example, air quality regulations have been constantly tested for performance and output by implementing these in areas where the levels of air pollutants have been observed to be high. However, information regarding how these regulations fare in smaller areas have not been studied fully to assess if there will be similar effects. In a study conducted by Tra (2013), despite higher initial costs and efforts in implementing air quality standards within smaller urban

areas compared to larger urbanized areas, meeting the 2008 air quality standard in a small urban area such as the Las Vegas valley area could lead to higher welfare gains such as the reduction of unhealthy days per year, lesser relocation rates due to unclean air, which in turn can contribute as much as \$1, 644 mean benefits per year for each household. The results of the study imply that by following the EPA's air quality regulations, no matter the size of the community involved in upholding these laws the citizens will reap the benefits by having clean air, less propensity for sicknesses, and creating a better housing location that can entice further area development through green technologies and investment opportunities for green and environment-friendly businesses.

To conclude, policies on regulating air quality have been mandated in order to reduce air pollution rates, in which the high rates of air particulates and greenhouse gases emitted in the atmosphere were linked with lower health qualities of the populations, as well as the entry of environmental issues such as lesser available clean air, and higher ground temperatures due to greenhouse gases. Current policies are the products of studying how implementation of air quality regulations can help improve urbanized areas through measuring benefits in individual households and in the community as a whole. Collection of data from these studies can then be used to further improve or amend existing policies that aim to increase air quality standards as projected in the future. Using such measures, these help in propelling earlier implementations of these policies in as many areas as possible to initiate processes of cleaning up the air and preventing the continued accumulation of pollutants in the atmosphere, while at the same time

complying with currently established standards and avoiding possible penalties in the future.

References

Costa, D. (2011). Air quality in a changing climate. *Environmental Health Perspectives*, 119(4), A154–A155.

Office of Transportation and Air Quality. (2013). EPA and NHTSA set standards to reduce greenhouse gases and improve fuel economy for model years 2017-2025 Cars and light trucks. Washington: United States Environmental Protection Agency.

Tra, C. I. (2013). Measuring the general equilibrium benefits of air quality regulation in small urban areas. *Land Economics*, 89(2), 291-307.