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Reducing Heavy-Duty Truck Idling: An Energy and Environmental Challenge

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I. Introduction

Many Americans, even many environmentalists, would be surprised to learn the extent to which current truck idling practices harm the environment and waste fuel. According to an EPA study, long duration truck idling in the United States consumes 960 million gallons of diesel fuel per year.¹ This represents almost 3% of the 35 billion gallons of diesel fuel consumed annually in the United States by freight trucks and locomotives.² In addition, according to the EPA, long duration truck idling leads to the emission of 180,000 tons of nitrogen oxides, 5,000 tons of particulate matter (“PM”), and eleven million tons of annual carbon dioxide emissions.³ For the sake of comparison, the entire state of Connecticut produced about 11.4 million tons of carbon dioxide in the year 2000.⁴

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1. EPA SmartWay Transport Partnership, <http://www.epa.gov/otaq/smartway/idlingir.pacts.htm> (last visited Feb. 22, 2006). The annual fuel consumption due to combined truck and locomotive idling is over a billion gallons per year. *Id.*

2. EPA SmartWay Transport Partnership Facts and Figures, <http://www.epa.gov/oms/smartway/documents/factsfiq.pdf> (last visited, Mar. 15, 2006).

3. EPA SmartWay Transport Partnership Website, *supra* note 1. These figures are based on assumptions of 8 hours of idling per day; 300 days per year; 0.8 gallons of fuel used per hour; and a fleet estimate of 500,000 long-range, heavy-duty truck. Han Lim, *Study of Exhaust Emissions from Idling Heavy-Duty Diesel Trucks and Commercially Available Idle-Reducing Devices*, EPA. (Oct. 2002), available at: <http://www.epa.gov/otaq/smartway/documents/epaidlingtesting.pdf> (last visited, Feb. 22, 2006). A more recent survey by the American Transportation Research Institute has found somewhat lower idling times, however even with these lower times, idling produces significant economic and environmental costs. *Idle Reduction Technology: Fleet Preferences Survey*, Prepared by American Transportation Research Institute for New York State Energy Research and Development Authority, p. 8 (Feb. 2006).

4. EPA, Connecticut Greenhouse Gas Emissions and Sink Inventory, [http://yosemite.epa.gov/oar/globalwarming.nsf/UniqueKeyLookup/RAMR6JTQS6/\\$File/CTInventorySummary_10-28b.pdf](http://yosemite.epa.gov/oar/globalwarming.nsf/UniqueKeyLookup/RAMR6JTQS6/$File/CTInventorySummary_10-28b.pdf) (last visited Feb. 22, 2006).

While these figures are far from insignificant, they still fail to adequately convey the seriousness of the current truck idling problem. This problem not only creates large amounts of noise pollution, the idling diesel engine also emits significant quantities of sulfur dioxide, carbon monoxide, and other toxic substances. Unless effective anti-idling policies are implemented, the problems of carbon dioxide emissions and high fuel consumption are likely to get worse, as truck mileage is expected to double by 2020.⁵

Most previous justifications for long duration truck idling are no longer valid. Due to technological advances, new engines do not normally require significant time to warm up before reaching peak performance (although this may not be the case when the outside temperature is extremely cold). Affordable technology exists to provide electric power for vehicles both at truck stops and when parked elsewhere.

Over the last few years, due in part to growing concerns about global warming and increasingly stringent limitations on emissions of conventional pollutants, policy-makers have begun to address the problem of excessive truck idling.⁶ There have been a variety of responses from federal, state, and local governments. These responses range from anti-idling regulations to tax incentives to private-public partnerships.

This paper will provide an overview and analysis of the rapidly developing field of anti-idling law and policy. Section 2 will provide background on the issue of excessive truck idling, and available technological solutions, and describe some of the economic and political barriers to idling reduction. Section 3 will compare and contrast the existing state and local laws aimed at controlling idling. Section 4 will review the voluntary anti-idling policies currently being implemented at the federal, state, and local level. Section 5 will conclude with some recommendations about the future direction of anti-idling policy and how to accelerate the movement to diminish the harmful effects of truck idling to the greatest extent possible.

5. Tom Berg, *Stop Your Engines: Government's Getting Serious About Curbing Needless Idling*, ROADSTAR (Nov. 2004) available at: <http://www.roadstaronline.com/2004/11/026a0411.asp> (last visited Feb. 22, 2006). One can anticipate a diminution in the gravity of some of the other environmental effects of idling over the next several years as the next generation of diesel engines that go on the market in 2007 will emit nitrogen oxides and particulates at significantly lower rates.

6. Idling reduction has been characterized as a "low-hanging fruit" in the fight against air pollution. Andy Haraldson, *Idle Now, Pay Later*, OVERDRIVE (Dec. 14, 2004) available at: <http://www.etrucker.com/apps/news/article.asp?id=45715> (last visited, Feb. 22, 2006).

II. Background

Anti-idling laws and policies have been formulated to address at least three distinct, but related problems: idling by commercial vehicles (trucks and commercial buses),⁷ idling by locomotives, and idling by school buses.⁸ Some idling laws (such as the one in Massachusetts⁹) are broad enough in scope to also cover automobiles, but idling laws have not generally been enforced against automobiles.¹⁰ This paper will concentrate on analyzing anti-idling laws and policies targeting diesel powered commercial vehicles (trucks and buses). Diesel powered commercial vehicles are the source of the highest amounts of preventable emissions, and therefore policymakers are concentrating to the greatest extent on that sector.

According to an EPA guidance, long duration truck idling is “the operation of the truck’s propulsion engine when not engaged in gear for a period greater than 15 consecutive minutes, except when associated with routine stoppages due to traffic movement or congestion.”¹¹ Long-duration idling often takes place at truck stops or rest areas, where drivers keep the engine running as a means of maintaining heat, air conditioning or electricity for televisions, microwaves, or other appliances. Idling also occurs, often for similar reasons, at pick-up and drop-off locations.¹² Some drivers idle for significant time periods at the

7. The commercial vehicle sector can in turn be divided into a number of subgroups that present differing challenges, including Long Haul Trucks (500+ miles), Short Haul Trucks (<500 miles), Pick-up & Deliver Trucks, Tour Bus, Transit Bus, Waste Haulers, Highway Industrial/Construction: snow plows, cement mixers, dump trucks, etc.

8. See e.g., *Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools*, 13 CAL. CODE REG. 2480 (2006); Prohibition on Idling of Bus, CONN. GEN. STAT. § 14-277; School Bus Idling, Allegheny County Health Dept. Rules and Reg., § 2105.91. Studies have shown that children riding on school buses for extended periods are exposed to harmful levels of diesel pollutants, including carbon monoxide. See John Wargo, *Children’s Exposure to Diesel Exhaust on School Buses*, Environmental and Human Health, Inc. (Feb. 2002), available at: <http://www.ehhi.org/reports/diesel/summary.htm> (last visited, Feb. 2, 2006); Dennis R. Fitz, et. al., *Characterizing the Range of Children’s Pollutant Exposure During School Bus Commutes*, prepared for the California Air Resources Board (2003), available at: <http://www.arb.ca.gov/research/schoolbus/schoolbus.htm> (last visited, Feb. 2, 2006).

9. MASS. GEN. LAW Ch. 90 § 16A (2006) (“No person shall cause, suffer, allow or permit the unnecessary operation of the engine of a motor vehicle while said vehicle is stopped for a foreseeable period of time in excess of five minutes.”).

10. Haraldson, *supra* note 6.

11. U.S. ENVIRONMENTAL PROTECTION AGENCY, GUIDANCE FOR QUANTIFYING AND USING LONG DURATION TRUCK IDLING EMISSION REDUCTIONS IN STATE IMPLEMENTATION PLANS AND TRANSPORTATION CONFORMITY, EPA420-B-04-001 (Jan. 2004), available at: <http://www.epa.gov/smartway/documents/420b04001.pdf> (last visited, Feb. 7, 2006).

12. In addition, many types of vehicles (i.e., cement mixers and asphalt trucks) idle engines to accomplish work other than moving the vehicle. This type of idling is called “power take-off.” See LINDA GAINES, ANANT VYAS AND JOHN L. ANDERSON, *prepared*

beginning or end of trips in the belief (not generally valid for newer engines) that this ensures engine health. In fact, most diesel engine manufacturers recommend an optimum warm-up and cool-down time of between 3-5 minutes.¹³ Idling for longer periods of time can harm an engine by causing carbon buildup and decreasing oil life.¹⁴

A. *Negative Effects of Truck Idling*

Excessive truck idling creates serious localized health and environmental effects, detrimental environmental effects for the larger community, and negative social consequences. In the immediate vicinity of the truck, idling increases localized carbon monoxide concentrations, which can cause headaches, dizziness, and nausea, negatively affecting both health and job performance.¹⁵ In addition, noise pollution and vibrations generated by idling trucks can cause sleep loss, especially near large truck stops.¹⁶ Excessive idling can have an environmental justice component. The brunt of the localized harm, such as increased air toxics and noise levels, are borne by communities near truck stops and rest areas. These areas sometimes have high concentrations of low income and minority populations.¹⁷

Aside from these localized effects, diesel emissions have a serious health impact on the general population. Diesel engines emit large amounts of nitrogen oxides, which contribute to ozone and smog creation, and many types of particulate matter. Diesel particulates

for ARGONNE NATIONAL LABORATORY, ESTIMATION OF FUEL USE BY COMMERCIAL TRUCKS, (Jan. 2006) at 6. This type of idling will not be discussed in this paper, as the idling engine is necessary to achieve the desired function of the vehicle.

13. See U.S. ENVIRONMENTAL PROTECTION AGENCY, TRUCK ENGINE IDLING EPA TRUCK ENGINE IDLING FACT SHEET (Apr. 2002) available at: http://www.epa.gov/NE/eco/diesel/assets/pdfs/Diesel_Factsheet_Truck_Idling.pdf (last visited Feb. 5, 2006).

14. For example, Caterpillar, Inc. cautions drivers to "... Avoid excess idling. If the vehicle is parked for more than five minutes, stop the engine. Excessive idling can cause carbon buildup and/or excessive idling can cause the engine to slobber. This is harmful to the engine." IC Corp.'s engine manual states that "... Excessive idling reduces fuel economy, and may decrease oil life." Cummins suggests idling for only 3 to 5 minutes before operating with a load. See U.S. ENVIRONMENTAL PROTECTION AGENCY ANTI-IDLING—CLEAN SCHOOL BUS USA, available at: <http://www.epa.gov/otaq/schoolbus/antiidling.htm> (last visited, Feb. 5, 2006).

15. THOMAS PERROT, ET AL., prepared for N.Y. STATE ENERGY RESEARCH AND DEV. AUTH. ET AL., TRUCK STOP ELECTRIFICATION AS A LONG-HAUL TRACTOR IDLING ALTERNATIVE 3 (2004) available at: <http://www.epa.gov/oms/smartway/documents/dewitt-study.pdf> (last visited, Feb. 22, 2006).

16. *Id.* This could partially negate the safety benefit of the Federal truck driver hours-of-service regulations, which took effect January 4, 2004. See Federal Motor Carrier Safety Administration (2003) *Hours of Service of Drivers; Driver Rest and Sleep for Safe Operation; Final Rule*. U.S. Department of Transportation, Federal Register, Part II, Vol. 68, No. 81, 49 CFR Parts 385, 390, and 395, Washington D.C.

17. EPA, *supra* note 11, at 3.

include known toxics, such as formaldehyde and nickel.¹⁸ Some of these particulates are classified as probable or likely human carcinogen by a number of federal and state environmental and public health agencies.¹⁹ In many states, diesel particulates account for the greatest risk for cancer in breathing the outdoor air.²⁰

The internal combustion of gasoline in diesel engines also leads to the emission of carbon dioxide, which is the most common greenhouse gas. In addition, diesel engines emit large quantities of carbon soot, which is also recognized as an important cause of global warming.²¹

Apart from the environmental and health effects, truck idling consumes fuel. Many people see fuel conservation as an important national goal. According to one estimate, about one percent of the petroleum imported into the United States and five percent of the total fuel used by heavy trucks is consumed by truck idling during rest periods.²² Many in the trucking industry have focused on the fuel conservation issue as a greater justification for anti-idling policies than environmental protection or health improvement.²³ As mentioned earlier, idling can also negatively affect engine health. The trucking industry estimates that long duration idling costs truck owners \$1.13 per day in greater oil change and engine overhaul costs.²⁴

B. *Idling Solutions*

Technological solutions to excessive truck idling already exist. Specifically, alternative power sources can be used to provide air conditioning, heat, and electrical power so as to reduce the need to idle. These power sources can be either mobile auxiliary power units (APUs) or stationary truck stop electrification (TSE). APUs are mobile and

18. See Cal. Env'tl. Prot. Agency, Health Effects of Diesel Exhaust Fact Sheet (Aug. 2000), available at: <http://www.oehha.ca.gov/air/pdf/dieselfact2.pdf> (last visited Feb. 25, 2006).

19. Kevin Downing, *Saving Energy, the Environment, and a Good Night's Rest—Oregon's Approach to Truck Idling*, *ECOStates*, THE JOURNAL OF THE ENVIRONMENTAL COUNCIL OF THE STATE (Winter, 2005), available at <http://www.westcoastdiesel.org/files/clearinghouse-truck/saving-energy.pdf> (last visited, Feb. 22, 2006).

20. *Id.*

21. *Id.*

22. Downing, *supra* note 19.

23. Terrence Nguyen, *Anti-Idling Benefits: A Background*, *DRIVERS* (May 19, 2004), available at: http://driversmag.com/ar/fleet_antiidling_benefits_battleground/index.html (last visited Feb. 24, 2006). It is worth noting that the impact of the laws and policies discussed in this paper in reducing idling may eventually pale in comparison to the impact of a somewhat unlikely ally: OPEC. As one owner-operator said, "with fuel at \$2 a gallon now, not idling is very smart from an economic standpoint." Haraldson, *supra* note 6.

24. *EPA SmartWay Transport Partnership*, *supra* note 1.

carried on-board the truck, while TSE technology involves electrifying truck parking spaces.²⁵ While there will be some emissions from these alternative power sources, the EPA estimates that idling-reduction technology would succeed in reducing ozone, greenhouse gas and particulate matter emissions by roughly 80 to 85 percent.²⁶

TSE systems can be classified as “off-board” or “truck-board” depending on the location of the heating, ventilation, and air conditioning (HVAC) unit.²⁷ The former is an external system that connects to the truck cab via a window or other access point. This type of system is sometimes referred to as “Advanced TSE.”²⁸ Generally it is mounted on an overhead truss assembly. It only requires the purchase of a very cheap window adapter by the truck driver. Advanced TSE can provide 120-volt electrical power outlets as well as an entertainment package (i.e., Internet, telephone and cable television connections). However, it is very costly (roughly \$16,000 per space) and not available in many locations (although purchases of off-board TSE equipment are growing very rapidly).²⁹

Truck-board systems require the combined use of truck-board equipment and facility power systems.³⁰ It is sometimes referred to as shorepower since the electrical connection hardware on the sleeper cab and at the parking facility is similar to that found at boat marinas. The shorepower system gives access to electrical power from a land-based electrical power source, and can also supply cable television, internet and phone connections. Shorepower equipment costs up to \$8,000 for the trucker (inverter/charge and electric HVAC) and up to \$6,000 per space for the external connection.³¹ According to one study, the payback

25. See EPA, *supra* note 11.

26. Argonne National Laboratory, Center for Transportation Research, Analysis of Technology Options to Reduce the Fuel Consumption of Idling Trucks, ANL/ESD-43, at 15.

27. Thomas L. Perrot, et al., Installation and Economics of a Shorepower Facility for Long-Haul Trucks, <http://www.nyserda.org/publications/Shorepower.pdf>.

28. Glenn P. Goldstein, Program Director, Idle-Free Corridors: Northeast States Experience. EPA Region 2, Implementation Meeting, (April 14, 2004), <http://www.epa.gov/SmartwayLogistics/presentations/nescaum-041404.pdf>.

29. Linda Gaines, Heavy Vehicle Idling Reduction, Presentation at NASEO Annual Meeting (Sept. 13, 2005), <http://www.naseo.org/events/annual/2005/presentations/Gaines.pdf>. IdleAire, which is the country's only Advanced TSE manufacturer, has recently signed exclusive deals to install electrification equipment for the nation's three largest travel-center chains, Pilot Travel Centers, Travel Centers of America, and Petro Stopping Centers. Larisa Brass, Not Sitting Idle: Local Company Ready to Launch National Expansion, Greater Knoxville Business Journal (Feb. 20, 2006), available at http://www3.knoxnews.com/kns/business_journal/article/0,2682,KNS_24796_4464954,00.html (last visited, Mar. 16, 2006).

30. Installation and Economics, *supra* note 29.

31. Linda Gaines, Heavy Vehicle Idling Reduction, *supra* n. 30.

period for truck drivers purchasing shorepower capable equipment (in terms of avoided diesel fuel and maintenance costs) was 17.4 months.³²

APUs are mobile power sources, normally diesel powered, which can provide air cooling and heat to both engines and cabs, as well as battery charging for the use of electronic appliances. APU market penetration has been impeded by the cost of the units, which ranges from \$5,000 to \$7,000 and must be borne entirely by the truck owner.³³ APUs can also be relatively heavy³⁴ and are subject to a 12% excise tax.³⁵ One complication that has arisen occasionally with APUs is that enforcers have mistakenly ticketed trucks for idling when they are only using their APU. The EPA's draft Model Idling Law explicitly states that operating APUs are not considered to be idling engines.³⁶

While conventional diesel APUs were the original anti-idling alternative and are still the cheapest and most environmentally effective solution in most circumstances, their usage recently suffered a setback when the California Air Resources Board proposed stringent emissions limitations for all diesel-powered APUs beginning in January 2008 for all Model Year 2008 and later motor vehicles.³⁷ The regulation requires diesel APUs installed on trucks Model Year 2007 and newer to control PM emissions by either routing exhaust through the PM trap of the truck engine or by retrofitting the APU with a level 3 PM control device. This device would reduce PM emissions by at least 85 percent.³⁸ APU manufacturers have vigorously opposed the new California rule.³⁹

32. Installation and Economics, *supra* note 29.

33. Goldstein, *supra* note 29.

34. Pony Pack APUs adds about 300 lbs. to a truck. See Pony Pack, <http://www.ponypack.com/faq.htm> (last visited, Feb. 20, 2006).

35. 26 U.S.C. § 4051(b)(1) (2006), (tax applies if APU is installed not later than six months after vehicle is first placed in service).

36. State Idle Reduction Model Law, http://airquality.morpc.org/diesel-subcmt/Oct25/State%20Idling%20Law_Participants.pdf ("Operating an auxiliary power unit or generator set as a means to heat, air condition, or provide electrical power as an alternative to idling the main engine is not considered to be an idling engine.").

37. See Proposed Regulation Order Title 13, § 1956.8(a)(6), at <http://www.arb.ca.gov/regact/hdvidle/appa.pdf> (last visited, Feb. 28, 2006). A 15-day Notice still needs to be mailed out for comments related to the changes that were directed by the and the rulemaking has to be finalized by the Office of Administrative Law, which is expected by Summer, 2006. In addition, a waiver is still required from EPA for the rule, pursuant to the Clean Air Act, but a CARB representative did not anticipate any difficulties receiving the waiver. E-mail correspondence with Karen Caesar, California Air Resources Board Information Officer, Mar. 7, 2006.

38. *Id.* These limitations would be quite onerous for current APU manufacturers to comply with, as current APU technology is not close to the required level. The pending regulation has already affected APU sales, as drivers are reluctant to purchase units that might not be usable for more than a few years in California. Telephone interview with Rex Green, President of Pony Pack, Inc. (Feb. 28, 2006).

39. Telephone interview with Rex Green, President, *supra* note 39.

By 2008, all truck drivers will be expected to use either truck stop electrification, a fuel cell APU⁴⁰ or reduced-emission diesel APUs as idling alternatives.

Finally, it should be noted that for some truckers, power sources are not really necessary as an idling alternative because stand-alone heaters or air conditioners will provide a comfortable enough environment and are significantly cheaper than APUs.⁴¹ According to one survey, 32% of trucks with sleeper cabs used direct-fire heaters and 24% used battery-powered air conditioners, while only 12% used APUs.⁴²

C. *Economic Barriers to Truck Idling Reduction*

Given that the benefits of reduced truck idling generally outweigh the costs, the question arises of why long-duration truck idling occurs at all. Why is it necessary for government to get involved? Without discounting the significant efforts that some private trucking firms have independently undertaken to reduce idling,⁴³ there are a few simple economic explanations. First of all, many of the most serious effects of idling are not borne by the truck driver (in other words, there are significant negative externalities). Obviously this is the case with environmental effects, but in many cases it is also the case with fuel costs, as owner-operators are a minority of American truck drivers.

Secondly, and somewhat connected, is the collective action problem: while all members of society may benefit to a small degree from idling reduction, the costs (or perceived costs) of idling reduction are borne by only a few—namely truck drivers, and arguably engine manufacturers, and trucking companies or truck stops to the extent that expenditures are necessary from these groups. As will be discussed further in the following section, this can lead to concentrated opposition to regulation from a few relatively small groups, and only lukewarm support (if there is support at all) from the rest of society.⁴⁴

40. For more information on the possible benefits of fuel cell APU technology (which is not yet commercially available), see Christie-Joy Brodrick, *et al.*, *Potential Benefits of Utilizing Fuel Cell Auxiliary Power Units in Lieu of Heavy-Duty Truck Engine Idling*, University of California Davis Institute of Transportation Studies, UCD-ITS-RP-01-01 (2001), available at: <http://repositories.cdlib.org/cgi/viewcontent.cgi?article=1016&context=itsdavis> (last visited Feb. 28, 2006).

41. Idle Reduction Technology: Fleet Preferences Survey, *supra* note 3, at 12.

42. *Id.* at 11.

43. Many trucking companies have seen idling reductions due to internal anti-idling policies. For example, Schneider National has used internal policies to limit idling time to 17 to 28% for its fleet, far less than the industry average. Berg, *supra* note 5.

44. See generally Mancur Olson, *THE LOGIC OF COLLECTIVE ACTION: PUBLIC GOODS AND THE THEORY OF GROUPS* 21, 57, 165-67 (Mancur Olson ed., Harvard University Press 1971) (1965) (describing free rider problems associated with interest groups and noting

Thirdly, there is a chicken-and-egg problem that hinders shorepower development (which is currently the cheapest truck electrification technology).⁴⁵ Shorepower utilization requires both on-board equipment and off-board equipment at the truck stop. Truck stops have been reluctant to invest in equipment because most truck drivers do not have the corresponding equipment necessary to hook up to these systems, while truck drivers have seen no reason to buy the equipment when there are so few truck stops where they can be used.⁴⁶

Fourthly, the lack of a single industry standard for truck stop electrification creates uncertainty, and reluctance on the part of all parties to invest in these alternatives. Truck stops do not want to spend large amounts of money on an advanced TSE system only to find that other truck stops in the region are installing shorepower and that truckers are therefore investing in shorepower equipment. Truckers do not want to invest in shorepower equipment when it is unclear if advanced TSE or shorepower will become widespread at truck stops in their region.

Lastly, many owner-operators are not able to afford a significant up-front capital expenditure where the payback may only come gradually over the life of the vehicle. This is seen as the greatest barrier for truck idling alternatives.⁴⁷ Many truck drivers do not have a great deal of savings, so a capital expenditure of several thousand dollars can be significant even when that expenditure is expected to result in long-term savings.

D. *The Politics of Anti-Idling*

As the benefits of reduced truck idling are dispersed throughout society, and the inconveniences or costs associated with regulations are more concentrated, there have been fewer advocates for anti-idling measures than one might expect. In many places, the major advocates of anti-idling laws have been local clean air groups⁴⁸ and pulmonary health

that small groups are more likely than large groups to overcome them).

45. Installation and Economics of a Shorepower, *supra* note 29. There is a similar chicken-and-egg problem that affects anti-idling laws. Governments have been understandably reluctant to enforce anti-idling ordinances during cold winter nights or hot summer days when truck drivers may have no realistic alternative to idling in order to keep warm or cold. However, truck drivers (and truck stops) may have little incentive to purchase the equipment necessary to provide idling alternatives until governments start enforcing anti-idling laws when the weather is unpleasant.

46. Downing, *supra* note 19.

47. E-mail from Linda L. Gaines, Systems Analyst, Argonne National Laboratory, to Andrew Wolman (Mar. 2, 2006, 15:47:41 CST) (on file with author).

48. Examples include the Clean Air Council (Pennsylvania and Delaware) and Clean Air Communities (New York City). See Clean Air Council, Transportation Program, <http://www.cleanair.org/Transportation/idling.html> (last visited, Feb. 22, 2006); see also

organizations.⁴⁹ The large national environmental organizations have not been particularly active in encouraging anti-idling policies.⁵⁰ One unusual “green” advocate has been the electricity industry, which favors a transition to electric power services at truck stops.⁵¹ The demand for truck stop electrification is highest at night when most truckers prefer to rest.⁵² This corresponds to a traditional off-peak period, potentially enabling energy suppliers to increase profits by using baseload power generation.⁵³

While there are few opponents to voluntary anti-idling programs, anti-idling regulations have spawned considerable opposition. Engine manufacturers have been particularly vocal in their hostility.⁵⁴ The reasons for engine manufacturers’ opposition to truck idling regulations include their inflexibility, perceived high costs to the regulated community, high enforcement costs, and fairness problems.⁵⁵ One representative of the Engine Manufacturers Association suggested that state and local idling requirements could establish de facto emissions standards, and therefore be preempted under Section 209(a) of the Clean Air Act.⁵⁶

Much of the trucking industry has traditionally opposed anti-idling laws as being punitive.⁵⁷ Part of this opposition has been against the principle of anti-idling regulation (after all, truck drivers often rely on

Clean Air Communities, <http://www.cleanaircommunities.org/> (last visited, Feb. 22, 2006).

49. See, e.g., Ohio Chapter of American Lung Association, <http://www.ohiolung.org/CCACC.htm> (last visited, Feb. 7, 2006). The American Lung Association has been active on the issue, especially through its regional chapters. Another example is the New England Asthma Regional Council, which has been working on anti-idling initiatives in New England in conjunction with the Boston Urban Asthma Coalition. See New England Asthma Regional Council, <http://www.asthmaregionalcouncil.org>, (last visited Feb. 7, 2006).

50. E-mail from Linda L. Gaines, Systems Analyst, Argonne National Laboratory, to Andrew Wolman (Mar. 2, 2006, 15:27:37 CST) (on file with author).

51. See Wendy Leavitt, *Good-Bye Idling, Good Buy*, (Aug. 1, 2001) (quoting Rick Tempchin of the Edison Electric Institute as saying “[n]ow is the time to work together to create a climate to encourage everyone to adopt something—some anti-idling alternative”) available at: http://fleetowner.com/mag/fleet_goodbye_idling_good/index.html (last visited Feb. 7, 2006).

52. PERROT, *supra* note 15, at 6.

53. *Id.*

54. See Joe Suchecki, *Obtaining Emissions Reductions Through Reduced Idling: Are Regulations the Best Option, Presentation to National Idling Reduction Planning Conference* (May 18, 2004), available at http://www.eere.energy.gov/vehiclesandfuels/pdfs/idling_2004/suchecki.pdf (last visited, Feb. 7, 2006) (note: website may not be available due to maintenance).

55. *Id.*

56. *Id.* See Clean Air Act § 209(a), 42 U.S.C. 7543(a)(2006).

57. Installation and Economics of a Shorepower Facility for Long-Haul Trucks, *supra* n.28.

idling for heat and air conditioning, so anti-idling ordinances can lead to discomfort). Also, some truckers feel that idling in excess of statutorily mandated amounts can be optimal for engine health. In addition, some in the industry also have a distinctly libertarian political bent, which leads to a general distrust of government regulation.⁵⁸ However, much of the opposition has centered more on the perceived inequity of the financial penalties associated with some statutes and with the difficulty of keeping track of the widely varying ordinances in different jurisdictions.

It should be emphasized, however, that anti-idling ordinances impact different members of the trucking industry in different ways, which leads to a less than unified opposition. Truck drivers that do not own their vehicle would be expected to oppose ordinances, because they would suffer the inconvenience of idling reductions without reaping the benefits of reduced fuel costs. Owners of trucking companies, on the other hand, could have the opposite reaction: reduced fuel consumption would help the bottom line, while they would not be directly inconvenienced by the laws (which may, in fact, reinforce their own company policies).⁵⁹ Owner-operators could be expected to take a more nuanced view. While they would be likely to strongly favor voluntary incentive programs, they would be unlikely to support mandatory regulation unless they already practice low-idling behavior.

III. Idling Laws and Regulations

Efforts to address idling can be categorized as either voluntary measures or mandatory regulation. They can also be divided along federal/state/local lines. Many state and local governments have enacted mandatory regulations, and a few states and local governments have implemented interesting voluntary initiatives. The federal government has concentrated on voluntary measures. First, this article will discuss issues relating to the increasing body of state and local anti-idling laws. After that, there will be a review of voluntary state and local measures, followed by a review of federal policy.

A. State and Local Laws

Over the past decade, the number of state and local governments

58. See e.g., Andy Haraldson, *Idle Now, Pay Later*, *supra* note 6. (quoting owner-operator Joe Rajkovic as saying “All these laws do is incrementally strip us of our freedom”).

59. In a recent survey, 55% of truckers stated that their company had policies limiting vehicle idling. The most common policies were establishing maximum idling times through company policy and/or by programming automatic engine shutdown devices. *Idle Reduction Technology: Fleet Preferences Survey*, *supra* note 3, at 10.

that have passed anti-idling laws has been increasing exponentially. The EPA and American Transportation Research Institute have both attempted to catalogue the different state and local idling laws, although neither list is comprehensive or up to date.⁶⁰ According to my research—which consisted of keyword searches in major on-line databases—there are currently fourteen states and seventy-five municipalities that possess anti-idling laws that cover commercial vehicles.⁶¹

While anti-idling laws are not restricted to a single area of the country, the states and localities that have passed such laws to date tend to be concentrated in the Northeast and the West coast, with relatively few cities and towns in between. The reason for this could be political (i.e., areas that are more liberal are more likely to pass environmental regulations), or simply environmental (much of the Northeast are certain areas of the West coast have serious air pollution problems). Most likely, it is a combination of both.

These anti-idling laws vary in their purposes. Some local laws are aimed at curbing localized air pollution problems, and therefore are restricted to certain (generally residential) areas. A typical example of a

60. See Environmental Protection Agency, <http://www.epa.gov/otaq/smartway/documents/statelaws.pdf> (last visited, Feb. 23, 2006) The EPA list was compiled in February, 2003; See also American Transportation Research Institute, http://atri-online.org/research/results/idling_chart.pdf (last visited, Feb. 23, 2006).

61. The following states have anti-idling laws as of February 21, 2006: Arizona (certain counties only); California; Connecticut; Delaware; Hawaii; Illinois; Maryland; Massachusetts; Nevada; New Hampshire; New Jersey; New York, Texas (certain counties only), and Virginia (buses only).

The following municipalities have anti-idling laws: Auburn (CA); Palm Desert (CA); Placer County (CA); Sacramento (CA); Aspen (CO); Denver (CO); Greenwood Village (CO); Johnstown (CO); Vail (CO); Winter Park (CO); Branford (CT); Mansfield (CT); Norwalk (CT); Windsor (CT); Wilmington (DE); Washington, D.C.; Atlanta (GA); Cook County (IL); New Orleans (LA) (buses only); Bar Harbor (ME); Chicopee (MA); Peabody (MA); Minneapolis (MN); Owatonna (MN); St. Cloud (MN); St. Louis (MO); Clark County (NV); Washoe County (NV); Atlantic City (NJ) (buses only); Bernards Township (NJ); City of Cape May (NJ); Borough of Closters (NJ); Franklin Township (NJ); Borough of Hillsdale (NJ); Princeton Township (NJ); Borough of South River (NJ); Brighton (NY); Village of Bronxville (NY); Town of Clifton Park (NY); Village of Flower Hill (NY); City of Ithaca (NY); Town of Mamaroneck (NY); Village of Mamaroneck (NY); Town of Milton (NY); City of New Rochelle (NY); New York City (NY); Town of North Salem (NY); Village of Northport (NY); Village of Nyack (NY); Village of Port Chester (NY); Town of Queensbury (NY); City of Rye (NY); Village of Scarsdale (NY); Town of Somers (NY); Suffolk County (NY); Village of Tuckahoe (NY); City of Yonkers (NY); Waynesville (OH) (buses only); Ashland (OR); Allegheny County (PA); Borough of Emsworth (PA); Falls Township (PA); Philadelphia (PA); Upper Providence Township (PA); Providence (RI); Beaufort (SC); Charleston (SC) (buses only); Park City (UT) (delivery vehicles only); Salt Lake City-County (UT); Burlington (VT); Arlington (VA) (buses only); Fairfax County (VA); Spokane (WA); Madison (WI); Rawlins (WY).

law that restricts idling in residential areas is § 189-6 of the Bradford (CT) Municipal Code, which reads as follows:

No person shall operate an engine or any standing motor vehicle with a weight in excess of 10,000 pounds manufacturer's gross vehicle weight (GVW) for a period in excess of 10 minutes when such vehicle is parked on a residential premises or on a Town road next to a residential premises.

A few ordinances are purely aimed at curbing noise pollution. An example of this type of law is § 6.28.147 of the Fountain Valley (CA) Municipal Code, which states that:

[n]o person shall leave standing any motor vehicle, including refrigeration trailers, with engine idling or auxiliary motor running for in excess of ten minutes between the hours of ten p.m. and seven a.m. if the engine or motor noise disturbs the peace or quiet of any residential neighborhood or causes discomfort or annoyance to any reasonable person of normal sensitivity residing in the area.

Most local laws and all state laws tend to be broader based and more focused on improving ambient air quality. Some states that are in non-attainment for ozone or particulate matter have used anti-idling laws as a means to comply with their State Implementation Plan (SIP) requirements under Section 110 of the Clean Air Act.⁶² In order for an anti-idling initiative to fulfill the SIP requirements, it must 1) provide for quantifiable emissions reductions, 2) be federally enforceable, 3) be permanent for the term that the emissions reduction is used, and 4) state implementation must be adequately supported with funding, personnel, and other resources.⁶³

B. Differences in the Laws

One of the major objections that truckers have to local ordinances is that their terms can differ so significantly that it is impossible to know

62. See, generally, ENVIRONMENTAL PROTECTION AGENCY, *supra* note 11; see ENVIRONMENTAL PROTECTION AGENCY, *supra* note 62 (Connecticut, Maryland, Massachusetts, New Jersey, Texas, and Virginia include their anti-idling laws in their SIPs; see generally, State and Territorial Air Pollution Program Administrators and the Association of Local Air Pollution Control Officials Guidelines, *Using Locomotive and Truck Idling Emission Reductions for New Source Review Offsets*, <http://www.4cleanair.org/NSRidling5.pdf> (last visited, Feb. 23, 2006) (The possibility also exists for states to use idling reduction measures as a new source review offset under Section 173 of the Clean Air Act where they wish to allow construction or major modification of a major source in a non-attainment area.).

63. State and Territorial Air Pollution Program Administrators and the Association of Local Air Pollution Control Officials Guidelines, *supra* note 64, at 3-5.

what idling habits are legal around the nation. Engine manufacturers have similarly argued that they do not know which standards they need to keep in mind when designing new engines because of the differences in the laws. A brief glance at the different anti-idling laws confirms that these objections have merit. While there are some patterns and duplication among the 89 laws, in general there are wide differences in idling times allowed, type of vehicle covered, types of exception allowed, and penalty provisions.

Most ordinances tend to place the time limit for acceptable idling at somewhere between three and fifteen minutes. However some allow as much as thirty minutes and some simply prohibit idling altogether without mention of any time limit.⁶⁴ Some laws apply to all vehicles,⁶⁵ some apply to all diesel vehicles,⁶⁶ and some only apply to vehicles above a certain weight (generally between 8,500 and 14,000 pounds).⁶⁷ Common exemptions include emergency vehicles, idling during maintenance or testing, idling because of traffic congestion and idling when necessary for a specific auxiliary task for which the vehicle was designed, such as drilling. However, a surprising number of towns have included unique (or nearly so) exemptions—for example Spokane's law contains an exception for vehicles participating in licensed parades.⁶⁸ The Village of Northport (NY) allows idling where necessary "for operation of mobile receiving and transmitter stations or mobile telephones."⁶⁹ A minority of laws contain exceptions for extreme weather conditions.⁷⁰ Some laws have exemptions for climate control for sleeping⁷¹ (thus basically taking away any incentive for truck stop electrification), while others have no exemptions whatsoever.⁷²

64. See e.g., CLOSTER, N.J., MUN. CODE § 183-13 (2006) (prohibiting idling over 30 minutes for all motor vehicles over 10,000 lbs on any street or parking yard); PROVIDENCE, R.I. Code § 15-11 (2005) (prohibiting all idling in residential areas for vehicles over 20 feet in length or weighing more than 6,500 lbs.).

65. See e.g., MASS. GEN. LAWS. ch. 90 § 16A (2006); N.Y. C. ADMIN. CODE § 24-163 (2005).

66. See e.g., NEV. ADMIN CODE § 445B.576 (2005); WILMINGTON DE MUN. CODE § 37-6 (2006).

67. See e.g., ASHLAND, OR., ORDINANCE 2882 (May 8, 2002) (12,000 lb. weight limit); PHILADELPHIA PA AIR MGMT. REG. IX §3(A) (1986) (8,500 lb. weight limit).

68. SPOKANE, WA., MUN. CODE. § 15.02.040 (2002).

69. VILLAGE OF NORTHPORT N.Y. MUN. CODE § 289 (2006).

70. See, e.g., DENVER CO MUN. CODE § 4-43 (2006) (exception where less than 10° F or less than 20° F for previous 24 hour period).

71. See e.g., COUNTY OF ALLEGHENY, PA ORDINANCE 16782, § 2105.92 (2004); N.J. ADMIN. CODE, 7: 27-14.3 (2006) (exception when sleeping or resting in a sleeper berth in non-residential zone, unless equipped with auxiliary heating/cooling).

72. See, e.g., FAIRFAX COUNTY, VA CODE § 103-3-10 (1989); BOROUGH OF EMSWORTH, PA CODE § 157-15 (2004).

Penalty provisions also vary widely.⁷³ Generally, a warning is issued for first offenses, with recidivists receiving progressively greater fines. Two of the most costly places to idle are in the State of New York (minimum \$375 and maximum \$15,000 fine for first offense)⁷⁴ and the City of Philadelphia (\$300 fine).⁷⁵ Many statutes do not even address the issue of enforcement, and enforcement procedures differ widely from place to place.⁷⁶ Clearly, it would be unrealistic to expect that a long-distance trucker would know the details of all the different anti-idling laws in all the different jurisdictions that the driver travels through (although one should point out that idling laws are hardly unique in this regard—many other aspects of driving regulations also vary widely at the state and local levels).

As is often the case with air pollution regulations, the State of California has been on the vanguard of idling regulation, and has come up with some interesting and innovative laws, including regulations on the amount of time that ports can make trucks wait. This regulation addresses both the difficult problem of excessive idling during pick-up and drop-off,⁷⁷ as well as providing a method of shifting the burden of idling regulation off the individual trucker. California's laws will be discussed in greater detail in the section on recommendations, *infra*.

C. EPA Model Law

The EPA responded to complaints about the differing terms of anti-idling laws by convening a series of conferences from May to July 2005 on standardization of idling laws. This was done with the intention of afterwards issuing a model state anti-idling law.⁷⁸ Although no official Model Law has appeared yet, a draft version has been published on the internet.⁷⁹ Trucking and engine companies were heavily involved in the drafting process, and the result has been a draft model law that is heavily

73. A summary of some penalty provisions for the more important anti-idling ordinances is available at Haraldson, *supra* note 6.

74. N.Y. COMP. CODES R. & REGS. tit 6, § 217-3.2 (2006).

75. PHILADELPHIA PA AIR MGMT. REG. IX § 3(A) (1986).

76. For more on enforcement, see *infra* Enforcement of Trucking Anti-Idling Laws.

77. See CAL. HEALTH & SAFETY CODE § 40720(a) (port operators must set up appointments so no truck has to wait more than 30 minutes in line).

78. See EPA SmartWay, <http://www.epa.gov/otaq/smartway/idle-state.htm> (last visited Feb. 23, 2006).

79. See Draft State Idle Reduction Model Law, *supra* note 38. In Canada, where anti-idling ordinances are also starting to spring up, the Clean Air Partnership has also issued a Model Idling Control By-law for municipalities. See Cracking Down on Idling: A Primer for Canadian Municipalities on Developing and Enforcing Idling Control By-laws, available at: http://www.repairourair.org/pdfs/IdlingBylaws_Canada.pdf (last visited Feb. 6, 2006).

slanted toward industry interests. The draft Model Law generally prohibits commercial diesel vehicles from idling for more than 5 minutes within any 60 minute period,⁸⁰ and makes it illegal for any entity to cause covered vehicles to idle for a period greater than 30 minutes while waiting to load or unload at a location under their control.⁸¹ The penalty for a first offense is a warning, with set fines for repeat offenders.⁸²

However, the draft law contains two conditional exemptions (among several other exemptions) that would essentially negate the effectiveness of the entire law. First, it would delay implementation of idling time limits for an occupied vehicle with a sleeper berth compartment for air conditioning or heating during a rest or sleep period until five years after implementation of a state financial assistance program for idle reduction technologies.⁸³ Second, it would delay implementation of idling time limits for an occupied vehicle while waiting to load or unload until five years after implementation of a state financial assistance program for idle reduction technologies.⁸⁴ To date, such a financial assistance program only exists in Minnesota, Arkansas, Pennsylvania, and Oregon.⁸⁵

D. Enforcement of Truck Anti-Idling Laws

Enforcement has emerged as one of the most interesting and controversial issues connected with anti-idling laws. Although there have not been any comprehensive studies on the issue, it seems clear that the ways in which anti-idling laws are enforced varies tremendously from jurisdiction to jurisdiction, and spans the spectrum from complete non-enforcement to targeted investigations to occasional sweeps. According to a Philadelphia Inquirer article, the jurisdictions issuing the most idling citations have been New York City, New York State, New Jersey, Washington, D.C., and Philadelphia.⁸⁶ Anecdotally, though, tickets appear rare in most places for first offenses.⁸⁷

Some agencies, including the EPA, focus enforcement on

80. See Draft State Idle Reduction Model Law, *supra* note 38, at § C.

81. *Id.* at § D.

82. *Id.* at § H.

83. *Id.* at § F(2).

84. *Id.* at § F(3).

85. See Annotations to Draft State Idle Reduction Model Law, *supra* note 37, at § F(2)(A).

86. Tom Avril, *Penalties are Few for Idling Diesel Engines*, PHILA. INQUIRER, Dec. 13, 2004, at CO1 (available at: 2004 WLNR 19354191).

87. See Haraldson, *supra* note 6 (quoting Todd Spencer, vice president of the Owner-Operators Independent Drivers Association as saying tickets are infrequently given, and “[m]ost of those we’ve heard about are coming from places like Manhattan or New York.”).

environmental justice areas, where localized air pollution creates real dangers for the population.⁸⁸ One major example of an enforcement push in an environmental justice area has been the campaign to reduce truck idling at Hunt's Point Produce Market in the Bronx. The Hunt's Point neighborhood is home to more than 10,000 residents, and has one of the highest asthma rates in the nation.⁸⁹ Since the passage of New York City's anti-idling law, security officers have regularly patrolled, and warned drivers to refrain from idling.⁹⁰ Those that refuse are written up as violators and fined \$300 for the first violations, with fines for repeat offenders going up to as much as \$15,000.⁹¹ While the campaign has been lauded by environmental groups,⁹² some truckers have expressed their displeasure with the lack of idling alternatives.⁹³

The state of New Jersey has been one of the most active large-scale enforcers of truck idling laws. New Jersey Department of Environmental Protection inspectors target bus staging areas, convenience stores, public entertainment venues, retail centers, truck yards, warehouse distribution centers and loading/unloading areas, and also responds to public complaints.⁹⁴ So far, the state has conducted four sweeps for violations, during which 22,176 vehicles have been observed and 238 idling violations have been recorded.⁹⁵

Another strategy that some jurisdictions have used is to enforce idling laws against larger companies with significant fines. One of the advantages of this strategy is that a large fine can bring significant publicity, and thereby discourage excessive idling behavior among other truckers. Also, settlements with large companies for anti-idling

88. See Nguyen, *supra* note 23 (quoting an EPA representative as saying that "[i]dling enforcement will generally be the toughest in "environmental justice" (EJ) areas—typically low-income residential areas that are exposed to high amounts of airborne pollutants.").

89. See Press Release, Office of New York State Attorney Elliot Spitzer, Hunt's Point Market to Reduce Diesel Fumes in the South Bronx (June 20, 2003), available at: http://www.oag.state.ny.us/press/2003/jun/jun20a_03.html (last visited, Feb. 23, 2006).

90. See Haraldson, *supra* note 6.

91. *Id.*

92. See Press Release, *supra* note 92.

93. See Sean Kelley, *The Big Turnoff*, TRUCKERS NEWS (May, 2004), available at: <http://www.etrucker.com/apps/news/article.asp?id=43816> (last visited, Feb. 23, 2006) (quoting Paul Kazan, president of Target Intermodal Systems, Inc., as saying "[t]his law has had a pretty dramatic impact. There's no infrastructure to support it. No IdleAire, no lounge. A lot of drivers don't want to come here. If they do come here, they don't want to come back.").

94. New Jersey Department of Environmental Protection, Compliance Alert (June, 2004), available at: <http://www.nj.gov/dep/enforcement/advisories/2004-05.pdf> (last visited, Feb. 23, 2006).

95. New Jersey Department of Environmental Protection, Idling Compliance Summary, available at <http://www.nj.gov/dep/enforcement/idlingsummary.pdf> (last visited, Feb. 23, 2006).

violations can lead to agreements by violators to fund idling alternatives for their fleet or revise company policies to discourage idling, thereby decreasing future idling behavior, as well as punishing past violations. These large fines have mainly come in the Northeast, from New York up to Massachusetts. For example, in August 2005, EPA fined Material Installations, a furniture delivery company in North Andover, Mass., \$109,120 for illegally idling on-site for close to 1,000 total minutes.⁹⁶ Material Installations was also ordered to install emissions control equipment on most of its trucks.⁹⁷

The U.S. EPA is able to jointly enforce state anti-idling laws when they are included in a state's State Implementation Plan. Recently, the EPA settled an action against Wal-Mart for violating state anti-idling laws in Massachusetts and Connecticut.⁹⁸ As part of the settlement, Wal-Mart agreed to a supplemental environmental project, whereby it agreed to post "no idling" signs at all Wal-Mart facilities in all states, and notify other delivery companies that idling is not permitted on Wal-Mart property and may violate state or local idling restrictions.⁹⁹ However, anti-idling enforcement by EPA is not common.¹⁰⁰

While state and local enforcement officers can and do monitor idling practices at rest stops or other sites, states generally encourage citizens to report violations. This is important given the inherent inability of enforcement officers to engage in widespread monitoring. In California, citizens can report excessive idlers to the California Air Resources Board via an on-line form.¹⁰¹

E. Contract Requirements

Finally, one quasi-regulatory way that local governments can influence idling behavior is by incorporating anti-idling requirements into the contracts used for employing municipal contractors. For example, Section 721.562 of Boston's Big Dig Contract Specifications

96. See E.P.A. New England Press Release, *E.P.A. Seeks Penalties from North Andover Company for Idling Violations* (Aug. 25, 2004), available at: <http://www.epa.gov/boston/pr/2004/aug/040815.html> (last visited, Feb. 23, 2006).

97. *Id.*

98. See E.P.A. New England Press Release, *Wal-Mart Settles Clean Air Violations with Campaign to Reduce Diesel Pollution* (Nov. 1, 2005), available at: <http://www.epa.gov/ne/pr/2005/nov/dd051101.html> (last visited, Feb. 23, 2006).

99. *Id.*

100. See Haraldson, *supra* note 6 (quoting Suzanne Rudzinski, transportation and regional programs chief in EPA's Air and Radiation Office, as saying "If there are local laws, they are locally enforceable. The EPA is not going to be out at truck stops enforcing laws.").

101. The complaint form is available at <http://www.arb.ca.gov/enf/complaints/icv.htm> (last visited, Feb. 23, 2006).

states that:

Methods that shall be used by the Contractor to control nuisance odors associated with diesel emissions from construction equipment include:

1. Turning off diesel combustion engines on construction equipment not in active use and on dump trucks that are idling while waiting to load or unload material for 5 minutes or more.¹⁰²

Similarly, the contract specifications in the Connecticut I-95 New Haven Harbor Crossing Corridor Improvement Program state that “Idling of delivery and/or dump trucks, or other diesel powered equipment shall not be permitted during periods of non-active use, and it should be limited to three minutes in accordance with the Regulations of Connecticut State Agencies Section 22a-174-18(a)(5).”¹⁰³

IV. Voluntary Programs and Incentives

A. State and Local Programs

Some state and local governments have implemented voluntary anti-idling initiatives, although the focus in most jurisdictions has remained on regulation. These voluntary programs range from simple driver education initiatives to more ambitious programs that include funding for truck idling alternatives or other incentives.

Educational initiatives have been attempted in some areas, both as a means of informing drivers about the financial and environmental costs of excessive idling and as a means of informing them about anti-idling laws. For example, the Connecticut Department of Transportation and Connecticut Department of Environmental Protection have worked together to install signs at state rest stops to inform drivers that they may not idle for more than three minutes.¹⁰⁴ Recently, the U.S. Mayor’s Climate Protection Agreement, which has been signed by 188 mayors, has included a provision that signatory cities should “launch an employee education program including anti-idling messages.”¹⁰⁵

102. See Environmental Defense, *Cleaner Diesel Handbook: Bringing Cleaner Fuel and Diesel Retrofits into Your Neighborhood* (Apr. 2005), available at: http://www.environmentaldefense.org/documents/4425_ContractSpecs.pdf (last visited, Feb. 5, 2006).

103. *Id.*

104. Connecticut Department of Environmental Protection, *Diesel Risk Reduction Strategies*, available at: <http://dep.state.ct.us/air2/diesel/docs/diefac.pdf> (last visited, Feb. 23, 2006).

105. See *Endorsing The U.S. Mayors Climate Protection Agreement*, available at:

State idling alternative funding programs are somewhat rarer. The State of California is providing funds to support the incremental cost of purchasing cleaner diesel engines and equipment through The California Air Resource Board's Carl Moyer Program.¹⁰⁶ Eligible projects include the installation costs for auxiliary power units. Arkansas and Minnesota have programs to offer loans for the purchase of idle reduction technologies.¹⁰⁷ State loan programs have been faulted for an excess of bureaucracy and eligibility requirements that discourage trucker participation.¹⁰⁸

A handful of states have implemented more comprehensive programs. Oregon has perhaps the most advanced state anti-idling initiative, with considerable incentive programs for both truck stop electrification and APU purchases. On the truck-stop electrification side, the state is working with funding from EPA's SmartWay Transport Program, the Climate Trust, and State agencies to electrify at least 600 commercial truck parking spaces.¹⁰⁹ The idling technology providers are also expected to provide a matching contribution valued at \$1.6 million.¹¹⁰ In January 2005, the Climate Trust published a request for proposals for roughly \$7 million worth of projects to be funded under this funding initiative.¹¹¹

On the non-truck stop side, Oregon offers taxpayers who own diesel trucks a 35% tax credit for purchasing and installing diesel emission control equipment, including idle reduction technologies.¹¹² Also, the Lane Regional Air Pollution Authority (LRAPA) based in Eugene, Oregon, has instituted a program called "Everybody Wins," that uses the state's Business Energy Tax Credit and Low Interest Energy Loan Program to underwrite a program to purchase onboard truck idle reduction systems, which it then resells to truckers through a low interest

http://www.ci.seattle.wa.us/mayor/climate/PDF/Resolution_FinalLanguage_06-13-05.pdf (last visited, Feb. 24, 2006).

106. See Moyer Program, at www.arb.ca.gov/moyer/moyer.htm (last visited, Feb. 23, 2006).

107. See State of Arkansas Department of Environmental Quality Standards Attainment Program, <http://www.adeq.state.ar.us/poa/businessasst.htm> (last visited, Feb. 23, 2006); see also Minnesota Pollution Control Agency, The Small Business Environmental Improvement Loan Program, http://www.pca.state.mn.us/programs/sbomb_loan.html (last visited, Feb. 24, 2006).

108. Green, *supra* note 40.

109. Downing, *supra* note 19.

110. *Id.*

111. *Id.*

112. U.S. Environmental Protection Agency, SmartWay Transport Partnership, *Idling Reduction: Innovative Funding and Incentive Opportunities*, <http://www.epa.gov/otaq/smartway/idle-fund.htm> (last visited, Feb. 22, 2006).

loan agreement.¹¹³

State and local governments can use truck stop electrification projects to comply with transportation conformity, as offsets for major source construction or modifications under new source review, and as non-attainment SIP requirements. One example of this is a truck stop electrification project recently undertaken by the South East Texas Regional Planning Commission in order to help the region emerge from a conformity lapse that threatened highway projects.¹¹⁴ The project reduces NOx emissions by six pounds per day, which enabled the region to pass its 2005 conformity determination.¹¹⁵

B. Federal Policy

While states and municipalities have largely addressed truck idling by passing laws and ordinances, the federal government has concentrated on a voluntary approach to the problem. For the federal government, one can point to the 2001 recommendations of the National Energy Policy Development Group to President Bush as the origin of a national anti-idling policy. In Chapter Four, the Group recommended:

that the President direct the EPA and DOT to develop ways to reduce demand for petroleum transportation fuels by working with the trucking industry to establish a program to reduce emissions and fuel consumption from long-haul trucks at truck stops by implementing alternatives to idling, such as electrification and auxiliary power units at truck stops along interstate highways. EPA and DOT will develop partnership agreements with trucking fleets, truck stops and manufacturers of idle-reducing technologies (e.g. portable auxiliary packs, electrification) to install and use low-idling technologies.¹¹⁶

Today, the federal government operates voluntary anti-idling initiatives primarily through the SmartWay Transport Partnership program, which is run out of the EPA's Office of Transport and Air Quality.¹¹⁷ SmartWay addresses truck idling in two major ways: corporate partnerships with carriers and shippers that voluntarily commit to reduce

113. *Id.*

114. Diane Turchetta, *Financing Idle-Reduction Projects: New Technologies Offer Cost-Effective Strategies to Limit Air Emissions at Truckstops*, Pub. Roads, Mar.-Apr. 2005, at 8-11, available at: <http://www.tfhrcc.gov/pubrds/05mar/02.htm>.

115. *Id.*

116. National Energy Policy Development Group, *Reliable, Affordable, and Environmentally Sound Energy for America's Future*, at 4-12 (2001), available at: <http://www.whitehouse.gov/energy/Chapter4.pdf> (last visited, Feb. 23, 2006).

117. See generally, Smartway Transport Partnership—E.P.A., <http://www.epa.gov/smartway/> (last visited, Feb. 6, 2006). Some of the regional E.P.A. offices also have anti-idling initiatives.

fuel consumption and emissions, and establishing National Transportation Idle-Free Corridors to provide the infrastructure necessary to eliminate unnecessary idling along major transportation routes.¹¹⁸

To date, 182 companies have signed up to be SmartWay corporate partners.¹¹⁹ Idle-Free corridors are in the works along I-5 (from Los Angeles to Seattle), I-10 (from Los Angeles to Jacksonville), I-20 (from Texas to South Carolina), I-40 (from Los Angeles to South Carolina), I-85 and I-95 (from Mississippi and Florida to Maine), and I-90 (from Massachusetts to Portland).¹²⁰ The idle-free corridors program is in its early stages—the vast majority of truck stops along these routes lack electrification equipment.¹²¹

The EPA also issues Smartway Transport Partnership Grants to fund private sector or state and local government anti-idling initiatives¹²² and attempts to facilitate standardization of state anti-idling laws, as discussed earlier. Finally, the Smartway office provides education and outreach on anti-idling policies¹²³ and guidance to states on how to incorporate anti-idling measures into their Clean Air Act State Implementation Plans (SIPs) and Transportation Conformity plans.¹²⁴

Elsewhere on the federal level, the Department of Transportation funds state projects through the Congestion Mitigation and Air Quality Improvement Program.¹²⁵ The Department of Transportation also

118. *Id.*

119. See Smartway Transport Partnership—Partners, <http://www.epa.gov/smartway/partners.htm> (last visited, Feb. 23, 2006).

120. See National Idle Free Corridors: Project Locations—SmartWay Transport Partnership, <http://www.epa.gov/oms/smartway/idle-tsemap.htm> (last visited, Feb. 23, 2006).

121. *Id.*

122. See Press Release, EPA Awards \$3 Million Grant to Texas Transportation Institute, EPA Region 6 New Release (Oct. 11, 2005), available at: <http://yosemite.epa.gov/r6/press.nsf/name/SmartWayGrant> (last visited, Feb. 6, 2006). The five projects funded in 2005 were the Texas Transportation Institute's "Truck Engine Idle Reduction Technology Demonstration Program"; the Ohio Department of Development's "Ohio and Midwest Truck Stop Electrification Corridors Demonstration, Evaluation, and Development Project"; the Lane Regional Air Pollution Authority's "Everybody Wins Program—Phase II"; the American Transportation Research Institute's "Demonstration of Integrated Mobile Idle Reduction Solutions"; and North Carolina State University's "Truck Original Equipment Manufacturer (OEM) Auxiliary Power Unit (APU) Prep Kit Design and Installation." *Id.*

123. See, generally, Smartway Transport Partnership—E.P.A., <http://www.epa.gov/smartway/idle-educ.htm> (last visited, Feb. 23, 2006).

124. See generally E.P.A., Guidance for Quantifying and Using Long Duration Truck Idling Emission Reductions in State Implementation Plans and Transportation Conformity, *supra* note 11.

125. See Memorandum from James M. Shrouds, Dir. of Fed. Highway Admin. Off. of Natural and Human Env't, to Div. Adm'rs and Fed. Lands Highway Div. Eng'rs re CMAQ Eligibility for Idle-Reduction Measures, available at: <http://www.fhwa.dot.gov/>

provides loans for anti-idling initiatives through the State Infrastructure Bank Pilot Program¹²⁶ and the Transportation Infrastructure Finance and Innovation Act Program.¹²⁷ The Department of Energy has been involved in idling reduction through a research group at the Argonne National Laboratory¹²⁸ as well as by its participation in the State Technologies Advancement Collaborative.¹²⁹

C. Congressional Initiatives

So far, Congress has largely stayed away from the anti-idling debate. However, there have been a few recent initiatives to provide incentives for truck idling reduction. Section 756 of the Energy Policy Act of 2005 (“the Act”) authorized the EPA SmartWay Transport Partnership to “establish a program to support deployment of idle reduction and energy conservation technologies . . . [with priority given] to the deployment of idle reduction and energy conservation technologies based on the costs and beneficial effects on air quality and ability to lessen the emission of criteria air pollutants.”¹³⁰ The Act authorized the appropriation for the purpose of reducing extended idling from heavy-duty vehicles of \$19,500,000 for fiscal year 2006; \$30,000,000 for fiscal year 2007, and \$45,000,000 for fiscal year 2008.¹³¹ All projects funded by these appropriations must receive at least half of their funding from private sector sources.¹³²

The Energy Policy Act also authorized the appropriation of \$200 million for each year from fiscal year 2007 to fiscal year 2011 for a State and National Grant and Loan Program for diesel emission reductions.¹³³

environment/cmaqpgs/tsemem.htm (last visited, Feb. 23, 2006). As of March, 2005, the CMAQ had funded roughly \$15 million to \$17 million worth of electrification projects (in operation or pending in the application process). Turchetta, *supra* note 117, available at: http://www.findarticles.com/p/articles/mi_m3724/is_5_68/ai_n14727177 (last visited, Mar. 15, 2006).

126. See State Infrastructure Banks, <http://www.fhwa.dot.gov/innovativefinance/sib.htm> (last visited, Feb. 23, 2006).

127. See Transportation Infrastructure Finance, <http://tiffa.fhwa.dot.gov> (last visited, Feb. 23, 2006).

128. The Argonne National Laboratory research group is currently working on a new report on the economic and energy impacts of idling reduction. Linda Gaines, *Government Activities to Reduce Idling, Presentation at SAE Commercial Vehicle Engineering Congress* (Nov. 2, 2005).

129. See State Technologies Advancement Collaborative, <http://www.stacenergy.org> (last visited Feb. 23, 2006).

130. Energy Policy Act of 2005, Pub. L. No. 109-58 § 756(b)(4)(A), 119 Stat. 594 (2005).

131. *Id.* at § 756(b)(4)(B). Of course, it remains to be seen how much of this money will actually be appropriated.

132. *Id.* at § 756(b)(4)(B)(iii).

133. *Id.* at §§ 791-97.

Projects to reduce long-duration idling are authorized to receive money through this program, as are other types of projects that reduce diesel emissions.¹³⁴ It should be emphasized that funding for both SmartWay and the Grant and Loan program has merely been authorized—it is possible that the eventual appropriations for these programs will not reach the authorized levels.

Lastly, the Act increased the maximum gross vehicle weight limit and axle weight limit for heavy-duty vehicles equipped with an idle reduction technology by a quantity necessary to compensate for the additional weight of the idle reduction system, but not more than 400 pounds.¹³⁵ There was not any additional money authorized for research or development of improved idling reduction technology.¹³⁶

In addition, for the third straight year, Rep. Kay Granger (R-TX) has introduced a bill entitled the “Idling Reduction Tax Credit Act of 2006,”¹³⁷ which would allow a 25 percent tax credit of up to \$1,000 for the purchase of idling reduction devices.¹³⁸ Under Congresswoman Granger’s legislation, the EPA and the Secretary of Energy would certify which of the alternative idling reduction devices meet appropriate standards to qualify for the tax credit.¹³⁹ The bill has received support from the trucking industry.¹⁴⁰

V. Suggestion on Policy Direction

Over the past few years, we have clearly made significant inroads as a society in decreasing the prevalence of harmful idling behavior. Recent increases in gasoline prices will no doubt also play at least some role in curtailing excessive truck idling. Yet the problem is far from solved. In fact, one could argue that we are only in the early stages of addressing this problem. In the last section of this paper, I will suggest six ways that truck idling policy can be improved in the short to medium term.

134. *Id.* at § 792-93.

135. *Id.* at § 756(c).

136. Gaines, *supra* note 131.

137. Idling Reduction Tax Credit Act of 2006, H.R. 4672, 109th Cong. § 2 (2006).

138. See Congresswoman Kay Granger Press Release, Granger Re-Introduces Bill to Help Truckers Save Money on Fuel; Reduce Air Pollution (Feb. 2, 2006), *available at*: <http://kaygranger.house.gov/news.asp?FormMode=Detail&ID=243>.

139. *Id.*

140. See OOIDA Supports Anti-Idling Legislation, Layover.com Industry News (Feb. 9, 2006), <http://www.layover.com/cgi-bin/portal/printnews.pl/9212.html> (last visited, Feb. 23, 2006).

A. *The Federal Government Should Increase its Activities in Encouraging the Use of Idling Alternatives*

To date, the federal government has been engaged mainly in outreach, research, isolated funding activities, and some degree of guidance/coordination activities with the states. These are all valuable roles that should continue, but more must be done. There should be a stronger and more results-oriented leadership on the issue at the federal level. Perhaps a more forceful federal role is impinged by the fact that control of anti-idling initiatives is divided between the Environmental Protection Agency (EPA), the Department of Transportation, and the Department of Energy. Perhaps it is a legacy of the history of anti-idling regulation as a quintessential local issue, stemming from nuisance law.¹⁴¹ Perhaps it is simply due to a lack of sufficient funding. Whatever the case, idling should no longer be considered a predominantly local issue—the pollutants and especially the greenhouse gases emitted affect the whole population. Therefore, a stronger federal role is necessary. As a start, the EPA should set firm goals for ending excessive idling behavior among long-distance truckers. Whether APU, shorepower, or advanced TSE, idling alternatives should be made available along the interstate highway system by the end of this decade.

Money must be forthcoming to fully fund an expanded program of incentives for both truck stop electrification and APUs. In his 2006 State of the Union address, President Bush said “America is addicted to oil, which is often imported from unstable parts of the world. The best way to break this addiction is through technology.”¹⁴² What better way to show that technology can help conserve oil—not only in the future but in the present as well—than by increasing funding for truck stop electrification and other idling alternatives. This can also be a way for EPA to show positive results from voluntary programs (and prove that it is doing something about climate change). The time is ripe for such advances.

B. *Congress Should Exempt APUs from the Federal Excise Tax and/or Provide Other Tax Incentives for APU Purchases*

A twelve percent federal excise tax is currently applied to the purchase of accessories for on-road heavy duty trucks within six months

141. In fact, much of environmental law started as local nuisance law, yet most environmental issues are now controlled (and controlled much more effectively) at the federal level. See e.g., David A. Westbrook, *Liberal Environmental Jurisprudence*, 27 U.C. DAVIS L. REV. 619, 631 (1994).

142. President George W. Bush, State of the Union Address (Jan. 31, 2006), transcript available at: <http://www.whitehouse.gov/stateoftheunion/2006/index.html>.

of the truck being put in service.¹⁴³ This excise tax adds approximately \$720 to the purchase and installation of full function idle reduction systems.¹⁴⁴ For years, industry representatives have tried to persuade the Internal Revenue Service (IRS) to rule that APUs should not be considered taxable because they are not “accessories” as they are explicitly not used when the truck is in motion or otherwise in service, but so far this argument has not been successful.¹⁴⁵

Regardless of what the IRS eventually rules on this issue, it is clear that as a policy matter this tax should not apply to idle reduction systems, given that they are explicitly used while the truck is not moving and offer clear petroleum displacement and environmental benefits. Either Congress should explicitly exempt APUs from the excise tax, or they should pass a tax credit for APU purchases along the lines of what Congresswoman Granger has proposed, or both. In this respect, Congress could look northward for inspiration: Canada has implemented a successful rebate program that provides up to \$350 toward the purchase of cab and coolant heaters, and up to \$1,400 for APUs.¹⁴⁶ The Canadian program has funded over 12,000 purchases as of the Autumn of 2005.¹⁴⁷ APU use leads to benefits for society as a whole. Therefore, it is reasonable that society should subsidize part of the cost of these devices, or at the very least exempt them from the federal excise tax.

C. States and Municipalities Should Continue Along the Dual Track of Regulation and Incentives

The basic thrust of the draft model anti-idling law seems to be that idling regulation should only take place several years after a particular state has put an incentive program into place. This is a bad idea. While it is a very good idea for states to have state financing programs for purchases of idling alternatives, these programs should not be a prerequisite for having anti-idling regulations. Even without state financing, idling alternatives are often affordable. If the entire industry is forced to adopt new idling practices because of widespread regulation (and enforcement), much of the incremental cost of idling alternatives will be passed on to the ultimate consumer of transported goods

143. 26 U.S.C. § 4051(b)(1) (2000).

144. As of the drafting of this paper, a Pony Pack APU costs \$6,000. See Pony Pack Online, Pony Pack, Inc. Announces Price Increase (Oct. 15, 2004), <http://www.ponypack.com/pressreleases/pr05.htm> (last visited, Feb. 28, 2006).

145. Telephone interview with Rex Green, *supra* note 40.

146. Natural Resources Canada Press Release, An Entire Fleet of Good Ideas Reduces Emissions from Idling Trucks and Buses (Dec. 2005), *available at*: http://www.nrcan.gc.ca/media/articles/2005/2005art28_e.htm.

147. *Id.*

(basically, society as a whole).

The environmental benefits of truck idling regulation are simply too great to put off. In addition, anti-idling laws provide an impetus for those in government to provide idling reduction incentives as a matter of equity (i.e., the thought being it would be unfair to regulate truckers without giving them something as well), instead of simply putting the issue on the back burner.

On the non-regulatory side, there are many efforts that state and local governments can undertake to ease the transition away from idling apart from providing funding assistance. Examples include ensuring that public fleets are properly equipped with idling alternatives where necessary, equipping state-owned rest stops with truck stop electrification, and promoting systems to notify truckers either by signs or radio communication about the availability of electrified truck parking places at nearby truck stops or rest stops.

D. Standardize Anti-Idling Laws but Reject an Ineffective Standard

The EPA Model Rule should be firmly rejected if it ends up resembling the draft described in this paper. However, state and local governments should still attempt to standardize their anti-idling laws. Those states that have not yet enacted idling statutes should coordinate their efforts with environmental protection officers from other states so as to learn from current best practices. In addition to being problematic for truckers who want to obey the law, the diversity of laws makes it less likely for companies to make large expenditures on idling equipment if they do not know if the equipment will meet all regulatory specifications.

From an environmental perspective, the optimal outcome would be for anti-idling laws to converge around California's comprehensive truck idling regulation scheme, and for engine regulations in non-attainment states to converge by 2009 around California's newly developed idling regulations for Model Year 2008 and beyond vehicles (with the exception of California's proposed APU emission limits, which are environmentally problematic and should be abolished by CARB and not emulated by other states).¹⁴⁸

California's 2004 idling law capped all non-essential idling by diesel-fueled commercial trucks and buses without sleeping berths at five minutes.¹⁴⁹ In October 2005, this rule was extended to cover trucks with

148. A CARB representative stated that as of March 7, 2006, California had not been contacted by other states looking to adopt their engine idling regulations, but some other states were expected to be interested in adopting the rule. E-mail from Karen Caesar, California Air Resources Board Information Officer (Mar. 7, 2006) (on file with author).

149. CAL. CODE REG.10 § 2485 (2004).

sleeping berths as well.¹⁵⁰ These rules allow the use of APUs to provide power. The rule contains several narrowly-tailored exceptions. The law applies regardless of outside temperature, but does contain an exception that allows idling where necessary to operate defrosters, heaters, air conditioners, or other equipment solely to prevent a safety or health emergency. This provision should curtail enforcement during temperature extremes when the driver has no alternative in order to keep the cabin at a reasonable temperature, except to idle.

California also has passed an important law that regulates container ports, which are sites of long-duration idling as trucks wait to load and unload.¹⁵¹ According to California's law, port operators must set up appointments so no truck has to wait more than thirty minutes in line, thus transferring some of the burden to prevent idling from the trucker to the port authority.¹⁵² According to published reports, authorities have cited operators at the Port of Oakland for letting lines lengthen beyond that limit.¹⁵³ Essentially, identical bills limiting waiting times at ports have since been introduced (but not yet passed) in Washington,¹⁵⁴ New Jersey,¹⁵⁵ and Illinois.¹⁵⁶

Most significantly, California's new heavy-duty truck idling regulations also require all engine manufacturers to install "non-programmable, tamper-resistant idle shutdown devices" that will shut down the main engine after five minutes of idling for all heavy-duty diesel engines weighing more than 14,000 pounds.¹⁵⁷ (with certain exceptions for engines that meet an optional low engine idling standard for NOx).¹⁵⁸ The law would apply to Model Year 2008 and beyond vehicles.¹⁵⁹ Also, beginning in 2008, all owners of Model Year 2007 heavy-duty diesel vehicles must either equip their vehicles with engines meeting the optional low NOx engine idling emission standard or have an APU system installed on their vehicle that meets California emissions standards for APUs.¹⁶⁰

Engine manufacturers are currently working with CARB to comply

150. Proposed Regulation Order, *supra* note 38.

151. CAL. HEALTH & SAFETY CODE, § 40720 (West 2005).

152. Berg, *supra* note 5.

153. H.R. 1661, 58th Leg., 1st Spec. Sess (Wa. 2003).

154. H.R. A1483, 211th Leg., 1st Spec. Sess. (N.J. 2004).

155. H.R. 2563, 92nd Leg., 1st Spec. Sess. (Ill. 2003).

156. Proposed Regulation Order, *supra* note 38.

157. See California Air Resources Board, Heavy-Duty Vehicle Idling Reduction Program, <http://www.arb.ca.gov/msprog/truck-idling/truck-idling.htm> (last visited Feb.23, 2006).

158. *Id.*

159. *Id.*

160. E-mail from Karen Caesar, California Air Resources Board Information Officer (Mar.7, 2006).

with these new requirements, and there have not yet been any legal challenges to the new rule.¹⁶¹ In fact, automatic engine shutdown devices have already become relatively common in recent years. According to one recent survey, 55% of trucks currently use automatic shutdown devices to control idling.¹⁶² While some states will not be able to copy California's engine standards due to the federal preemption provisions in the Clean Air Act,¹⁶³ these tougher standards should nonetheless become the standard for the long-distance trucking industry, which is generally active across many states.

On the same day that it passed the above heavy-duty truck idling regulations, California passed very stringent idling regulations for APUs, which will lead to large price increases for conforming units. The regulations were unnecessarily harsh. While they may be possible to justify in California from a narrow particulate emissions perspective as long as the state funds rapid truck stop electrification, increasing the cost of APUs would be a mistake leading to a rise in most other pollutants, including greenhouse gases, and would also lead to greater fuel consumption. This policy error would be magnified in most other states, where electric power plants are more likely to be coal-powered, and arguably more environmentally destructive than APU use.

E. Ensure that Idling Reductions Projects are Accepted as Commitments or Offsets in the Clean Air Act and Any Future Greenhouse Gas Regime

It is inherently difficult to quantify emissions reductions from idling reduction projects. This does not mean that these reductions do not take place, or are not valuable. Projects such as funding truck stop electrification or APU purchases should be encouraged as creditable means of reducing pollution in non-attainment areas and creating offsets for transportation conformity or new source review purposes. Data requirements for predicting emission reductions must not be made so strenuous as to discourage commitments. As regional or national greenhouse gas trading regimes go into effect—and most assume that they will go into effect sooner or later—idling reduction projects should be considered legitimate carbon reduction offsets and greenhouse gas emitters should be allowed to undertake or fund such projects where

161. IDLE REDUCTION TECHNOLOGY, *supra* note 3, at 10.

162. See Christine Joy Broderick, et. al., HEAVY-DUTY TRUCK IDLING CHARACTERISTICS—RESULTS FROM A NATIONWIDE TRUCK SURVEY (a paper submitted for the 2004 annual meeting of the Transportation Research Board) (2004).

163. States that do not meet any one of the National Ambient Air Quality Standards (and most do not) are permitted to adopt California's engine standards under Section 177 of the CAA. CAA § 177, 42 U.S.C. 7507.

doing so would be cheaper than reducing their own emissions. Given the many other harmful effects of diesel engine idling, the side benefits of reducing idling probably exceed the side benefits of other forms of greenhouse gas emission reductions.

F. Educate Public on Harmfulness of Idling

In the long term the goal must be to make excessive idling as socially unacceptable for all drivers as it is now to litter or drive drunk. Currently, idling is still an accepted part of truck driving culture. Changing this culture can only be achieved by increasing public awareness. It will never be feasible (or desirable) to enforce every violation of an idling ordinance committed by a privately owned vehicle. Yet, studies show that when truckers are educated about the harm of excessive idling, they tend to reduce their level of idling.¹⁶⁴ This reduction is independent of a driver's attitude toward the environment.¹⁶⁵ A few areas have already begun activities to this end, by putting up signs,¹⁶⁶ however much more can be done.

Education initiatives can also address issues that go beyond the current (and appropriate) policy concentration on the provision of idling alternatives at truck stops. There is growing evidence that a large percentage of idling behavior takes place outside of traditional rest periods, for example while waiting in traffic or queuing at a pick-up or drop-off point.¹⁶⁷ Electrification and APUs are not particularly practical in these situations.¹⁶⁸ However, educational initiatives could be a valuable starting point, both in terms of convincing drivers not to idle and teaching facilities the economic and environmental value of scheduling pick-ups and drop-offs so as to minimize the need to idle. There have already been many innovative anti-idling education programs around schools, which are intended to discourage parents from idling on or near school grounds while they wait to pick up their children.¹⁶⁹

164. *Id.*

165. *See supra* note 105, 106, and accompanying text.

166. *See* JOHN L. ANDERSON, LINDA GAINES, AND ANANT VYAS, ESTIMATION OF FUEL USE BY COMMERCIAL TRUCKS, *supra* note 12 at 9 (“Given the large numbers of vehicles potentially involved, the fuel use for [workday] idling could be much larger than that for overnight idling.”).

167. *Id.*

168. APUs are usable when a truck is parked, but are not currently practical in a moving queue (so-called “creep mode”), although it is possible that future technical advances will allow an APU to replace a truck's main engine in creep mode. *Id.* at 6.

169. For example, in Austin, TX, parents of school-aged children, at participating schools, are asked to complete the Blue Sky Patrol “Stopping Idling” pledge form, and those that do receive a windshield sticker that identifies them as a Blue Sky Patrol member. *See* City of Austin webpage, at <http://www.ci.austin.tx.us/airquality/>

VI. Conclusion

The idling debate is an interesting one to follow for environmental scholars. It encapsulates at the policy level many of the broad theoretical issues of environmental policymaking in this country: whether to regulate or embrace voluntary initiatives; the benefits of federal management compared to state or local control; the balancing of industry and environmental interests; and the proper role for environmental justice and other equity issues. It is a debate that has begun relatively recently, but already a good deal of progress has been made. More importantly, the scope for further progress is considerable. While there are many environmental problems in this country that are depressingly intractable, excessive truck idling is not one of them. With concerted attention to the issue, significant environmental gains will be made at negligible cost to the economy. Policymakers at all levels should work towards ensuring that those gains materialize as soon as possible.