

**Notice of Proposed Rulemaking**  
**Department of Environmental Protection**  
**Environmental Quality Board**  
**(25 Pa. Code, Chapters 121 and 126, Subchapters F and G)**  
**Diesel Vehicle Idling; and Auxiliary Power Systems**

**Preamble**

The Environmental Quality Board (Board, EQB) proposes to amend 25 Pa. Code Chapter 126 (relating to motor vehicle and fuels programs) by adding a new Subchapter F (relating to diesel vehicle idling) and a new Subchapter G (relating to auxiliary power systems), as set forth in Annex A. The proposed rulemaking establishes an idling restriction of 5 minutes in a 60-minute period for diesel-powered commercial motor vehicles, with a number of exemptions. The proposed rulemaking also regulates the use of diesel-powered auxiliary power systems for diesel-powered commercial motor vehicles with model year 2007 and newer engines. The proposed rulemaking adds definitions to Section 121.1 (relating to definitions) for auxiliary power system, commercial motor vehicle, gross combination weight rating, highway and idling.

This proposal was adopted by the Board at its meeting of \_\_\_\_\_ (date).

**A. Effective Date**

These amendments will go into effect upon final-form publication in the *Pennsylvania Bulletin*.

**B. Contact Persons**

For further information, contact Arleen Shulman, Chief, Mobile Sources Section, P.O. Box 8468, Rachel Carson State Office Building, Harrisburg, PA 17105-8468, (717) 787-9702, or Kristen Campfield Furlan, Assistant Counsel, Bureau of Regulatory Counsel, P.O. Box 8464, Rachel Carson State Office Building, Harrisburg, PA 17105-8464, (717) 787-7060. Information regarding submitting comments on this proposal appears in Section J of this preamble. Persons with a disability may use the AT&T Relay Service by calling 1-800-654-5984 (TDD users) or 1-800-654-5988 (voice users). This proposal is available electronically through the DEP Web site (<http://www.depweb.state.pa.us>).

**C. Statutory Authority**

The proposed rulemaking is being made under section 5 of the Air Pollution Control Act (APCA) (35 P. S. § 4005), which in subsection (a)(1) grants the Board the authority to adopt regulations for the prevention, control, reduction and abatement of air pollution, in subsection (a)(7) grants the Board the authority to adopt regulations designed to reduce emissions from motor vehicles and in subsection (a)(8) grants the

Board the authority to adopt regulations to implement the Clean Air Act (CAA) (42 U.S.C.A. §§ 7401--7642).

#### **D. Purpose and Background**

The purpose of this proposed rulemaking is to establish restrictions on the idling of diesel-powered commercial motor vehicles and on the related use of certain auxiliary power systems (APS) in order to reduce exposure to harmful emissions and to help attain and maintain health-based air quality standards. The idling and APS use restrictions would provide air quality benefits to citizens in this Commonwealth, particularly those in areas where diesel-powered commercial motor vehicles congregate. Because idling of diesel-powered commercial motor vehicles consumes approximately one gallon of fuel per hour, vehicle owners and operators would not only realize cost savings by complying with this proposed rulemaking but would also contribute to the country's energy independence. With a statewide regulation, operators of diesel-powered vehicles can easily identify where and when idling is restricted. Having a statewide regulation should also discourage boroughs, townships, cities and counties from enacting their own idling restrictions. On October 18, 2006, the Clean Air Board of Central Pennsylvania (CAB) filed a petition for rulemaking, requesting that the Environmental Quality Board (EQB) adopt regulations to restrict the idling of commercial diesel-powered vehicles. The statement of policy in 25 Pa. Code Chapter 23 (relating to Environmental Quality Board policy for processing petitions – statement of policy) establishes the procedures for the Department's response to rulemaking petitions. On January 17, 2007, the EQB accepted the CAB's petition for study. Notice of the EQB's acceptance of the petition was published in the *Pennsylvania Bulletin* on January 27, 2007, at 37 Pa.B. 477. Upon the EQB's acceptance of the petition, the Department had 60 days to prepare a report evaluating the petition, including whether the EQB should approve the action requested in the petition. In accordance with 25 Pa. Code §23.7 (relating to response to report), the Department provided a copy of the completed report to the petitioner for a 30-day response period. The petitioner submitted a response, after which the Department submitted a final report to the EQB. The Department's report recommended that the Department pursue a statewide regulation restricting idling of diesel-powered commercial motor vehicles. On May 16, 2007, the EQB concurred with the Department's recommendation and directed that the Department develop a proposed regulation for consideration at the Board's September 2007 meeting.

The Department concurs with the petitioner's assessment of the impacts of diesel exhaust emissions. Diesel exhaust emissions have adverse health and environmental effects because they contribute to levels of particulates and ground-level ozone and have adverse health effects when individuals are exposed directly.

The United States Environmental Protection Agency (EPA) is responsible for establishing National Ambient Air Quality Standards (NAAQS) for six criteria pollutants considered harmful to public health and the environment: ozone, particulate matter, nitrogen oxides, carbon monoxide, sulfur dioxide, and lead. The Clean Air Act established two types of NAAQS: primary standards set limits to protect public health;

and secondary standards set limits to protect public welfare, including protection against visibility impairment, damage to animals, crops, vegetation, and buildings.

In 1997, EPA established more protective ozone and fine particulate primary and secondary NAAQS to protect public health and to ensure an adequate margin of safety. Fine particles or PM<sub>2.5</sub> (particles with a diameter of 2.5 micrometers or less) in the atmosphere are made up of a complex mixture of components. Some, like diesel particulate, are emitted directly into the air (“primary” sources) and others, such as sulfate and nitrate, form in the air as a result of various chemical reactions (“secondary” sources). The health effects associated with exposure to PM<sub>2.5</sub> are significant, and the evidence for these effects is compelling. Premature mortality, aggravation of existing respiratory and cardiovascular disease, decreased lung function and asthma attacks have been attributed to exposure.

The NAAQS for PM<sub>2.5</sub> was established in 1997 at 15 micrograms per cubic meter on an annual basis and 65 micrograms per cubic meter over 24 hours. In 2004, EPA designated eight areas in Pennsylvania, comprising all or part of 19 counties, as not attaining the NAAQS.

In October 2006, EPA tightened the 24-hour PM<sub>2.5</sub> standard to 35 micrograms per cubic meter. Based on data from 2003-2005, all of the areas designated by EPA in 2004 and several additional areas would violate the revised 24-hour standard. Pennsylvania plans to submit attainment and nonattainment designation recommendations to EPA in December 2007 for the designation of specific nonattainment areas for the revised 24-hour standard; EPA is anticipated to finalize those designations in December 2009 with an April 2010 effective date. Revisions to the State Implementation Plan will be due to EPA in April 2013.

EPA and other agencies have evaluated the health effects of direct exposure to diesel particulate matter. The small size of diesel exhaust particles allows them to be drawn deeply into the lungs. Diesel particulates are, for the most part, even smaller than 2.5 micrometers. EPA has said that long-term exposure to diesel particulate exhaust is likely to pose a lung cancer hazard. Exposure to diesel particulates has non-cancer and acute effects as well, including throat and eye irritation and inflammation, exacerbation of existing respiratory and allergic conditions, and exacerbated risk of heart attacks. Studies indicate children living near highways have more lung and breathing problems than other children. Children may also be exposed to more diesel exhaust inside diesel school buses, especially in idling buses that queue. People commuting to work in almost any mode of transportation along truck routes are exposed to high levels of diesel fine particulate matter.

Ground-level ozone, the other pollutant directly of concern in this rulemaking, is not emitted directly to the atmosphere but is formed by a photochemical reaction between volatile organic compounds (VOCs) and oxides of nitrogen (NO<sub>x</sub>) in the presence of sunlight. Heavy-duty vehicles contributed about 25 percent of all NO<sub>x</sub> emissions in Pennsylvania in 2002. (Compared to gasoline-powered vehicles, diesel vehicles are not a

significant source of VOCs.) Repeated exposure to ozone pollution may cause a variety of adverse health effects for healthy people and those with existing conditions, including difficulty in breathing, chest pains, coughing, nausea, throat irritation, and congestion. It can exacerbate bronchitis, heart disease, emphysema and asthma, and reduce lung capacity. Ozone can aggravate asthma, causing more asthma attacks, increased use of medication, more medical treatment and more frequent visits to hospital emergency clinics. Ozone also has adverse effects on vegetation (forests and food crops) and, through deposition, contributes to pollution in the Chesapeake Bay.

The current ground-level ozone standard set by EPA is 0.08 parts per million averaged over eight hours. In 2004, EPA designated 37 counties in Pennsylvania as eight-hour ozone nonattainment areas. Redesignation requests and maintenance plans for 32 counties and an attainment demonstration for the five-county Philadelphia Interstate Area (comprising Bucks, Chester, Delaware, Montgomery and Philadelphia counties) are being processed by EPA for approval as revisions to the State Implementation Plan. On June 20, 2007, EPA proposed a more protective 8-hour ozone standard and is under court order to finalize the revised NAAQS by March 12, 2008. Recommendations for attainment and nonattainment areas must be submitted to EPA in June 2009; final action by EPA would be due in June 2010. The designations would take effect 60 days after EPA publishes a notice in the *Federal Register*.

The Department estimates that diesel-powered commercial motor vehicles idle approximately 27.2 million hours a year in the Commonwealth. Idling during rest stops at truck stops and rest areas accounts for nearly 78 percent of this total. Long duration idling (namely, idling lasting more than 15 minutes) amounts to about 22.3 million hours a year, 95 percent of which has been estimated to be due to truck travel rest. Some idling, such as that from individual vehicles idling at smaller facilities, may be difficult to quantify and has not been included.

The amount of idling by long-haul trucking is directly influenced by federal requirements. The United States Department of Transportation's (U.S. DOT) "hours of service" regulations include specific requirements for rest by truck drivers. Drivers may rest roadside or at truck stops, rest stops, motels or street locations near their loading or unloading points. During their rest periods, some drivers run their engines to operate heat and air conditioning or to avoid opening windows for their own personal security. Some drivers operate auxiliary equipment for comfort (such as for using a microwave oven or television) or to keep the engine warm in extreme temperatures. The habits of drivers may also play a significant role in how APS are used.

Technology exists to assist drivers in reducing idling during their rest periods. These are of two types: equipment provided on the vehicle (on-board or mobile) and equipment provided at parking spaces (stationary).

On-board bunk heaters, cab heaters and APS can provide climate control, engine warming and power to run household-type appliances. At present, much of this equipment is diesel-powered, but alternatives to diesel-powered APS are increasingly

available. These smaller engines generally use about 1/10<sup>th</sup> the fuel that a main engine would use to idle. Costs per truck to have an APS range from less than \$1,000 for a bunk heater to \$10,000 for some APS capable of supplying power for all services when the main engine is off. While running these smaller engines reduces fuel use, running a diesel-powered APS on a vehicle with a model year (MY) 2007 or newer engine may result in more particulate emissions than running the main engine, because particulate filters reduce emissions from these newer main engines.

Stationary equipment or parking space electrification is also increasingly available throughout the Commonwealth and the United States. Electrification refers to a technology that harnesses an electrical system to provide the truck or locomotive operator with climate control and other needs, eliminating the need to idle the main engine. Pennsylvania currently has nine truck stops where stand-alone electrified parking spaces are available. The only additional equipment needed by the vehicle operator is an inexpensive window adapter to ensure that the service module fits securely. The service module itself provides climate control, electricity, Internet and telephone connections. Another stationary system provides plug-in stations only; truck operators need to have or rent supplementary connection equipment to operate heating, air conditioning and appliances.

While school buses may not contribute a large number of idling hours, they idle near children, and protection of children from unnecessary direct exposure to diesel particulate exhaust is important. Students who ride buses generally ride them every school day. The students may be exposed to diesel exhaust when school buses queue at pick-up and drop-off locations. Auxiliary equipment to heat or cool school buses is not available, but EPA has found that there is no need for long-duration idling to warm up buses for either passenger or engine protection. Transit and tour buses face similar passenger comfort issues. Management strategies, such as providing lounges for bus drivers, can reduce idling; technology is not necessary.

It is estimated that highway vehicles will emit about 180,000 tons of NO<sub>x</sub> and 3,250 tons of PM<sub>2.5</sub> in 2009. The heaviest trucks, which account for most of the idling, generally contribute 37% of the NO<sub>x</sub> and 38% of the highway emissions. These estimates account for the cleaner technology required of MY 2007 and newer engines, using assumptions in EPA's approved highway motor vehicle model, MOBILE 6.2. When this proposed regulation takes effect in 2009, it is estimated that idling emissions will account for about 3,325 tons of NO<sub>x</sub>, 90 tons of volatile organic compounds (VOCs) and 60 tons of particulate matter per year. This estimate does not include an anticipated increase in idling hours from the present time because no statewide data exists upon which to base the estimate. The benefits of this proposed rulemaking could be greater if hours spent in Pennsylvania in travel rest increase significantly. Assumptions about idling emissions were those provided by EPA in its *Guidance for Quantifying and Using Long Duration Truck Idling Emission Reductions in State Implementation Plans and Transportation Conformity* (2004). The Department expects that, once the temperature exemption for trucks with sleeper berths expires, the proposed regulation would reduce diesel-powered commercial motor vehicles idling by half and that a corresponding 50

percent reduction of emissions would occur. Therefore, the Department estimates that the proposed rulemaking would reduce emissions by about 1,610 tons of NO<sub>x</sub>, 45 tons of VOC and 30 tons of particulate matter once the temperature exemption expires.

Because the United States increasingly relies on imported fuel for transportation needs, reducing idling will contribute to the country's energy independence. Another benefit of reducing idling is the reduction of carbon dioxide (CO<sub>2</sub>) emissions. EPA estimates that idling heavy-duty vehicles can consume about one gallon of diesel fuel for every hour of idling time, adding more than a pound of CO<sub>2</sub>, the major greenhouse gas (GHG). The idling of a typical long-haul truck contributes about 19 metric tons of CO<sub>2</sub> annually.

The experience of several other jurisdictions shows that involving property owners in enforcement and outreach is key to reducing idling, especially at locations associated with truck travel rest. This may be the case because drivers, who typically travel nationally and even internationally, may not be aware of a state's rules and may have little incentive to pay the fines. To encourage assistance from property owners, some states reduce fines for facilities that post signs and take other steps to reduce idling. The Department will consider these and other approaches to obtaining compliance as this rulemaking proceeds, and specifically seeks comment on approaches to obtaining compliance.

Idling restrictions have been adopted by 14 states, the District of Columbia and many local jurisdictions, including Pennsylvania's two most populated urban areas, Philadelphia and Allegheny counties. The federal government does not regulate commercial highway diesel vehicle idling, and generally considers the regulation of these vehicles in use to be the prerogative of state government. In March 2006, recognizing that reducing unnecessary diesel vehicle idling would be a public health benefit and that a multiplicity of state and local rules was a "barrier to greater implementation of idling control technologies," EPA released a model state idling law. (EPA Model State Idling Law, EPA420-S-06-001) The model was a result of five workshops across the country in which affected stakeholders participated.

In developing the proposed rulemaking, the Department considered the petitioner's suggested language, the EPA model law and the existing regulations of the Philadelphia and Allegheny county health departments.

The Department consulted with the Department of Transportation (PennDOT) during development of the proposed rulemaking, in accordance with section 5(a)(7) of the APCA, 35 P.S. § 4005(a)(7). The Department also consulted with the Pennsylvania State Police.

The Department consulted with the Air Quality Technical Advisory Committee (AQTAC) on the proposed rulemaking on July 26, 2007. The AQTAC concurred with the Department's recommendation to seek EQB approval of the proposed rulemaking.

The Department also consulted with the Citizens' Advisory Council and the Small Business Compliance Advisory Committee.

This proposed rulemaking is necessary to achieve and maintain the eight-hour ozone NAAQS. The proposed regulations, if adopted, will be submitted to the EPA as a revision to the State Implementation Plan.

**E. Summary of Regulatory Requirements**

The proposed rulemaking adds definitions for the following terms to § 121.1 (relating to definitions): “auxiliary power system,” “commercial motor vehicle,” “GCWR-gross combination weight rating,” “highway,” and “idling.”

The proposed definition of “auxiliary power system” describes equipment that may be installed on a vehicle in lieu of operating the main diesel engine.

The proposed definition of “commercial motor vehicle” is adapted from the definition in 49 CFR 390.5 (relating to definitions). The proposed definition limits the scope of the proposed rulemaking to vehicles designed for or used on a highway that are above a certain weight or passenger capacity or carry hazardous materials in quantities requiring placarding. Vehicles covered by the definition of “commercial motor vehicle” would include most trucks used for business purposes, transit and tour buses and school buses. The definition is not intended to cover vehicles that would only otherwise be covered by the use of a separate engine for cargo refrigeration in the tractor portion of a tractor-trailer.

The proposed definitions of “GCWR-gross combination weight rating” and “highway” are the same as in the Pennsylvania Motor Vehicle Code (75 Pa.C.S.A. § 102 (relating to definitions)).

The proposed definition of “idling” specifies that, for purposes of this subchapter, idling is operating a main propulsion engine of a vehicle without moving.

The proposed rulemaking adds § 126.601 (relating to applicability), which states that the diesel vehicle idling requirement applies to owners and operators of diesel-powered commercial motor vehicles and owners and operators of locations at which diesel-powered commercial motor vehicles load, unload or park. The locations affected include, for example, warehouses, terminals, truck stops, other retail locations, schools, parking lots, rest areas and roadway rights-of-way. The proposed rulemaking would regulate idling at off-road sites by highway vehicles, but not by construction, agricultural or other off-road vehicles or equipment, or by locomotives, marine vessels or aircraft.

The proposed rulemaking adds § 126.611 (relating to idling restriction) to prevent persons subject to this subchapter from causing or allowing the engine of a commercial diesel vehicle to idle more than 5 minutes in any 60-minute period, except as provided in § 126.612 (relating to exemptions). This time limitation is in the EPA model law and

was suggested by the petitioner. Most idling takes place in conjunction with truck travel rest at truck stops and rest stops, and the Department's study found that shared responsibility by facilities and vehicle owners and operators is essential to reduce idling effectively. Therefore, the provision has been written to include owners and operators of locations at which diesel-powered commercial motor vehicles load, unload or park.

The proposed rulemaking adds § 126.612 (relating to exemptions), which describes a number of situations in which the idling restriction would not apply. These situations are listed below.

Section 126.612(a)(1) allows idling by vehicles equipped with sleeper berths when idling is necessary in cold or hot weather for purposes of driver comfort. The exemption expires on May 1, 2010, as suggested by the petitioner. The expiration provision is mirrored in the EPA model rule, and is designed to allow businesses the opportunity to identify, finance and install mobile idling reduction equipment before the exemption's expiration. Affordable idling reduction strategies already exist. Not only will they reduce air pollution from idling, but they also should reduce operating costs for diesel fleets by decreasing fuel use. DEP has had a financial assistance program for small businesses for pollution prevention and energy efficiency since July 2004 that can help these diesel vehicle owners purchase on-board idling reduction equipment. The exemption also recognizes that stationary idling reduction equipment, specifically electrified parking spaces, is available within the Commonwealth and is currently underutilized. Because using stationary idling reduction equipment is preferable to idling from a pollution perspective, the exemption would not apply if parking is available at an electrified parking space. The petitioner recommended allowing the temporary temperature exemption only if the vehicle was parked at a fleet trucking terminal, commercial truck stop or PennDOT designated rest area. The proposed language makes the temporary exemption available no matter where the vehicle is parked, but also restricts its applicability to occupied vehicles with sleeper berths, as in the EPA model rule.

Section 126.612(a)(2) allows idling for passenger buses with passengers onboard when idling is necessary to provide heating or air conditioning for the passengers. It allows a maximum of 15 minutes in a 60-minute period, in recognition that heating and cooling of a bus, rather than of a truck cab, takes longer. The exemption primarily is patterned after the EPA model rule. The petitioner suggested allowing idling for 10 minutes prior to passenger boarding; however, that could have been dependent upon too many schedule and passenger arrival variables. The petitioner suggested that idling be allowed any time passengers are on board; however, EPA found that 15 minutes is a sufficient amount of time to condition a bus. The EPA model rule suggests that this exemption expire five years after a state implements a financial assistance program to allow bus owners to identify, finance and install equipment to replace idling. The Department has not proposed an expiration date for this exemption and is seeking comment on whether affordable idling reduction technology exists to cool a passenger bus adequately by means other than operation of the main engine.



Section 126.612(a)(3) allows idling when necessary for active loading or unloading of property or passengers. In most cases, idling is not necessary for active loading or unloading. Idling could be necessary when, for example, a facility requires a driver to remain inside the cab. The Department is seeking comment on whether to expand this exemption to include, for example: idling that is necessitated by a delay in loading or unloading due to an unforeseen facility-related problem during hot or cold weather; and, idling in specific situations in which vehicles are lining up to load or unload.

Section 126.612(a)(4) allows idling when necessary to operate work-related mechanical or electrical equipment. Examples include trash compaction equipment, mixing equipment for concrete trucks, lifts for cargo or passengers and straight truck refrigeration. The exemption does not apply when idling for cabin comfort or to operate nonessential on-board equipment.

Section 126.612(a)(5) allows idling when required by on-road traffic or other obstruction on the highway, a stop signal or the direction of an official directing traffic, since these are normally circumstances outside the driver's control. This exemption applies only to on-road traffic conditions and does not apply to queuing for loading or unloading. The Department is seeking comment on whether an exemption should be allowed for vehicles waiting to load or unload and how such an exemption should be worded, including conditions.

Section 126.612(a)(6) allows idling when idling is required as part of a state or federal safety inspection. Idling must be necessary to perform the operations.

Section 126.612(a)(7) allows idling when idling is required for maintenance, servicing or repair of the vehicle, and for diagnostic operations for maintenance, servicing or repair. Idling must be necessary to perform the operations.

Section 126.612(a)(8) allows idling when necessary to operate defrosters, maintain temperature or refrigerate cargo to prevent a health or safety emergency or during the period in which equipment is being installed to prevent such an emergency. It also allows idling if required by federal, state or local safety regulations.

Section 126.612(a)(9) allows idling of vehicles when necessary for vehicles being used in emergency or training situations. It does not allow idling while the vehicle is not acting in emergency or training mode.

Section 126.612(a)(10) allows idling for an armored vehicle when idling is necessary while a person remains inside to protect the security of the cargo.

Section 126.612(a)(11) allows idling by a school bus during queuing for the sequential discharge or pickup of students when idling is necessary because the physical configuration of the school or the school's surrounding streets does not allow for

stopping. This exemption is likely to be useful in limited situations, such as some urban settings, in which there may be no reasonable alternative to idling.

While several of these exemptions were identified in EPA's report on its model law development as "common sense," participants in EPA's process felt it was important to articulate the exemptions to ensure appropriate interpretation and enforcement by enforcing officials. Even though some of these exemptions were not included in the petitioner's suggested regulation, they have been included in this proposed rulemaking. They include portions of paragraph (4), all of paragraphs (6) and (10) and subsection 126.612(c) discussed below.

Subsection 126.612(b) allows idling for vehicles displaying a label indicating that the NO<sub>x</sub> emissions from the vehicle are low enough that the vehicle is allowed to idle without restriction in California. This subsection does not *require* that a vehicle's emissions meet California's standards applicable to unrestricted idling; it simply allows an exemption if they do.

Section 126.612(c) allows idling if idling is due to mechanical difficulties over which the driver has no control. These situations are rare. An example would be a problem with the alternator. If the regulation were enforced against a driver, the enforcement action would be abandoned if the driver demonstrated within the specified time limits that the claimed mechanical problem existed and was fixed. Participants in EPA's model law development suggested that a requirement to submit paperwork to the enforcing agency would prevent abuse of this exemption.

Section 126.612(d) allows a local government or local air authority with idling regulations predating the adoption of this proposed rulemaking as a final rulemaking to approve alternative compliance plans for bus terminals to minimize idling.

Proposed Subchapter G would ensure that emission reductions realized from the proposed rulemaking continue as MY 2007 and newer heavy-duty engines become more prevalent in vehicles traveling in and through the Commonwealth. Engines that are MY 2007 and newer are required by both EPA and the California Air Resources Board (CARB) to control particulate emissions to very low levels. Diesel engine and vehicle makers have chosen to meet the 2007 engine requirements primarily by using particulate filters and other equipment to remove the particulates from the engines' exhaust. These filters are normally installed in the exhaust system of the main engine. APS that are powered by small diesel engines have their own exhaust systems. Even though these small engines use about 1/10<sup>th</sup> the fuel of the main propulsion engine, they generally emit more particulate matter per hour than the main engine. Vehicle fleet operators might choose to purchase these smaller engines as an idling alternative despite the higher particulate emissions because of the fuel savings. Therefore, proposed Subchapter G requires the exhaust of APS used on vehicles with MY 2007 or newer engines to be routed through the main engine's exhaust system upstream of the particulate filter. In practice, this is generally done in ways that are visible to an enforcing official without

opening the engine or cabin compartment. The Department is seeking comment on the implications of this provision for vehicle owners and manufacturers.

According to a survey conducted by the American Trucking Associations, almost one-half of all vehicles with sleeper berths in the country may be driven in California, and therefore, will have to be prepared to comply with California's idling and APS use regulations. CARB allows alternatives to re-routing the exhaust of the APS. CARB also provides that these systems be labeled so that idling enforcement officials can easily identify vehicles that are compliant through use of these alternatives. The proposed rulemaking provides that the APS, if labeled according to California requirements, may operate in Pennsylvania when used on vehicles with MY 2007 or newer engines. The proposed rulemaking does not regulate the use of APS on vehicles with MY 2006 or older engines.

## **F. Benefits, Costs and Compliance**

### **Benefits**

All citizens in the Commonwealth will benefit from reduced direct exposure to diesel emissions produced by idling commercial motor vehicles. Reduced diesel emissions will also assist the Commonwealth in maintaining the fine particulate and ground-level ozone standards. However, more air pollution from idling is produced in some counties than others because of the concentration of travel rest facilities. These counties will benefit more. For instance, idling trucks in Cumberland and Luzerne counties produce about 20 percent of all idling emissions in the Commonwealth.

When this regulation takes effect in 2009, it is estimated that idling emissions will account for about 3,325 tons of NO<sub>x</sub>, 90 tons of VOC and 60 tons of particulate matter per year. This estimate does not include an anticipated increase in idling hours from the present time because no statewide data exists upon which to base the estimate. The benefits of this proposed rulemaking could be greater if hours spent in Pennsylvania in travel rest increase significantly. Assumptions about idling emissions were those provided by EPA in its *Guidance for Quantifying and Using Long Duration Truck Idling Emission Reductions in State Implementation Plans and Transportation Conformity* (2004). The Department expects that, once the temperature exemption expires, the proposed regulation would reduce diesel-powered commercial motor vehicles idling by half and that a corresponding 50 percent reduction of emissions would occur. Therefore, the Department estimates that the proposed rulemaking would reduce emissions by about 1,610 tons of NO<sub>x</sub>, 45 tons of VOC and 30 tons of particulate matter once the temperature exemptions for trucks with sleeper berths expires.

Because the United States increasingly relies on imported fuel for transportation needs, reducing idling will contribute to the country's energy independence. Another benefit of reducing idling is the reduction of CO<sub>2</sub> emissions. EPA estimates that idling heavy-duty vehicles can consume about one gallon of diesel

fuel for every hour of idling time, adding more than a pound of CO<sub>2</sub>, the major GHG. The idling of a typical long-haul truck contributes about 19 metric tons of CO<sub>2</sub> annually.

Vehicle operators, the people in the closest proximity to diesel exhaust, will benefit most, particularly drivers of long-haul vehicles. In addition to cleaner air, the noise of their sleeper berth should decrease if power is supplied by an alternative idling technology. This should lead to a more rested truck driver. The National Transportation Safety Board has cited fatigue as a major cause of accidents in which long-haul trucks are involved. Nearly 500,000 trucks in the nation are dedicated to long-haul trips. Since trucking companies need to replace truck drivers constantly due to high turnover rates, more truck operators would be affected than there are number of trucks. It is possible that most, if not all, long-haul drivers will idle in Pennsylvania at some time. Including bus drivers and local drivers in the Commonwealth, there are nearly 1,000,000 drivers who may benefit through reduced exposure to diesel emissions.

The proposed rulemaking can provide consistency in idling regulations in the Commonwealth for the industry, as well as encourage consistency in other states in which Pennsylvania vehicles may idle. Pennsylvania's adoption of this proposed rulemaking will make it difficult for most long-haul trucks across the nation to avoid complying with idling regulations, since most long-haul trucks in the nation are likely to travel through Pennsylvania. Pennsylvania's adoption of the proposed rulemaking will encourage more vehicle operators across the country to invest in long-term, permanent alternatives to idling and, when installing APS on vehicles with MY 2007 or newer engines, to ensure that the APS usage will be less polluting.

### **Compliance Costs**

Savings due to this proposed rulemaking are expected to exceed the costs in 2011, and by 2012 the regulated community will see a payback of their initial investment in equipment that would replace idling for travel rest. The overall benefit to the regulated community in the first five years of this program (2009-2015) should total at least \$163 million. The costs associated with the regulation are investments in equipment to provide climate control and electrical power without idling the main engine, primarily during required periods of rest. While this proposed rulemaking would apply to more vehicles than just trucks with sleeper cabs, shorter-haul vehicles, transit buses and school buses are not likely to invest in such equipment. The savings are directly attributable to decreases in fuel use. The anticipated decreases in fuel use could reduce revenue to Pennsylvania diesel fuel vendors (truck stops and other retail outlets) by as much as \$14 to \$22 million per year.

### **Compliance Assistance Plan**

The Department plans to educate the regulated community through associations of truck and bus fleet operators, the industry media (including newsletters and radio stations

serving the trucking community), large truck stops and operators of other locations where vehicles idle. The information provided would include information about the idling restrictions and financial assistance programs that may be available through the Commonwealth and the federal government for purchase or lease of mobile idling reduction equipment. At present, these financial assistance programs are available for small businesses.

### **Paperwork Requirements**

This proposed rulemaking creates no new paperwork for the regulated community at large, with one exception. Violating vehicle operators who wish to claim the exemption under Section 126.612(a)(4) would have to submit timely documentation of a repair to the enforcing agency.

#### **G. Pollution Prevention (if applicable)**

The Federal Pollution Prevention Act of 1990 established a National policy that promotes pollution prevention as the preferred means for achieving state environmental protection goals. The Department encourages pollution prevention, which is the reduction or elimination of pollution at its source, through the substitution of environmentally-friendly materials, more efficient use of raw materials, and the incorporation of energy efficiency strategies. Pollution prevention practices can provide greater environmental protection with greater efficiency because they can result in significant cost savings to facilities that permanently achieve or move beyond compliance. This regulation prevents pollution by either requiring a pollution source (namely, vehicle engines) to be shut off and by encouraging the use of alternative, less polluting equipment when idling is necessary.

#### **H. Sunset Review**

This regulation will be reviewed in accordance with the sunset review schedule published by the Department to determine whether the regulation effectively fulfills the goals for which it was intended.

#### **I. Regulatory Review**

Under section 5(a) of the Regulatory Review Act (71 P.S. § 745.5(a)), on (blank), the Department submitted a copy of these proposed amendments to the Independent Regulatory Review Commission (IRRC) and the Chairpersons of the House and Senate Environmental Resources and Energy Committees. In addition to submitting the proposed amendments, the Department has provided IRRC and the Committees with a copy of a detailed regulatory analysis form prepared by the Department. A copy of this material is available to the public upon request.

Under section 5(g) of the Regulatory Review Act, IRRC may convey any comments, recommendations or objections to the proposed regulations within 30 days of

the close of the public comment period. The comments, recommendations or objections shall specify the regulatory review criteria that have not been met. The Act specifies detailed procedures for review of these issues by the Department, the General Assembly and the Governor prior to final publication of the regulations.

**J. Public Comments**

**Written Comments** - Interested persons are invited to submit comments, suggestions or objections regarding the proposed regulation to the Environmental Quality Board, P.O. Box 8477, Harrisburg, PA 17105-8477 (express mail: Rachel Carson State Office Building, 15th Floor, 400 Market Street, Harrisburg, PA 17101-2301). Comments submitted by facsimile will not be accepted. Comments, suggestions or objections must be received by the Board by (blank) (within \_\_ days of publication in the *Pennsylvania Bulletin* and within 30 days after the third hearing). Interested persons may also submit a summary of their comments to the Board. The summary may not exceed one page in length and must also be received by (blank) (within \_\_ days following publication in the *Pennsylvania Bulletin* and within 30 days after the third hearing). The one-page summary will be provided to each member of the Board in the agenda packet distributed prior to the meeting at which the final regulation will be considered.

**Electronic Comments** - Comments may be submitted electronically to the Board at RegComments@state.pa.us and must also be received by the Board by (date) (within \_\_ days of publication in the *Pennsylvania Bulletin* and within 30 days after the third hearing). A subject heading of the proposal and a return name and address must be included in each transmission.

**K. Public Hearings**

The Environmental Quality Board will hold 3 public hearings for the purpose of accepting comments on this proposal. The hearings will be held at \_\_ p.m. on the following dates:

\_\_\_\_\_ (blank) \_\_\_\_\_

\_\_\_\_\_ (blank) \_\_\_\_\_

\_\_\_\_\_ (blank) \_\_\_\_\_

Persons wishing to present testimony at a hearing are requested to contact the Environmental Quality Board, P.O. Box 8477, Harrisburg, PA 17105-8477, (717) 787-4526, at least one week in advance of the hearing to reserve a time to present testimony. Oral testimony is limited to ten minutes for each witness. Witnesses are requested to submit three written copies of their oral testimony to the hearing chairperson at the hearing. Organizations are limited to designating one witness to present testimony on their behalf at each hearing.

Persons in need of accommodations as provided for in the Americans With Disabilities Act of 1990 should contact the Environmental Quality Board at (717) 787-4526 or through the Pennsylvania AT&T Relay Service at 1-800-654-5984 (TDD) to discuss how the Department may accommodate their needs.

BY:

KATHLEEN A. MCGINTY  
Chairperson  
Environmental Quality Board