State of Illinois
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Illinois Environmental Protection Agency Fact Sheet

Alternatives to Diesel Truck Idling: Improving the Bottom-Line in a Competitive Market!

Reducing or eliminating the need for idling prolongs engine life, reduces maintenance, saves on diesel fuel costs, and improves the quality of life for the driver. It also raises the bottom-line in a competitive market, and in combating high diesel fuel prices!

Here are options that will help you reduce or eliminate truck idling:

1. **TURN OFF THE ENGINE**
   This is the simplest way, and can be very effective. But it requires the direct oversight of the trucking firm, driver education and the ability to quantify reduced engine operating time and/or reduced fuel costs to help ensure policy compliance. The company can check the engine operation data stored in the engine control module (if present) to determine the amount of idling that takes place. Under typical conditions and when the use of the engine to power auxiliary equipment is not needed, instruct drivers to turn off the truck when parked for more than ten minutes. This is especially beneficial for when the drivers arrive at their pick up or unloading destination; for periods when the truck is left unattended, such as at a restaurant or truck stop; or during other instances when the truck is parked and it is not essential to leave the engine running to power auxiliary equipment or for reasonable cab comfort. The company may offer driver incentives, where a portion of the quantifiable fuel savings be rewarded to the driver of the truck. This is a win-win for the company and for the driver and will increase policy compliance. An unattended truck left running when there is no real need to do so is the most obvious target in efforts to reduce idling and to save on the costs of doing business.

2. **AUTOMATIC ENGINE SHUT DOWN**
   Several engine manufacturers incorporate into their engines a timing feature that will automatically turn off the diesel engine while it is idle for a certain period of time. Check with your engine's manufacturer to see if this feature is included with your truck or bus and to learn how to use or enable this feature if it is present. If the timing device is not present, an after-market shut down/timing unit is available that can be installed, which allows the truck to be programmed for temperature and other features. These units range in price from $900 to $1,200.

3. **MAKE USE OF ADVANCED TRUCK STOP ELECTRIFICATION FACILITIES**
   The growing trend in the trucking industry is for long-haul trucking fleets to use advanced truck stop electrification (ATE) facilities. One company, IdleAire, has facilities located at truck stops along major interstate highways. This expansive network allows drivers to plan their routes and to make use of the ATEs at several truck stops

around the country. An ATE provides for the essential needs of a truck driver for overnight parking, without the need to run the diesel engine for several hours during longer rest periods. The units are installed at many parking slots at the truck stop and "hook up" to the window opening of the truck. The units are locked into place in the window opening while providing the driver security, heat or air conditioning, electrical outlets to power items in the cab, satellite television, Wi-Fi computer access, and other amenities. These services are provided to truck drivers at a nominal charge, and is much less than the cost of diesel fuel that would have been used had the truck been idling. Many long-haul trucking fleets have accounts with IdleAire, enabling the drivers to swipe an account card for the use of the ATEs. Millions of gallons of diesel fuel have been saved by the use of ATEs, while helping to improve driver morale and job retention. For information on the IdleAire facilities and their locations, please visit www.idleaire.com.

4. **INSTALL AUXILIARY POWER UNITS (APUs)**
   Most of the diesel engine manufacturers and similar companies make APUs, which are small diesel-powered units of 5 to 10 horsepower installed on the truck. An APU powers the truck's air conditioning and heat, and also allows the use of electronics inside the cab, such as televisions, microwaves, and refrigerators. In addition, the APU can help to keep the engine warm up to operational temperature in colder weather. For all of these functions, the main engine is turned off and the APU operates the cab's electrical systems and powers the heat or air conditioning. Depending on the type and size, the APU may use only one-fourth of the fuel as the main engine to operate. APUs may cost from $5,000 up to $10,000 depending on the desired features. By significantly reducing diesel fuel usage and saving the main engine from added wear and maintenance needs, the typical APU will pay for itself within a year. Beyond the initial pay-off period, the APU will save a significant amount of money for the operation of the truck for years to come. For APUs installed on each truck in the fleet, the amount of savings can be substantial.

5. **INSTALL A DIESEL-POWERED DIRECT-FIRED HEATER**
   These units run off of the vehicle's diesel fuel and heat the engine coolant. The cab is heated directly from the combustion flame to the interior heat exchanger. However, no air conditioning is supplied by direct-fired heaters. The cost of these units for heating purposes ranges from $1,000 to $5,000.

6. **INSTALL A BATTERY-POWERED ENGINE COOLANT HEATER AND/OR AN EVAPORATIVE COOLING SYSTEM**
   Battery-powered engine coolant heaters are similar to the diesel-powered direct-fired heater, in that they run the cab heater and heat the engine coolant without providing air conditioning. These units cost $550 to $700. Evaporative cooling systems are used to provide air conditioning to the cab. No heat is provided. Cost is approximately $1,500.

7. **INSTALL AN EXTERNAL BATTERY PACK**
   A separate battery pack is used to power an independent air conditioning system and a compact air-heating system for heat. Cost is approximately $3,500.

Source: U.S. Environmental Protection Agency, www.epa.gov/smartway/ndex.htm