

DIESEL IDLING & THE *IdleAire* SOLUTION

BACKGROUND

There are an estimated 4.2 million large diesel trucks in America and 1.3 million of them long-haul trucks with sleepers. Drivers of these trucks traditionally idle their engines during required rest periods (10 hours for every 11 hours on the road) or while waiting on loads (24 hours or more in some instances). Idling engines provide power for air conditioning, heating and various appliances in the cab.



Without IdleAire Drivers park their trucks and leave their engines idling for heating, cooling, and to use various accessories in the cab.

ISSUES/CHALLENGES/OPPORTUNITIES

- ▶ Drivers don't sleep well in the presence of an idling truck's noise, vibration and fumes
- ▶ A significant percentage of truck accidents is related to sleep deprivation
- ▶ The trucking industry is a growth industry that transports over 80% of the nation's goods
- ▶ Owners of travel centers desire new revenue sources to maintain and increase profitability
- ▶ Idling diesel engines emit various substances into the atmosphere, including nitrogen oxide, particulate matter, volatile organic compounds (such as formaldehyde and benzene), carbon dioxide and carbon monoxide. Some of these contribute to respiratory problems, such as asthma
- ▶ Class 7 & 8 truck diesel engines idling @ 900 rpm for extended times create significant engine "wear and tear" and reduce the engine's useful life by up to 50%
- ▶ Residents of neighborhoods around travel centers and large-vehicle parking areas where trucks idle often believe they are disproportionately affected by diesel emissions and the sound of sometimes hundreds of idling engines
- ▶ 3 billion gallons are burned during extended idling each year, while the U.S. is searching for solutions to energy demands and dependence on foreign oil

THE *IdleAire* TECHNOLOGIES CORPORATION SOLUTION

- ▶ IdleAire's Advanced Truckstop Electrification (ATE) technology allows truck engines to be shut down by providing each parking space with electrical outlets and an external, individual, thermostatically-controlled, high capacity heating and air conditioning unit
- ▶ The unit connects to the truck via a window-mounted service module, which also provides a Pentium-class computer with color touch screen, telephone connection, television and Internet access, and 120-volt outlets for appliances & engine block heaters
- ▶ A simple window adapter is the only retrofit required for virtually any long-haul truck
- ▶ Cost of IdleAire services to the truck owner is significantly less than the cost of fuel



With IdleAire Drivers at IdleAire-equipped parking spaces can turn off their engines and enjoy many of the comforts of home.

RESULTS FROM USING THE *IdleAire* SOLUTION

- ▶ Extended diesel idling is eliminated
- ▶ Fleets can rest in an environment that is conducive to safe highway performance – no truck fumes, vibrations or noise - and with the added benefits of connections for television, telephone, Internet and appliances
- ▶ Truck owners have the choice of significantly reducing idling, fuel and maintenance costs, and engine wear, and providing a benefit to drivers that will aid in retention and recruitment
- ▶ IdleAire shares revenue with travel centers and other locations, providing a new revenue source for property owners
- ▶ The IdleAire system places the truck's power demand on the local power grid and achieves a 100% reduction of all emissions related to truck idling in the immediate vicinity because the engine is off
- ▶ The IdleAire system is designed to reduce much of the noise and exhaust emissions nearby neighborhoods associate with travel centers and large-vehicle parking areas
- ▶ If all long haul trucks used the IdleAire system on a regular basis, it would promote fuel conservation, transportation cost savings and a cleaner environment on a national level, including significant reductions in airborne particulates, nitrogen oxide, volatile organic compounds, carbon monoxide and carbon dioxide

