
ENVIRONMENTAL Fact Sheet



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Idle Reduction Technology

What is idle reduction?

Idle reduction is typically used to describe practices and technologies that reduce the amount of time vehicles idle their engines. Reducing idle time saves fuel, engine wear and money while reducing emissions and noise. While changing driver behavior is the most effective means of reducing idling, circumstantial and operational needs may necessitate running the engine when the vehicle is stopped.

Light and medium duty refers to vehicles that weigh less than 10,000 pounds. Fleets in this category that may idle frequently include emergency vehicles, taxis and delivery trucks and vans. There are a number of technological options that can be installed to reduce idling in this group. *Coolant heaters* and *air heaters* employ the engine's cooling system or a heater exchanger to warm and defrost the passenger compartment. These use a small amount of the engine's fuel but operate independently from it. *Energy recovery systems (ERS)* use a small electric pump to distribute the engine's heat, keeping the cab's heater and defrost systems operating after the vehicle is turned off. *Power management systems* automatically turn on the engine to recharge the battery when a low voltage condition is detected.

As the name implies, **long haul trucks** typically travel long distances, necessitating the need for rest periods. Commercial drivers must follow DOT regulations that mandate a 10-hour rest after 11 hours of driving. Many long haul trucks have sleeper berths to facilitate these rest periods. Trucks idle their engines during rest periods to provide heating, cooling and electrical power to keep the engine warm and the battery charged. Options available for this application include *auxiliary power units (APUs)* and *truck stop electrification*. The simplest auxiliary power unit (APU) consists of a block heater that can warm the engine and provide heat to the truck's sleeper cabin. More advanced APUs also provide cooling and power. Truck stop electrification refers to stations at truck stops or rest areas where a driver can literally "plug in" to supply heating, cooling and power to run electrical equipment like refrigerators and televisions. Single-system electrification provides heating, ventilation and cooling (HVAC) alone, while dual system electrification provides HVAC and electricity. Both are typically operated by private companies that charge a fee for the service. The Federal Highway Administration, in conjunction with the US Department of Energy, maintains a truck stop electrification locator at www.afdc.energy.gov/afdc/locator/tse/.

School buses idle during warm-up time and when queuing at schools during pick up and drop off. Idling school buses pollute the air in and around the bus; that air can also enter school buildings through air intakes, doors and open windows. Battery- and fuel-operated heaters are

available that provide window defrosting and passenger cabin heat instead of idling. New Hampshire has instituted a clean air zone statute that calls for school districts to implement policies that, among other things, address the harmful effects of bus idling [RSA 200:48 Air Quality in Schools](#). Resources for establishing a school bus idle reduction campaign are available at the School Bus Anti-Idling webpage at http://des.nh.gov/organization/divisions/air/tsb/tps/msp/irc/school_bus.htm

NHDES encourages individual drivers to limit their vehicle's idle time by following these practices:

- Turn off your engine when you are parked or stopped (except in traffic) for more than a minute.
- Avoid using a remote vehicle starter, which encourages unnecessary idling.
- Avoid drive-through windows – park your vehicle and walk inside instead.

For more information about idling in New Hampshire, contact the New Hampshire Department of Environmental Services Air Resources Division (603) 271-6453 or go on-line at <http://des.nh.gov/organization/divisions/air/index.htm>.