

Vehicle Idling Reduction Strategies

For most on-road, heavy-duty fleets, idling can account for more than 50 percent of total trip time. The amount of diesel fuel burned, the emissions produced, and the maintenance impacts to trucks owners are significant. Consider the following:

- A class 8 truck typically idles 8 hours per night, 300 nights per year (2,400 hours per year).
- Each year a truck emits over 0.3 tons of nitrogen oxide (NOx) and 21 tons of carbon dioxide (CO₂).
- A typical diesel vehicle burns one gallon of fuel for every hour of idling.
- Idling trucks collectively burn away 1.2 billion gallons of diesel fuel annually at a cost of more than one trillion dollars to the industry.
- A truck idling for one hour suffers wear and tear equivalent to being driven seven miles. (ATA Technology and Maintenance Council)
- Operating life of engine oil is reduced by 75 percent due to prolonged idling – from 600 engine hours to 150 engine hours.

As indicated above, idling time can have significant economic impacts, depending on the size of a fleet. For air quality planners, limiting idling time is an understandable target to reduce emissions. For truckers, however, idling is a customary practice due to concerns that restarting the engine will cause damage to the engine. In addition, it is important to be able to operate the truck's heating and cooling equipment.

Nevertheless, studies on idling practices have found that restarting the engine does not impact the engine as much as assumed. Advances in idling control technologies, specifically auxiliary power units and truck stop electrification, are becoming more appealing to truckers and fleet owners because of cost savings, noise abatement, and improvements in air quality. At the same time, a number of local and state governments have implemented anti-idling legislation and/or ordinances to limit idling in order to address air quality and noise concerns.

below, adapted from the EPA, provides a useful starting point for writing your own policy.

[Calculate savings from idling reduction.](#)

Saves Money

Less idling means less wasted fuel, which can save your company money. A six-cylinder diesel vehicle that idles for one hour a day wastes more than \$1600 worth of fuel over the course of a year, with gas at \$2.50/gallon.

Sample No-Idling Policy (Adapted from the EPA)

Applicability

This policy applies to the operation of any vehicle on company property.

Rationale

Exhaust from idling vehicles can accumulate and pose a health risk to employees, drivers, and the community at large. Exposure to exhaust can cause

lung damage and respiratory problems. Exhaust also exacerbates asthma and existing allergies, and long-term exposure is thought to increase the risk of lung cancer. Idling vehicles also waste fuel and financial resources and contribute to global warming. Idling is bad for the environment and bad for the bottom line.

Purpose

To minimize idling time in all aspects of facility vehicle operation.

Guidance

- When drivers arrive at loading or unloading areas to drop off or pick up passengers, they should turn off their vehicles as soon as possible to eliminate idling time and reduce harmful emissions. Vehicles should not be restarted until passengers are ready to depart and there is a clear path by which to exit the pickup area. Exceptions include conditions that would compromise passenger safety, such as:
 - extreme weather
 - idling in traffic
- At bus and facility vehicle depots, limit idling time during early-morning warm-up to what is recommended by the vehicle manufacturer (generally 3 to 5 minutes) in all but the coldest weather.
- All service delivery vehicles should turn off their engines while making deliveries to the facility.
- All drivers of any company vehicle should receive a copy of this bulletin and have an opportunity to discuss it at the beginning of every year.

Additional Resources

- [Canadian Office of Energy Efficiency](#)
 - [EPA: School Bus Idling](#)
 - [Idling Calculator](#)
- [Federal Highway Administration—Idling](#)



THE BUSINESS PLAN

Why Be Green?

Why Be Green Overview Greening is good business Benefits to the environment Successful business greening initiatives [Principles and Policies](#)

Principles and Policies Overview An organization-wide environmental policy An environmentally preferable purchasing policy Environmental language in contracts Communicating environmental initiatives to the public Involving staff at all levels Sustainability Reports

Air Quality

Air Quality Overview Indoor air pollutants Low-VOC products Less-toxic cleaning and maintenance products Clean and efficient energy Ozone-friendly products Clean and fuel-efficient transportation [Construction/Renovations](#)

/Interiors

Construction/Renovations/

Interiors Overview LEED certification for existing buildings Replacing older HVAC systems Daylighting Wastewater recycling systems Rainwater catchment systems Building envelope Forest

Stewardship Council certified wood On-site renewable energy generation Reflective and green roofs Interiors **Energy**
 Energy Overview Energy audits Energy efficiency improvements On-site renewable energy generation Purchasing renewable energy **Paper**
 Paper Overview Purchasing Paper use reduction **Purchasing**
 Purchasing Overview Office-wide purchasing policy Paper products Appliances, electronics and HVAC Food and beverage Ozone-friendly products Laundry care Cleaning and maintenance Pesticides Fertilizers Low-VOC products Other environmentally preferable product specifications **Transportation + Accommodation**
 Transportation + Accommodation Overview
 Green hotels
 Clean and fuel-efficient transportation
 A bicycle-friendly environment
 Employee car pools
No-idling policies
 Public transportation
 Offsetting carbon emissions from travel
Waste Management
 Waste Management Overview Waste audits Recycling Proper disposal of batteries, electronics and hazardous waste Composting Donating leftover food **Water Quality**
 Water Quality Overview Minimizing urban runoff Minimizing pesticides and fertilizers Less-toxic cleaning and maintenance products Laundry care **Water Use**
 Water Use Overview Water audits Low-flow fixtures and water-efficient appliances Watering landscaping in the evening or overnight Planting native and drought-tolerant species

A six-cylinder diesel vehicle that idles for one hour a day wastes more than \$1600 worth of fuel over the course of a year (with gas at \$2.50/gallon).

Facts About Idling

Vehicle emissions are the largest contributors to outdoor air pollution. Idling a medium-duty gasoline vehicle for five minutes each day can emit as much as 30 pounds of harmful pollutants and 300 pounds of carbon dioxide in a year. The EPA estimates that air toxins emitted by vehicles account for half of all cancers attributed to outdoor sources of air pollution. Mobile sources contribute more than 50% of nitrogen oxides (NOx) emissions in Maine. NOx in the presence of sunlight and high temperatures reacts with volatile organic compounds to form harmful ground-level ozone (smog). In general, children are more sensitive to air pollution because they breathe 50% more air per pound of bodyweight than adults. In Maine, 9.3% of children currently suffer from asthma, the highest rate in New England according to a 2004 study report. Vehicle emissions can trigger asthma attacks and other respiratory distress.

The Benefits of Taking Action to Reduce Idling

Breathe Easier. By turning off your vehicle's engine when parked, you and others around you especially children and people with respiratory problems won't have to breathe unhealthy exhaust fumes from a vehicle that is going nowhere. Fumes can trigger asthma attacks and cause respiratory illnesses. Exposure to most auto pollutants is higher inside the vehicle than outside the vehicle. Toxic fumes from idling vehicles that are drawn into buildings through the ventilation system cause indoor air pollution.

of warm-up time is needed on cold winter days before driving away. Once the vehicle is running, the best way to warm it up is to drive it. Many components, including wheel bearings, tires and suspension systems only warm up when a vehicle is moving.

Protect Our Climate and Air. An idling vehicle emits 20 times more pollution than one traveling 32 miles per hour. By turning off your engine, you can help stop global warming, acid rain, and smog.



Myths About Idling

There are many myths that have people surrounding idling. Most of these myths are really just that, Myths.

The car should be warm prior to driving. In reality, idling is not an efficient way to warm the vehicle—even in cold weather. The best way is to actually drive the car. On the coldest of days, one should let the car run for no more than 30 seconds. However, until the temperature of the engine rises fully, it is advisable to avoid high speeds and rapid accelerations.



Save Money. More than 10 seconds of idling uses more fuel than restarting the engine. Idling a medium-duty vehicle for even 5 minutes a day wastes more than 13 gallons of gas a year. Just by turning your key you can save money.



**“Drivers Stop
Your Engines!”**

Reduce Wear and Tear on Your Vehicle's Engine. Excessive idling can damage engine components, including your vehicle's cylinders, spark plugs and exhaust system. Only 30 seconds

Idling is good for the engine.

No. Idling is terrible for the engine. In fact, it damages important parts such as cylinders, spark plugs, and the exhaust system. Because the engine is not at operating temperature, fuel combustion is not complete and can contaminate engine oil.

Shutting off the engine and then returning it on is bad for the engine.

Even frequent restarting has been shown to have little impact on engine components. The added wear on engine components is roughly equal to 1/7 of what one may pay in idling costs if the car kept running.