

Idle Reduction for Shippers

A Glance at Clean Freight Strategies

**Take 25 trucks
idling 2 hours
per day**

=

50 idle hours

50 idle hours

=

40 gallons for diesel

**At \$3.85¹ per gallon
=\$154 per day**

**At 300 days per year
=
Projected savings of
\$46,200**

“No idling” policies and practices can improve air quality in and around your facilities and docks, save fuel, and reduce your supply chain’s carbon footprint.

What is the Challenge?

Drivers waiting to load or unload at a shipper’s facility tend to let their engines idle for one of several reasons:²

- For comfort—to power a heater or air conditioning unit.
- To generate electricity for on-board appliances, electronics, and auxiliary equipment.
- In extreme cold, to prevent fuel from gelling and the engine block from freezing.
- Due to the outdated thinking that idling is good for the engine.
- Out of habit.

Excessive idling is an inefficient and expensive use of diesel fuel and largely preventable source of emissions. On average, an idling diesel engine will consume 0.8 gallons of fuel per hour and emit more than 18 pounds of CO₂³ in addition to other pollutants such as fine particulates, increasing the health risks for dockworkers and others at your facility.⁴

What is the Solution?

You may not have direct control over driver behavior but you can influence it while a driver and truck are at your facility. Here’s what you can do to reduce or eliminate idling on your premises:

- Institute a “no idling” policy with clear signage. Explain it both to drivers and their managers, communicating in detail the rules that must be followed.
- Offer preferential loading and unloading times and docks to fleets with no-idling policies.
- Establish climate-controlled “comfort stations” at your facility where drivers can wait.
- Encourage and incentivize the use of SmartWay-verified idle-reduction devices: Auxiliary Power Units (APUs) and gen-sets; direct-fired heaters; and automatic engine shut-down and start-up systems.
- Train supervisors and others with authority (including security personnel) how to tactfully approach and discuss your no-idling policy with drivers, emphasizing potential cost savings and reduced engine wear.

As a shipper, you have direct control over the amount of time drivers have to wait at your facility to load or unload (a.k.a. detention time). By reducing detention time, you can reduce the need for idling. Several factors contribute to excessive detention time, including:⁵

- Limitations at facilities, including the inability to drop-and-hook and insufficient loading equipment or staff. These limitations can be exacerbated when facilities over-book appointments and create a backlog of vehicles.
 - Products not being properly staged, palletized, and ready to load when the truck arrives.
 - Bills of lading and other documents are missing or not properly filled out.
 - Scheduling practices that encourage drivers to line up hours before the facility opens.

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Idle Reduction for Shippers

A Glance at Clean Freight Strategies *Continued*

Costs

Generally speaking, the capital costs for implementing and maintaining a no-idling policy are low. The costs for signage (\$50 or less for an aluminum sign) and for training employees about the policy are nominal (these rules are usually incorporated into regular orientation and training classes).

Offering drivers access to a waiting area at your facilities should incur no costs. However, the cost to make those areas appealing (adding TV, seating, vending machines, Wi-Fi and electrical outlet access, a desk, etc.) will vary.

Savings and Benefits

There are several benefits to shippers that institute no-idling policies at their facilities.

Reduced fuel-related charges: An idling diesel engine will consume approximately 0.8 gallons of fuel per hour.⁶ Fuel burned at idle can affect the calculation of the carrier's fuel surcharge and potentially inflate your overall transportation costs.

Operational efficiency: Detention impacts a driver's ability to meet your delivery schedules and his federal hours of service requirements by reducing available driving time. Additionally, for about 65 percent of drivers, detention time has resulted in lost revenue from either missing an opportunity to secure another load or paying late fees to the shipper.⁷ There is an environmental cost to detention as well: every minute a truck sits in your yard is an opportunity for the driver to idle the engine and generate exhaust emissions.

Improved air quality: While more stringent heavy-duty diesel emissions standards improve the nation's newer fleet, millions of older diesel engines remain in use. These "legacy" vehicles emit large amounts of nitrogen oxides and particulate matter, both of which contribute to serious health problems,

including premature mortality and hundreds of thousands of asthma attacks. These health problems result in millions of lost work days, increased health insurance costs, and other impacts to your workers.⁸

Newer heavy-duty truck engines (model year 2010 and later) are required to comply with stringent emission standards for oxides of nitrogen (NOx), frequently achieved by the use of the after-treatment emission control technology called selective catalytic reduction (SCR). When functioning properly, the SCR system has been demonstrated to reduce NOx by up to 94 percent.⁹ However, under conditions where the catalyst cools, such extended periods of idling, NOx is emitted in higher amounts¹⁰ at untreated levels. To combat this, research has been conducted on thermal management strategies to maintain higher exhaust gas temperatures at lower engine load to keep the SCR active and reducing NOx.¹¹ However, the most effective method to reduce NOx associated with idling is to shut off the engine.

Savings: By lowering carriers' costs through 'no idling' rules and preferred dock treatment, shippers might be able to negotiate lower shipping rates. For example, if a warehouse distribution facility has 25 trucks idling two hours per day, this would equal 50 idle-hours or the consumption of 40 gallons of diesel (assuming 0.8 gallons per hour). At \$3.85 per gallon¹² (August 2014) this would cost \$154 per day. For facilities operating 300 days a year, this fuel consumption would cost \$46,200 and produce about 270,000 pounds of carbon emissions (15,000 hours @ 18 pounds per hour). By facilitating the reduction of diesel consumption by its carriers, shippers help to lower the cost of their fuel, which is a savings that may be passed on to the shipper.

A no-idle policy combined with efforts to reduce detention time can improve the operational efficiency at your facility, reduce detention-related charges, and perhaps position you as a "shipper of choice" when carriers allocate capacity.

NEXT STEPS

1 Post "no-idling" signage at facility entrances, loading zones, and docks. Signs must be clear, easy-to-read, and abundant. Use SmartWay branding on the signage to create awareness of your organization's commitment to freight sustainability and environmental responsibility.

2 Communicate the reasons for your no-idle policy to your employees, carriers, and their drivers, and incorporate the policy into your carrier agreements.

3 Establish a driver comfort station where drivers should stay while their vehicle is waiting to be loaded or unloaded.

4 Take steps to reduce detention times and improve efficiency at your facilities, including scheduling appointment times, training drivers to be more familiar with your operations, and providing the resources your own dockworkers and staff need to move goods efficiently.