

Driver Training

A Glance at Clean Freight Strategies

ENERGY & FUEL SAVINGS

Gallons Saved:
794 gallons

CO₂ Savings:
8.06 metric tons

Fuel Economy Increase:
5%

MPG (original 6 mpg):
6.3 mpg

Reduction in Fuel Consumption:
5%

Fuel Cost Savings:
\$3,015

Driver training programs can help trucking companies save fuel and reduce greenhouse gas emissions by increasing drivers' skills, knowledge, and performance. A driver training program that improves fuel economy by 5 percent could save over \$3,000 in fuel costs and eliminate 8 metric tons of greenhouse gas emissions per truck each year.

What is the Challenge?

Even highly experienced truck drivers can boost their skills and enhance driving performance through driver training programs. Training that targets fuel efficiency can help drivers recognize and change driving habits that waste fuel. For example, driving 65 mph instead of 55 mph can use up to 20 percent more fuel, idling a typical heavy-duty engine burns about 0.8 gallons of fuel per hour, and driving with the engine rpm too high can waste several gallons of fuel each hour. Other common habits that reduce fuel economy are frequent or improper shifting, too-rapid acceleration, too-frequent stops and starts from failing to anticipate traffic flow, and taking circuitous routes.

A few simple changes in driving techniques can produce sizable fuel savings of 5 percent or more. A Canadian study estimates that many fleets could achieve a 10 percent fuel economy improvement through driver training and monitoring. A study for the European Commission estimates that an annual one-day driver-training course will improve truck fuel efficiency by 5 percent.

What is the Solution?

Well-trained drivers can reduce fuel consumption by applying a number of simple techniques.

- Use cruise control where appropriate
- Coast whenever possible
- Brake and accelerate smoothly and gradually
- Progressive shifting (upshift at the lowest rpm possible)
- Limit unnecessary truck idling
- Start out in a gear that doesn't require using the throttle when releasing the clutch
 - Limit unnecessary shifting; block-shift (go from, for example, 2nd gear to 5th gear)
 - Drive at the lowest engine speed possible
 - Reduce parasitic energy losses by limiting the use of accessories.

Savings and Benefits

Fleets that improve fuel economy by at least 5 percent through driver training and monitoring programs can save more than \$3,000 per truck each year in fuel costs and eliminate 8 metric tons of carbon dioxide emissions per truck each year. Driver training can generate larger efficiency gains for vehicles in urban service, where shifting practices have more influence on fuel economy. For a typical long-haul truck, the initial cost of training and the purchase of related equipment such as an electronic engine monitor and recorder could be recouped within 2 years from fuel cost savings. Trucking companies can realize even greater fuel and maintenance savings by using technologies that limit truck idling and highway speed.

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NEXT STEPS

1 Trucking firms can consider implementing driver training programs to reduce fuel costs and teach drivers fuel saving techniques through employers, vocational schools, and for-profit training organizations.

2 Electronic engine monitors can be installed to review drivers' operating patterns and benchmark individual performance over time. Create successful incentive programs that are simple to administer by paying bonuses and setting realistic goals. To provide additional motivation, training can be combined with an incentive program to reward drivers for enhanced performance.

3 Fleets can contact their national or local trucking organizations for more details on improving driver performance and establishing a driver incentive program. Also contact truck dealers or equipment vendors for information on engine monitors and other fuel-saving devices.

