

For virtually every trucking company, fuel is the second largest expense behind labor. Numerous technologies are currently available to help these companies reduce fuel consumption; however, one of the major barriers to their widespread adoption is a lack of investment capital. The SmartWay Transport[®] Partnership is establishing several innovative financing programs to make these technologies more accessible to interested trucking companies through SmartWay Upgrade Kits. Greater use of these technologies will not only reduce fuel consumption and related costs to trucking companies, but it will also result in reductions in emissions of greenhouse gases and other harmful air pollutants.

The SmartWay Technology Upgrade Kit

To assist trucking companies, SmartWay has bundled highly fuel-efficient technologies with emission control devices into SmartWay Upgrade Kits. These SmartWay Upgrade Kits create a unique incentive for trucking companies to retrofit their trucks because the monthly fuel savings generally exceed the monthly loan payments. Fleet owners save money immediately. The following table shows how the individual components of the SmartWay Upgrade Kits can benefit the company and the environment.

What is the SmartWay Transport Partnership?



- Voluntary partnership between the U.S. Environmental Protection Agency (EPA) and the freight industry to improve energy efficiency and reduce emissions from freight transportation.

What does the Partnership do?

- Encourages trucking companies and railroads to adopt technologies that reduce fuel consumption and emissions.
- Works with freight shippers (such as IKEA, Nike, Lowe's, The Home Depot) to ship more of their freight using trucking companies participating in the Partnership.

| Technology | Cost ¹ | Monthly Loan Payment @ 5% for 48 months | Benefits ² (Monthly Fuel Savings) | Net Monthly Savings |
|---|-------------------|---|--|---------------------|
| Idle Reduction Device – Bunk Heater | \$1,000 | \$23 | \$195 | \$172 |
| Idle Reduction Device – Auxiliary Power Unit (APU) | \$7,000 | \$161 | \$300 | \$139 |
| Aluminum Wheels for Single Wide Tires | \$3,000 | \$69 | \$150 | \$81 |
| Trailer Aerodynamics | \$2,400 | \$55 | \$188 | \$133 |
| Emission Control Device – Diesel Oxidation Catalyst (DOC) | \$1,000 | \$23 | \$0 (20-50% PM emission reduction) | -- |
| Emission Control Device – Particulate Matter (PM) Filter | \$6,000 | \$138 | \$0 (90% PM emission reduction) | -- |

SmartWay Upgrade Kits that include an idling reduction device, emission control device, aerodynamics, and single wide tires may improve fuel economy up to 25%, reduce oxides of nitrogen (NOx) up to 25%, and reduce particulate matter (PM) up to 90%. Upgrade Kits purchased by trucking companies can be customized to the specific needs of the company. The following table provides some possible SmartWay Upgrade kits options.

¹ Equipment cost may vary depending on vendor, equipment specifications, quantities purchased, etc.

² Monthly fuel savings are estimated for a long-haul truck using 18,000 gallons of diesel per year and idling 1,200 hours per year for bunk heaters, and 2,400 hours per year for APUs. Fuel cost is \$2.50/gallon.

| Possible SmartWay Upgrade Kit Options | Total Cost | Monthly Loan Payment @ 5% for 48 months | Benefits (Monthly Fuel Savings) | Net Monthly Savings |
|---------------------------------------|------------|---|---------------------------------|---------------------|
| Heater, Tires, Aero, DOC | \$7,400 | \$170 | \$495 | \$325 |
| APU, Tires, Aero, DOC | \$13,400 | \$309 | \$600 | \$291 |
| Heater, Tires, Aero, PM Filter | \$12,400 | \$286 | \$495 | \$209 |

For additional idle reduction technologies, visit <http://www.epa.gov/otaq/smartway/idlingtechnologies.htm>.
 For a list of emission control devices, visit <http://www.epa.gov/otaq/retrofit/retroverifiedlist.htm>.

Financing Options

SmartWay is exploring a number of options to help trucking companies reduce their fuel consumption and costs and make funds available for the purchase of SmartWay Upgrade Kits. These options include state loan programs, national loan programs, and performance contracting arrangements.



A SmartWay partner using single wide tires.

State Loan Programs:

- Some states have existing loan programs through their small business or environmental offices that may be able to finance SmartWay Upgrade Kits.
- These loan programs are often offered with terms that are more attractive than currently available commercial loans (e.g., low-interest rates, flexible repayment terms).
- SmartWay has partnered with loan programs in Arkansas, Minnesota, and Pennsylvania to offer SmartWay Upgrade Kits and is working to partner with additional states.

National Loan Programs:

- Commercial banks or other organizations could develop programs aimed at providing capital to trucking companies for the purchase of fuel saving and emission reduction devices.
- Programs could be nationally available and offer below-market rates or preferred terms for trucking companies.

Performance Contracting Arrangements:

- These arrangements are based on the Energy Service Company (ESCO) model that has been highly successful in the buildings sector.
- In these arrangements, ESCOs purchase technologies for use by companies, and the companies return a portion of the value of their energy savings to the ESCO to pay for the technology.
- SmartWay is planning a pilot project to develop this concept for the trucking industry. Fleets would test out various technologies and document their fuel and cost savings from the use of the technologies.



A SmartWay partner using trailer aerodynamics.

For More Information

If you would like to learn more about the national loan programs and performance contracting arrangements, please contact: Mike Zatz, 202-343-9035, zatz.michael@epa.gov

For information about the state loan programs, please contact: Annie Kee, 202-343-9218, kee.annie@epa.gov, or Kristin Sipes, 202-343-9636, sipes.kristin@epa.gov

Information about SmartWay can be found on the program website: <http://www.epa.gov/smartway>.