

## FACT SHEET

### **The Situation**

- Truckers run their engines while stopped in order to operate cab heating, air conditioning, communication and entertainment systems and medical devices.
- Long-haul trucks, without idle reduction technology and not traveling in “no idle” states, typically idle 6 hours per day, or 1,830 hours per year. Some trucks may idle one to two nights a week, while others hardly ever have the engine shut off.

### **The Problem**

- Idling consumes as much as a gallon of diesel fuel an hour, depending on the size of the engine and the load put on it. In 2006, more than 650,000 long-haul heavy-duty trucks idled overnight for required rest stops, using more than 665 million gallons of diesel fuel per year. (Source: Argonne National Laboratory, “Estimation of Fuel Use By Idling Commercial Trucks, 2006). Anti-idling laws and ordinances have reduced idling, but it’s still a major financial and environmental concern.
- For a long-distance sleeper cab truck idling an average of six hours a night for 300 days a year, at \$4 a gallon for diesel fuel, overnight idling costs \$7,200 a year per truck.
- Idling produces emissions that contribute to air pollution, affecting drivers and residents of nearby communities. Using the figures above, overnight idling produces 6.7 million metric tons of carbon dioxide, 124,000 tons of nitrous oxide, and 3,400 tons of particulate matter. (Sources: Argonne; “Improving Truck Efficiency and Reducing Idling,” Oregon Department of Environmental Quality, 2010)
- Overnight idling increases engine maintenance costs. Running an engine at low speed (idling) causes twice the wear on internal parts compared to driving at regular speeds; a

truck idling for one hour suffers wear equal to about seven miles on the road. Increased oil changes and engine overhauls due to idling can increase maintenance costs by an average of \$0.14 per hour. Overnight idling boosts maintenance costs by \$116 million a year. (Sources: American Trucking Associations; Oregon DEQ report)

- Idling generates noise that can prevent drivers from getting the rest they need to be alert on the road.
  
- Increasingly states and communities are curtailing or banning truck idling. At least 30 states (including D.C.) have anti-idling laws at the state or local level, sometimes both, and more are coming; Oregon's takes effect Jan. 1, 2012. (Source: American Transportation Research Institute) Numerous Canadian municipalities have anti-idling rules on the books; Nova Scotia was the first province to approve one, for buses.
  
- Trucks move the bulk of American freight (67 percent of tonnage by all domestic modes, according to the American Trucking Associations). Growing freight volumes moved by truck means more fuel consumption – and more reliance on imported oil.

### **Truck Stop Electrification**

■ Truck Stop Electrification reduces fuel consumption and emissions by powering AC-powered HVAC systems, or space heaters. AC-power is also often readily available at shipper locations, plus at truck terminals, or at “home” for owner operators. It provides a more healthy work environment for truckers – cleaner air and less noise. It costs much less than idling (\$1 an hour vs. a \$4 gallon of diesel fuel per hour). And it shifts energy requirements from expensive, imported oil to domestically produced electricity.

Truck manufacturers are incorporating equipment to use TSE into their vehicles. In addition, many anti-idle solutions, with shore power connectivity, are available on the aftermarket. Federal and state programs often provide incentives to truck and fleet owners to adopt anti-idling technologies. TSE can easily be combined with other technologies, including aerodynamic tractors and trailers and low-friction tires, to give truck owners and operators multiple tools to reduce energy use.

Companies and organizations such as Shorepower Technologies and Cascade Sierra Solutions are working on building a network of truck stops to give truckers access to anti-idling services along the nation's highway freight corridors.