

Air Quality Improvement 8

Businesses can help improve air quality in a variety of ways. In Anchorage, two air pollutants of primary concern are carbon monoxide (CO) and particulate matter (PM). Vehicles are a major source of CO, especially during Anchorage's long, cold winters. They emit 90% of the CO pollution nationwide. Particulate matter, or dust, comes mainly from road and parking lot traction sand, and is a problem especially in the spring. For most businesses, improving vehicle efficiency and finding ways to reduce driving will provide the biggest reductions in air emissions. Other facility processes also can produce air emissions, so look at all of your operations for improvements.

Did you know...

- Plugging in an engine block heater can reduce wear and tear on engines and cut carbon monoxide (CO) emissions by an average of 72%.
- An estimated 25% of all CO is emitted during start up and warm up, before the vehicle actually begins the trip.
- On each weekday morning during Anchorage's winter, about 70,000 cars and trucks are started after spending the night outside in the cold dumping a total of about 10 tons of CO into the air in our neighborhoods. The average warm-up idle time for morning commuters is 12 minutes.
- If all of these cars were plugged in, emissions would be cut by at least six tons.
- CO concentrations in some neighborhoods can be 20 to 30% higher than those measured near major intersections during the morning commute hours.
- Heaters and defrosters work faster on vehicles that have been plugged in, allowing shorter idle times.

GREEN STARS

University of Anchorage Alaska

- Provides free bus passes to employees and students.
- Provides bike racks and trails for walkers and bikers.

Municipal Light & Power

- Provides electrical outlets in employee parking lots for individuals who wish to plug in at work.

Steller Secondary School and Polaris K-12 School

- Developed and promoted an Anti-Idle campaign to reduce emissions near school entrances.

3rd CMS Propulsion Flight, Elmendorf Air Force Base

- Encourages the use of bike paths throughout the base and installed showers and locker rooms for staff to encourage transportation by bike or on foot.
- Implemented a vehicle maintenance and inspection program to reduce vehicle emissions.
- Implemented an alternative work schedule for civilian employees allowing them to stay at home one day every two weeks with a nine hour a day work week, reducing transportation-related pollution.



- *Plug it in!* Cold engines produce a lot more CO than warm ones. Encourage employees to install engine block heaters in their vehicles and provide outdoor outlets and extension cords at the workplace for employee use. To minimize electricity consumption, use timers programmed to turn on block heaters two hours before driving. Educate employees about the importance of plugging in both at home and at work. Consider incentives such as providing timers and cords for use at home, or helping to cover the cost of installing block heaters in employees' vehicles. Also, ensure that business fleets are plugged in during winter months. Vehicles should be plugged in for two hours before starting when the temperature drops below 20 degrees F.
- *Develop and identify alternative transportation programs for your employees.* Encourage employees to carpool, ride the bus, and use non-motorized ways to get to work. Help employees identify potential fellow carpoolers within your business or contact People Mover's Share-A-Ride program for assistance in matching up with carpoolers from around town. Offer incentives for carpooling, such as better parking spots or providing cars or vans for carpooling. Preferred Parking signs are available for participants in People Mover's Share-A-Ride program.

Encourage employees to take the bus by providing bus passes. Employers who purchase bus or van passes and provide them to employees at a reduced rate or at no costs may be eligible for tax breaks under the Federal Commuter Choice program (Internal Revenue Code [26 USC 132(f)], visit www.fta.dot.gov for more information).

Participate in People Mover's Employer Transportation Coordinator (ETC) program by designating an employee to help promote use of People Mover in your business through posting information from People Mover and conducting an annual commuter survey. See Chapter 11 for contact information for People Mover's programs.

- *Develop maintenance procedures to increase electric motor efficiency.* Motors that are operating efficiently use less energy and generate less pollution. To keep motors running smoothly, clean and maintain them regularly. Lubricate and adjust belts, clean with brushes and air pressure vacuum, and check the alignment of shafts. For larger, enclosed motors, install filters to minimize corrosion and dust. Finally, make sure that you run the motor without the plug to remove all old lubricant before adding new lubricant.
- *Replace old electric motors with premium efficiency motors.* Premium efficiency motors contain thinner, high quality steel laminations in the rotor and additional copper in the windings. They also have improved power factors over standard motors. Higher initial costs are offset by increased operating efficiency and decreased energy use. An energy efficient motor will save energy and money over its entire life. Visit www.oit.doe.gov/bestpractices for more information about motors.

