

Air Quality -- Reduce Vehicle Pollution

This tip sheet corresponds with Air Quality Award Standard # 7 – Reduce Vehicle-related Pollution. Another useful tool is “Becoming a Green Star: A Waste Prevention Guide for Anchorage Businesses.”

You can find the guide online in pdf and html format at www.greenstarinc.org/guideindex.php or request a hard copy from Green Star.

Plug It In

We rely on our vehicles to get us where we need to go but they pollute along the way, adversely affecting our air quality.

On each weekday morning in Anchorage, about 70,000 cars and trucks are started after spending the night outside in the cold. Local studies show that more than three-quarters of carbon monoxide emissions in Anchorage come from vehicles.

In addition, a good portion of pollutants are generated when “cold starting” a vehicle. One of the best ways to reduce cold-weather emissions from our vehicles is to plug in.

Installing engine block heaters, and consistently plugging in your fleet and personal vehicles if they are parked outdoors whenever it's colder than 20°, reduces carbon monoxide emissions by an average of 60%.

Plugging in also improves fuel efficiency, reduces engine wear, and increases driving visibility and comfort. Remember, a cold start-up yields maximum engine wear and minimum fuel efficiency.

Outdoor or all-weather timers can be used in conjunction with block heaters to create an even more efficient system. By plugging into a programmable timer, you can set the timer to turn on two to three hours before your commute without having to get up early or leave the car plugged in unnecessarily all night.



Alaskan “Plug It In” Protocol

If you park your vehicle outside, you should:

- Plug in your engine block heater anytime it's 20°F or colder.
- Only warm up your engine block heater for two to three hours before driving.
- Use an outdoor timer to limit the time your engine block heater is on to two to three hours to save electricity.
- If you start your engine cold, be sure to warm it for 10 minutes. Idling for more or less than 10 minutes causes more pollutants, which also means the engine is running inefficiently and using more fuel.
- Remember to unplug before you drive away!



Helpful Resources

Engine Block Heaters

Contact your local mechanic to install a block heater if your vehicle does not already have one. Green Star can loan a small device designed to test whether your block heater is functioning properly.

Timers

Green Star helps distribute free timers to use with engine block heaters. Give-away events are typically scheduled in November and December. Contact Green Star for details about timer availability.

Display Board

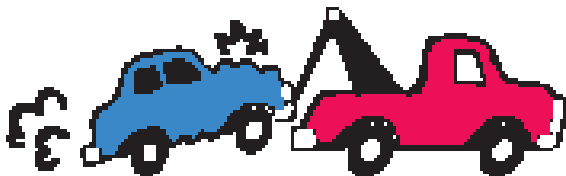
If your workplace receives lots of people traffic, consider featuring an Air Quality display during a few weeks of fall or winter to educate the public about local air quality issues. Contact Green Star to borrow the display for your workplace.

Literature

Green Star and the Anchorage Department of Health & Human Services both can provide brochures about the benefits of plugging in. Contact Green Star at 278-7827 or the Department of Health & Human Services Air Quality staff at 343-4200.

Car Tips to Reduce Pollution

- Avoid driving when possible. Meet by phone, telecommute, walk to meetings.
- Carpool and combine trips to reduce driving time.
- Drive gently. For gasoline-fueled vehicles, jackrabbit starts and quick stops generate additional pollution from both vehicle exhaust and particulates from your tires and the roadway.
- Reduce idling. Businesses can designate areas as idle-free zones to reduce emissions. Contact Green Star to get Idle-Free Zone signs.
- Try a windshield cover to improve visibility without the long idle time and all that scraping.
- Allow children to ride the school bus or form "school pools" with other parents in the neighborhood.
- Keep cars maintained: tune-up every 3,000 to 5,000 miles, check spark plugs and filters regularly, and keep tires inflated properly. A well-tuned vehicle can use as much as 10% less fuel than a poorly tuned one.
- Maintain current I/M certification to ensure your vehicle is not emitting more pollution than necessary.
- Use tire studs that reduce road wear and are approved by the Alaska Department of Transportation, such as Street Smart TM studs. And be sure to switch out your studs by the required dates to avoid ongoing roadwear.
- Take advantage of flex time. Drive to and from work during off hours to reduce overall emissions at peak times and to reduce traffic congestion.



Alternative Fuel Vehicles

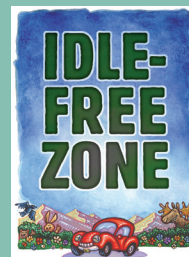
Driving an alternative fuel vehicle is one way to reduce your air emissions impact. Alternative fuel vehicles are most commonly hybrid fuel/electric cars and trucks, but can also be fully electric, compressed natural gas, or biodiesel powered.

Driving a hybrid is different than driving a traditional car. To get the most out of your hybrid, you should toss all that you learned about gentle starts out the window. The engine of a hybrid is most efficient at high speed and torque. First, when you see that you'll need to slow or stop ahead, start braking gently and as early as possible so you recover the most braking energy back into the battery for later reuse.

Second, accelerate briskly whenever traffic and weather conditions permit. Be sure to consider the road conditions first and foremost -- safety is more important than fuel efficiency!

Idle-Free Zones

In 2006, Green Star provided 180 "Idle-Free Zone" signs to the Anchorage School District to install at each school in the district. Schools including Polaris, Steller, West High, Chugach Optional, Inlet View Elementary, and Turnagain Elementary have included articles in school newspapers about the benefits of reducing idling.



These schools also provided a variety of other suggestions, including encouraging parents to arrive as close to when school gets out as possible, parking rather than idling, turning up the car heat before stopping to keep things warm, an educating parents about starting a walking school bus to minimize school traffic.

A number of schools have interested PTA members who help direct traffic and cone off areas in front of school doors to minimize traffic congestion, keep vehicles moving, and increase safety.



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