GREEN WRENCH TECHNICAL ASSISTANCE
DEPARTMENT OF ENERGY & ENVIRONMENT

Sustainable Car Ownership

Car owners can protect the environment by taking the follow actions at the mechanic, at home, on the road, and when buying a new car.

At the Mechanic

1. **Ask for sustainable products to be used in your vehicle.**
    a. **Re-refined motor oil.** Motor oil can be recycled into re-refined motor oil and lubricating oil that can be used in vehicles. Recycling motor oil saves a valuable resource and uses less energy than producing virgin motor oil.
    b. **Recycled antifreeze.** Recycled coolant mixtures (the mixture of antifreeze and water used in cars) are less expensive than the equivalent amount of new antifreeze and water.
    c. **Copper-free brake pads.** Installing copper-free brake pads reduces the amount of copper, mercury, lead, and other toxins found in brake pads from getting into our environment.
    d. **Non-lead wheel weights.** If the auto shop uses wheel weights to balance your tires, ask them to use steel or zinc wheel weights instead.

2. **Regular maintenance is a money-saver.** If a car is out of tune or has failed an emissions test, fixing it can improve gas mileage by an average of four percent, depending on the repair. More serious problems, such as a faulty oxygen sensor, can reduce gas mileage by as much as 40 percent. Find more at: https://www.fueleconomy.gov/feg/maintain.jsp

At Home

1. **Manually check tire pressure monthly.** While some cars have built-in tire pressure gauges, they are only required to alert the driver when a tire has lost 25 percent or more of its air. Properly inflated tires can save ten cents per gallon on gas, produce less exhaust, which causes asthma, lung cancer, and other diseases, and contributes roughly 1.5 tons less greenhouse gasses every year. Cars with proper tire pressure are also safer because they are easier to handle and less likely to have a blowout.

2. **Make sure vehicle wash water does not go into a storm drain.** Take it to a licensed car wash, which carefully manage and treat wash water. When washing a car at home, wash it over a grassy areas where wash water will soak into the ground. Always use biodegradable soap, and try to use as little water as possible to wash the car. A typical garden hose uses

about 10 gallons per minute, which means you use 100 gallons of water for a 10-minute car wash. Instead:

a. Use a bucket and sponge to wash the car.
b. Use a garden hose nozzle with a trigger-lever or a power washer, which only use 2-5 gallons per minute.
c. Switch to a waterless alternative, such as a spray-and-wipe car wash product.

If your organization holds car-wash fundraisers, contact DOEE for guidance on controlling water runoff in parking lots. Contact Clara Elias at clara.elias@dc.gov or 202-645-4231.

3. **Watch for leaks and have them fixed.** Check the ground beneath the car for signs of leaks, like brown liquid or rainbow sheen, and have it serviced immediately, before these leaks end up in the river.

4. **Maintain your Electric Vehicle (EV)**.
    a. The District of Columbia and neighboring counties have hundreds of charging stations available to keep you and your car going: www.plugshare.com or map.openchargemap.io.
    b. One of the main myths about EVs is that owners need to replace the battery to keep the car running as optimal as possible. When the battery needs to be replaced it can cost around $6,000. Follow these habits to help extend battery life:
        i. Cut down on the use of accessories, such as heating, air conditioning, and the stereo system.
        ii. Pre-heat or pre-cool the car while it is still plugged in.
        iii. Turn on the economy mode.
        iv. Avoid breaking hard. Instead, anticipate braking and follow at safe distances. This lets the regenerative braking system to work at its best.

        Learn more at: https://www.energy.gov/eere/electricvehicles/maximizing-electric-cars-range-extreme-temperatures
    c. One of the surprising costs for EVs is tires. Because they deliver so much torque directly from the motor to the tires, the tires wear out faster than traditional vehicles.
        i. Check EV tires every month and replace them when the tread wears down to 2/32 of an inch.

        Find more information at: https://www.nhtsa.gov/equipment/tires

On The Road

Maximize gas mileage. There are a number of smart driving habits that improve fuel economy and reduce emissions from your vehicle. For example, going the speed limit can save you $0.17 to $0.35 per gallon. Fuel economy can drop by seven percent for every five mph over 50 mph. Find out more at: https://www.fueleconomy.gov/feg/driveHabits.jsp

Buying a New Car

Instead of investing in a typical car that emits 4.6 metric tons on carbon dioxide each year, consider purchasing a green vehicle that lowers greenhouse gas emissions and has better fuel economy. Explore green vehicle options at https://www.epa.gov/greenvehicles