

Energy Saving Tips for Small Business: Auto Dealers

Considering that auto dealerships use, on average, more energy per square foot than a typical office building (110kBTU – 93kBTU respectively), it's important for dealers to explore all their energy efficiency options. Fortunately, there are many cost-effective opportunities that exist for significant reductions in energy usage. These opportunities focus on auto dealership-specific areas of energy use energy such as compressors, paint booths, lighting, HVAC, and certain other services, while still



maintaining quality, safety, and customer comfort as top priorities. This document is designed to help auto dealers make smart energy decisions that can save time and money. Read more about these potential improvements in the following sections:

- How to profile your dealership's energy use
- What auto dealer-specific tips can help you save energy and money
- Where to find online resources.

PROFILING YOUR ENERGY USE

The National Automobile Dealers Association (NADA), <https://www.nada.org>, has partnered with the EPA since 2007 to help dealers save energy and money through cost-effective energy efficiency opportunities. With the help of auto dealerships across the country, NADA is gathering data to develop a 1 – 100 ENERGY STAR score for dealerships which will then allow dealers to apply for ENERGY STAR certification.



By contributing to this survey, in the future you will be able to receive an “apples to apples” comparison of your energy performance with that of other dealerships nationwide in a simple, easy-to-understand number. A score of 50 represents median energy performance, whereas top-performing dealerships that score a 75 or higher will be eligible to earn ENERGY STAR certification.

TIPS FOR ENERGY SAVING AT YOUR DEALERSHIP

Inefficient equipment/lighting not only draws power, but also emits heat that can contribute to higher cooling bills. Use the information below as a guide for energy savings opportunities.



LEARN MORE AT
energystar.gov

ENERGY STAR®, a U.S. Environmental Protection Agency program, helps us all save money and protect our environment through energy efficient products and practices. For more information, visit www.energystar.gov.

Compressors

When selecting a compressor, it is important to remember that in addition to your specific performance needs, compressor types consume energy at different rates. Take a look at the following list to see what each compressor type offers:

- **Reciprocating compressors.** This design uses a piston to maintain pressure in a tank. It is prone to heat build-up in the compressor head and condensation build-up. Reciprocating compressors are available in a variety of capacities, require moderate maintenance, and are easy to rebuild.
- **Scroll compressors.** Use a rotating scroll to compress air. They generally are more efficient than reciprocating designs at higher volumes and more frequent use, and deliver greater volume and good pressure.
- **Centrifugal compressors.** Typically used for large shops, they provide large quantities of air at relatively low pressures. They are low-maintenance, and can be energy-efficient when run at 80 percent or greater of peak capacity throughout the day. They are extremely inefficient at lower capacities.

For efficient compressor operation:

- Periodically check belts for wear and tension
- Lubricate moving parts per manufacturer's maintenance recommendations
- Frequently empty water separators
- Change air-filters at manufacturer-recommended intervals. Consult a compressor product and service provider to determine the most appropriate system size and energy efficiency for the facility.

Paint Booths

Paint booths are energy-intensive. Automotive refinishing often involves HVLP (High-volume, Low-pressure) guns that require large volumes of air and ventilation systems necessary to remove vapors and particulates from the booths. However, today's paint booths are much more efficient than those available just five to ten years ago, with manufacturers offering premium motors, improved air-flow and ducting, variable speed drives and controls, and more efficient lighting. When selecting a new paint booth, ask suppliers if they incorporate these features and if they have data comparing the efficiency of their booths to other manufacturers'. For existing booths, consult booth suppliers and/or a qualified electrician to determine if cost-effective energy-efficient features can be retrofitted.

Car Wash and Detailing Facilities

Many dealerships have on-site vehicle washing centers or bays. These range from simple pressure washers to automated car washes with rollers and dryers. These washers can be extremely energy- and water-intensive resulting in significant energy costs.



LEARN MORE AT
energystar.gov

ENERGY STAR®, a U.S. Environmental Protection Agency program, helps us all save money and protect our environment through energy efficient products and practices. For more information, visit www.energystar.gov.

For any new construction, consider the following:

- At a minimum, HID lighting such as metal halide lamps should be specified and, in many applications, T8 lamps will provide better energy efficiency.
- Where electricity is the only fuel available, consider heat pumps for water heating. By concentrating existing heat, heat pumps cost much less to operate than electric resistance heating and sometimes even gas heating units.
- Where gas is the primary water heating fuel, carefully evaluate boiler efficiencies, looking for a minimum 8% annual fuel use efficiency (AFUE).
- Maintain boilers regularly, checking for combustion efficiency and sediment.
- Specify NEMA premium motors and consider variable speed drives.
- Evaluate water reclamation systems as they can reduce water use by up to 60 percent.

Bay Doors

Bay doors may open and close dozens of times a day as motor vehicles enter and exit, increasing heating and cooling loads. In some facilities, these doors are left open unnecessarily for long periods of time. To reduce energy losses from bay doors:

- **Check seals to minimize air infiltration.** Replace missing cracked or hardened seals.
- **For new doors,** specify interior and exterior thermal breaks and R-10 or greater.
- **For new installations,** specify automatic sensor-driven bay door actuators to ensure that doors close immediately after vehicles or persons enter or exit. Newer high-speed units safely close doors in a fraction of the time older units take.
- **Educate employees** on the energy efficiency value of keeping doors shut.

Specialty Task Lighting in Shop Areas

Shop areas require a variety of specialty task lighting. These include mobile task lights, such as the work or “drag” lights used to illuminate vehicles during servicing. Older drag lights use incandescent lamps or halogen bulbs, both of which are energy-intensive and inefficient. CFL and LED illuminated drag and mobile lights now are available. The advantages of these energy-efficient drag lights include:

- **Reduced energy consumption.** Incandescent drag lights use 60 to 100 watts, fluorescent drag lights use 12 to 20 watts, and LED drag lights use five to eight watts.
- **Increased safety.** Incandescent and halogen drag lights can cause severe burns; fluorescent and LED drag lights will not.
- **Improved Durability.** Incandescent and halogen drag lights are prone to filament and lamp breakage. Quality fluorescent work lights are much more durable as they do not have a fragile filament and are usually surrounded by impact-resistant plastic. LED lighting, which is solid state, is very resistant to impacts.



LEARN MORE AT
energystar.gov

ENERGY STAR®, a U.S. Environmental Protection Agency program, helps us all save money and protect our environment through energy efficient products and practices. For more information, visit www.energystar.gov.

RESOURCES AND LINKS

This section includes online resources that can help your dealership learn more about energy use and energy efficiency.

- ENERGY STAR materials for Auto Dealers:
<http://www.energystar.gov/buildings/facility-owners-and-managers/small-biz/auto-dealers>
- ENERGY STAR Commercial Light Fixtures:
<http://www.energystar.gov/products/certified-products/detail/7581/partners>
- NADA Energy Ally Program:
http://www.nada.org/regulatory_affairs/energy/default
- The SBA Energy Efficiency for Auto Dealers:
www.sba.gov/content/energy-efficiency-auto-dealers