



Get All the Facts

To learn more about the benefits of using propane-fueled commercial mowers and hand-held equipment, visit www.poweredbypropane.org/mowers.

For a hands-on experience, learn more about propane-fueled lawn equipment at a Propane Road Show. Visitors can see and drive equipment, view manufacturer displays, attend training sessions, and ask questions of industry experts.

The Propane Education & Research Council was authorized by the U.S. Congress with the passage of Public Law 104-284, the Propane Education and Research Act (PERA), signed into law on October 11, 1996. The mission of the Propane Education & Research Council is to promote the safe, efficient use of odorized propane gas as a preferred energy source.

LAWN AND LANDSCAPE

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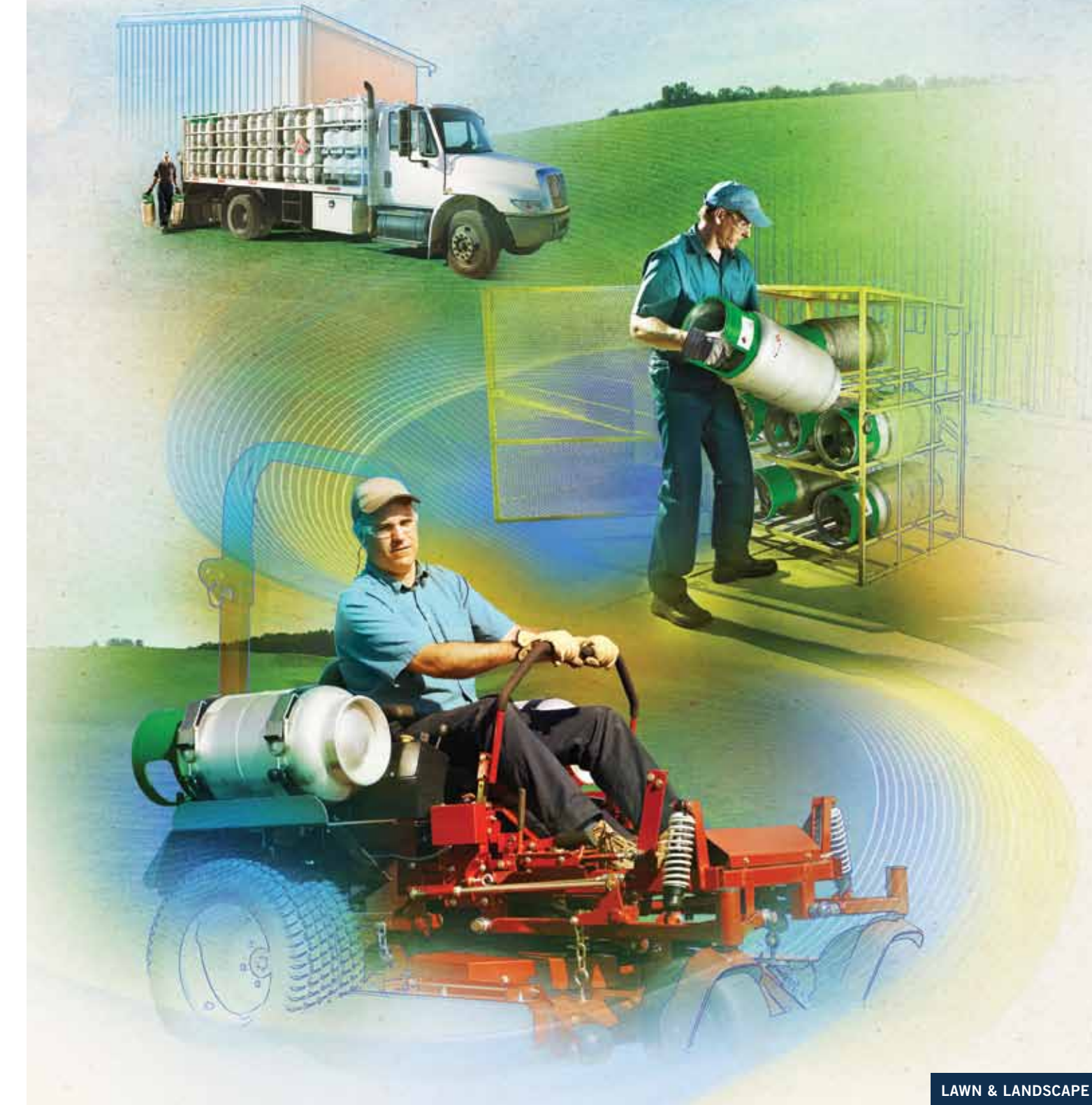


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GUIDE TO Propane-Fueled Equipment for Lawn Care Fleets



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Facts About Commercial Lawn Equipment Fueled by Propane

As customers weigh equipment choices for their landscaping needs, it's helpful to be knowledgeable about commercial-grade mowers and trimmers fueled with propane. Today, more landscape contractors, communities, and schools are looking at propane equipment. Here's what they need to know to get started:

Cost. Propane fuel is competitively priced, and research shows that propane-fueled equipment costs less to operate than conventionally fueled mowers and trimmers.

Fuel supply. Propane is abundant from domestic sources, and refueling is easy due to an existing fuel delivery and cylinder exchange model for propane refueling.

Performance. Propane-fueled equipment provides the same power and work capability as gasoline or diesel equipment.

Product choices. More than 30 models of propane-fueled commercial mowers are available from industry-leading brands, and existing equipment can be converted to run on propane.

Environment. Propane-fueled equipment runs cleaner than gasoline or diesel, releasing fewer pollutant emissions and greenhouse gases.

Propane-fueled commercial mowers and hand-held equipment are available now. Review the facts and decide how these machines fit customers' lawn care fleets.

An Alternative for Cost-Conscious Users

Propane-fueled lawn and landscape equipment can reduce costs and increase productivity with competitively priced fuel and low maintenance downtime.

Lawn and landscape companies, municipalities, and schools can save by having fuel delivered by a propane provider, instead of traveling to off-site fueling stations. Additional savings are attainable as fuel spillage, leakage, and theft are minimized.

The equipment's clean emissions also may contribute to increased productivity. Operators can run propane-fueled equipment during pollution advisory periods such as Ozone Action Days, when local regulations may ban gasoline mowers to protect air quality.



Easy On-Site Refueling

Propane is abundant and readily available. Nearly 90 percent of propane supplies are produced in the United States,¹ making it a truly domestic fuel.

Fueling commercial mowers with propane is convenient and affordable, because local fuel cylinder exchange programs are well-established. A fuel supplier can install a cage for propane cylinders

on the customer's property. When a cylinder is empty, the equipment operator removes the cylinder, puts it in the cage, replaces it with a full one, and goes back to work. The propane provider then visits regularly to replenish with full cylinders and take away the empties.

As an alternative, high-volume users can get an on-site, no-spill refueling dispensing station installed to fill empty cylinders. On-site refueling dispensing stations are compact and easy to install, and their costs are comparable or less than those of gasoline or diesel stations. An on-site dispensing station also can be an efficient way to refuel other propane-fueled equipment, including on-road vehicles fueled by propane autogas.

Safe by Design

Fueling with propane is safe and uses aluminum cylinders specifically designed for mower use only. Local propane providers offer refueling training to make sure safe refueling practices are always used.

Fuel Cylinders Made for Mower Service:

- 5-, 8-, and 10-gallon capacities.
- Vapor service with liquid prevention device (LPD) at the end of the vapor tube.
- Fill valve with overfill prevention device (OPD).
- Special collar to identify cylinders as "mower only."
- Left-hand connections (male and female) exclusively for mower use.

Keeping an Eye on the Environment

Many businesses and institutions today value sustainability and seek green-conscious service providers. Clean propane-fueled lawn equipment can help open doors. It also can help lawn care companies, municipalities, schools, and others reach their own sustainability goals and send positive messages to customers and stakeholders.

Commercial mowers with new propane-specific engines meet U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) certification standards.

In addition, propane refueling is spill-free. According to the EPA, refueling landscape equipment results in 17 million gallons of spilled gasoline in the United States each year — more than one-and-a-half times the volume of oil spilled by the Exxon Valdez into Prince William Sound in 1989.

When compared with gasoline-fueled commercial mowers, propane-fueled commercial mowers:	Sustainability factor
Reduce greenhouse gases by nearly 50 percent. ²	✓
Cut carbon monoxide by more than 80 percent. ³	✓
Produce significantly fewer ground-level ozone precursors and particulate matter. ⁴	✓



Models to Fit Multiple Applications

A robust research and development program has led to the creation of the wide range of propane-fueled lawn and landscape equipment on the market today. These models are made possible by engine suppliers and original equipment manufacturers. Options are abundant — from tough commercial-duty riding mowers to walk-behind mowers to hand-held equipment.



For a list of top manufacturers offering propane options, please visit www.poweredbypropane.org.

Conversions for Existing Equipment

Besides new propane-fueled commercial mowers and hand-held machines, equipment suppliers offer conversion kits that allow gasoline-fueled mowers to use propane as an alternative fuel. Visit www.poweredbypropane.org/mowers.

1. Department of Energy, Energy Information Administration, "Petroleum Navigator: Supply and Disposition," Annual 2009 period, last updated July 2010, http://tonto.eia.doe.gov/dnav/pet/pet_sum_snd_d_nus_mbl_a_cur.htm (accessed January 14, 2011).
 2. Energetics Inc., *Propane Reduces Greenhouse Gas Emissions: A Comparative Analysis* (Washington, D.C.: Propane Education & Research Council, 2009).
 3. Environmental Protection Agency, "Engine Certification Data: Nonroad Small Spark-Ignition Engine Certification Data: 2007–2011 Model Year Engine Family and Models & Parts," 2009 data, last updated September 2010, <http://www.epa.gov/otaq/certdata.htm#smalls> (accessed September 23, 2009).
 4. AirNow, "Action Days," daily updates, <http://airnow.gov/index.cfm?action=airnow.actiondays> (accessed January 19, 2010). AirNow, "Air Quality Index (AQI)—A Guide to Air Quality and Your Health," November 2009, <http://www.airnow.gov/index.cfm?action=aqibasics.aqi> (accessed January 19, 2010). Wendy Weaver-Flask, "Green Mowers Cut Pollution," *Custom Publications*, September 25, 2009, <http://green.indy.com/posts/green-mowers-cut-pollution> (accessed January 6, 2010). Ferris Industries, "Propane Powered IS®3100Z," http://www.ferrisindustries.com/pages/mower.php?product_id=30 (accessed January 6, 2010). Environmental Protection Agency, Clean Air Act Advisory Committee, "2008 Clean Air Excellence Awards Recipients," <http://www.epa.gov/air/caaac/2008awar.html> (accessed November 22, 2010). Environmental Protection Agency, Clean Air Act Advisory Committee, "2008 Clean Air Excellence Awards Recipients," <http://www.epa.gov/air/caaac/2008awar.html> (accessed November 22, 2010). National Safety Council, *Ground-Level Ozone* (National Safety Council, revised April 2009), http://www.nsc.org/news_resources/Resources/Documents/Ground-Level_Ozone.pdf (accessed November 22, 2010).