



# POWERING AMERICA TODAY AND TOMORROW

## PROPANE CAN DO THAT™

### WHAT IS PROPANE?

Propane — sometimes known as liquefied petroleum gas, or LPG — is a gas normally compressed and stored as a liquid. It is nontoxic, colorless, and odorless; an identifying odor is added so it can be detected. Propane is most commonly used for space and water heating, for cooking, and as fuel for engine applications such as forklifts; however, its applications are rapidly growing due to new technology developments. When used as vehicle fuel, propane is known as propane autogas.

### WHERE DOES PROPANE COME FROM?

Propane is primarily a byproduct of domestic natural gas processing, though some propane is produced from crude oil refining and from renewable sources. U.S. propane supplies are becoming increasingly abundant due in large part to increased supplies of natural gas.

- Propane production in the U.S. has increased markedly with the increases in shale gas and associated gas production from U.S. tight oil plays. Increased oil production from new tight oil plays has increased the volumes of propane produced from domestically sourced crude oil.<sup>5</sup>
- The U.S. became a net exporter of propane in 2011.<sup>5</sup>
- Renewable propane, made along with other liquid fuels from animal fats and vegetable oils, offers the same clean, efficient, reliable performance as conventional propane. Worldwide production capacity of renewable propane at 15 processing plants, including three in the United States, is about 100 million gallons a year and growing, according to a World LP Gas Association estimate.<sup>6</sup> The National Renewable Energy Laboratory says the potential demand for renewable propane in California alone could surpass 200 million gallons a year by 2030.<sup>7</sup>

### WHY PEOPLE CHOOSE PROPANE

Propane is derived from conventional and renewable sources. It's been an important part of America's energy mix for more than a century, due to its many positive advantages:

#### CLEAN

Propane is an approved clean fuel listed in the 1990 Clean Air Act. Substituting propane for other fuels such as gasoline, diesel, and fuel oil is an economical and viable step toward cleaner air. Using propane reduces the greenhouse gas carbon dioxide and air pollutants like carbon monoxide and nitrogen oxide.<sup>1</sup>

#### MADE IN AMERICA

Propane production keeps quality jobs in our country. Nearly 50,000 workers across the U.S. are employed in propane production, transportation, and distribution.<sup>2</sup>

#### ABUNDANT

The U.S. is the world's leading producer and exporter of propane. Propane is an abundant, clean alternative to gasoline and diesel.<sup>3</sup>

#### AFFORDABLE

Propane prices are typically lower than those associated with gasoline, diesel fuel, and home heating oil due to the growing supply.<sup>4</sup>

## WHO USES PROPANE?

Propane is used in 12 million households<sup>8</sup> as well as many businesses for heat and water heating, indoor cooking, clothes drying, and backup power. Tens of millions more use it for outdoor cooking. Additionally, many industries increasingly choose propane to fuel vehicles and equipment cost-effectively while lowering emissions.



### ON-ROAD VEHICLES

Propane autogas is the third most popular vehicle fuel worldwide behind gasoline and diesel.<sup>9</sup> Propane is commonly used to fuel buses, light- and medium-duty trucks, vans, shuttles, taxicabs, and police and government vehicles.



### PROFESSIONAL LANDSCAPE EQUIPMENT

More than 130 models of propane-powered commercial lawn mowers are available today from 18 industry-leading brands, including walk-behind, stand-on, and zero-turn-radius options. Some landscape contractors choose to convert existing equipment to propane using EPA- and CARB-certified kits.



### AGRICULTURAL EQUIPMENT

Propane influences all aspects of farming operations. Nearly 850 million gallons of propane were sold for agricultural use in 2016.<sup>10</sup> This includes propane that is used to run pumps and engines, heat buildings, and dry and process crops.

## HOW IS PROPANE DISTRIBUTED?

With up to 56,000 miles of pipeline and thousands of propane suppliers nationwide, propane is widely available and easily portable.<sup>11</sup>

For vehicles, there are thousands of propane autogas refueling stations across the country. Propane is the only alternative fuel with fueling stations in every state.<sup>12</sup>

## HOW MUCH DOES THE PROPANE INDUSTRY CONTRIBUTE TO THE U.S. ECONOMY?

The propane industry generated nearly \$46.2 billion in value in 2015.<sup>13</sup>

### CITATIONS

1. U.S. Environmental Protection Agency (EPA), Center for Corporate Climate Leadership, "Emission Factors for Greenhouse Gas Inventories," last updated March 9, 2018, [https://www.epa.gov/sites/production/files/2018-03/documents/emission-factors\\_mar\\_2018\\_0.pdf](https://www.epa.gov/sites/production/files/2018-03/documents/emission-factors_mar_2018_0.pdf) [accessed August 17, 2018].
2. ICF International, Impact of the U.S. Consumer Propane Industry on U.S. and State Economies in 2015, (Washington, D.C.: ICF International, 2015), prepared for the Propane Education & Research Council, p27.
3. John D. Podesta and Timothy E. Wirth, "Natural Gas: A Bridge Fuel for the 21st Century" (Center for American Progress and Energy Future Coalition, August 10, 2009), <http://www.americanprogress.org/issues/2009/08/pdf/naturalgasmemo.pdf> [accessed January 4, 2012].
4. ICF International, Impact of the U.S. Consumer Propane Industry on U.S. and State Economies in 2015, (Washington, D.C.: ICF International, 2015), prepared for the Propane Education & Research Council.
5. ICF International, Impact of the U.S. Consumer Propane Industry on U.S. and State Economies in 2015, (Washington, D.C.: ICF International, 2015), prepared for the Propane Education & Research Council, p5.
6. Atlantic Consulting, commissioned by Liquid Gas Europe (AEGPL) and the World LP Gas Association (WLPGA), BioLPG: A survey of markets, feedstocks, process technologies, projects and environmental impact (Zurich: Atlantic Consulting, 2018).
7. National Renewable Energy Laboratory (NREL), prepared for the Propane Education & Research Council (PERC) and the Western Propane Gas Association (WPGA), "Bio-propane: Production Pathways and Preliminary Economic Analysis," Final Report, January 2, 2018.
8. U.S. Department of Energy (DOE), Energy Information Administration (EIA), Independent Statistics and Analysis, Residential Energy Consumption Survey (RECS), "Table HCL1.1 Fuels Used and End Uses in U.S. Homes, By Housing Unit Type, 2015," (Washington D.C.: EIA, 2017), <https://www.eia.gov/consumption/residential/data/2015/hc/php/hc1.1.php> [accessed August 23, 2018].
9. U.S. Department of Energy (DOE), Office of Energy Efficiency and Renewable Energy (EERE), Alternative Fuels Data Center, "Propane Fuel Basics: Propane as an Alternative Fuel," last updated May 25, 2018, [http://www.afdc.energy.gov/fuels/propane\\_basics.html](http://www.afdc.energy.gov/fuels/propane_basics.html) [accessed August 15, 2018].
10. American Petroleum Institute (API), 2016 Sales of Natural Gas Liquids and Liquefied Refinery Gases, Table C. Sales of Odorized Propane in the United States, by End Use, PAD District, and State: 2016 and 2015, (Washington, D.C.: API Statistics Department, January 11, 2018).
11. U.S. Department of Transportation (DOT), Pipeline and Hazardous Material Safety Administration (PHMSA), Office of Pipeline Safety, "Stakeholder Communications: Pipeline Basics," 2017, <http://primis.phmsa.dot.gov/comm/PipelineBasics.htm> [accessed August 17, 2018].
12. U.S. Department of Energy (DOE), Office of Energy Efficiency & Renewable Energy (EERE), Alternative Fuels and Advanced Vehicles Data Center, "Alternative Fueling Station Counts by State," station data last updated November 26, 2018, [http://www.afdc.energy.gov/fuels/stations\\_counts.html](http://www.afdc.energy.gov/fuels/stations_counts.html) [accessed November 26, 2018].
13. ICF International, Impact of the U.S. Consumer Propane Industry on U.S. and State Economies in 2015, (Washington, D.C.: ICF International, 2015), prepared for the Propane Education & Research Council, p2.

### LEARN MORE AT PROPANE.COM

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**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.

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