



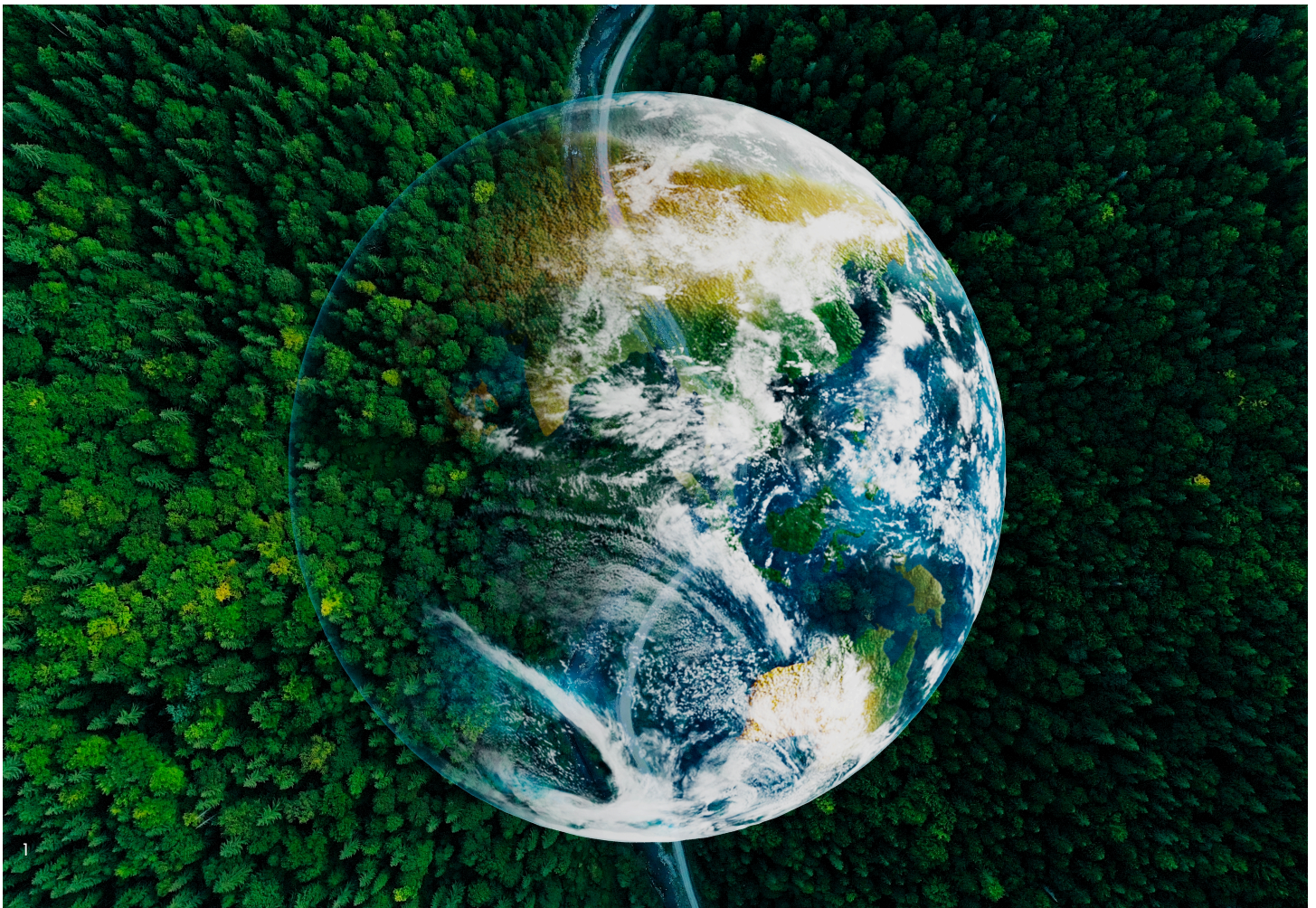
# **OPW Clean Energy Solutions: Seizing The Opportunities Created By An Alternative- Fuel Future**



For more than a century, the vast majority of fuels that have been used as energy sources to power operations in the world's transportation, industrial, commercial and residential sectors have been produced through the refinement and consumption of petroleum-based substances and coal. These energy sources derived from fossil fuels have been used to propel vehicles, light lights, heat up gas and electric stoves, and essentially make the world a more livable and prosperous place.

Over the years, great pains have been taken to develop cleaner alternative forms of energy. Being that it is the most easily tracked and recognizable, the transportation sector is the area in which the most identifiable gains have been made in the last three or four decades.

**The U.S. Department of Energy (DOE) launched the AFDC in 1991 in response to the Alternative Motor Fuels Act of 1988 and the Clean Air Act Amendments of 1990. It originally served as a repository for alternative fuel vehicle performance data. Department of Energy**





# Motor Fuels

In fact, the Alternative Fuels Data Center (AFDC), which was launched in 1991 and is a project of the U.S. Dept. of Energy's Office of Energy Efficiency & Renewable Energy, today lists seven motor fuels that can be seen as common alternatives to traditional gasoline and diesel



- Ethanol: Made from corn and other plant material, today more than 98% of gasoline in the U.S. contains some ethanol



- Biodiesel: Manufactured from vegetable oils, animal fats and recycled restaurant grease, biodiesel's properties are similar to those of petroleum diesel



- Propane: Also known as Autogas, propane has been used as a motor fuel for decades and has a widespread fueling infrastructure, most notably in Europe and Asia



- Electricity: Used to power all-electric vehicles, also called battery-electric vehicles (BEVs), and plug-in hybrid electric vehicles (PHEVs) by drawing electricity directly from the power grid



- Hydrogen: Derived from diverse energy sources and used to create and provide electricity to a vehicle's fuel cell with zero resulting tailpipe emissions



- Natural Gas: A clean-burning motor fuel that is readily available through the existing natural-gas distribution system



- Renewable Biodiesel: Previously known as "green" diesel, though renewable diesel can be made from fats and oils, it is not the same as biodiesel, mainly because it can be produced through different technology pathways, the most common of which is hydrotreating



Since the development of new fuel sources is a perpetual process, the AFDC also identifies a number of what it calls “emerging” fuels, which can be considered alternative fuels, that are in various stages of development and use. So, get ready to hear more about biobutanol (butanol made from biomass feedstocks), dimethyl ether (a synthetically produced colorless gas that is an alternative to diesel) and renewable gasoline (produced from biomass sources through a variety of biological, thermal and chemical processes).





# Seizing The Opportunity

While on the surface, the search for alternative sources of energy may be altruistic – identifying and deploying ways to better protect the population and environment – it also creates opportunities for companies to design, engineer, develop and produce technologies that possess the capability to help ensure the safe production, transport, handing and use of the growing list of alternative fuels.

It was with this in mind in 2021 that OPW completed the acquisition of Acme Cryogenics and RegO® Products, followed by the subsequent announcement in 2022 that the companies would be the first product brands within its new OPW Clean Energy Solutions business unit. The formation of OPW Clean Energy Solutions fit seamlessly into OPW's "Defining What's Next" philosophy that is focused on developing technologies for the reliable and efficient handling of the world's most essential fluids – both old and new. As the use of alternative fuels continues to grow, the acquisition of Acme Cryogenics and RegO Products allows OPW to look further into the future of the clean-fueling industry and expand into areas that will require the creation of products and systems that will contribute to a safer, cleaner tomorrow in all regions around the globe.





# Both Acme and RegO bring specific – and time-proven – technologies to the clean-energy table

Since its founding in 1969, Allentown, PA-based Acme Cryogenics has been a leading developer and provider of precision-engineered products and services that facilitate the production, storage and distribution of cryogenic liquids and gases. Specifically, Acme Cryogenics offers vacuum-jacketed pipe systems, valves, vaporizers and gas-handling systems that enable the safe and reliable handling and transfer of cryogenic liquids and gases at temperatures below -292°F (-180°C). Acme Cryogenics has manufacturing operations in Allentown, PA; Atlanta, GA; Lonsdale, MN; and Oxnard, CA, and maintains seven U.S. field-service locations.

RegO Products, Elon, NC, which can trace the roots of its founding to 1888 and the invention of the CO<sub>2</sub> cylinder valve, is a premier manufacturer and worldwide supplier of gas-control products for use in the industrial gas and liquefied cryogenics industries. RegO specializes in the development of cryogenic valves, regulators, storage and containment systems and has recently completed development of a nozzle for use in the transfer of LNG. RegO operates four manufacturing facilities in North Carolina and has distribution centers in the U.S., Mexico, Germany and China.

Thanks to its 135-year track record of innovation in the fuel-handling and storage markets, OPW has accumulated an inordinate amount of experience and know-how as it pertains to the buildout of fueling infrastructures. Combining that experience and expertise with that of Acme and RegO perfectly positions OPW Clean Energy Solutions to be a major player in the growing clean-energy products market with the tacit acknowledgment that these fuels that are currently known as “alternative” may one day in the not-too-distant future be regarded as “primary.”







OPW Clean Energy Solutions was formed in December 2021 when OPW acquired both ACME Cryogenics and RegO Products. ACME is a leading provider of mission-critical cryogenics products and services that facilitate the production, storage and distribution of cryogenics liquids and gases. RegO is a leading provider of highly engineered flow-control solutions for cryogenic and liquified gas end markets. Together, they are taking OPW beyond conventional fueling solutions and helping define what's next for alternative energy markets. Visit [www.OPWCES.com](http://www.OPWCES.com) for more information.

