SoCalGas funds demonstration of adsorbed natural gas technology for light-duty trucks

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Adsorbed natural gas vehicles leverage lower cost natural gas to provide a more economic and cleaner fueling option

NORTH CHARLESTON, S.C.--(BUSINESS WIRE)--Southern California Gas Co. (SoCalGas) today announced it will fund a field demonstration of adsorbed natural gas bi-fuel vehicles powered by natural gas compressing technology developed by Adsorbed Natural Gas Products, Inc. and Ingevity. Adsorbed natural gas technology uses Ingevity's unique Nuchar® activated carbon to reduce the storage pressure of natural gas without sacrificing the volume of natural gas stored through a process called adsorption. Using this type of fuel provides a cleaner and lower cost fuel option for large, light-duty vehicles, such as SUVs, half-ton pickup trucks, and service vans, than diesel, gasoline, or traditional compressed natural gas fuel.

“The transportation sector accounts for more than 80 percent of smog-forming emissions and about 40 percent of greenhouse gas emissions in California,” said Yuri Freedman, senior director of business development at SoCalGas. “Natural gas can play an important role in reducing emissions, and adsorbed natural gas can revolutionize the way natural gas is used as a transportation fuel. We are excited to see how the vehicles perform during the demonstration.”

“It is the unique ‘capture and release’ properties of our Nuchar activated carbon that makes this incredible new transportation option possible,” said Ed Woodcock, executive vice president and president of Performance Materials at Ingevity. “Having SoCalGas as a project partner will provide invaluable insight and support as we work to demonstrate the value of adsorbed natural gas to the natural gas community and light-duty vehicle fleets, and commercialize this exciting new technology.”

Adsorbed natural gas vehicles can be fueled at public-access compressed natural gas stations, as well as conveniently from home or work through a refueling compressor. They operate at significantly lower fueling pressure than standard compressed natural gas vehicles, refilling at 900 psi instead of 3600 psi. This reduces energy consumption by over 50 percent and decreases fueling time by over 60 percent. Additionally, these vehicles can travel long distances on adsorbed natural gas before seamlessly switching to gasoline. As natural gas costs $1-$1.50 less per gasoline gallon equivalent than gasoline, adsorbed natural gas offers a lower-cost fueling alternative.

Natural gas is one of the cleanest burning alternative fuels available. And natural gas vehicles are some of the cleanest vehicles in commercial production today; they can reduce emissions of carbon dioxide by as much as 30 percent, carbon monoxide by 85 percent, and carcinogenic particulate emissions by 99 percent. Adsorbed natural gas vehicles are 90 percent cleaner than the Environmental Protection Agency’s current nitrogen oxide standard and emit over 25 percent fewer greenhouse gas (GHG) emissions than comparable gasoline and diesel vehicles. When refueling with renewable natural gas, GHG emissions can be reduced by up to 125 percent.

SoCalGas is providing funding for the project with research and development funds authorized by the California Public Utilities Commission, and will also test and validate the adsorbed natural gas vehicles during a six-month demonstration period.

Results from SoCalGas’ demonstration will support a commercial rollout of adsorbed natural gas vehicles to fleet operators in Southern California.

About SoCalGas

Headquartered in Los Angeles, SoCalGas® is the largest natural gas distribution utility in the United States. SoCalGas delivers affordable, reliable, clean and increasingly renewable natural gas service to 21.8 million customers across 24,000 square miles of Central and Southern California, where more than 90 percent of residents use natural gas for heating, hot water, cooking, drying clothes or other uses. Natural gas delivered through the company's pipelines also plays a key role in providing electricity to Californians — about 45 percent of electric power generated in the state comes from gas-fired power plants.

SoCalGas’ vision is to be the cleanest natural gas utility in North America, delivering affordable and increasingly renewable energy to its customers. In support of that vision, SoCalGas is committed to replacing 20 percent of its traditional natural gas supply with renewable natural gas (RNG) by 2030. Renewable natural gas is made from waste created by dairy farms,
landfills and wastewater treatment plants. SoCalGas is also committed to investing in its natural gas system infrastructure while keeping bills affordable for our customers. From 2014 through 2018, the company invested nearly $6.5 billion to upgrade and modernize its natural gas system to enhance safety and reliability. SoCalGas is a subsidiary of Sempra Energy (NYSE: SRE), an energy services holding company based in San Diego. For more information visit socalgas.com/newsroom [13] or connect with SoCalGas on Twitter [14] (@SoCalGas), Instagram [15] (@SoCalGas) and Facebook [16].

Ingevity: Purify, Protect and Enhance

Ingevity provides specialty chemicals, high-performance carbon materials and engineered polymers that purify, protect, and enhance the world around us. Through a team of talented and experienced people, Ingevity develops, manufactures, and brings to market products and processes that help customers solve complex problems. These products are used in a variety of demanding applications, including asphalt paving, oil exploration and production, agrochemicals, adhesives, lubricants, publication inks, coatings, elastomers, bio-plastics and automotive components that reduce gasoline vapor emissions. Headquartered in North Charleston, South Carolina, Ingevity operates from 25 locations around the world and employs approximately 1,750 people. The company is traded on the New York Stock Exchange (NYSE: NGVT). For more information visit www.ingevity.com [17].