

## Gas Keeps Key Role In Energy Future

By Dan Holder

AUSTIN, TX.—Looking beyond year's end, the versatility and abundance of natural gas ensures global use will continue to grow, predicts Scott Tinker, director of the Bureau of Economic Geology at the University of Texas at Austin.

"Demand for natural gas has been growing more than any other fuel in absolute terms. Over the past 40 years, gas use has increased more than 500% globally. That is a remarkable growth rate," he says. "Beyond power generation, it is essential for cooking and residential uses, as well as making things such as fertilizers, plastics and beyond. There also are natural gas-powered vehicles, which we seem to have forgotten a bit. Fuel cells are great technology for low- to zero-emission transportation, and the best source of hydrogen is methane."

Future gas demand is impossible to forecast because of all the variable factors, Tinker muses. Those range from how quickly alternative energy sources develop, what kinds of subsidies those resources attract, if liquefied natural gas imports will increase, and how stable electricity markets stay across the globe, and of course public opinion. Even though residential electrical use is up because of stay-at-home restrictions, he says the increase doesn't compensate for the declines in commercial and industrial usage.

The effects of COVID-19 and other viruses on human respiratory systems vary tremendously, but Tinker argues natural gas has a key role in mitigating those impacts. While many view natural gas, coal and oil simply as fossil fuels, he says fundamentally they are different—coal is carbon, oil is complex hydrocarbons, and natural gas is mostly hydrogen.

"There is a challenge in branding nat-

ural gas so differently because it has the benefit of being hydrogen. Because natural gas is found in so many places—as associated gas, dry gas and even biogenic gas—I think it emerges and continues to become one of the big fuels of choice in this century. I don't see it getting slowed by the crisis," he says.

### Global Impacts

Natural gas is a game changer for many people across the globe, and Tinker says when considering the ramifications of viruses that impact human health and society—particularly concerning respiratory systems—natural gas' status as a preferred fuel should increase even more.

"Respiratory challenges are important globally," he observes. "Just cooking indoors

with biomass of various kinds—wood, charcoal, dung—impacts the health of more than 2 billion people in the world, with 3 million people a year dying of various lung diseases related to cooking indoors. There also increased incidents of cataracts in women and pneumonia in children. That 3 million is more than malaria and AIDS combined."

The best replacement for biomass is liquefied petroleum gas, which is relatively inexpensive, emits no particulate matter, is moved easily in canisters and uses global distribution networks that are easy to set up, Tinker assesses. Energy poverty and LPG are featured in Tinker's latest documentary film, *Switch On*, which he notes can be streamed at [SwitchOn.org](http://SwitchOn.org).

The global liquefied natural gas trade



The liquefied natural gas tanker *Excelsior* docks at the Freeport LNG terminal near Freeport, Tx. Freeport LNG has contracts with overseas companies to provide 13.4 million tonnes per annum of LNG under 20-year contracts. The company now is producing LNG from three liquefaction trains.



is expected to play a key role in meeting future natural gas demand, and while IHS Markit has downgraded its estimate for total LNG demand in 2020 by 3.8% relative to pre-Covid-19 forecasts, it expects 2020 volumes will be up 4.4 million metric tons year-on-year. The analysis notes LNG demand has increased every year since 2012.

U.S. companies continue their LNG terminal expansion plans, with Venture Global LNG and Freeport LNG announcing significant project milestones.

Eight months after it issued a final investment decision, Venture Global raised

the first LNG storage tank roof at its Calcasieu Pass export terminal in Cameron Parish, La. The site eventually will have two of the 200,000 cubic meter tanks. The company says it also has completed the facility's marine perimeter wall and levee three months ahead of schedule, and installed the project's first modular equipment, piperack modules. Equipment for the project's 720-megawatt combined cycle gas turbine power plant was scheduled to arrive in May.

The 10 million tonne per annum Calcasieu Pass facility is being built at the intersection of the Calcasieu Ship Channel

and the Gulf of Mexico. The company says it expects to begin construction on its Plaquemines Parish LNG export terminal later in 2020.

Freeport LNG has begun commercial liquefaction services from its third liquefaction train at its facility on Quintana Island near Freeport, Tx. Freeport says the facility's first two trains have been in commercial operation since mid-December and mid-January.

The Freeport terminal can produce more than 15 mtpa, the company reports. It is the seventh largest liquefaction facility in the world. □