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GAS MARKETS

The U.S. Is Overflowing With Natural Gas. Not Everyone Can Get It.

U.S. gas production is at a record high, but the infrastructure needed to move the fuel around the country hasn't kept up. The result is price spikes, uneven distribution and fears of stifled economic growth.

By Stephanie Yang and Ryan Dezember

America is awash in natural gas. In parts of the country there's hardly a drop to burn.

Earlier this year, two utilities that service the New York City area stopped accepting new natural-gas customers in two boroughs and several suburbs. Citing jammed supply lines running into the city on the coldest winter days, they said they couldn't guarantee they'd be able to deliver gas to additional furnaces. Never mind that the country's most prolific gas field, the Marcellus Shale, is only a three-hour drive away.

Meanwhile, in West Texas, drillers have so much excess natural gas they are simply burning it off, roughly enough each day to fuel every home in the state.

U.S. gas production rose to a record of more than 37 trillion cubic feet last year, up 44% from a decade earlier. Yet the infrastructure needed to move gas around the country hasn't kept up. Pipelines aren't in the right places, and when they are, they're usually decades old and often too small.The result, despite natural-gas prices that look low on commodities exchanges, is energy feast and famine.

This spring, the price of natural gas at a trading hub near Midland, Texas, dropped as low as negative $9 per million British thermal units—meaning that producers were paying people to take it off their hands. (A million British thermal units is enough to dry about 50 loads of laundry.)

Elsewhere, prices soared due to bouts of cold weather coupled with supply disruptions, including an explosion along a British Columbian pipeline and a leaky underground storage facility near Los Angeles. At a trading hub in Sumas, Wash., natural gas rose to $200 per million British thermal units in March, the highest ever recorded in the U.S. In Southern California, prices went as high as $23; the average over the winter was a record $7.23.

The national benchmark, which is set at a knot of pipelines in Louisiana, recently hit a three-year low of $2.19 and has hovered below $3 for much of the year.

“I don’t recall a situation when we’ve had the highs and lows happen in such extremes and in such relatively close proximity,” says Rusty Braziel, a former gas trader who now advises energy producers, industrial gas buyers and pipeline investors.

With U.S. homes, power plants and factories using more natural gas than ever, the uneven distribution of the shale boom’s bounty means that consumers can end up paying more or even become starved for fuel, while companies that can’t get it to market lose out on profits. Around New York City, the dearth of gas has cast uncertainty over new developments and raised fears of stifling economic growth.

One reason for the problem is that pipelines have become political. Proponents of reducing the use of fossil fuels have had little luck limiting drilling in energy-rich regions. Instead, they’ve turned to fighting pipeline projects on environmental grounds in regions like New York and the Pacific Northwest, where they have a more sympathetic ear.Even in Texas, the heart of the oil-and-gas industry, new pipelines have started to meet more local resistance. In April, landowners, Hays County and Kyle, a booming city on the outskirts of Austin, sued to block construction of a 430-mile pipeline that would move gas from the West Texas drilling fields, where it is being burned up, to buyers near Houston. The case was dismissed by a Texas judge in June.

Before pipelines

Natural gas, which is often found alongside oil and coal, was once a nuisance to drillers and miners alike. It would send crude shooting up out of wells like flammable geysers and was at risk of exploding in mineshafts. Before the advent of arc-welded pipelines that could be laid over long distances, gas had little value unless it happened to be very close to early industrial cities, like Pittsburgh or Cleveland.

After World War II, energy producers repurposed oil pipelines to ship gas to fuel the hungry furnaces and factories of the Northeast. By the beginning of the 21st century, many thought the U.S. was running out of gas. The national price averaged about $6 over most of that decade and at times rose to more than $12. Pipelines were built to move imported gas from the country's borders, particularly along the Gulf Coast, into the interior.Then the fracking revolution arrived, flooding domestic gas markets and rendering a lot of supply routes irrelevant. Within a generation, the U.S. has gone from importing gas to becoming a leading exporter.These days, it's a hassle getting gas from drilling fields like the Marcellus and Utica shales in Appalachia, and the Permian Basin in West Texas, to customers in northern cities. Many pipelines now run the other way: to move gas toward the Gulf Coast, where exporters can usually buy it for less than $3 per million British thermal units, and ship it overseas as liquefied natural gas, or LNG, for higher prices.

A 99-year-old law prevents foreign tankers from shipping gas within the U.S. There are no domestic LNG tankers, mostly because the hundred-million-dollar-plus ships are much less expensive to build in Asia. So consumers in New England relied on importing liquefied natural gas from Trinidad and Tobago and even Russia to keep prices in check this past winter.

In New York, commercial real-estate broker John Barrett said he was completing the sale of a development that would become a 66-unit apartment building, when Consolidated Edison Inc. announced it would no longer take on new gas customers after March 15 in the southern part of Westchester County. The developer canceled the deal signing and backed out of the purchase two weeks later.

The future of a nine-figure development in New Rochelle, which would include a new city hall, fire station and affordable housing units, is suddenly in doubt. In Yonkers, Mayor Mike Spano worries that the gas moratorium will foul up plans for a mixed-use development on a big downtown parking lot.Homes

that don't come with natural gas lines are now a tougher sell, said Mark Nadler, director of Westchester sales at Berkshire Hathaway Homeservices, unless buyers don't mind cooking on an electric range or refilling tanks of heating oil each autumn.

Con Edison is trying to adapt to a world without additional pipelines. Scott Butler, from the company's "utility of the future" department, said the team has explored trucking in emergency fuel supplies and even making its own fuel. The utility has proposed building three new facilities in the New York City area to turn compost and food scraps into gas. It is also planning to haul in natural gas on trucks, as many as 180 of them on the coldest days.

National Grid PLC, which serves Long Island, including the boroughs of Brooklyn and Queens, stopped processing new customer requests in May after the state's environmental agency denied a permit to add capacity to the supply line beneath Lower New York Bay. One of the first projects notified earlier this year was the $1 billion arena where the National Hockey League's Islanders are planning to play.

"It will basically put economic growth at a halt," Keith Rooney, director of community and customer management at National Grid, told a gas-industry gathering in April in Hartford, Conn. “It’s going to start with the big customers and go all the way down to mom-and-pops.”

At issue are plans to boost capacity at the northern end of the 10,000-mile Transco pipeline, owned by Tulsa, Okla.-based Williams Cos. It would involve stretches of new pipe in New Jersey and Pennsylvania, and about 23 miles more that need to be laid alongside existing supply lines on the ocean floor around New York City.

For years Williams has fought with Gov. Andrew Cuomo’s administration over the company’s plans to build the Constitution Pipeline, a 125-mile pipeline that would carry shale gas from wells in northern Pennsylvania to upstate New York. The costs to build overland pipelines like Constitution have eclipsed what Williams spends on much more technologically challenging projects like pipelines laid deep offshore in the Gulf of Mexico, said Alan Armstrong, Williams’s chief executive.

“At a time when the federal government has abdicated its responsibility to protect our environment and public health, states like New York are on the front lines of protecting our clean water and the public health,” Mr. Cuomo said in a statement earlier this year.Raising resistance

Natural gas has long been considered a transition fuel—a placeholder that’s cleaner-burning than coal or oil but more dependable than renewables like wind or solar. But natural gas still releases carbon dioxide into the atmosphere, and fracking has its own environmental consequences, including the production of toxic wastewater. That has raised resistance to building new pipelines as well as enlarging old ones.

Opponents say they are vaulting cities into the future of clean energy. More than 40,000 people and organizations wrote to the New York environmental agency asking it to deny Williams permission for the expansion. In March, New Jersey residents lined up in a middle-school auditorium to oppose the project, including plans for a compressor station Williams wants to build there as part of the expanded supply route into New York. Over three hours, seven attendees spoke against the project for every one who stood to support it.

Locals worried about flooding, water contamination and the risk of explosion. One woman used her three minutes at the microphone to read a list of lawsuits and accidents in which Williams has been involved.“We built our home here thinking this would be our forever home,” said Eileen Balaban-Eisenberg, who has helped organize opponents of the pipeline at the nearby retirement community Princeton Manor. “Due to the environmental impacts, it makes us think twice about staying.”

In June, the New Jersey Department of Environmental Protection joined New York regulators in denying Williams permits, citing risks to water quality as well as to wetlands near the proposed compressor where the protected Barred Owl was spotted this spring.Williams said it is addressing the concerns raised by environmental regulators in both states and has resubmitted its applications for construction permits.

“In some cases there are hundreds of millions of dollars in development for a project that is stymied through the regulatory and political process,” said Coralie Carter Sculley, marketing director at Tennessee Gas Pipeline, a subsidiary of Kinder Morgan Inc. that brings gas into Westchester, at the industry event in

April. “We’re not going to have a huge pipeline running through the Northeast again.”

In Seattle’s northern suburbs, Williams spent more than four years trying to get permission to dig up about 6 miles of an 8-inch-diameter gas line it owns and replace it with a 20-inch pipe to keep up with demand from the new homes being built there. The cost of the project, which Williams hopes to start this summer, has grown from about $6 million to more than $50 million due to delays in receiving permits, said Mr. Armstrong.

It’s the sort of routine project that wouldn’t have crossed the CEO’s desk a decade ago. “That is such a simple piece of work,” Mr. Armstrong said. “It’s hard for me to even talk about it because it’s repulsive how much money has been spent there.”

Pipeline supporters argue that the blockades keep them mired in the past. Technologies like heat pumps, which transfer warmth between homes and the surrounding ground or air, promise low-carbon futures, but they are costly and complex. Absent cheap natural gas, that leaves dirtier fuels like oil and propane to keep the heat on during the cold winter months.

With limited pipelines to smooth the distribution of gas around the country, price spikes have become wild. In 2018, natural gas prices in New York City surged as high as $175 during a snowstorm that spurred record heating demand. A week later, they returned to about $3. Though prices in northern Washington hit a historic $200 this year, more recently they traded at less than $2 as regional stockpiles were replenished and winter demand dissipated.

In late April, a few weeks after its gas moratorium went into effect, Con Edison said it had reached an agreement with Kinder Morgan, which owns the intrastate pipeline that supplies southern Westchester, to boost capacity. The catch: It could be 2023 before the work is completed.

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