



WINTER 2018

# Natural Gas TODAY



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## American Public Gas Association Sends Letter on Corporate Tax Issue to Federal Energy Regulatory Commission

On January 3, APGA sent a letter to Chairman McIntyre of the Federal Energy Regulatory commission (FERC), urging the Commission to act promptly to ensure that the recourse rates paid by customers of natural gas pipelines are reduced to reflect the lower corporate tax rate. The letter was sent in response to The Tax Cuts and Jobs Act of 2017, which was signed into law last month and lowered the corporate tax rate from 35 percent to 21 percent. However, all pipeline rates continue to recover from ratepayers an income tax allowance assuming a 35 percent rate.

Since APGA sent its letter, several other associations, including the Natural Gas Supply Association and American Forest and Paper Association, have followed up with their own letters that reference APGA's letter. In its letter to the Commission, the Natural Gas Supply Association expressed support for APGA's letter and request for immediate action on pipeline rates. They also stated that "many pipeline rates are by definition rendered unjust and unreasonable in light of the fact that current rates include an income allowance that no longer reflect the income tax rate that will be paid by the pipeline."

In its letter, the American Forest and Paper Association states that it is writing to align with the request filed by APGA and urges the commission to "act promptly to ensure the pass through of the benefits of lower corporate tax rates and other provisions in the new tax law".

Following is the APGA letter sent to Chairman McIntyre:

Dear Chairman McIntyre:

I write on behalf of nearly 1,000 communities that own their own gas system and are paying interstate pipeline rates that now are unjust and unreasonable in light of the significant decrease in the corporate income tax rate now effective under the Tax Cuts and Jobs Act of 2017. The American Public Gas Association (APGA) urges the Commission to act promptly to ensure that the recourse rates paid by customers of natural gas

pipelines are reduced to reflect the lower corporate tax rate.

As you know, all pipelines under the Commission's jurisdiction currently recover from ratepayers and income tax allowance that assumes a corporate tax rate of 35%, not the new current 21% rate. Also, all pipelines maintain accumulated deferred income tax (ADIT) accounts are now significantly overfunded because the tax has been collected from ratepayers at 35% but will be paid in the future at 21%. The difference should therefore be returned to ratepayers through further rate reductions. Each pipeline has its own facts of course, but we estimate that the new tax rate should lower firm recourse rates by 5-9%—without question this is a known and measurable change of a "substantial nature."

APGA's members are representative of smaller towns and rural America that almost always obtain natural gas service through maximum recourse interstate pipeline rates. They are the customers most affected by any regulatory hesitation at this time. They lack the wherewithal to bring rate challenges under Section 5 of the Natural Gas Act, so APGA requests the Commission to act now. State commissions are already acting to reduce retail utility rates.

When FERC declined to act universally after the 1986 tax rate change in the interstate pipeline industry, its decision apparently was based upon the belief that tax trackers were then included in the majority of the natural gas pipeline companies' rate settlements. APGA is unaware of any such trackers in place today with a single exception (Columbia Gas Transmission). Today, in the interest of competition, the Commission should act universally to place all pipeline rates on an equal footing by requiring the use of the current corporate tax rates effective now.

APGA believes that in light of the magnitude of the costs involved, the Commission may look past its general reluctance to adjust rates to reflect discreet cost-of-service

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## Look! Up in the Sky-It's Not a Bird, but it is a Plane Monitoring Pipelines

As a rookie analyst for the natural gas transmission firm El Paso Corp., Jeff Farrells got his first real eye-opener in the pipeline inspection business when he boarded a tiny, single-engine Cessna 182 propeller plane in Colorado Springs.

It was the mid-1980's and he was off on his first mission to inspect the company's extensive network of pipelines. The gravity of the challenge hit him as soon as he looked to the back of the plane and saw the generous stash of sleeping bags, food warm jackets, clothing and equipment for starting a fire for what was not supposed to be an overnight mission.

Remembering back, Farrells says, "They were trying to anticipate all the problems they could have."

Such is the life of those who fly to the middle of nowhere to inspect critically-important transmission infrastructure that most people don't even realize exists. Analysts, inspectors and other safety personnel in the United States must tend to a network of oil and gas pipelines that, all together, adds up to 2.6 million miles, a distance that equals a little over five round-trips to the moon.

"The patrol pilots are a unique breed of people," says Farrells, now the executive director of the Pipeline Association for Public Awareness, a group that works with excavators, emergency responders, and public officials to make sure our nation's remarkably safe network of pipelines stays that way.

Farrells recalls that the pilots were always hospitable to their guest, teaching him what they could about flying the planes and only occasionally subjecting him to surprise gut-tumbling maneuvers.

"It's not the most glamorous occupation," Farrells says, recalling the

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# What is Natural Gas Worth to a Home?

By Jon Christiansen, PhD

## The Perpetual Question

Each industry vertical my company serves seems to have that one question that everyone is asking. The natural gas utility industry is no different. The questions vary slightly regarding language or delivery, but the theme is the same: what is my product (natural gas) worth in the eyes of the consumer?

This question is a bold one, and as expected, comes with many sub-questions. What are the most attractive products? What appliances tip the scale of market preference and perceived home value? And perhaps the first question I remember hearing: What is the optimal number of natural gas burner tips to drive market preference and perceived home value?

We felt this was the year to tackle these questions.

## All Things Held Equal

One home has all natural gas appliances, while the other has electric appliances. Which of the two is of greater interest to the market among homeowners? I don't think this article would appear in a magazine targeting natural gas professional if the answer wasn't natural gas. But how much exactly?

The answer is three times. Two-thirds (66 percent) prefer the all-natural gas home to 22 percent preferring the all-electric home. Perhaps the bigger question, however, is would the market be willing to pay more for an

all-natural gas home? A substantially larger proportion of homeowners would pay more for an all-natural gas home than an all-electric home, as noted in the graph below. Additionally, more than a third of the market (36) would pay less for an all-electric home.

## Natural Gas Product Demand

Before launching into our experiment, we first wanted to identify the most attractive natural gas products that could be newly installed or upgraded in the home. As expected, the top two were the water heater (38 percent market attraction) and the stove/cooktop (34 percent market attraction), while the home heater/furnace (29 percent market attraction) rounded out the second tier demand.

Isolating the non-users we hope to convert makes the rank ordering look slightly different. The home heater/furnace was the most commonly

selected product (29 percent choice share) that would most convince non-users to convert to natural gas.

## Natural Gas Economic Valuation

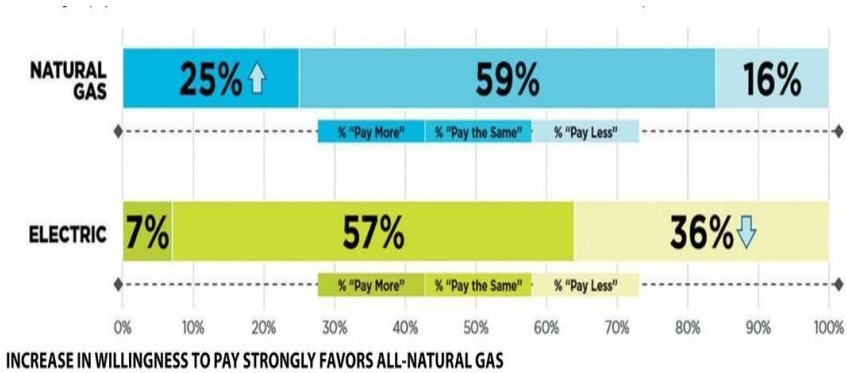
Now imagine you are a homeowner that does not work in the natural gas industry. Consider the following frame: Imagine a neighborhood where the average home value was than \$250,000. Some homes in the neighborhood are worth more than \$250,000 while some are worth less than \$250,000.

A home has the following appliances installed:

- ♦ Water heater– natural gas
- ♦ Home heat/furnace– natural gas
- ♦ Stove/cooktop - natural gas
- ♦ Clothes dryer– electric

Is this home worth:  
(a) More than the neighborhood average home value of \$250,000  
(b) Less than the neighborhood average home value of \$250,000  
(c) About the same

You will note there are three natural gas burner tips. Perhaps you selected the first option - more than the



NG Burner Tip Combination	Water Heat	Home Heat	Stove/Cook Top	Clothes Dryer	% Less than Market Avg.	% More than Market Avg.	+/- Index
0	Electric	Electric	Electric	Electric	-30%	14%	0.47
1	Natural Gas	Electric	Electric	Electric	-28%	14%	0.50
1	Electric	Natural Gas	Electric	Electric	-19%	19%	1.00
1	Electric	Electric	Natural Gas	Electric	-26%	16%	0.62
1	Electric	Electric	Electric	Natural Gas	-33%	13%	0.39
2	Natural Gas	Natural Gas	Electric	Electric	-15%	44%	2.93
2	Natural Gas	Electric	Natural Gas	Electric	-28%	31%	1.11
2	Natural Gas	Electric	Electric	Natural Gas	-30%	24%	0.80
2	Electric	Natural Gas	Natural Gas	Electric	-21%	34%	1.62
2	Electric	Natural Gas	Electric	Natural Gas	-27%	27%	1.00
2	Electric	Electric	Natural Gas	Natural Gas	-31%	18%	0.58
3	Natural Gas	Natural Gas	Natural Gas	Electric	-15%	48%	3.20
3	Natural Gas	Natural Gas	Electric	Natural Gas	-16%	44%	2.75
3	Electric	Natural Gas	Natural Gas	Natural Gas	-17%	40%	2.35
4	Natural Gas	Natural Gas	Natural Gas	Natural Gas	-9%	38%	4.22

BURNER TIP COMBINATION ECONOMIC VALUATION INDEX

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neighborhood average of \$250,000. It is worth noting that \$250,000 is the median home value in the U.S. Roughly half (48 percent) of the market agrees, while only 15 percent feels the opposite, i.e., that a home with three of four burners is worth less than the median U.S. home value median.

We replicated the same question with most of the possible combinations of the four primary products.

Let's first visit burner tip optimization. There isn't an optimal number of burner tips, per se. However, at three burner tips, we see a substantial difference in estimated home value than at two, and especially so at zero or one. At two burner tips, the home heat is the key appliance that lifts the estimated home value. At three burner tips, we see some variation, but the bottom line is the lift is evident for all three possible combinations.

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**PANHANDLE EASTERN PIPE LINE**  
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**TRUNKLINE GAS**  
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APGA Sends Letter on Corporate Tax Issue

Continued from page 1.

changes. Not insignificantly, in its 2015 policy statement on modernization costs, the Commission determined that significant governmental initiatives warranted a variance from this general policy. For similar reasons, the major decrease in the corporate tax rate necessitates industry-wide action with respect to this specific cost component of rates.

APGA therefore request that FERC take immediate action to require all jurisdictional natural gas pipelines to submit compliance filings pursuant to Section 5 of the Natural Gas Act addressing the impacts of the change in the corporate income tax on their recourse rates.

As you are well aware, despite APGA’s efforts to change the Natural Gas Act to bring consistency with the Federal Power Act, the Commission lacks refund authority under Section 5. Accordingly, because only prospective rate relief is available under law, prompt Commission action is necessary to ensure that pipeline customers do not continue to pay inflated rates based on the superseded tax rate any longer than necessary. Thank you for your consideration.

Sincerely,  
Bert Kalisch  
President and CEO

FERC Faces Complications in Adjusting Gas Pipeline Rates to Reflect Lower Federal Corporate Tax Rates

By Barbara Jost

One of the major recent changes made to the federal tax code as the result of the tax Cuts and Jobs Act was the reduction in corporate income tax from 35 percent to 21 percent. As soon as the corporate tax cuts took effect at the beginning of 2018, the Federal Energy Regulatory Commission (FERC) started to receive request that it use its authority under Section 5 of the Natural gas Act (NGA) to lower pipeline rates to reflect the reduced corporate tax rates. Absent such action, it is alleged, recourse rates will be inflated and therefore no longer “just and reasonable” as the NGA requires.

In one request to FERC, the American Public Gas Association (APGA) estimates that firm recourse rates should be reduced by 5-9 percent to pass through these tax savings. A related issue is how to handle taxes collected from shippers which have not been paid but recorded in the pipeline’s accumulated deferred income

tax (ADIT) account. Such ADIT accounts are likely overfunded because they were collected when the corporate tax rate was 35 percent and, if so, such monies should be refunded to shippers or used to reduce rates going forward.

APGA also asks that FERC take immediate industry-wide action, but it is not clear whether FERC can take this approach. Many rates in effect today were established under settlements that prohibited the rates from changing for a period of time. Does the FERC want to walk away from its longtime support of the sanctity of settlements and other changes in such rates before the rate change moratorium periods end? On a more nuts-and-bolts level, how will FERC investigate and modify rates to reflect lower tax expenses if existing recourse rates are based on a “black-box” settlement that does not specify, for example, the debt-to-equity ratio or the debt and equity cost rates used?

In 1987, FERC adopted in Order No. 475 a voluntary, abbreviated rate filing procedure to allow electric utilities to file for rate decreases to reflect the decrease in the federal tax rate as a result of the Tax Reform Act of 1986. The procedure adopted was a formula reduction in rates based on data supplied by the utility in its most recent rate case. FERC did not use this approach to downwardly adjust gas pipeline rates. At the time, most gas pipelines had tax trackers in their tariffs that caused recourse rates to adjust automatically when tax liabilities changed. That is no longer the case. As a result, if FERC does favor an industry-wide approach to address this issue, an order modeled on Order No. 475 may be in the offing.

What is Natural Gas Worth to a Home?

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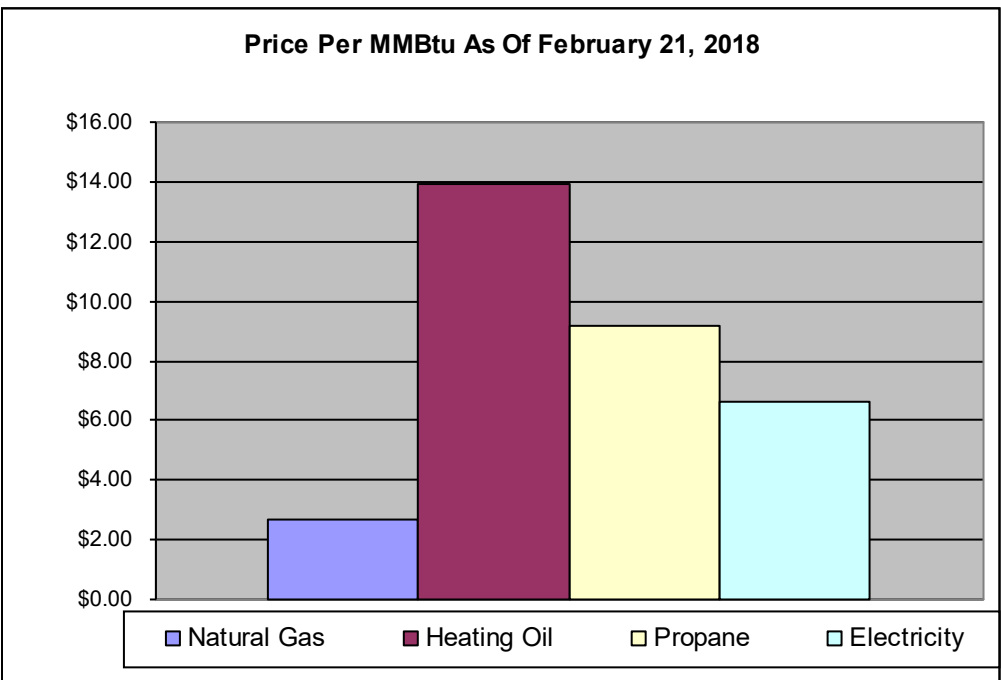
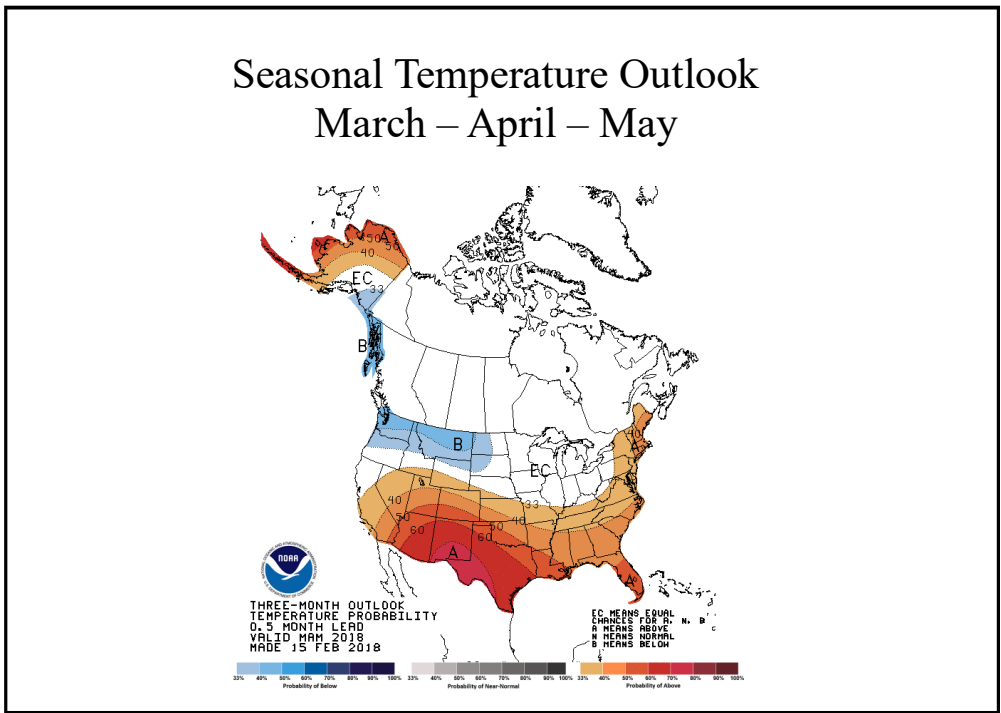
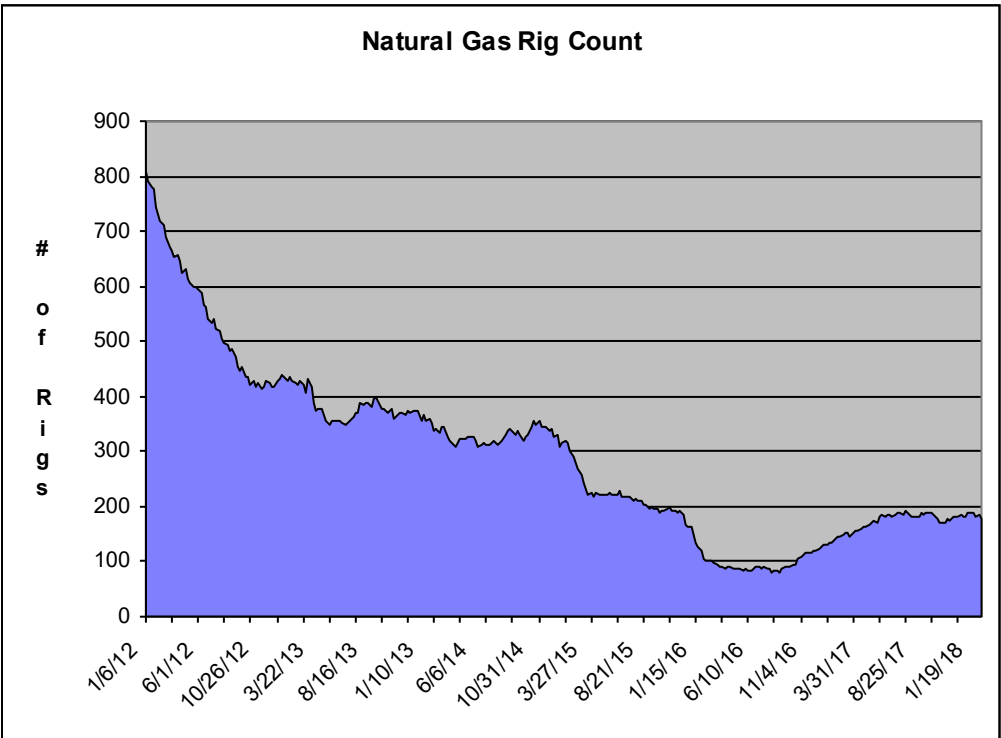
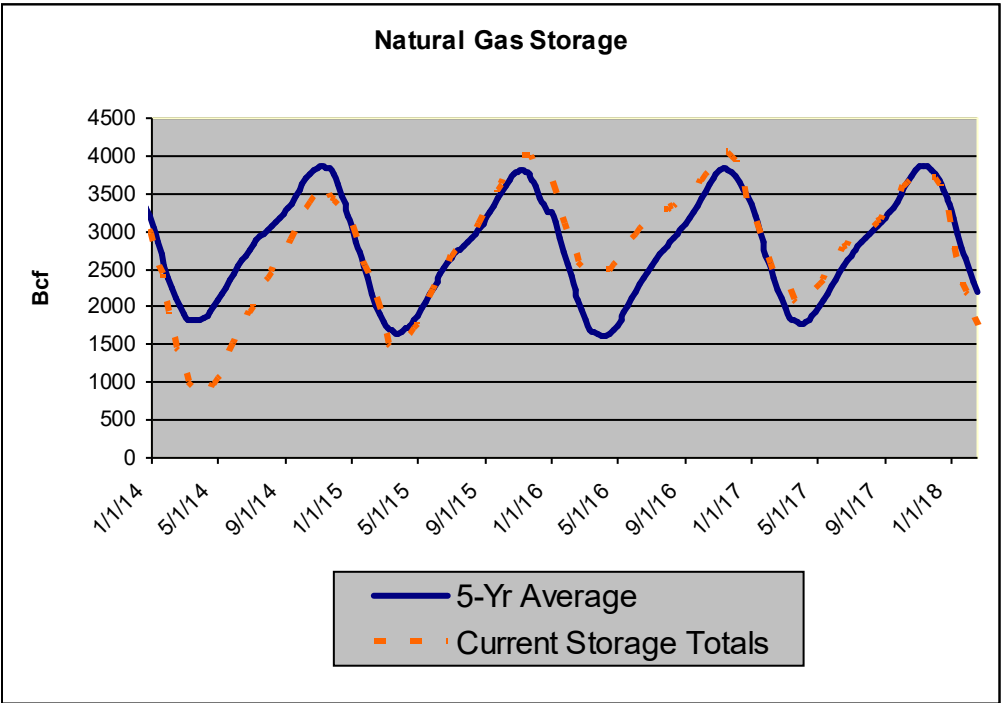
Additionally, we asked survey participants to estimate the value increase or decrease of a home with each appliance bundle.

Perhaps the most significant finding emerges when pairing an all-natural gas home versus and all-electric. The all-electric median estimated home value against the national average (\$250,000) is \$246,000 (\$4,000 below national median value), with a 90 percent confidence range of \$229,500 to \$256,000 (-\$20,500 to more than \$6,000 respectively).

The all-natural gas median estimated home value against the national average (\$250,000) is \$262,800 (\$12,800 above national median value), with A 90 percent confidence range of \$256,600 to \$284,200 (more than \$6,600 to more than \$34,200, respectively).

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Snapshots



## Look Up in the Sky

Continued from page 1.

danger. "Pilots have to be willing to fly single engine planes about 1,000 ft off the ground, in the mountains. They have to be pretty good pilots."

The business of aerial oil and gas pipeline monitoring is remarkable for the great lengths that industry personnel have to go to in order to get the job done. The first and ultimate goal of aerial surveillance is to provide a simple visual inspection, just like the typical walk-around before driving away in a rented car. They just have to go out in the field (way, way out in the field) and use helicopters, fixed-wing aircraft and sometimes drones to make it happen.

Aside from the distance and remote landscape, pipelines are also difficult to inspect from the air because they are almost always underground-placed there to prevent problems with corrosion and temperature-inspired expansion and contraction. So, as an inspector, how do you monitor the health of a pipe system that you largely cannot see? You're looking for two telltale signs of problems, Farrells says: Leaks, which can usually be spotted by the patches of dead vegetation they leave behind, or any other disturbance of the ground near the pipe.

Sometimes, the source of those disturbances are human. Nearby construction can often be an issue, with home owners, for example, excavating septic tanks too close to the pipeline. (As they say, call before you dig.) Someone else might be unknowingly building a shed in the pipeline's right-of-way, which could hinder access if some portion of the pipe needed to be dug up or otherwise maintained.

But the trouble could also come from Mother Nature. Rainstorms and floods can wash out hillsides, exposing sections of pipeline not designed to be above-ground. There's even a possibility that the eyes in the sky will notice intentional, human-caused damage to the pipes. Farrells says it is not unheard of for people to try to steal product directly from the pipeline. Thieves have been known to break in and siphon off just enough

fuel for their own use, or perhaps a tiny bit more for sale in a black market retail operation. If they take just a little, it's possible that the pipeline's pressure sensors won't detect it. But between aerial surveillance, sensors, and tiny surveillance robots run through the actual pipes, illegal taps are usually discovered.

A thick body of complex federal regulation spells out exactly how often pipelines must be inspected. For gas lines, it's four times per year, but for liquids deemed more hazardous, it's up to 26 times per year. Regulations vary depending on whether the pipelines are crossing open fields or public rights of way.

New technology, meanwhile, is helping to improve surveillance capabilities, as inspectors can now deploy an array of sensors to help. High-res cameras, for example, can take in a larger and less distracted panorama, which provides a record that can be referenced later. Other sensory equipment can even detect invisible methane leaks. To further enhance the tool factor, laser technology is also being utilized in the field.

### New Aircraft for an Old Game

While some inspectors are looking to drone innovation to keep "eyes in the skies," their use still remains extremely limited for pipeline surveillance due to flight regulation, especially those dealing with how close they need to be to their on-the-ground operators. As a result, piloted aircraft innovation remains key to an industry that is facing mounting pressure from safety regulators and the growing size of its infrastructure.

Enter in the Seeker, a specially designed two-seater aircraft that can fly almost anywhere, anytime.

Four hundred miles to the south of Colorado Springs, the farming and ranching town of Los Lunas, New Mexico straddles the Rio Grande. The town is home to some 15,000 people and one small dirt airstrip where, on a perfect day in the summer of 2006, Tommy Dunn first boarded the Seeker. The aircraft is a fixed-wing, but with its oversized, wrap-around front window, it resembles the head of a housefly under a microscope.

Dunn, the Senior Vice President for Business Development and Marketing at CSI Aviation (Seeker Aircraft's parent company), took the plane for a spin, flying south along the river and nearby desert mesas for a couple of hours before returning to the airstrip.

"It was an incredible experience. The view from this aircraft is truly unique," he says. "You do not get this visibility in any other fixed wing."

Back in 2006, the Seeker was an Australian company. Today, it is owned by the New Mexico-based CSI Aviation, which recently shepherded the plane through some key regulatory hurdles and is now preparing it for manufacturing at Erickson in southern Oregon. Now, Dunn is determined to make the Seeker the gold standard in pipeline monitoring.

"The Seeker is specifically built for surveillance," he says. "It's extremely rugged, capable of operating in austere conditions, and has a long endurance flight time." The aircraft had no difficulty in taking off and landing at the tiny dirt strip in Los Lunas, he added.

Dunn has the disarming habit of casually comparing his ultra-light plane to the Blackhawk helicopters he once flew in Iraq, Jordan and Africa while in the New Mexico Army National Guard. He also lovingly refers to the plane as "this Bird," in what he chalks up to a linguistic holdover from his military service.

And he's serious about the aircraft's selling points. The propeller is mounted in the back and pushed the plane forward, rather than pulling it from the front, to keep the field of vision clear. On the nose, there's a small patch of the plane's skin that can be removed to easily install sensor equipment. It can take off and land in all manner of gravel, grass, and dirt. It cruises at about 100-110 knots, but can comfortably be taken down to 55 for a close, slower look.

When it comes to operating costs, according to Dunn, the advantages get even clearer. Where helicopters, with their vast collection of moving parts, can cost \$1,000 per hour to keep in the air, the Seeker operates below \$80 an hour.

"Companies and government agen-

cies are looking for the most cost effective way to place their surveillance systems in the air" Dunn says. "The Seeker is the only purpose built aircraft. The Seeker can safely fly slow and low."

So while drones will soon revolutionize industries like real estate, farming and insurance, don't look for them to take over pipeline surveillance anytime soon, says Dunn. "Their range is limited, as is their ability to carry sensors. And it remains critically important to have knowledgeable inspectors in the air-especially far afield."

Dunn says that he believes the Seeker could play a critical role in pipeline safety as population growth and expanding pipeline systems continue to converge on one another. "That's why we are working to expand into that market," He says. "Some things are a perfect fit, and I believe this is one of them."

## What is Natural Gas Worth to a Home?

Continued from page 2.

In short, the low end of the estimate for an all-natural gas home (more than \$6,600) is higher than the high end of the estimate (more than \$6,000) for an all-electric home.

### Take It to Market

While multiple audiences should enjoy these findings, the optimal target to convey this message is your allies or potential allies if you are not currently tapping into such resources. We published research in 2016 that proved the potential power of the realtor as an ally. This data should prove fruitful when aligning with Realtors in your area. Additionally, product retailers, plumbers and other suppliers can use this information to sell natural gas during customer-facing opportunities.

Albeit difficult to sum up a study of this complexity in a limited space, the message is simple: the perception in the market suggests that the presence of natural gas drives up a home's value. Or, more simply, people value gas. You've likely been conveying this exact message for years. We were fortunate to prove it.

## Stay Informed With The IMGA Evening Report

The IMGA Evening Report is an excellent way to stay up to date on NY-MEX prices, weather, gas storage, and industry news. Each issue includes the days closing market prices for natural gas futures and crude oil, as well as a short commentary on market movement and industry related news.

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