

# MIDSTREAM Monitor

April 3, 2015 | Volume 33 | Issue 13

---

---

## Mexico Says ‘¡Hola!’ To Natural Gas Expansion Projects

By Caryn Livingston, Hart Energy



The 120-mile NET Mexico Pipeline transports gas from nine interconnects at the Agua Dulce Hub in Nueces County, Texas, to a point near Rio Grande City, Texas, in Starr County. *Source: NET Midstream*

As Mexico privatizes its oil and gas industry, the country has entered one of the largest periods of pipeline buildout in its history.

Still to be built are 13 natural gas pipelines costing an estimated \$10.5 billion, several of which are planned for Mexico’s northwestern area, which currently lacks sufficient access to domestic gas production.

The largest of these planned gas pipelines is Los Ramones Pipeline, which will extend about 650 miles from the South Texas border to northeastern Mexico. Asset manager BlackRock Inc. and U.S. private equity firm First Reserve have taken a joint stake worth around \$900 million in the second phase of the project, a March 26 release said. The private investment is a major departure from Mexico's previous energy policy, which was controlled by state-owned Petróleos Mexicanos' (Pemex) 76-year monopoly.

The change comes in response to consistent declines in Mexico's oil and gas production during the past decade. As a way to reinvigorate the country's energy industry, Mexico's President Enrique Peña Nieto moved to reform the constitution in late 2013 to allow for private investment in the energy value chain. The reforms were implemented the following year.

In addition to the significant changes in the E&P sector, the reform is expected to impact Mexico's energy infrastructure through new projects opening to outside investment and current systems that are leaving Pemex's control, according to the report "Mexico's New Energy Landscape" from Platts' Bentek Energy.

While Pemex formerly operated Mexico's largest gas transportation system—the Sistema Nacional de Gasoductos, which has a nameplate capacity of 5 billion cubic feet per day (Bcf/d) and is made up of about 5,400 miles of pipeline—Centro Nacional de Control de Gas Natural (CENEGAS) will operate the system after the reforms. Pemex will also transfer other operations to CENEGAS, including operations of Sistema Naco Hermosillo, a 212-mile, 1,054 million cubic feet per day (MMcf/d) system, which receives its gas supply from Kinder Morgan Inc.'s (NYSE: KMI) El Paso Natural Gas in Arizona.

The increased development is a result of Mexico's National Infrastructure Program 2014-2018.

Major aims of the program include the development of "infrastructure for generating electricity using efficient, low cost and low environmental impact fuels," as well as "the development of fuel transportation and storage projects," according to analysis from PricewaterhouseCoopers S.C. Mexico's plan to reach those stated goals is to move "toward a gas-based economy under its National Infrastructure Program," a recent Tudor, Pickering, Holt & Co. note said.

The Comisión Federal de Electricidad (CFE), Mexico's only electric utility, estimates that gas demand in northwestern Mexico will necessitate 2.2 Bcf/d of incremental supply between now and 2028, the Bentek report said. Imports from the U.S. via pipeline have increased steadily during the past few years, peaking at 2.2 Bcf/d during September 2014.

To help reach those goals, CFE awarded five tenders for the construction of new pipelines since October, the Bentek report said. Combined, the pipelines will make up an investment of more than \$2.2 billion and a nameplate capacity of 5.7 Bcf/d. The CFE is expected to award five more tenders for gas pipelines before the end of the summer.

Tudor said that those upcoming tenders will play an important role in Sempra Energy's (NYSE: SRE) story, as the company's subsidiary IEnova will be bidding on the remaining planned gas pipeline projects

through 2017. This will give Sempra “the potential to earn about 9.5% ROC as Mexico moves toward a gas-based economy under its National Infrastructure Program,” the note said.

<b>Upcoming Mexico Project Bids From Sempra Subsidiary IEnova</b>				
<b>Project</b>	<b>Capex (\$MM)</b>	<b>Capacity (Bcf/d)</b>	<b>Miles</b>	<b>In-Service Date</b>
San Isidro to Samalayuca Pipeline	\$123	1.14	14	January 2017
Tuxpan to Tula Pipeline	\$350	0.7	147	March 2017
Samalayuca to Sasabe Pipeline	\$916	0.55	328	2017
Colombia to Escobedo Pipeline	\$450	0.5	158	June 2017
Natural gas supply to Baja Sur	\$600	0.136 to 0.227	N/A	June 2018
<i>Source: Tudor, Pickering, Holt &amp; Co. International LLP, Sempra Energy</i>				

### **Get Cracking**

Current ethylene production supports cracking demand, but more is on the way. Mexico’s first greenfield cracker to enter service since the North American shale boom began is scheduled to come online in late 2015.

The cracker, called the Etileno XXI complex, will have a production capacity of 2.310 billion pounds per year and will house one ethane cracker and two polyethylene facilities, Bentek said. To support the increased production needs, Pemex will increase ethane recovery capabilities in its Ciudad Pemex processing complex, which currently does not produce NGL. Gasoductos de Chihuahua, a 50:50 joint venture (JV) between Pemex and IEnova, will also develop a 140-mile ethane pipeline to connect the Cactus, Nuevo Pemex and Ciudad Pemex complexes to Coatzacoalcos.

Pemex also operates three ethane crackers at petrochemical complexes of La Cangrejera, Morelos and Pajaritos in Veracruz. Combined, the crackers have a nameplate capacity of 3.045 billion pounds per year. The report estimated that the three crackers would need about 80,000 bbl/d of ethane to operate at 95% utilization, though current demand from the crackers is about 60,000 bbl/d, down from peak demand of 84% in 2009 as ethylene production from Pajaritos declines.

Mexico’s gas processing operations have remained fairly steady during the past few years, while NGL recovery has actually declined along with the declines in crude oil production, the report said. Most of the country’s gas processing plants were built by Pemex from the 1950s through the 1970s, with capacity additions at only three plants during the past decade. The nine plants operated by Pemex have a combined capacity of 4.5 Bcf/d of sour gas and 5.9 Bcf/d of cryogenic processing capacity, according to Bentek.

Pemex separates  $\gamma$ -grade into purity NGL products in nine fractionators, most of which are located at the same sites as the processing plants. Fractionation also takes place at Pemex’s Madero refinery and

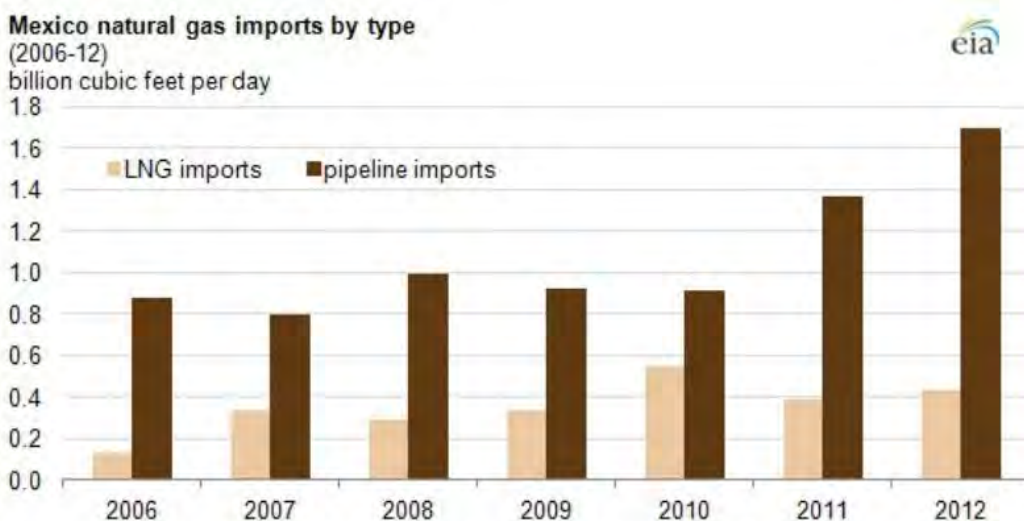
its three petrochemical complexes. Combined, Mexico's fractionators have a combined ethane capacity of 587,000 barrels per day (bbl/d) and produced 360,000 bbl/d on average in 2014.

### Adios To LNG?

Though pipeline constraints led Mexico to increase its LNG imports—accounting for 38% of its 2010 total gas imports at more than 0.5 Bcf/d, according to the U.S. Energy Information Administration—imports from the U.S. via pipeline are expected to eventually displace LNG as more pipelines enter service.

Mexico imports LNG at Costa Azul in Baja Cali., Manzanillo on the West Coast of central Mexico and Altamira on the Gulf Coast. The facilities have a combined regasification capacity of 16.1 million tons per annum, Bentek said.

However, pipeline expansion plans have prompted market participants to consider the possibility of LNG exports from Mexico. To that end, in November Pemex announced plans to develop a \$6 billion LNG liquefaction plant that would begin operations in 2020.



The plant would likely be a JV with Pemex and third-party investors, Bentek said. No site for the project has been selected, though it is expected to be near to Pemex's Salina Cruz refinery on southern Mexico's West Coast.

However, that area is already running at capacity and an export facility would require significant growth in gas production for Mexico, as well as increased connectivity to U.S. gas supplies, making it unlikely any LNG would leave the terminal until well into the next decade. Further, the drop in global oil prices means the project will encounter reduced global capex budgets, severely limiting new LNG export projects.

# Worry, But Be Happy About Economic Outlook

By Joseph Markman, Hart Energy



**Ellen Zentner, Morgan Stanley's chief U.S. economist, expressed surprise over how consumers were choosing to spend their savings from lower fuel prices. Source: Hart Energy**

Don't look now, but in a macroeconomic sense, things are pretty good.

"We think that the expansion globally and in the U.S. could be one of the longest on record," Ellen Zentner, managing director and chief U.S. economist for Morgan Stanley, said at the recent Duff & Phelps 7th Annual Private Capital Conference in Houston.

Energy folks in the crowd, reeling from the fall in commodity prices, were ready to take happy statistics where they could find them, even those numbers that were pinching their own business.

"Look at the drop in gasoline prices," Zentner said. "It's just incredible. If we annualize these savings, it's about \$165 billion in disposable income that's been freed up because of lower gasoline prices. What we care about is: What are consumers doing with all that extra cash? They're not spending it as much as we thought they would."

Zentner's forecasting team at Morgan Stanley found that consumers were spending rather cautiously, following a pattern set during the 2008 to 2009 financial crisis. They were choosing to divert funds formerly dedicated to fuel consumption toward diminishing credit card debt and repairing balance sheets. These prudent habits are good for the U.S. economy in the long run, but led to a smaller bounce from low fuel prices than expected. Nevertheless, there is an immediate impact for the economy—right to the stomach.

“Consumer spending growth has picked up,” she noted. “No matter what, even if you make a concerted effort to spin those gas savings, it does bleed into the economy. We go to the gas station, we put gas in our tanks. It costs half today than what it did a month ago. We’re excited, what do we do? We go out to eat.”

Restaurant sales shot up 8% year over year in the U.S. Census Bureau’s January retail sales report. Other elements of that report indicated weakness, but Zentner was not concerned.

“I always tell people, look at the line item for dining out services,” she said. “If that’s growing, the kids are all right, because that’s the first category we cut if we feel that our finances are pinched, and it’s the first category that benefits when we’ve got some extra cash to spend.”

Another benefit from low energy prices? More demand for energy.

“It’s one of the ways from a demand standpoint that you do end up finding a floor in oil prices eventually because it actually does spur demand when energy prices drop,” Zentner said. “We’ve already seen, in auto sales, that people are being less picky about the mpg of the vehicles. We’ve seen SUV sales rise. People are happy just to get out on the road and drive more. Maybe they kicked their share ride person out of the car and said, ‘I don’t have to share a ride with you anymore. You were annoying anyway. I’m going to do the commute on my own.’”

On the whole, Zentner considers lower energy prices as an overall positive for the U.S. economy. That’s because the country remains a net importer of oil, and the consumer sector, which accounts for 70% of the economy, enjoys cost savings when gasoline prices fall. But that upfront boost to the economy fades over time.

“If you sustain \$40 or lower, let’s say, on oil, it boosts the economy by a little more than four-tenths of 1%,” she said. “But there’s a drag from a 10% sustained rise in the U.S. dollar. So basically, the two are canceling each other out. We went into the year thinking we would get this big bang to growth from lower energy and a lot of it is actually being counteracted right now from the strength that we’ve been seeing in the U.S. dollar.”

Long term, though, Zentner is optimistic because demographics are shifting back into an advantage for the U.S. Concern about the impact to GDP resulting from the aging population of post-World War II baby boomers has given way to the promise brought by the new major demographic segment: 20- to 24-year-olds, i.e., the children of those baby boomers.

“This, to me, sets the U.S. apart on the global stage over the next decades really, because this demographic trend is unique,” Zentner said. “Japan’s birth rates remain very low after World War II. China has just relaxed its one-child policy. Europe’s has remained very low after World War II.”

This generation will need affordable housing once it unburdens itself of student loans. Zentner expects it to wield considerable influence over what retailers provide.

# Paper: Shale Gas Adds Up To Billions In Consumer Savings

*By Caryn Livingston, Hart Energy*

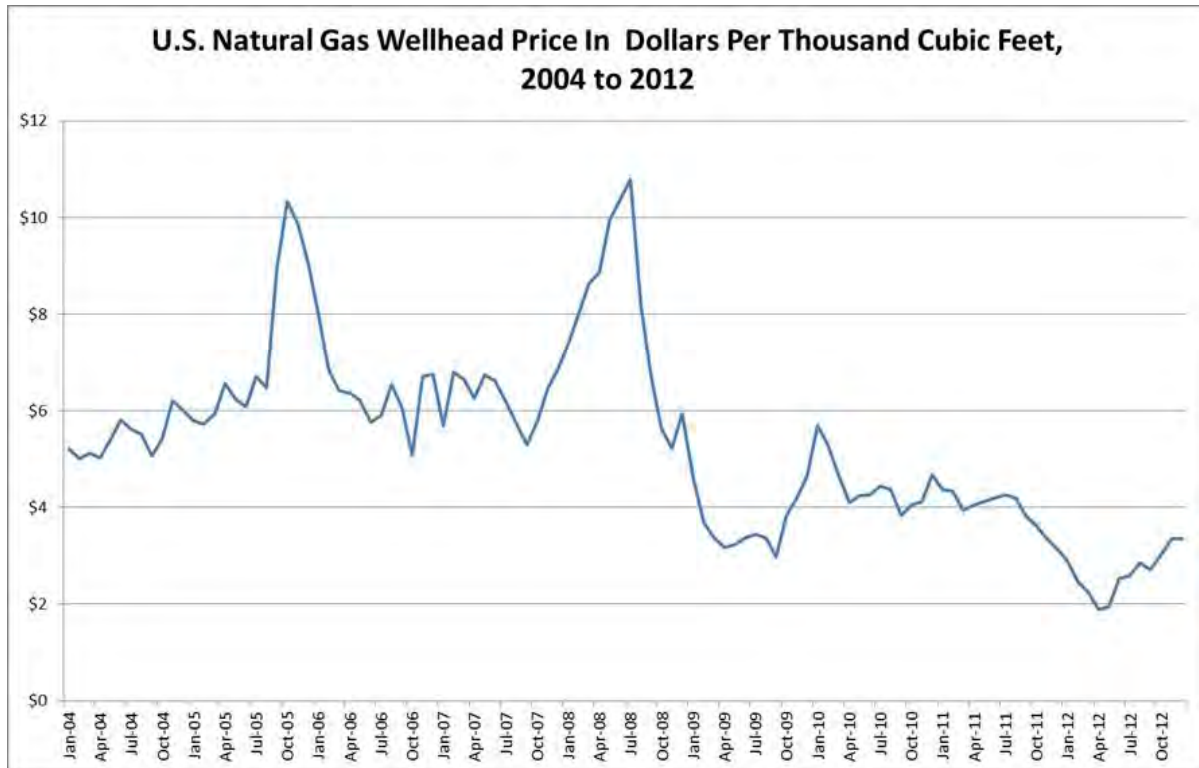


A recent paper examining the effects of the shale natural gas boom on U.S. gas prices determined that the abundance of gas has reduced gas prices by \$3.45 per thousand cubic feet since 2007, lowering residential bills by about \$13 billion per year.

The paper, written by Catherine Hausman of the Ford School of Public Policy at the University of Michigan and Ryan Kellogg of the Department of Economics at the University of Michigan and the National Bureau of Economic Research, found that gas prices from 2007 to 2013 were 47% lower than they would have been had hydraulic fracturing not led to exponential growth in domestic gas production.

Hausman and Kellogg considered four sectors of gas consumption: residential, commercial, industrial and electric power. Combined, the estimated savings from the lower gas prices add up to \$74 billion per year. Residential savings came in at \$17 billion per year; commercial at \$11 billion; industrial at \$22 billion; and electric power at \$25 billion.

Gas producers, on the other hand, were estimated to have experienced a significant decrease in surplus in spite of the increased production. The decline in prices likely has the most substantial effect on areas that produce large amounts of conventional gas without shale development. However, as the overall difference for producers is only about \$26 billion annually, the net overall gain is still \$48 billion.



While it might be expected that colder states would see the most benefit from the reduced gas prices, Hausman and Kellogg found that the West South Central area, consisting of Arkansas, Louisiana, Oklahoma and Texas, saw the greatest benefit per person at \$432. They were followed by the East North Central area of Illinois, Indiana, Michigan, Ohio and Wisconsin at \$259 per person in benefits. The area that saw the smallest benefit was the Pacific, consisting of California, Oregon and Washington, where consumers still saw \$181 per person in benefits.

Due to the importance of natural gas as a direct input in chemical and cement manufacturing and an indirect input in virtually all manufacturing for its use in generating electricity, the paper also examined the impact of shale gas on the overall manufacturing industry, which has been declining in the U.S. for decades. Specifically, Hausman and Kellogg examined “the extent to which the new availability of low-cost natural gas has spurred the expansion of U.S. industries with gas-intensive production processes,” the paper said.

According to the determination made by the researchers, the most energy-intensive sectors of manufacturing expanded by 30% as a result of lower gas prices from 2006 to 2013. The most significant change was found in fertilizer manufacturing, which experienced a 233% increase in capital expenditure from 2007 to 2012, the paper said. “It is therefore clear that manufacturing sectors that are particularly gas intensive have expanded relative to other manufacturing sectors since the onset of the shale gas boom, the paper stated.

The paper also considered environmental impacts of hydraulic fracturing and difficulties regulators face. In considering the potential impacts on climate change hydraulic fracturing could have, the paper



addressed a range of concerns raised by environmentalists, from methane leaks during gas production to displacement of coal in domestic power generation. The overall effect of hydraulic fracturing's impact remains uncertain due to the number of variables, the paper noted.

"The climate change impacts of fracking in 2013 could have been anywhere from an increase in environmental costs of 28 billion dollars per year to a decrease in costs of 0.7 billion dollars per year," it said.

The uncertainty has led to a wide variety in regulatory approaches to hydraulic fracturing.

"While some states and localities have outright banned fracking, other areas have allowed the industry to rapidly move forward," the paper noted. "From an efficiency perspective, this variation in policy approaches is unlikely to be optimal."

To alleviate the uncertainty, the paper said that, "Higher quality, comprehensive data on baseline levels of environmental quality, as well as on emissions from individual producers, would go a long way. In the absence of such data, regulatory options remain limited and are unlikely to be cost effective."

# Crossing The Line

By Joseph Markman, Hart Energy



**A New Mexico sunset provides a rich backdrop for Regeneration Energy Corp.’s operations in the Permian Basin. The area continues to show promise for producers and midstream operators, despite current low oil prices and a host of regulatory challenges. Source: Regeneration Energy Corp.**

In August, citizens of the New Mexico town of Hobbs will celebrate the opening of Murray Elementary School, a 53,000-square-foot facility with expected enrollment of more than 450 students. Four years ago, they opened a new Freshman High School. Their high school football stadium seats 13,200, the largest of its kind in the state, and may undergo a \$15 million renovation that will include luxury suites.

These are ambitious, expensive projects for a population of around 36,000, but Hobbs—where unemployment is a mere 3.2%—is located in Lea County, birthplace of New Mexico’s Permian Basin oil and gas business. Lea County and neighboring Eddy County are home to its recent renewal.

In fiscal 2013, Hobbs Municipal Schools received more than \$56 million in state funding, 31.5% of which, or \$17.65 million, was derived by revenues attributed to the oil and gas industry. In total, oil and gas accounted for about \$1.7 billion of the state’s \$5.59 billion budget that year. Early figures from the New Mexico Oil & Gas Association for fiscal 2014 elevate that percentage to 35%.

By comparison, oil and gas revenue accounts for about 13% of Louisiana’s state budget.

“With oil and gas prices being down, that percentage will likely be lower in the fiscal year we’re in now, but we’ve gone back eight years and it’s certainly going to be in the mid- to high 20s in the worst of circumstances,” Wally Drangmeister, vice president and director of communications for the association, told *Midstream Business*. “It’s extremely important to all aspects of state government here in New Mexico.”

The New Mexico portion of the Permian's oil and gas industry sustains 94,000 jobs, generates \$22.7 billion in economic output and contributes \$10.2 billion to the gross state product of the state, according to a 2014 study by Texas Tech University in Lubbock.

But given the state's reliance on energy for its coffers, members of the oil and gas community wouldn't mind a friendlier atmosphere in which to work.

"It is a tremendous challenge for any company to operate in New Mexico compared with stepping straight over the state line into Texas," Larry Risley, former president and COO of New Mexico-focused producer Cross Borders Resources Inc., told *Midstream Business*. "It's night and day. It just continues to amaze me the grit that many of the companies have that continue to operate in New Mexico under the circumstances that are found there."

### **Disenchanted**

Drangmeister doesn't dispute that challenges exist in the land of enchantment.

"The biggest difference [between Texas Permian and New Mexico Permian] is the amount of production and issues related to dealing with the [federal] Bureau of Land Management [BLM] on federal acreage," he said. "Around 50% of oil and gas production in New Mexico comes on federal land, so it is an issue dealing with the Bureau of Land Management [BLM]. There's been some frustration with the resources that are available to process rights of way and drilling permits and the like. There are a lot of rules in place."

Unconventional production bolstered annual crude oil production in New Mexico by 70.3% to over 100 million barrels (bbl) between 2007 and 2013, the U.S. Energy Information Administration reported.

The swiftness of the ramp-up overwhelmed the midstream system's ability to respond.

"What you're finding at this point is that the pace of development, particularly as it occurred last year, was virtually straining everyone's facilities," Raye Miller, president of Artesia, N.M.-based Regeneration Energy Corp., told *Midstream Business*. "Every gas plant was full. New plants were being constructed and virtually as soon as they were online and operational, they were being filled with gas."

"A good portion of our lands are owned by the State of New Mexico and the United States government, administered by the BLM," Miller said. "Rights of way for gathering lines and connections have just been dreadfully slow. It winds up being a thing where in most cases, those rights of way will actually allow gas that has been flared to be processed and sold, so it becomes environmentally advantageous. You'd think that the BLM would be stressing to their folks to get those rights of way processed as quickly as possible to reduce the amount of emissions into the environment through flaring and all, but that certainly doesn't seem to be the priority and this administration doesn't seem to, well, I don't think they're enamored with any fossil fuel."

### **Midstream scramble**

Miller admits that the New Mexico Permian does not compare in flaring issues with relatively new plays like the North Dakota Bakken, where the sudden emergence of oil and gas has caused major concerns because infrastructure cannot be built quickly enough to accommodate it. New Mexico, by contrast, dates its oil history back to the first flow from the Midwest State No. 1 well in Hobbs on June 13, 1928.

Selected New Mexico Permian Midstream Projects			
Operator	System	Capacity	Start Date
Alpha Crude Connector LLC, Frontier Midstream Services, Concho Resources Inc.	400-mile gathering system serving northern Delaware Basin	100,000 bbl/d	Est: 2H 2015
NuDevco Midstream Development LLC	Rail and truck terminal in Lea County, N.M.	TBD	TBD
Western Refining Inc.	Tex New Mexico Pipeline line-fill	110,000 bbl/d	1Q 2015
Crestwood Midstream Partners LP	Willow Lake gathering and processing system	30 MMcf/d	1Q 2015
	Delaware Ranch Plant	120 MMcf/d	1Q 2016
Enterprise Products Partners LP	South Carlsbad Dew Point Plant	200 MMcf/d	Completed
	Carlsbad Chaparral Gas Plant	40 MMcf/d	Completed
	South Eddy processing plant, 80 miles of gathering pipelines	200 MMcf/d	1Q 2016

*Source: Stratas Advisors, a Hart Energy company*

“We have had better luck with the need to flare compared to other places because, while the Permian Basin certainly has decades if not centuries of future development potential, it’s not a frontier area,” Drangmeister said. “There’s quite a bit of gas gathering and processing infrastructure in place. The challenge is always to get the next well hooked up with right of way and easement and other agreements. It’s probably not been as much of an issue in terms of the duration of flares that maybe it has been in other parts of the country.”

But the limitations are enough of a problem to cause economic concerns, Risley said.

“You would have a wonderful oil well and you would have the issue with the associated gas,” he said. “We found ourselves in more than one situation where our operator had to shut in our well because there was not the pipeline capacity to take away the gas.

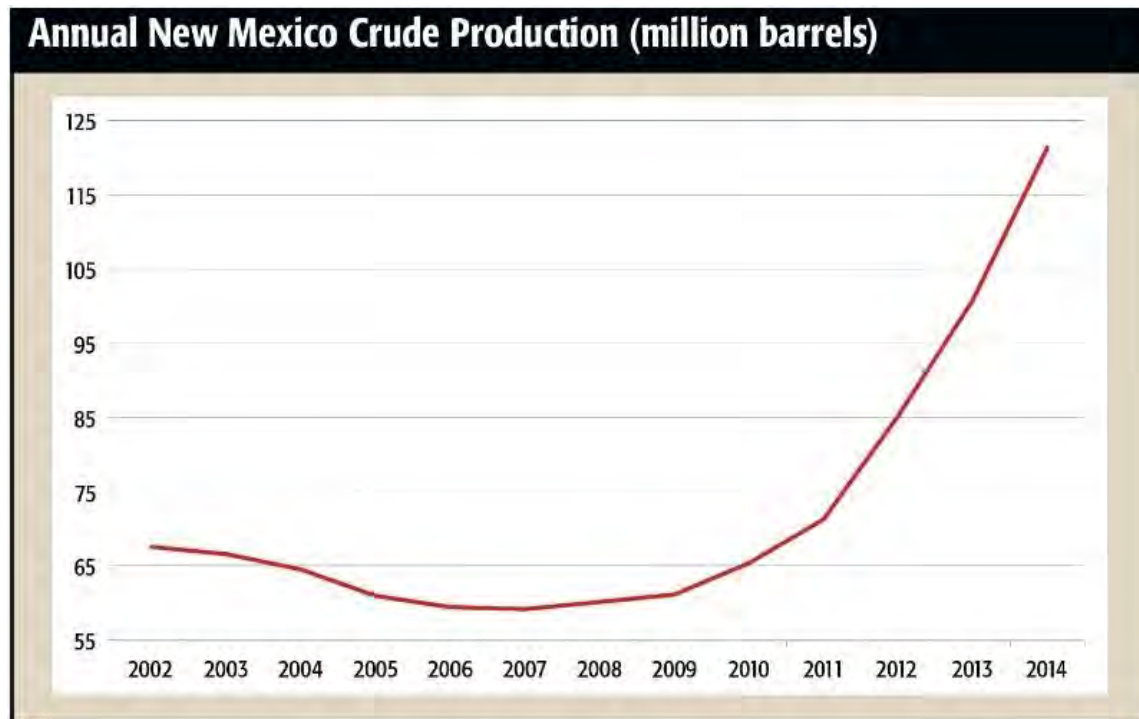
“From the standpoint of risk and well economics, you’re always concerned that your well may not come back completely, since you’re shutting your well in, and that’s always an issue for an operator,” Risley said. Many wells are now horizontal, offering the promise for high-volume flowback, high cash flow with quick return on investment and in a large program often disturb less surface area.

“That’s helpful, but it brings up considerable volumes of oil and gas and it just exacerbates the situation with putting in facilities. These service companies are doing their best to put in gas pipelines, etc., but they have quite a challenge to stay up with the activity,” he added.

### More challenges

With the exception of Yates Petroleum Corp., most of the major operators in New Mexico are based out of state. The top gas producer is Houston-based ConocoPhillips Co., with 2013 production of 417 billion cubic feet (Bcf) that roughly equaled output of the next seven producers. The company operates mostly in northwestern New Mexico’s San Juan Basin, but maintains more than 1,100 wells in southeast New Mexico and paid more than \$17 million in production taxes in the Permian region.

The state’s top oil producer and No. 2 gas producer in 2013 was Midland, Texas-based Concho Resources Inc., which concentrates its efforts in the New Mexico Shelf area of the Permian. The Shelf is a narrow crescent, just north of the Delaware Basin and mostly in Eddy County. Concho began drilling vertical wells targeting the Shelf’s Yeso formation in 2006 and started horizontal drilling in 2012.



*Source: U.S. Energy Information Administration*

Occidental Petroleum Co.’s Centurion Pipeline subsidiary boasts 2,900 miles of oil gathering and common carrier pipelines from southeast New Mexico to the Cushing, Okla., hub. The system’s throughput capacity is 400,000 bbl with storage capacity of 5.8 million bbl. Oxy ranked No. 13 among the state’s gas producers with 24.8 Bcf in 2013 and No. 2 among oil producers with nearly 8 million bbl of output.

Yates, based in a glass-and-stone headquarters in Artesia, in Eddy County, traces its history to the Illinois State No. 3 well, which struck oil at 1,947 feet early in the last century. It was the first well discovered on

state land and the site was chosen on pure intuition by Mary Yates, wife of the company's founder, who accompanied a three-man team to the field in a Model T. Yates ranks No. 10 among both oil and gas producers, with 2013 output of 3.7 million bbl and just under 31 Bcf.

### **Promising horizon**

Unconventional production has reinvigorated New Mexico's energy business and its economy, but it's not a shale revolution.

"There's the Avalon Shale section in the Bone Spring formation that has seen some development and that's truly a shale play," Miller said, "but the majority of activity that's currently going on in Eddy and Lea counties in the horizontal work is actually in Bone Spring and primarily in traditional sand sections."

And the Permian is a choice area to operate because of the rock, which mostly consists of medium- to very finegrained clastics, gypsum and carbonates.

"The good thing about that part of the world, which is similar to the Texas side of the Permian Basin, is that you have the potential for multiple stacked pays—you have many opportunities to make a well," Risley said. "I've worked in other basins, where you'll get down to 10,000 feet and you'll still have one or two targets that you're drilling the well for. The Permian Basin in general can be forgiving. You can miss a target and have something up the hole to back into. You may not get your full investment back, but for something that you set pipe on, there's a chance that you may be able to break even. That's very attractive. Obviously, there's money to be made in New Mexico or companies wouldn't continue to put their capital at risk there."

The rig count decline in the state has mirrored the fall-off in the Permian Basin as a whole, according to Baker Hughes Inc. statistics. New Mexico's total of 102 at the end of 2014 had tumbled to 68 by the end of February and the basin's count of 536 was down to 355.

### **Drilling dropoff**

"In general, the number of drilling rigs held on an amazingly long time largely through the end of 2014," Drangmeister said. "We certainly don't expect it to dry up completely. There are many different companies that were doing a great amount of drilling and development many years ago when the price of oil was similar to what it is now. We are starting to see a reduction in drilling of some wells that are not in the midst of wellknown formations.

"The risk is just too high," he said. "You can't bet on the fact that prices will go up. Many producers in New Mexico are producing in areas where they know a lot about the formations, it's a very logical next step in the wells they're drilling. Their risk is relatively low."

And despite its long-time contribution to the state's economy, the energy industry faces particularly stiff pushback from an environmentalist movement with a stronghold in the state capital of Santa Fe.

“Santa Fe tends to be one of those places—like Boulder, Colo., and Berkeley, Calif.—there’s a different vibe here in this community,” Drangmeister said. “They’re not necessarily fully knowledgeable of what happens in the industrial process, much less oil and gas development, and Santa Fe’s the home of the anti-advocacy industry in the state.”

Every producing area has its own set of business challenges. It’s not unique, but it can be frustrating to those trying to be responsible corporate citizens as they produce energy.

In certain areas of New Mexico, “It’s a not-in-my-backyard type of viewpoint,” Risley said. “We’ve seen it elsewhere in the country so it’s not new by any means, but even California, with its tremendous regulations and such, has been able to partner with the industry and continue to develop its resources. Significant partnering to help resolve issues certainly is ongoing in New Mexico among government-related agencies, citizens of the state and operators. However, with these business headwinds, New Mexico appears to fall short in its capability to attract increased investment.”

And yet, the outlook is promising.

### **‘Spikes and lulls’**

“Obviously, commodity price fluctuations cause spikes and lulls in activity levels,” Miller said. “With prices in the \$40s and \$50s for crude oil, the rig count drops substantially. But the future for the New Mexico side of the Permian is just absolutely outstanding as commodity prices recover. We couldn’t be happier.”

Persistence in the Permian extends beyond the drilling fields to the battles with bureaucrats and accommodations with lizards and chickens. But the rewards are rich as well.

In Eddy County, oil and gas operations valued at more than \$5.5 billion lifted government budgets by more than \$1.1 billion.

Challenges aside, New Mexico can be a profitable place for oil and gas.

# Frac Spread: Heavy NGL Prices Spring To Life

*By Frank Nieto, Hart Energy*



A shortage of pentanes-plus ( $C_{5+}$ ) along the Gulf Coast resulted in a Mont Belvieu price spike the final week of March due to increased demand from refiners ramping up summer-grade gasoline blending. Pentanes-plus prices also rose at Conway while butane prices rose at both hubs.

Mont Belvieu  $C_{5+}$  rose 23% to \$1.38 per gallon (gal) its highest price since it was \$1.41/gal the week of Nov. 26. This surge was largely responsible for the 11% gain in the theoretical NGL barrel (bbl) at the hub. The Conway price improved 7% to \$1.15/gal, its highest price in a month.

While the NGL with the closest relationship to crude oil surged in value, West Texas Intermediate (WTI) crude continued to hover around \$50/bbl, giving a clear indication that the movement on  $C_{5+}$  was market-based and not related to other markets.

Indeed, the gains posted by butane and isobutane at both hubs were much more muted as they hit their highest level in about a month.

Crude prices are entering the weakest part of the year in the second quarter. This downturn is likely to operate as a headwind for heavy NGL prices. Barclays Capital noted in a March 31 research note that there were several factors that supported crude prices in the first quarter, which is a bit scary considering how far prices tumbled in the past six months. These factors include:

- Diesel and fuel oil demand increased this past winter due to colder-than-normal weather and natural gas infrastructure bottlenecks;



- Product margins for crude increased due to refinery strikes, unplanned outages in Latin America and the U.S. West Coast and the enforcement of low sulfur fuel oil use in Emission Control Areas;
- Production disruptions in Libya and Iraq;
- Stockbuilding in China at the end of 2014 and stockholding obligations in Europe; and
- A delayed oil price pass-through to LNG prices.

Despite the impact on crude demand, the market is expected to remain oversupplied by 2 million bbl/d in the second quarter. “New prices [expected] for Brent are unlikely and WTI is not expected to go below \$40/bbl. Both prices are anchored by the back of the market and available storage capacity, even if it is floating,” PIRA Energy Group’s *Weekly Oil Market Recap* for the week ending March 29 said. “The magic is working to tighten oil markets but it takes time. Gasoline season looks healthy but new refinery capacity will pressure distillate. Political uncertainties are on the rise with the Nigerian elections, Saudi Arabia’s direct military involvement in Yemen and turmoil in Libya, among other things.”

Light NGL prices were a mixed bag as propane prices went up but ethane prices retreated very slightly. Interestingly, this occurred despite propane inventories increasing and was more likely due to prices having hit their floor the previous week. The Mont Belvieu propane prices rose 7% to 54 cents/gal, its highest price in a month, while the Conway price increased 4% to 49 cents/gal, its highest price in three weeks.

Frac spread margins were largely unchanged as gas prices fell with the advent of the spring shoulder season. The most profitable NGL to make at both hubs was C<sub>5+</sub> at 79 cents/gal at Conway and 83 cents/gal at Mont Belvieu. This was followed, in order, by isobutane at 39 cents/gal at Conway and 35 cents/gal at Mont Belvieu; butane at 31 cents/gal at Conway and 32 cents/gal at Mont Belvieu; propane at 24 cents/gal at Conway and 27 cents/gal at Mont Belvieu; and ethane at 2 cents/gal at Conway and 1 cent/gal at Mont Belvieu.

There was a bit of a surprise as natural gas storage levels declined the week of March 27 with the U.S. Energy Information Administration reporting that storage declined by 18 billion cubic feet (Bcf) to 1.461 trillion cubic feet (Tcf) from 1.479 Tcf the previous week. This was 75% greater than the 833 Bcf posted last year at the same time and 12% lower than the five-year average of 1.651 Tcf.

Storage injections should return this coming week as heating demand will be very limited due to normal to warmer-than-normal temperatures expected around the country. This may result in limited cooling demand, but likely not enough to result in another withdrawal.

<b>NGL PRICES</b>						
<b>Mont Belvieu</b>	<b>Eth</b>	<b>Pro</b>	<b>Norm</b>	<b>Iso</b>	<b>Pen+</b>	<b>NGL Bbl</b>
March 25 - 31, '15	17.52	54.04	63.22	64.16	137.54	<b>\$23.50</b>
March 18 - 24, '15	18.36	50.64	59.36	60.44	112.20	<b>\$21.20</b>
March 11 - 17, '15	18.23	53.22	62.80	63.74	110.46	<b>\$21.64</b>
March 4 - 10, '15	18.43	58.38	68.66	70.00	118.16	<b>\$23.28</b>
March '15	18.15	54.72	64.30	65.48	119.85	<b>\$22.57</b>
February '15	18.19	57.06	68.02	69.98	116.61	<b>\$22.95</b>
4th Qtr '14	20.22	76.90	96.73	98.28	149.25	<b>\$30.10</b>
3rd Qtr '14	23.19	103.92	123.69	128.39	212.20	<b>\$40.27</b>
2nd Qtr '14	29.26	106.55	124.12	130.23	222.81	<b>\$42.31</b>
1st Qtr '14	34.50	129.51	137.62	141.49	212.60	<b>\$46.16</b>
March 26 - April 1, '14	29.36	105.98	123.98	128.56	221.78	<b>\$42.13</b>
<b>Conway, Group 140</b>	<b>Eth</b>	<b>Pro</b>	<b>Norm</b>	<b>Iso</b>	<b>Pen+</b>	<b>NGL Bbl</b>
March 25 - 31, '15	17.45	48.46	60.42	65.42	114.84	<b>\$21.35</b>
March 18 - 24, '15	18.35	46.60	56.90	64.10	106.92	<b>\$20.51</b>
March 11 - 17, '15	17.50	48.68	58.52	73.40	106.46	<b>\$20.92</b>
March 4 - 10, '15	18.03	53.56	65.16	83.46	110.96	<b>\$22.52</b>
March '15	17.81	49.99	61.09	72.97	110.31	<b>\$21.52</b>
February '15	17.56	53.62	67.06	82.14	113.63	<b>\$22.69</b>
4th Qtr '14	18.69	78.64	102.72	113.19	146.37	<b>\$30.77</b>
3rd Qtr '14	20.38	104.99	123.51	140.07	207.90	<b>\$40.18</b>
2nd Qtr '14	26.26	105.44	121.26	163.00	221.62	<b>\$42.62</b>
1st Qtr '14	25.46	169.48	132.08	147.10	216.86	<b>\$49.93</b>
March 26 - April 1, '14	31.25	103.90	120.12	146.06	234.60	<b>\$43.63</b>

<b>CURRENT FRAC SPREAD (CENTS/GAL)</b>				
<b>April 3, 2015</b>	<b>Conway</b>	<b>Change from Start of Week</b>	<b>Mont Belvieu</b>	<b>Last Week</b>
Ethane	18.35		18.36	
Shrink	16.51		17.24	
<b>Margin</b>	1.84	99.06%	1.12	69.87%
Propane	46.60		50.64	
Shrink	22.81		23.82	
<b>Margin</b>	23.79	-7.71%	26.82	-7.33%
Normal Butane	56.90		59.36	
Shrink	25.82		26.96	
<b>Margin</b>	31.08	-4.65%	32.40	-8.27%
Isobutane	64.10		60.44	
Shrink	24.80		25.90	
<b>Margin</b>	39.30	-18.97%	34.54	-7.50%
Pentane+	106.92		112.20	
Shrink	27.61		28.83	
<b>Margin</b>	79.31	0.73%	83.37	2.83%
NGL \$/Bbl	20.51	-1.96%	21.20	-2.02%
Shrink	9.10		9.50	
<b>Margin</b>	11.42	-3.18%	11.70	-2.12%
Gas (\$/mmBtu)	2.49	-0.40%	2.60	-1.89%
Gross Bbl Margin (in cents/gal)	25.50	-3.62%	26.63	-2.49%
<b>NGL Value in \$/mmBtu (Basket Value)</b>				
Ethane	1.01	4.86%	1.01	0.71%
Propane	1.62	-4.27%	1.76	-4.85%
Normal Butane	0.61	-2.77%	0.64	-5.48%
Isobutane	0.40	-12.67%	0.38	-5.18%
Pentane+	1.38	0.43%	1.45	1.58%
Total Barrel Value in \$/mmbtu	5.02	-1.85%	5.23	-2.20%
<b>Margin</b>	2.53	-3.25%	2.63	-2.51%

Price, Shrink of 42-gal NGL barrel based on following: Ethane, 36.5%; Propane, 31.8%; Normal Butane, 11.2%; Isobutane, 6.2%; Pentane+, 14.3%, Fuel, frac; transport costs not included. Conway gas based on NGPL Midcontinent zone, Mont Belvieu based on Houston Shio Channel.

RESIN PRICES – MARKET UPDATE – APRIL 3, 2015					
TOTAL OFFERS: 23,231,776 lbs		SPOT		CONTRACT	
Resin	Total lbs	Low	High	Bid	Offer
HDPE - Inj	5,325,544	0.56	0.68	0.57	0.61
LDPE - Film	3,945,060	0.585	0.725	0.59	0.63
LLDPE - Film	3,887,336	0.615	0.695	0.57	0.61
HDPE - Blow Mold	3,378,348	0.555	0.635	0.545	0.585
PP Homopolymer - Inj	1,993,392	0.67	0.76	0.66	0.7
LLDPE - Inj	1,804,576	0.57	0.69	0.595	0.635
HMWPE - Film	1,455,036	0.565	0.635	0.585	0.625
LDPE - Inj	881,840	0.575	0.655	0.615	0.655
PP Copolymer - Inj	560,644	0.735	0.79	0.68	0.72

Source: Plastics Exchange – [www.theplasticsexchange.com](http://www.theplasticsexchange.com)

---



---

## BNSF Cuts Oil Trains' Speed For Safety In Urban Areas

*Bloomberg*

BNSF Railway Co. is cutting the speed of oil-carrying trains in some urban areas to as slow as 35 miles per hour, a 30 percent reduction, to improve safety following crude-by-rail accidents this month.

BNSF, owned by Warren Buffett's Berkshire Hathaway Inc., implemented the slower train speeds and measures to inspect tracks and rail cars more closely on March 25, Mike Trevino, a spokesman, said on Monday. The reduction trims the speed from the 40 mph (64 kilometers per hour) in high-risk areas that railroads, including BNSF, last year voluntarily installed in 46 urban areas. In some cases, the cut is from 50 mph for cities with populations of at least 100,000, the Fort Worth, Texas-based rail company said.

"This change goes beyond the high-threat urban area definition to be municipalities with populations of 100,000 or more," Trevino said in a telephone interview.

The dangers of hauling crude oil by rail was highlighted in an accident this month in which a BNSF train jumped the tracks near the Mississippi River-town of Galena, Illinois, and five of the 21 cars that derailed

caught fire. The BNSF accident occurred a few days before a Canadian National Railway Co. crude train was involved in a fiery crash near the Canadian town of Gogama, Ontario.

The safety steps include wider use of monitors to detect overheated wheel bearings on rail cars, with units placed every 10 miles on crude-by-rail routes along critical waterways instead of the current 40-mile spacing, Trevino said. The railroad will also inspect track more frequently on crude train routes and lower the tolerance for pulling out rail cars that register on wheel-impact detectors.

“The result will be that you will take a car out of service sooner compared with today,” Trevino said.

The actions aren’t being taken in conjunction with other railroads, although they are aware of the measures, he said.

---

---

## Transco Seeks FERC Approval For Atlantic Sunrise Pipeline

### *Business Wire*

Transco, a wholly owned subsidiary of Williams Cos. Inc. (NYSE: WMB), filed with the Federal Energy Regulatory Commission for authorization for its Atlantic Sunrise Pipeline expansion project, Williams said March 31.

Atlantic Sunrise would transport about 1.7 billion cubic feet per day of natural gas from the Marcellus Shale to mid-Atlantic and Southeastern U.S. markets, the Tulsa, Okla.-based company added.

The pipeline is scheduled to go online in 2017’s second half, as part of a \$4.8 billion project bringing transmission projects online through that year.

The Transco Leidy line in Pennsylvania, and various locations along its mainline between Pennsylvania and South Carolina, will be compressed and looped. The Central Penn Line, a greenfield pipeline segment, will connect the northeastern Marcellus region to the Transco mainline near Station 195 in southeastern Pennsylvania. Transco and a third party will jointly own this segment. The mainline of the 10,200-mile pipeline network runs about 1,800 miles between South Texas and New York.

Williams Partners’ net investment in the Atlantic Sunrise project is expected to be about \$2.1 billion.

Transco is the country’s largest-volume and fastest-growing interstate natural gas pipeline system.

# Creel Plans Retirement From Enterprise's General Partner

## *Business Wire*

Michael A. Creel said he would retire at the end of the year as CEO of the general partner of Enterprise Products Partners LP (NYSE: EPD), the company said March 30. A.J. (Jim) Teague was elected to replace him in the role, the company added.

Teague has been a director of the general partner since 2008, and has been COO since 2010. He joined Enterprise in 1999, the company said.

Previously, he worked for 23 years at Dow Chemical Co., and has 40 years' experience in midstream and petrochemicals.

When Creel retires, Randa Duncan Williams and Teague will be in the office of the chairman. Currently, Williams is the non-executive chairman of the general partner, and Teague is COO, in that office. Creel is currently the CEO in that office.

The general partner's board of directors will add the role of chief administrative officer to the office of the chairman, effective April 1. W. Randall Fowler has been elected as chief administrative officer, effective April 1.

Fowler has 35 years of industry financing and accounting experience, and joined Enterprise in 1999.

Enterprise also said that Bryan F. Bulawa was elected senior vice president and CFO, effective April 1. He has been senior vice president and treasurer since 2009. He joined Enterprise as vice president and treasurer in 2007.

Previously, Bulawa spent 13 years in Scotia Capital's corporate and investment banking energy division. He will continue reporting to Fowler.

Christian M. (Chris) Nelly was elected vice president and treasurer, effective April 1. He has been senior director of finance since 2011. He joined Enterprise in 2008 as director of finance.

Previously, he worked for Societe General and Scotia Capital. He will continue reporting to Bulawa.

Houston-based Enterprise Products Partners LP is a domestic-focused midstream company.

# SemGroup Corp. To Build Maurepas Pipeline

Midstream-focused SemGroup Corp. (NYSE: SEMG) will construct, own and operate the Maurepas Pipelines on the Louisiana Gulf Coast, the company said March 26.

Maurepas will support Motiva Enterprises LLC's efforts to interconnect and optimize its refinery operations.

The 34.2-mile long, 24-inch wide pipeline will cross the Mississippi River connected to Locap. It will terminate at Motiva's refinery in Norco, La.

Two intermediates pipelines will run between the Norco and Convent refineries. They will be 35 and 34 miles long, respectively, and 6 inches wide. 12-inch, 35 mile intermediates pipeline between Motiva's Norco and Convent refineries.

Long-term transportation agreements with Motiva are supporting the project, SemGroup said. Maurepas is scheduled to be operational in 2016's fourth quarter.

This project is SemGroup's first asset development in the Gulf Coast area, said CEO Carlin Conner.

"This \$500 million investment will expand SemGroup's scale and customer base, creating a more diversified midstream company while adding to our inventory of assets to drop down to our MLP, Rose Rock Midstream, in the future. We remain focused on expansion projects that create value for our customers, are executed at mid-to-high single digit EBITDA multiples and generate attractive returns for our shareholders."

SemGroup Corp. is based in Tulsa, Okla.

Motiva Enterprises LLC is based in Houston.

# Chevron Global Energy Closes Caltex Shares Sale

## *Business Wire*

Chevron Global Energy Inc. completed the sale of 135 million shares in Caltex Australia Ltd. (ASX: CTX.AX, OTC: CTXAF), parent Chevron Corp. (NYSE: CVX) said March 29.

The shares were priced at AU\$35 each, and proceeds will be \$135,000,035.

San Ramon, Calif.-based Chevron will receive the cash proceeds upon settlement on April 2, and reflect the gain in second-quarter 2015 results.

## Contact Information:

**CARYN LIVINGSTON** Assistant Editor  
[clivingston@hartenergy.com](mailto:clivingston@hartenergy.com)

**Contributing Editors:** Velda Addison, Darren Barbee, Nissa Darbonne, Deon Daugherty, Rhonda Dauey, Caroline Evans, Bethany Farnsworth, Dale Granger, Leslie Haines, Mary Hogan, Paul Hart, Susan Klann, Mike Madere, Joseph Markman, Richard Mason, Emily Moser, Frank Nieto, Jack Peckham, Erin Pedigo, Larry Prado, Jennifer Presley, Chris Sheehan, Bryan Sims, Kristie Sotolongo, Steve Toon, Theresa Ward, Scott Weeden, Peggy Williams

**Graphic Designer:** Felicia Hammons

**ORDER TODAY!**

Call: 1-212-608-9078 | Fax: 1-212-608-9357

## HARTENERGY

1616 S. Voss, Suite 1000 • Houston TX 77057-2627 • USA

Copyright 2014. All rights reserved. Reproduction of this newsletter, in whole or in part, without prior written consent of Hart Energy is prohibited. Federal copyright law prohibits unauthorized reproduction by any means and imposes fines up to \$100,000 for violations. Permission to photocopy for internal or personal use is granted by Hart Energy provided that the appropriate fee is paid directly to Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923. Phone: 978-750-8400; Fax 978-646-8600; E-mail: [info@copyright.com](mailto:info@copyright.com).