HARTENERGY

MIDSTREAM Monitor

VOLUME 9 / ISSUE 33 / APRIL 15, 2011

Formerly GAS PROCESSORS REPORT

In This Week's Edition

FEATURE

2011 GPA Convention: Scott – Oil And Gas Industry Under Attack

"The oil and gas extraction industries are very much under attack today," Dr. Loren Scott said during his keynote speech at the Gas Processors Association's (GPA) 90th Annual Convention in San Antonio, Texas, while discussing the outlook for the oil and natural gas industries in 2011-12.

Dr. Loren Scott speaking at the 90th Annual GPA Convention

Dr. Scott, professor emeritus of economics at Louisiana State University (LSU) and president and founder of Loren C. Scott & Associates Inc., an economic consulting firm, said that these attacks are coming from five different sources.

The first of these attacks on the industry is from the media and legislators due to the Macondo oil spill last year in the Gulf of Mexico. However, Dr. Scott said that the economic impact on this industry was not as harsh as covered by the media.

"Following the spill, the fisheries industry got a lot of attention from the media after this disaster. There were a lot of great pictures and a lot of sad stories to tell. Having said that, Louisiana is the number two sea-

(continued on page 3)

INSIDE LOOK AT PROCESSING

ExxonMobil's Tillerson: Natural Gas Demand Will Grow By 60% By 2030

Rex Tillerson, chairman, president and chief executive of ExxonMobil, told CNBC last week that despite the continued depressed state of natural gas prices the company's 2010 acquisition of XTO Energy for $41 billion will prove to be a shrewd acquisition in the long run.

"We've recognized for some time that natural gas would be the fastest growing of the conventional fuels–oil, gas and coal. We clearly see the important role that natural gas will play globally and, more importantly, its role in the United States in terms of meeting future energy demand," he said.

ExxonMobil anticipates global demand for natural gas will grow by 60% during the 25-year period from 2005 to 2030. It is this anticipated growth in demand that served as the impetus for the company to invest so largely in natural gas with the XTO Energy acquisition, Tillerson said.

"The timing was good from our perspective; the current conditions were not unexpected by us. We anticipated because of the oversupply of natural gas that prices were going to decline...Our expectation for gas in the U.S. is it will be healthy in the years to come. It's going to be extraordinarily important as a fuel source in the U.S. and we're very, very happy with the resource position we have and extremely happy with the organization that we acquired as well," he said.

While ExxonMobil is strongly focused on developing oil and gas projects in North America, Tillerson stated that its projects in Qatar with Qatargas that saw the two companies co-develop four liquefied natural gas (LNG) trains served as the

(continued on page 5)

VOLUME 9 / ISSUE 33 / APRIL 15, 2011

2011 GPA Convention: Shale Growth Slow To Migrate Internationally

Production from North American shales still is on the rise. At an average of 59.1 Bcf/d, 2011 already has seen the highest production rate compared to the last 10 years. At the 90th Annual Gas Processors Association Convention in San Antonio, Texas, April 3-6, Rusty Braziel, vice president of Sales and Marketing for Bentek Energy, addressed how shale activity in North America will impact international markets and the rate at which domestic success will be transferred abroad. He spoke to a full room of attendees at the International Breakfast on April 4.

Shale Activity in North America

Shale growth in North America happened quite quickly. Although companies knew where horizontal wells were being drilled and the volumes that were being produced, it still was hard to believe that the out-of-the-box concepts and technologies could be so successful, Braziel noted. Several factors contributed to the rapid growth, he said. Between 1Q 2007 and 4Q 2010 in Arkansas's Fayetteville shale alone:

- Drill time has decreased by 59% (from 20 days to 8 days);
- Number of wells per year per rig has increased by 144%;
- Average lateral length has increased by 122%;
- Average 30-day production rate has increased by 162%;
- Initial production additions per rig per year have increased by 538%; and
- Drilling and completion costs have increased by 4% (only an additional $100,000).

In both dry gas and liquids-rich/oily shale plays in North America, the overall rig count has increased by 995 rigs, with companies moving as many as possible to liquids-rich plays. Approximately 474 horizontal rigs have been added to the count as the industry transfers the technology to these liquids-rich resources.

However, production from domestic shales will reach unprecedented levels if kept on this track. "This cannot happen because there are not enough places to store it, process it, etc.," Braziel said. "Something has to give."

International Impact

North American shale activity could have a substantial impact on international growth. Along with an international displacement of LNG imports and interfuel competition (namely between coal and natural gas), a natural gas liquids surplus could look like natural gas surpluses over the next few years, according to Braziel. Because global interest in shale is growing in places like Europe, India, China, Australia, and even North Africa, which has potential for huge shale development, there likely will be worldwide adoption of existing shale techniques along with potential challenges moving forward.

The rapid learning curve seen in North America likely will not spread as quickly to international markets due to several constraints on growth. More infrastructure is needed to support the development of shale resources and more rigs need to be moved to location. According to Baker Hughes Inc., there are only 30 shale gas rigs in all of Europe as of February 2011. Regulatory support also is needed along with less "frac paranoia," according to Braziel.

The biggest issue, however, is the lack of seismic and logging information. "In the U.S., we knew where the shale was," Braziel said, "so there were not a lot of dry holes." Unfortunately, there is not a lot of international seismic information available, which will make growth increasingly difficult, he said.

To put things in perspective, Braziel compared the state of New York and its popular Marcellus play to France. Both are under a moratorium due to public and regulatory paranoia. On the other hand, Louisiana and Poland are more motivated and therefore are quite active. Finally, think of Texas and China as the big shale players, Braziel said. Texas is the largest producer of natural gas in the U.S., and China, the "wildcard" in global gas markets, could be up to 10 to 15 Bcf/d in the next 20 years. Infrastructure, information, and policy will determine how growth in international shale markets will play out, Braziel said.

– Ashley E. Organ

2011 GPA Convention: Attendance Exceeds Expectations

The Gas Processors Association's (GPA) conversion from an organization covering just the gas processing industry to one reflecting the midstream overall really took center stage at this year's annual convention in San Antonio, Texas.

"We have been increasing our focus for several years and now we're really starting to see the results of changes we made to try to reflect our new role," said Mark Sutton, executive director of GPA. "This is really reflected in our advocacy work on issues such as RICE MACT and EPA (Environmental Protection Agency) Subpart W, which is certainly a different strategy than we used before. We are now more proactive with filing petitions and threatening legal action should a strong resolution not be presented to us."

In the past, the association's position on different issues might have been a bit watered down to satisfy all of the members, but that is not the case now, Sutton said, as the company is fully focused on the best interest of the midstream industry. "Even some of our stances may not make everyone in the room happy, but it will be true to the midstream," he added.

GPA's expansion began in 2002-2003, but was not fully supported initially because of some membership from the production and transportation segments who felt they could not agree with the association's midstream membership on all of the issues.

"What we told them was we need to represent the midstream and we'll let other groups represent their pieces. What we've seen this year is, with the hiring of Jeff Applekamp as director of Government Affairs, we're in a position to make strong statements on the advocacy front," Sutton said.

While there will still be issues from time to time with members that are more producer-focused than midstream-focused, Sutton said these members recognize and accept that GPA will be focused on the midstream as a whole. "Right now we are in a position to give the membership what it wanted when we began to expand our focus," he said.

During Monday's general session, GPA director Mark Sutton was serenaded by "Marilyn Monroe" in recognition of GPA's 90th birthday.

The success of this change is reflected in the attendance growth at this year's conference, which is up nearly 8% from the 2008 conference in Grapevine, Texas, and is expected to top 1,800 attendees. "San Antonio is consistently the best host for our conference, but the attendance has exceeded our expectations," Sutton said. "I think the energy level is as strong as I've seen in many years. There are people everywhere and our meetings tend to be filled to capacity. I think last year's meeting in Austin was very good, but I think this year's is better."

As GPA continues to solidify its role as a midstream advocacy group, it will seek to increase its role on an international basis. This year, the association accepted half of the papers submitted from international members and half from its domestic members.

"We thought this made everything pretty evenhanded in trying to make it a very international gathering," Sutton said, "but we hope in the future to attract more international attendees. The quality of the program is there, but we might not be getting the message out to the right people." The international segment to get the most attention likely will be in Latin America due to the number of presentations submitted and training held in that part of the world.

"The sessions for the young professionals also continue to exceed our expectations each year," he said. "The training was jam packed and I hope we can increase their attendance next year."

While the GPA is very pleased with this year's show, Sutton said they will begin planning next year's event almost immediately after the end of this one. "We will start to appoint the committees and place the call for papers pretty quickly."

– Frank Nieto

2011 GPA Convention: Scott – Oil And Gas Industry Under Attack... *(continued from page 1)*

food-catching state in the nation...despite that the total value of landed seafood catches in 2008 was only US $278 million or about 0.1% of Louisiana's gross state product. It is not a big industry and, in fact, many of the fishermen made a whole lot more working for BP in the spill clean-up effort," he said.

One area that was undoubtedly hard hit was tourism, but the spill only impacted the eastern portion of the region from Mobile Bay to the Florida panhandle and he anticipates that this will be temporary. "What I think will happen is that by the time spring break is over, everyone will be saying, 'What was all the shouting about?'"

The reason for this, Scott said, is because much of the oil in the region has been captured, evaporated, burned, cleaned with dispersants, or diluted by the water.

The bigger problem, in Scott's opinion, is the effects on the oil and gas industry since 33% of oil production and 10% of natural gas production in the US comes from the Gulf of Mexico and nearly 19% of oil and 5% of natural gas is produced from deep waters.

Although permitting in the Gulf has opened up again, the Bureau of Ocean Energy, Regulations, and Enforcement (formerly MMS), has increased the time necessary for new or revised drilling permits from 30 days to 90 days. "We've gone from a moratorium to a 'permitatorium,'" Dr. Scott said.

These new permitting times resulted in seven drilling permits being approved in the Gulf between May and September compared to an average of 13 being approved per-spill. Since the spill only two permits have been approved in deep waters.

"Is more stringency really needed?," he asked while noting that there are have been 55,000 wells drilled in the region with no major spills and the industry has been spending a great deal on safety efforts to ensure something like this doesn't happen again.

KEY NORTH AMERICAN HUB PRICES	
2:08 PM CST / April 14, 2011	
Gas Hub Name	Current Price
Carthage,TX	3.91
Katy Hub, TX	4.07
Waha Hub, TX	4.03
Henry Hub, LA	4.13
Perryville, LA	4.04
Houston Ship Channel	4.07
Agua Dulce TX	4.06
Opal Hub, Wyo.	3.87
Blance Hub, NM	3.88
Cheyenne Hub, Wyo.	3.88
Chicago Hub	4.20
Ellisburg NE Hub	4.24
New York Hub	4.45
AECO , ALBERTA	3.77

Source: Bloomberg

Despite this safety record, he said that a Willis insurance executive told him that insurers will raise their rates in the Gulf by between 10 to 35% depending on the producer's history. In addition, Congress wants to raise the liability cap from $75 million to $10 billion.

The second area from which the industry is under attack is from the Obama administration's proposed taxes on the oil and gas extraction industry, which have risen to $53.5 billion.

"There are very predictable things that will happen if this piece of legislation passes…There will be less oil and gas produced in the United States of America…Most of the higher costs from these taxes will be passed on to consumers in the form of higher gasoline prices…The costs that can't be passed on to consumers will be absorbed by oil and gas companies, but these companies don't pay taxes, instead these taxes are paid by owners of mutual funds, asset management companies, and institutional investors. We are not taxing oil and gas companies, we're taxing ourselves," Dr. Scott said.

The final three attacks on the industry are coming from initiatives from the Department of the Interior (DOI).

The first is a requirement made in 2010 that operators in the Gulf of Mexico set permanent plugs on non-producing, completed wells within three years while dismantling 650 production platforms connected to these wells within five years due to the environmental risk.

Scott noted that over the past few years the region has been hit by some of the strongest hurricanes, yet these platforms and wells did not have any incidents attached to them. The plugging and dismantling initiatives will cost $3.8 billion and result in the loss of production of between $6.2 billion and $18.2 billion, according to an LSU study.

DOI is also halting development on federal lands and excluding the Atlantic and Eastern Gulf from the 2012-17 outer continental shelf five-year leasing program. All of this has led the US to handcuff its energy industry at a time when the need to produce cheaper domestic reserves has never been greater, Scott said. "The US is the only country in the world that knows where there is oil and does not drill for it."

His forecast for oil prices is that they will continue to rise with the average price in 2011 being $92/bbl with a high of $110/bbl and the 2012 price averaging $100/bbl with a high of $120/bbl. He anticipates gas prices remaining low with an average of $4.60/MMBtu with a high of $5.60/MMBtu in 2011 and an average of $5.20/MMBtu with a high of $6.00/MMBtu in 2012.

Dr. Scott said that there are two ways to deal with the challenges that lay ahead in the energy industry: the one proposed by Karl Marx and the other by Adam Smith.

Marx, of course, espoused abolishing all private property and that the state should determine the individuals' needs while Smith touted individual ownership and that the free market dictated needs through supply and demand.

"Which one of these guys had the better idea? Well, 58 years ago we saw Korea split up. The north went the way of Karl Marx and the south went the way of Adam Smith. Fifty years later the gross domestic product per capita was $1,300 in North Korea and the gross domestic product per capita in South Korea was $17,800," he said while concluding that it would be in the country's best interests to let the industry follow Adam Smith's method rather than Karl Marx's.

– Frank Nieto

Marcellus Midstream 2011: Learning Lessons In The Shales

When most people think of taking lessons learned in one shale play and utilizing those experiences in other plays, it is generally taken from a producer's viewpoint. However, these experiences can also be used in the midstream, according to C. Gregory Harper, group president, pipelines and field services at CenterPoint Energy.

"Right-of-way costs escalate when developing 'hot' fields," he said while speaking at Hart Energy's recent Marcellus Midstream conference in Pittsburgh, Pa. CenterPoint Energy was able to achieve first-mover advantage in the Haynesville through its Carthage to Perryville pipeline.

He noted that since 2005, CenterPoint Energy Pipeline and Field Services has deployed over $3.8 billion in capital to transport natural gas, much of this from shale plays to new markets.

Although this figure is high it would have been larger were it not for the company entering plays early. Harper said that CenterPoint Energy's right-of-way costs doubled in a five-year time span since it first entered the Woodford shale. Over that same five-year period, the right-of-way costs in the Haynesville grew more than three-and-a-half times.

In addition, Harper said that some of the challenges that midstream companies face are the same as producers went it comes to right-of-way issues.

"In the Haynesville, there are wealthy landowners controlling large parcels of land that obtain legal counsel, which adds more time and expenses to the process," he said.

Other issues that help to drive up costs for midstream operators in the shale plays include adding expenses for multi-line rights for potential expansion or transporting other products such as natural gas liquids (NGL) or producer water; long lead times for materials; and weather that could extend the project timeline and add expenses.

Terrain is another big issue in the shale plays because not all of the plays have similar formations. It is important to try to identify the sort of terrain within the play and determine what other shale it is similar to and use that information to drive down costs.

The same goes for the quality of the gas where depending on the contents of the stream may require gas treating. "The Fayetteville required little treating for its gas since it was near pipeline quality. The Woodford required amine treating due to its higher CO_2 content while the Haynesville may require both amine treating as well as thicker-walled pipe due to its H2S content," he said.

An additional expense frequently is the lack of construction crews close to where the infrastructure will be built. The same holds true for other skilled labor in the "hot" plays and can create a bit of a bidding war for talent.

In the end, companies need to learn the lessons of what worked in other shale plays when entering a new play and be prepared to utilize that information where it is applicable.

– Frank Nieto

ExxonMobil's Tillerson... *(continued from page 1)*

perfect model of how to work with a national oil company.

"They [Qatar] have placed their emphasis on education, and technology development, but they have centered their investment approach on honoring contracts, compliance with the rule of law and creating the right conditions where risks can be taken and rewards can be gained between investors and the government as well," he said.

Tillerson compared the business culture and atmosphere for energy in Qatar to other countries around the world and said that many nations have large reserves of natural resources combined with a strong location to import and export markets, but what is most important to generate business are the government policies in place. "With resource development, it's really about taking a long-term approach–creating conditions and sticking with those conditions for many, many years."

In addition to North America and Qatar, ExxonMobil will invest up to $36 billion during the next five years on capital projects in the Middle East, West Africa and Australia among other regions.

"There will continue to be opportunities available to us, particularly in the shale plays that are going to be very attractive...There are opportunities to acquire and develop in the unconventional space throughout all of North America from Texas to the Marcellus to the Bakken. We are participating in all of the major unconventional plays in the U.S. and in Canada. We have a very large position in the Horn River basin and are evaluating other new areas of unconventional development as well," Tillerson said.

– Frank Nieto

Resin Prices

Market Update – April 14, 2011

TOTAL OFFERS: 11,438,260 lbs		SPOT		CONTRACT	
Resin	Total lbs	Low	High	Bid	Offer
PP Copolymer - Inj	3,157,932	0.83	1.03	0.90	0.94
LLDPE - Film	2,340,048	0.73	0.84	0.73	0.77
HDPE - Blow Mold	1,628,208	0.66	0.76	0.68	0.72
LDPE - Film	925,932	0.77	0.92	0.87	0.91
HDPE - Inj	665,012	0.71	0.82	0.68	0.72
HMWPE - Film	529,104	0.76	0.76	0.72	0.76
PP Homopolymer - Inj	484,000	0.74	0.97	0.88	0.92
LDPE - Inj	366,368	0.73	0.93	0.83	0.87
GPPS	274,000	0.82	0.86	0.81	0.86
HIPS	232,000	0.95	0.96	0.88	0.93
LLDPE - Inj	130,184	0.77	0.78	0.75	0.79

Market Update | Source: Plastics Exchange – www.theplasticsexchange.com

VOLUME 9 / ISSUE 33 / APRIL 15, 2011

NEWS & TRENDS

Quicksilver Creates Midstream Entity For Horn River Ops

Quicksilver Resources Inc., Fort Worth, Texas, has reported it has begun the initial steps of creating a separate midstream entity to support the company's 130,000 net acre project in the Horn River Basin of northeast British Columbia and positioning the company's Canadian assets for development success.

"We expect the company's value creation strategy for the midstream business will be accretive to our oil and gas returns, as was the case in the Fort Worth Basin through our successful implementation of our midstream strategy," said Toby Darden, Chairman of the Board of Quicksilver. "We have the pieces in place to ensure that our vast resource capture will move out of the Horn River Basin to the west through the Spectra system and to the south through the Trans Canadian pipeline system. We believe that creating this midstream entity will provide our lowest cost solution for gathering, treating and transporting our commodity to multiple sales points."

The first piece of this strategy was the construction of a 20-mile, 20-inch gathering line, which is now complete and awaiting tie-in to the Spectra system and is anticipated to be operational in May. The line will initially serve as the spine of Quicksilver's transportation from its Horn River Basin acreage, where the company has completed four gas wells to date and is at various stages of drilling and completing four additional wells. These initial four wells are capable of producing more than 30 million cubic feet (MMcf) per day of natural gas, but are currently restricted to approximately 20 MMcf per day through a third-party line into the Spectra system. Upon tie-in of the 20-inch line the company expects production will be unrestricted and will flow through new compression facilities currently being commissioned.

With the execution on April 11, 2011 of an agreement with NOVA Gas Transmission Ltd., a subsidiary of TransCanada Pipelines Limited it has initiated the second phase of its strategy to create a midstream business in connection with the Horn River Basin asset. Pursuant to that agreement, TransCanada will commence work on a 70-mile Horn River extension and Fortune Creek Meter Station, which will be located within Quicksilver's acreage. The Horn River extension is expected to be a 36-inch sales gas line to connect TransCanada's Fortune Creek Meter Station and Quicksilver's proposed treatment facility to TransCanada's Alberta System from the Cabin area of British Columbia. Completion of the Horn River extension is expected in mid-2014.

Quicksilver has committed to deliver its gas to receipt points on the Horn River extension pipeline. The TransCanada Fortune Creek receipt point will provide a low-cost transportation solution to move gas to the AECO hub. Access to the AECO hub, at favorable rates, is consistent with the company's strategy to ensure multiple markets for each of its developments.

Quicksilver has begun planning for construction of the initial phase of its Fortune Creek treatment facility to remove CO_2 from the natural gas stream. Quicksilver has a long history of CO_2 removal dating back to its operations in Michigan, where the company was at the forefront of implementing membrane technology. In its initial phase, the facility will have capacity to deliver 125 MMcf per day of natural gas to TransCanada and is expected to be operational by mid-2014. The facility is designed to be expandable in 125 MMcf per day sales increments to meet the company's growing production profile for the basin.

"These steps will create a midstream business that we believe will be the low-cost solution for gathering, treating and transporting natural gas from the Horn River Basin to multiple markets to achieve the highest possible netbacks," added Darden. "This entity will ultimately have its own capital structure and be separately financed. Quicksilver has a history of creating value by building assets in the upstream exploration and production sector of our business as well as in the midstream gathering, treating and transportation sector, and we expect this venture to follow that path."

El Paso Corp. To Develop Eagle Ford Shale Without A Partner

El Paso Corp., Houston, has reported it has decided to develop its Eagle Ford Shale program without a partner. This decision follows an extensive evaluation of proposals from potential partners.

"While interest in our Eagle Ford shale position was high, we believe that we will create greater value for shareholders by developing it ourselves," said Brent Smolik, president of El Paso Exploration & Production Co. "The Eagle Ford shale program is one of our most valuable assets, and we are very excited about the future of this program. It is a key resource for oil reserves and production growth; the wells in our Central area in LaSalle County, Texas are exceeding our expectations, and we continue to drive efficiencies in our drilling and completion processes as we have in the Haynesville shale program."

Martin Midstream Partners Appoints Byron R. Kelley As Advisory Director

Martin Midstream Partners LP (MMLP), Kilgore, Texas, has reported the appointment of Byron R. Kelley as an advisory director to the board of directors of Martin Midstream GP LLC, which is the general partner of MMLP.

Ruben Martin, president and chief executive of the general partner, said, "Byron represents another key addition to the Martin team. He brings significant experience and knows many of our assets well. His advisory guidance and leadership will greatly serve our existing board of directors, management and most importantly our unit holders as we continue to grow our Partnership."

Mr. Kelley brings a long and distinguished career in the midstream oil and gas and pipeline industries. His career spans over 40 years with experience in both domestic and international activities covering operations, engineering, natural gas marketing, business development, strategic planning and executive management. Before agreeing to serve MMLP as an advisory director to the general partner, Mr. Kelley was most recently president, chief executive and a member of the board of directors of Regency GP LLC from April 2008 to November 2010. He also served as Chairman of the Board through May 2010. Prior to that Mr. Kelley spent four years at CenterPoint Energy, which operates two interstate pipeline systems and natural gas gathering and processing systems. Mr. Kelley served as senior vice president and group president of pipeline and field services, and was responsible for commercial, operational, strategic, regulatory and development aspects of two business units and three lines of business. Preceding his work at CenterPoint, Mr. Kelley served as executive vice president of development, operations and engineering, and as president of El Paso Energy International in Houston, a natural gas pipeline and independent power plant developer and operator. In addition, Mr. Kelley also held management and executive positions at other companies in the natural gas pipeline industry. Mr. Kelley is a past chairman and member of the Board of Directors of the Interstate National Gas Association and previously served as one of the association's representatives on the U.S. Natural Gas Council of America. Mr. Kelley received a Bachelor degree in Civil Engineering from Auburn University.

Petron, Daelim To Build Petrochemicals Plant In Philippines

Daelim Industrial Co. Ltd. of South Korea announced it signed a 345.3 billion won (US$317 million) agreement with Petron Corp. to build a petrochemical plant in the Philippines to help the country reduce its dependency on ethylene imports.

The project, which would be located near a refinery and oil depot in Limay, Bataan, is expected to be completed in November. The plant will mark the entry of Petron, the country's largest refiner, into the petrochemical market. It is also expected to help to build an integrated petrochemical market in the country.

– Frank Nieto

PIPELINES & TECHNOLOGY

Feds Call On Industry To Repair Aging Pipelines

Federal transportation officials demanded Monday that pipeline companies speed up efforts to repair and replace aging oil and gas lines, saying recent deadly explosions in Pennsylvania and California highlight the urgent need for safety improvements.

Transportation Secretary Ray LaHood announced plans to strengthen oversight of companies that operate a 2.5 million-mile network of pipelines that deliver oil and gas to the nation's homes and businesses. LaHood toured the ruins of a Feb. 9 pipeline explosion in Allentown that destroyed a block of row houses and killed five people, including an elderly couple and a 4-month-old boy.

"People shouldn't have to worry, when they flip a light switch in their kitchen, that it could cause an explosion in the front yard," LaHood said. "People should have absolute confidence they can turn on the heat, the stove or a computer without endangering their families and neighbors."

Although the number of pipeline-related accidents resulting in serious injury or death has been cut nearly in half over the past two decades, LaHood said, the Allentown blast and other recent catastrophic explosions showed that pipeline companies need to do more.

Last September, a 44-year-old gas transmission line ruptured in San Bruno, Calif., killing eight people, injuring dozens and leaving 55 homes uninhabitable. Investigators said the pipe had flawed welds. And in Philadelphia in January, a gas main explosion sent a 50-foot fireball into the sky, killing a utility worker, injuring six people and forcing dozens from their homes.

Gas companies are already legally required to check pipeline integrity in highly populated areas and make repairs where necessary, but LaHood has asked executives at major pipeline companies to make it a priority.

Some pipelines in Allentown are more than 120 years old. Reading-based UGI Utilities Corp., which operates 79 miles of cast-iron pipeline in Allentown and about 300 miles across its system, has said that it could take four decades at the current pace to replace those pipes.

But UGI Vice President Robert Beard told a state Senate panel last month that the explosion could accelerate the utility's efforts.

Antonio Arroyo, 43, who lost his home in the blast, said UGI needs to go faster.

"This place is a minefield until it gets replaced," said Arroyo, who appeared at Monday's news conference with LaHood.

Michelle Hall, 40, whose husband's parents were killed in the explosion, said the empty lot where a row of homes once stood should be reason enough for utilities to act.

"That plot of land wasn't always vacant. There were eight houses, with families living in them, families who are now completely devastated," she said. "That vast empty space — that is why there should be pipeline regulation."

The Transportation Department also plans new regulations to strengthen reporting and inspection requirements and make information about pipelines and the safety records of operators easily accessible to the public.

The department also seeks legislation to enhance oversight of pipeline safety — including an increase in civil penalties for violations from a maximum of $100,000 per day to $250,000 per day and from $1 million to $2.5 million for a series of violations — and has asked for funding for 40 more inspectors.

Dave McCurdy, president and chief executive of the American Gas Association, said the pipeline system "is the safest form of transportation that exists" but added that any incident is one too many.

"AGA agrees with Secretary LaHood that swift action to continue to increase pipeline safety is critical," he said in a statement. "We have been diligently working with key stakeholders … to make sure this is done thoughtfully and efficiently so that we can continue to provide safe, reliable, clean and affordable natural gas to millions of consumers around the country.

Industry leaders, state officials and others will meet April 18 in Washington to discuss ways to improve the nation's pipeline infrastructure.

Many cast-iron pipeline systems were installed decades ago, yet states often do not require their timely replacement. Pennsylvania's cast-iron pipes are not required to be replaced for another century. New York's cast-iron pipes are targeted for replacement by 2090.

Significant pipeline failures resulting in oil spills or gas explosion usually come from damage due to digging, corrosion and failure of the pipe material, welds or equipment, officials said. The latter is due to problems with valves, pumps or poor construction, they said.

The National Transportation Safety Board has said it decided not to investigate several pipeline accidents, including the Allentown blast and one in Philadelphia, because the current workload has strained the agency's manpower.

NTSB Chairman Deborah Hersman said in February that the board may include the findings of state investigators in safety recommendations. Steve Klejst, who heads the safety board section that investigates pipeline accidents, said he has only four pipeline investigators in his office.

– Associated Press

VOLUME 9 / ISSUE 33 / APRIL 15, 2011

NGL PRICES

Week of April 6: Ethane Prices Down Due To Supply Chain Disruptions

Ethane was the lone natural gas liquid (NGL) to drop in value at Mont Belvieu and Conway the week of April 6 due to several maintenance repairs undertaken by Chevron that impacted the ethylene supply system.

Chevron's ethylene cracker in Port Arthur, Texas, which is estimated to crack 46,000 barrels per day of ethane, was taken offline for unplanned repair work. Last week, the company took a cracker in Sweeney, Texas, offline for planned maintenance work. In addition, Chevron shut down its 27-mile Evangeline pipeline system that transports ethylene from the Golden Triangle to Baton Rouge due a leak.

These disruptions helped push the price of ethane down 3% to 71¢ at Mont Belvieu and 1% to 56¢ at Conway. Despite these price drops, ethane remains very strong compared to its value at the same time last year. The Mont Belvieu and Conway prices are both 24¢ greater than last year.

The only other NGL to experience a price decrease was Conway isobutane, which fell slightly from the previous week to $2.01. However, the Mont Belvieu price posted a 2% gain to $2.02. This was the first time that the price of isobutane was above $2 at both hubs since the week of July 30, 2008.

Surprisingly the NGL that gained the most at both hubs was propane, which figured to see demand falter as much of the country is experiencing spring temperatures. Propane gained 2% in value at Mont Belvieu to $1.41 and 1% in value at Conway to $1.31. While seasonal demand may be waning, propane storage levels are below their levels at the same time last year which is having a positive effect on prices.

Butane posted modest gains at both hubs this week as it was up 1¢ to $1.88 at Mont Belvieu and $1.75 at Conway. The Mont Belvieu price was the second highest price at the hub this year, behind the $1.90 price posted the week of March 23. The Conway price was also the second highest price at the hub this year behind the $1.78 posted the week of March 23.

Pentanes-plus (C_{5+}) continued to steadily improve at both Mont Belvieu and Conway the week of April 6. The price at Mont Belvieu rose 1% to $2.50, the highest it has been since the week of March 2, when it was also $2.50. The price increased slightly to $2.44, which was also the highest price at the hub since it was $2.53 the week of March 2.

While NGL prices have largely held firm during the past month with moderate gains at Conway and Mont Belvieu, natural gas prices have continued to fall. While there was anticipation that the disaster in Japan might increase demand for natural gas, this is likely not the case according to Barclays Capital's most recent Natural Gas Kaleidoscope.

"Concerns about an immediate jump in natural gas demand due to a shutdown of nuclear power plants in the aftermath of the events in Japan have faded, withdrawing one factor that supported natural gas prices over the past few weeks. In the short term, all eyes are on the weather. Although forecasts continue to call for cool temperatures ahead, the persistent strong performance of production maintains a bearish sentiment and renders prices vulnerable to weakness with any turn of weather trends to the milder side," the report said.

– Frank Nieto

NGL PRICES

Mont Belvieu	Eth	Pro	Norm	Iso	Pen+	NGL Bbl
April 6 - 12, '11	70.88	140.76	187.50	202.40	249.50	$59.84
March 30 - April 5, '11	73.70	136.56	186.96	198.90	246.45	$59.45
March 23 - 29, '11	70.79	138.94	190.03	198.42	243.60	$59.24
March 16 - 22, '11	70.01	146.42	185.10	196.28	238.60	$59.35
March '11	68.59	139.76	181.80	192.01	243.97	$58.42
February '11	61.86	137.14	173.64	187.12	224.73	$55.21
1st Qtr '11	63.74	137.32	175.07	186.15	228.46	$55.82
4th Qtr '10	59.07	126.07	162.01	168.24	198.89	$50.59
3rd Qtr '10	44.99	106.98	138.23	143.25	171.45	$42.37
2nd Qtr '10	50.97	108.43	145.01	157.23	178.04	$44.64
April 7 - 13, '10	46.62	114.42	147.78	153.08	191.00	$45.60
Conway, Group 140	**Eth**	**Pro**	**Norm**	**Iso**	**Pen+**	**NGL Bbl**
April 6 - 12, '11	55.88	131.12	175.00	200.55	243.60	$55.84
March 30 - April 5, '11	56.40	128.70	174.10	201.50	242.83	$55.57
March 23 - 29, '11	53.68	129.46	177.70	191.62	241.25	$55.03
March 16 - 22, '11	50.45	132.18	170.54	185.75	238.28	$54.09
March '11	50.44	129.33	169.43	190.30	244.91	$54.26
February '11	44.36	126.61	161.11	191.61	224.17	$51.13
1st Qtr '11	46.30	128.26	164.69	186.06	225.91	$51.80
4th Qtr '10	47.01	120.80	157.16	161.69	193.86	$47.80
3rd Qtr '10	31.16	101.46	132.39	141.93	163.91	$39.04
2nd Qtr '10	31.56	103.03	130.96	145.20	172.55	$39.90
April 7 - 13, '10	31.78	110.62	134.82	145.00	188.07	$42.09

Data Provided by Intercontinental Exchange. Individual product prices in cents per gallon. NGL barrel in $/42 gallons | Source: Frank Nieto

Week of March 30: Propane, Butane Prices Fall At Both Hubs

The week of March 30, natural gas liquid (NGL) prices were a mixed bag at both Conway and Mont Belvieu for the second straight week as propane and butane prices continued to tumble due to a lack of seasonal demand.

The Mont Belvieu price for propane was down 1% to $1.37 and the Conway price was down slightly to $1.29. Both prices were the lowest at their respective hubs in a month. Propane prices are likely to remain stagnant for the next few weeks as heating demand continues to fall across the country.

Demand for butane is also falling across the country as refiners continue to switch from winter-grade gasoline, which uses butane, to summer-grade gasoline. However, higher prices for crude oil and heavy NGLs helped to push up the price at both hubs. The price at both hubs fell 2% with the Mont Belvieu price down to $1.87 and the Conway price down to $1.74. Both were the lowest prices since the week of August 27, 2008.

The biggest price increase at either hub the week of March 30 was for Conway isobutane, which was up 5% and is benefitting from its use as a partial component in summer-grade gasoline as well as a close relationship to crude prices. The price of $2.02 was the highest it has been at the hub since the week of February 16 when it was $2.04. The Mont Belvieu price rose very slightly to $1.99, its highest price since it was $2.07 the week of July 30, 2008.

Ethane prices continued to perform well the week of March 30, as the price rose 3% at both Mont Belvieu and Conway. The Mont Belvieu price of 74¢ was the highest at the hub since the week of February 10, 2010, when it was 75¢ while the Conway price of 56¢ was the highest price since it was 57¢ the week of March 3, 2010.

Pentanes-plus (C_{5+}) maintained the highest price at both hubs, although price gains were minimal the week of March 30. Both the Mont Belvieu and Conway price rose 1% from the previous week. The $2.47 price posted at Mont Belvieu was the highest at the hub since it was $2.50 a month ago while the $2.43 price posted at Conway was the highest at the hub since it was $2.53 four weeks prior.

– Frank Nieto

NGL PRICES

Mont Belvieu	Eth	Pro	Norm	Iso	Pen+	NGL Bbl
March 30 - April 5, '11	73.70	136.56	186.96	198.90	246.45	$59.45
March 23 - 29, '11	70.79	138.94	190.03	198.42	243.60	$59.24
March 16 - 22, '11	70.01	146.42	185.10	196.28	238.60	$59.35
March 9 - 15, '11	65.11	134.36	175.62	191.04	240.83	$56.68
March '11	68.59	139.76	181.80	192.01	243.97	$58.42
February '11	61.86	137.14	173.64	187.12	224.73	$55.21
1st Qtr '11	63.74	137.32	175.07	186.15	228.46	$55.82
4th Qtr '10	59.07	126.07	162.01	168.24	198.89	$50.59
3rd Qtr '10	44.99	106.98	138.23	143.25	171.45	$42.37
2nd Qtr '10	50.97	108.43	145.01	157.23	178.04	$44.64
March 31 - April 6, '10	54.44	113.65	147.97	153.13	189.00	$46.59
Conway, Group 140	**Eth**	**Pro**	**Norm**	**Iso**	**Pen+**	**NGL Bbl**
March 30 - April 5, '11	56.40	128.70	174.10	201.50	242.83	$55.57
March 23 - 29, '11	53.68	129.46	177.70	191.62	241.25	$55.03
March 16 - 22, '11	50.45	132.18	170.54	185.75	238.28	$54.09
March 9 - 15, '11	47.36	125.60	162.70	182.50	242.70	$52.60
March '11	50.44	129.33	169.43	190.30	244.91	$54.26
February '11	44.36	126.61	161.11	191.61	224.17	$51.13
1st Qtr '11	46.30	128.26	164.69	186.06	225.91	$51.80
4th Qtr '10	47.01	120.80	157.16	161.69	193.86	$47.80
3rd Qtr '10	31.16	101.46	132.39	141.93	163.91	$39.04
2nd Qtr '10	31.56	103.03	130.96	145.20	172.55	$39.90
March 31 - April 6, '10	40.68	109.54	136.78	146.20	186.65	$43.46

Data Provided by Intercontinental Exchange. Individual product prices in cents per gallon. NGL barrel in $/42 gallons | Source: Frank Nieto

FRAC SPREAD

Week of April 6: Natural Gas In Storage Down 8% From Same Time Last Year

Frac spread margins for natural gas liquids (NGL) followed the pricing trends at both Conway and Mont Belvieu the week of April 6. Ethane margins fell at both hubs while Conway isobutane margins also dropped. All other margins, like their prices, showed improvements.

The largest drops in the frac spread were for ethane, which was down 5% at Mont Belvieu and 2% at Conway. Propane margins gained back more than their losses from the prior week as the Mont Belvieu frac spread improved by 5% and the Conway margin was up 3%.

In addition to stronger NGL prices gains, Mont Belvieu margins also benefited from a 1% drop in natural gas feedstock prices the week of April 6 as the price was down to $4.09 per million Btu (/MMBtu). By comparison, Conway natural gas prices remained stagnant at $3.96/MMBtu.

The theoretical NGL barrel remained stronger at Mont Belvieu as it rose 1% to $59.84 per barrel (/bbl) with a margin improvement of 1% to $44.90/bbl. The Conway theoretical NGL barrel also improved by 1%, as it was up to $55.84/bbl with a 1% gain in margin at $41.38/bbl.

The most profitable NGL to make at both hubs remained C_{5+} at $2.00 per gallon (/gal) at Conway and $2.04/gal at Mont Belvieu. This was followed, in order, by isobutane at $1.61/gal at Conway and $1.62/gal at Mont Belvieu; butane at $1.34/gal at Conway and $1.45/gal at Mont Belvieu; propane at 95¢/gal at Conway and $1.03/gal at Mont Belvieu; and ethane at 30¢/gal at Conway and 44¢/gal at Mont Belvieu.

Natural gas in storage for the week of April 8 the most recent data available from the Energy Information Administration, increased by 28 billion cubic feet to 1.607 trillion cubic feet (Tcf) from 1.579 Tcf reported the previous week. This was 8% below the 1.744 Tcf figure reported last year at the same time and 1% greater than the five-year average of 1.597 Tcf.

Given these figures it appears as though the decrease in production during the past year is having an effect on both storage levels as well as NGL prices, if not natural gas prices. The most telling aspect of this storage report is the large difference between last year's storage figure and this week's, especially since 2010 storage figures benefitted from an extremely cold winter that helped to increase demand for natural gas.

In terms of a weather forecast for the coming week, there may be increases in cooling days that may drive up demand for natural gas from power producers. According to the forecast from the National Weather Service, the East Coast is expected to experience much warmer weather than normal for this time of year. Portions of the Midwest and Gulf Coast are also expected to experience warmer than normal spring temperatures with much of the rest of the country experiencing normal weather with the exception of the Rockies, which is expected to have a cold front.

– Frank Nieto

Current Frac Spread (Cents/Gal)

APRIL 14, 2011	Conway	Change from Start of Month	Mont Belvieu	Start of Month
Ethane	55.88		70.88	
Shrink	26.25		27.12	
Margin	29.63	-1.72%	43.76	-5.38%
Propane	131.12		140.76	
Shrink	36.27		37.46	
Margin	94.85	2.62%	103.30	4.72%
Normal Butane	175.00		187.50	
Shrink	41.07		42.41	
Margin	133.93	0.68%	145.09	0.73%
Iso-Butane	200.55		202.40	
Shrink	39.44		40.74	
Margin	161.11	-0.59%	161.66	2.54%
Pentane+	243.60		249.50	
Shrink	43.92		45.36	
Margin	199.68	0.39%	204.14	1.80%
NGL $/Bbl	55.84	0.50%	59.84	0.66%
Shrink	14.47		14.94	
Margin	41.38	0.67%	44.90	1.30%
Gas ($/mmBtu)	3.96	0.00%	4.09	-1.21%
Gross Bbl Margin (in cents/gal)	94.52	0.78%	104.29	1.41%
NGL Value in $/mmBtu				
Ethane	3.08	-0.92%	3.90	-3.83%
Propane	4.55	1.88%	4.89	3.08%
Normal Butane	1.89	0.52%	2.03	0.29%
Iso-Butane	1.25	-0.47%	1.26	1.76%
Pentane+	3.14	0.32%	3.22	1.24%
Total Barrel Value in $/mmbtu	13.91	0.50%	15.29	0.38%
Margin	9.95	0.70%	11.20	0.97%

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 Ship Channel.

Shrink is defined as Btus that are removed from natural gas through the gathering and processing operation.
Source: Frank Nieto

Week of March 30: Ethane Margins Up At Both Hubs

The frac spread margin for natural gas liquids (NGL) performed stronger at both hubs than NGL prices due to decreases in natural gas feedstock prices. Overall, Conway margins showed greater improvement than those at Mont Belvieu. However, margins at Mont Belvieu remained greater than at Conway.

Ethane had the largest frac spread improvements at both hubs the week of March 30 as the Conway margin rose 16% and the Mont Belvieu margin rose 8%. Conway isobutane also rose 8%, although the Mont Belvieu margin was only up 1% from the prior week.

Butane had the weakest frac spread performance at both hubs this week as the Conway margin was down 1% and the Mont Belvieu margin was down 2% from the previous week.

The theoretical NGL barrel price improved at both Conway and Mont Belvieu this week. The Conway price rose 1% to $55.57 per barrel (/bbl) with a 3% improvement in margin to $41.10/bbl and the Mont Belvieu price up less than 1% to $59.45/bbl with a 1% improvement in margin to $44.33/bbl.

The most profitable NGL to make at both hubs was C_{5+} at $1.99 per gallon (/gal) at Conway and $2.01/gal at Mont Belvieu. This was followed, in order, by isobutane at $1.62/gal at Conway and $1.58/gal at Mont Belvieu; butane at $1.33/gal at Conway and $1.44/gal at Mont Belvieu; propane at 92¢/gal at Conway and 99¢/gal at Mont Belvieu; and ethane at 30¢/gal at Conway and 46¢/gal at Mont Belvieu.

Natural gas in storage for the week of April 1, the most recent data available from the Energy Information Administration, was down 45 billion cubic feet to 1.579 trillion cubic feet (Tcf) from 1.624 Tcf the previous week due to an unexpected cold front whipping through a large part of the country. This was 5% below the storage figure of 1.665 Tcf reported last year at the same time and 1% above the five-year average of 1.569 Tcf.

The National Weather Service's forecast for the week of April 13 is calling for colder than normal early spring weather throughout the northern portion of the country with warmer than normal weather in the South. – Frank Nieto

Current Frac Spread (Cents/Gal)

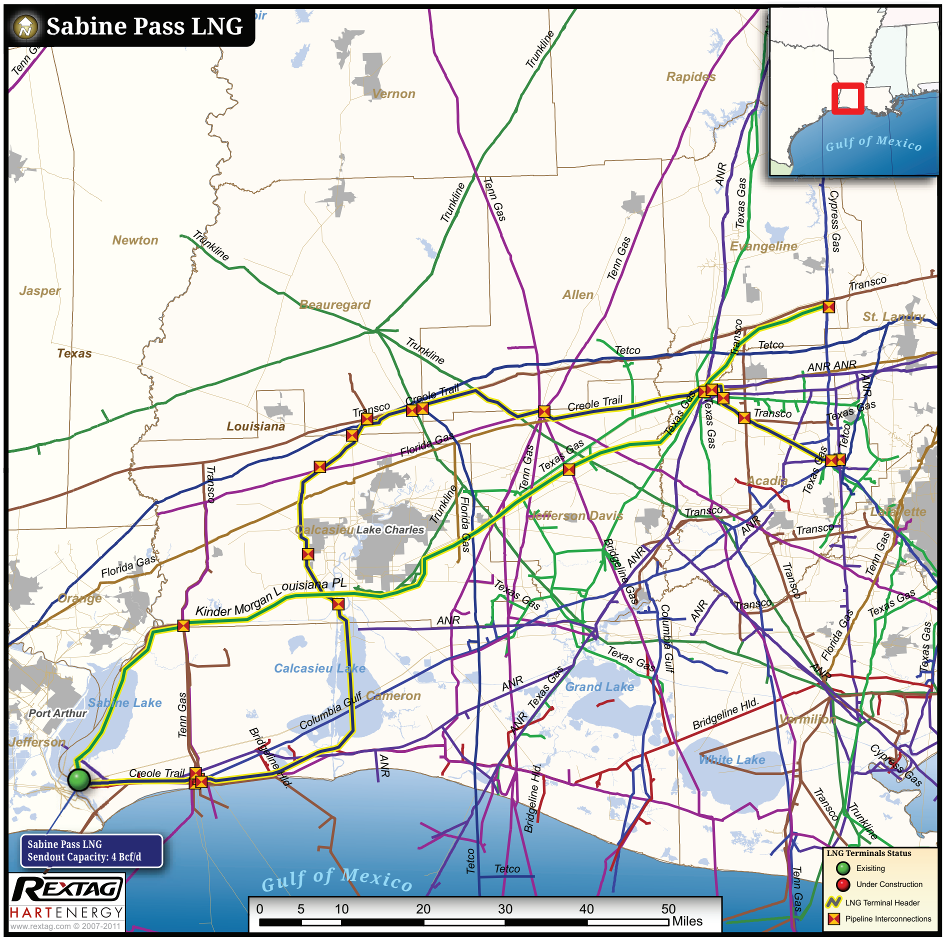
APRIL 7, 2011	Conway	Change from Start of Month	Mont Belvieu	Start of Month
Ethane	56.40		73.70	
Shrink	26.25		27.45	
Margin	30.15	16.09%	46.25	8.20%
Propane	128.70		136.56	
Shrink	36.27		37.92	
Margin	92.43	1.38%	98.64	-1.55%
Normal Butane	174.10		186.96	
Shrink	41.07		42.93	
Margin	133.03	-0.98%	144.03	-1.46%
Iso-Butane	201.50		198.90	
Shrink	39.44		41.23	
Margin	162.06	8.05%	157.67	0.88%
Pentane+	242.83		246.45	
Shrink	43.92		45.91	
Margin	198.91	2.06%	200.54	1.96%
NGL $/Bbl	55.57	0.98%	59.45	0.36%
Shrink	14.47		15.12	
Margin	41.10	3.38%	44.33	1.23%
Gas ($/mmBtu)	3.96	-5.26%	4.14	-2.13%
Gross Bbl Margin (in cents/gal)	93.79	3.42%	102.83	1.16%
NGL Value in $/mmBtu				
Ethane	3.10	5.07%	4.06	4.11%
Propane	4.47	-0.59%	4.74	-1.71%
Normal Butane	1.88	-2.03%	2.02	-1.62%
Iso-Butane	1.25	5.16%	1.24	0.24%
Pentane+	3.13	0.65%	3.18	1.17%
Total Barrel Value in $/mmbtu	13.84	1.22%	15.23	0.56%
Margin	9.88	4.07%	11.09	1.59%

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 Ship Channel. Shrink is defined as Btus that are removed from natural gas through the gathering and processing operation. Source: Frank Nieto

VOLUME 9 / ISSUE 33 / APRIL 15, 2011

SNAPSHOT

Sabine Pass Largest Terminal By Regasification Capacity In The World



General Information *These pipelines are accessed through the LNG headers

Owner: Cheniere Energy
Storage Capacity: 16.8 Bcf
Sendout Capacity:4000 MDth/d

Interconnecting Pipelines: Kinder Morgan Louisiana PL, Creole Trail *NGPL, Transco, Tennessee Gas, Florida Gas, Trunkline, GulfSouth, Tetco, Sabine, Traga. *Prop.:* ANR, Columbia Gulf

Total LNG Shipments

Interconnecting Pipeline	Total Volumes
Kinder Morgan Louisiana Pipeline	25.1 Bcf
Creole Trail Pipeline	2.6 Bcf

Top 5 Shippers

Shipper		Sendout Capacity (MDth/d)
1	ChevronTexaco	1000
2	Total	1000

Source: Hart Energy Mapping and Data Services

The Sabine Pass liquefied natural gas (LNG) terminal, owned by Cheniere Energy Inc., is on 853 acres of land on the Sabine Pass River on the border between Texas and Louisiana, in Cameron Parish, Louisiana. It has a storage capacity of 16.8 billion cubic feet of gas per day (Bcf/d) and a sendout capacity of 4 Bcf/d, according to Hart Energy Mapping and Data Services.

The terminal is located at 3.7 nautical miles from the coast and 23 nautical miles from the other buoy at the widest point on the Sabine River Navigation Channel. The channel, which has a depth of 40 ft, is not subject to tidal limitations.

On Sept. 7, 2010, the U.S. Department of Energy (DOE) approved Cheniere's bid to export LNG produced from the terminal, according to a report by The Wall Street Journal. The approval allowed the terminal to export LNG to any nation that has the capacity to import the fuel and with which the U.S. has entered, or may in the future enter, a Free Trade Agreement, the Journal reported, citing an order by the DOE.

According to Cheniere Energy's website, the Sabine Pass Terminal is the largest receiving terminal, by regasification capacity, in the world. Phase 1 began in April 2008 and the first part of the Phase 2 expansion was completed by mid 2009. The future plans of the Phase 2 expansion may include a sixth storage tank and related facilities to increase the total LNG storage volume to 20.2 Bcf. Four dedicated tugs are stationed at the terminal to ensure safe and timely escorts by crews specifically trained to berth LNG vessels at the terminals two docks. The terminal can receive and unload about 400 LNG vessels a year. Each regular carrier takes between 10 to 12 hours to unload. QMax-class vessels are projected to unload in approximately 18 hours, according to Cheniere.

Interconnecting pipelines include Kinder Morgan Louisiana PL, Creole Trail NGPL, Transco, Tennessee Gas, Florida Gas, Trunkline, GulfSouth, Tetco, Sabine, ANR and Columbia Gulf.

– Rebecca Torrellas

VOLUME 9 / ISSUE 33 / APRIL 15, 2011

Contact Information:

FRANK NIETO Editor
fnieto@hartenergy.com

REBECCA TORRELLAS
Online News Editor
rtorrellas@hartenergy.com

HARTENERGY
1616 S. Voss, Suite 1000 • Houston TX 77057-2627 • USA
www.hartenergy.com | www.midstreambusiness.com
Midstream Monitor is published weekly by Hart Energy and is included with a premium subscription to midstreambusiness.com. Premium subscriptions are $995 per year.

SHARON COCHRAN Circulation Coordinator
E-mail: scochran@hartenergy.com
Mail: Hart Energy Publishing, LP
1616 S. Voss, Ste. 1000
Houston, TX 77057 USA

Order Today!
Call: 1-212-608-9078
Fax: 1-212-608-9357