HARTENERGY

MIDSTREAM Monitor

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FEATURE

Petral Worldwide's Lippe: Ethane Needs To Stay In Nearby Markets

While there is no question that ethylene production capacity will increase during the next few years, given the number of projects that have been announced, the question is how much will capacity increase and which projects are likely to see the light of day.

"I have no idea how much capacity is going to increase. Two years ago you couldn't find an ethylene producer that would talk to you about adding capacity. Now all of them seem to be saying they're going to build a new cracker," Dan Lippe, founder and managing director of Petral Worldwide Inc., told *Midstream Monitor*.

"Obviously neither of these scenarios is correct. Until someone starts spending capital dollars and starts putting steel and concrete in the ground, you can't take the aggregate amount of capacity too seriously."

Winner Takes All With Ethylene Plants

These announced projects include two world-scale chemical plants in the Gulf Coast and another in the Appalachian region, as well as multiple expansions. Lippe said that it is reasonable that one- to three billion pounds of capacity would be added during the next five years and one new plant.

"I can't single out one project over the other because they all have merits. There's

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INSIDE LOOK AT PROCESSING

Penn Virginia: Coal Provides Solid Earnings, But Growth Is In The Midstream

With an eye towards a future that will see an increase in the use of natural gas over coal due to less harmful emissions, Penn Virginia Resource Partners'CEO William H. Shea stated that the company will grow its midstream business during the next three to five years.

Coal made up 60% of the company's EBITDA (earnings before interest, taxes, depreciation and amortization) in 2010 while the remaining 40% was generated from its midstream assets.

"The midstream portion of the business is going to become much larger than the coal, all things being equal, over the next three to five years as we complete our project in the Marcellus shale and also see continued activity in the Granite Wash," he said while speaking at last month's National Association of Publicly Traded Partners (NAPTP) Annual MLP Investor Conference in Greenwich, Connecticut.

In order to simplify this growth, the company merged its GP with its MLP (sp these out). In addition to simplifying its corporate structure and enhancing its growth potential, the move reduced its cost of capital drastically. This reduction should help the company be more competitive in the acquisition arena.

"We have no IDRs (issuer default rating), and no high splits. That reduces our cost of capital dramatically and you'll see that we should do an acquisition in the near future without that high split to the GP," he said.

Penn Virginia has sought to minimize commodity risks by increasing its ratio of fee-based and proceeds contracts. In 2004,

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'New Kid' Crestwood Midstream Partners Offers Unique Growth Strategy

Bob Phillips, chairman, president and chief executive of Crestwood Midstream Partners LP, described his company as the new kid on the block as well as a unique company in the MLP (master limited partnership) space while speaking at last month's National Association of Publicly Traded Partners (NAPTP) Annual MLP Investor Conference in Greenwich, Connecticut. This uniqueness is due to it being a pure shale play company.

"Certainly, we don't have a corner on the market, but we did start last year with the concept with First Reserve that the shale play has provided an enormous amount of infrastructure opportunity...Crestwood is a new firm built simply on that very straightforward strategy, focusing on the shale plays, acquiring an entrance into the shale plays with visible growth, and then executing on the strategy," he said.

First Reserve is the private-equity partner in the company, which helped Crestwood acquire Quicksilver Gas Services last October. This acquisition provided the company with an entry into the public markets as well as entry into the Barnett shale.

Phillips stated that the acquisition, which has since become the aforementioned Crestwood MLP, represents tremendous growth opportunities for Crestwood because it is well-located in the play, but was previously "under-managed, underfunded and really didn't have a growth story or a growth strategy."

Crestwood has since acquired a gathering system near the Avalon shale, as well as assets in the Fayetteville and Granite Wash. "We've got a very good platform – four unconventional plays – about a $1.9-billion total enterprise value. We've been to the equity markets and the debt markets. So we're no longer a neophyte or a first-time issuer. Now that we have a strong platform, we're ready to grow the business," Phillips said.

While this growth strategy will focus on shale plays, he noted that plans for growth will be different in each of the four shales. The company intends on building a portfolio of producers, acreage and systems with different exposures to different plays in the shale-play lifecycle.

Its acquisition of assets in the Barnett represents the late stage of the shale lifecycle with significant volume growth, but not a lot of opportunities for new infrastructure.

"We're essentially acquiring or stacking different stages of development to offer and allow continuous growth in volumes, cash flows, and distributions over time relative to our initial investment capital.

However, the early stage in the life of shale plays that requires a great deal of development is not part of Crestwood's strategy. Instead the company will focus on mid- to late-stage development plays.

"There is a significant amount of capital required [to develop plays], but the returns are very high. We're simply not really in the development game. Our experience, our history, our skill set with all the companies that we've run is to acquire and integrate and build over a long period of time," Phillips said when explaining why the company has not entered the Marcellus or Eagle Ford.

The mid-stage development plays that the company will focus have already identified the exploratory risks, the volume growth is more certain, and the backbone of the system has been built-out already.

"Our job is to execute on that backbone and build laterals out at higher-return projects to drive down the costs of our original investment," he said. In addition to laterals, opportunities presented in these mid-stage development plays include station and plant expansion. – Frank Nieto

Shell Plans World-Scale Chemical Plant In U.S.

Shell is developing plans to build a world-scale ethylene cracker with integrated derivative units in the Appalachian region of the U.S. The cracker would process ethane from Marcellus natural gas to produce ethylene, one of the primary building blocks for petrochemicals. Shell is evaluating derivative choices and the leading option is Polyethylene (PE), an important raw material for countless everyday items, from packaging and adhesives to automotive components and pipe. Most of the PE production would be used by northeastern US industries.

"Building an ethane-fed cracker in Appalachia would unlock significant gas production in the Marcellus region by providing a local outlet for the ethane," said Ben van Beurden, Shell executive vice president chemicals. "This fits well with our strategy to strengthen our chemicals feedstock advantage and would be another step in growing our chemicals business to meet the increasing demand for petrochemicals."

Demand for PE in North America is expected to grow, so the economic and efficiency benefits of a regional cracker make this configuration attractive. As a leader in gas technologies, Shell has an array of long-term options to monetize natural gas. Extracting ethane and other

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natural gas liquids for petrochemicals production is one of these options that also include developing shipping solutions for LNG (liquefied natural gas); proprietary gas-to-liquids technology to produce fuels, lubricants and chemicals; and gas-for-transport in markets focusing on heavy duty vehicles, marine and rail transportation.

"US natural gas is abundant and affordable. Shell has the expertise and technology to responsibly develop this vital energy resource, including associated products such as polyethylene for the domestic market," said Marvin Odum, president, Shell Oil Co. "With this investment, we would use feedstock from Marcellus to locally produce chemicals for the region and create more American jobs. As an integrated oil and gas company, we are best-placed in the area to do this."

Selection of the site for the cracker and derivative units would be determined in the next phase of this project. Building the facility would be subject to receiving all applicable permits.

Petral Worldwide's Lippe... *(continued from page 1)*

no proposed expansion that's completely ridiculous," he said.

The projects with the highest probability of being developed are those that require smaller amounts of capital such as incremental expansions. Conversely it was harder to expect an expensive project--such as a new plant being developed by a company--until funding was approved by its board.

"At the end of the day, ethylene producers are still a pretty conservative, fairly cautious group of people. However, they all want to be the first guy on the block to build a plant because it's a winner-take-all game. The first guy gets everything unless they all decide to build plants at the same time, in which case we [would] have a few years of too much capacity," he said.

KEY NORTH AMERICAN HUB PRICES	
2:38 PM CST / June 8, 2011	
Gas Hub Name	Current Price
Carthage,TX	4.65
Katy Hub, TX	4.77
Waha Hub, TX	4.67
Henry Hub, LA	4.83
Perryville, LA	4.79
Houston Ship Channel	4.79
Agua Dulce TX	4.80
Opal Hub, Wyo.	4.46
Blance Hub, NM	4.53
Cheyenne Hub, Wyo.	4.55
Chicago Hub	4.92
Ellisburg NE Hub	5.81
New York Hub	5.67
AECO, Alberta	4.34

Source: Bloomberg

Outside of multiple plants being built, Lippe said that the midstream and petrochemical industries will be through three- to five-year cycles between supply constrainment and transportation constrainment.

"Right now we don't have enough raw mix pipeline capacity and it takes two to three years to build a new raw mix pipeline. We will have three to four years where we build new pipeline, then we bring those online and the industry will produce more NGLs and more supply will be available to the ethylene producers to consume. We'll then reach a new equilibrium after this new ethane is being shipped. Exploration will continue to occur, NGL production will continue to increase and a few years later we'll again be in an infrastructure constrained environment somewhere," Lippe said.

Marcellus Gas To Be Shipped To Sarnia

The region with arguably the biggest issue in terms of infrastructure constrainment is the Marcellus. The major issue confronting producers in the Marcellus is undoubtedly the question of what to do with all of the ethane out of the play. While there have been various plans announced that would seek to alleviate this problem, Lippe told *Midstream Monitor* that the most likely destination for Marcellus ethane is in Sarnia, Ontario, Canada.

He noted that there is already a market and feedstock supply agreements in place in Sarnia. The same holds true for Mont Belvieu, but it makes more economic sense to ship ethane volumes to Sarnia than to Texas. In addition, there is already 30,000 to 40,000 barrels per day (b/d) of instant demand for ethane in Sarnia, due to a shortfall of ethane supplies in the region.

While the Marcellus is in need of more ethane takeaway, Louisiana's demand for ethane is at such a level that capacity into the region isn't high enough, according to Lippe.

"Ethylene producers everywhere want to crack ethane to produce ethylene. We need a pipeline from Texas to Louisiana. We don't need more raw mix in Louisiana; we just need more ethane in Louisiana. Nobody has talked about building one, but that is a project that needs to be built or existing infrastructure expanded," he said.

Texas Is Big Winner

The location and continued development of liquids-rich plays should see much of this new production being directed to the state of Texas, Lippe said. Obviously the liquids-rich gas from the Eagle Ford will remain in the state and much of the rest of the gas in the U.S. is dry gas. Liquids-rich gas from the Bakken shale will be

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directed to the Alberta, Canada market, which is in the midst of a five- to six-year shortage of ethane.

"The bulk of the supply of NGL-rich gas is concentrated in Texas. This gas has to be processed and Texas has the most significant concentration of NGL raw mix infrastructure in the entire continent and maybe the whole world. Texas has 70% of the ethylene capacity, 50% of the refining capacity, 70% of the storage capacity and 50-60% of the fractionation capacity," he said.

It is for this reason that ONEOK Partners' $610- $810-million Sterling III pipeline that will transport up to 193,000 b/d of unfractionated NGLs or NGL purity products from Conway, Kansas to Mont Belvieu.

"This pipeline should resolve the problems that the Overland Pass Pipeline created when it diverted 150,000 b/d of NGLs away from Mont Belvieu into Conway. There is no market whatsoever for ethane in Conway. That's why there are such deep discounts in Conway for ethane compared to Mont Belvieu. You have to take the ethane to where it is supposed to be, which is in Mont Belvieu. The Sterling III project will fix that problem, but its two to three years away," Lippe said.

The projects that will not focus on moving volumes to Texas are those where it doesn't make economic sense to do because they are too far away, such as in the Marcellus and Bakken. The projects that will aim to move volumes to Texas are those that involve natural gas being produced in Texas, New Mexico, Oklahoma, Wyoming and Colorado.

Crackers Will Continue To Favor Ethane Long-Term

Lippe anticipates ethane will lose its economic advantage to naphtha from time to time during the next few years due to supply constrainments until many of the infrastructure projects are brought online. However, the economics should favor ethane over naphtha for the next 10 years.

"It's going to be a pretty wild ride because the industry has so much flexibility-- even more than five years ago--crackers can switch to something cheaper quickly. You couldn't dream up a scenario that would create more price volatility."

Such price volatility hasn't yet hit the propane market despite low inventory levels from higher demand, but this will have to change, according to Lippe.

"We've been exporting propane like there's no tomorrow for two years. We're exporting more than 100,000 b/d and we're also consuming more than 300,000 b/d of propane as feedstock. We've never done that simultaneously. One would think that at some point the market would wake up and decide there's not going to be enough propane for next winter. Propane prices will have to go up," he said.

– Frank Nieto

EOG Letting Go Of Bakken Midstream Assets For $185 Million

Aux Sable Liquid Products, LP, Enbridge Inc., Veresen Inc. and Williams Partners, LP, have reported that Sable NGL LLC, an affiliate of Aux Sable, has executed an agreement with a wholly owned subsidiary of EOG Resources Inc. to purchase and operate the Stanley Condensate Recovery Plant and the Prairie Rose Pipeline. The Prairie Rose Pipeline connects the Stanley Plant to the Alliance Pipeline, which delivers high energy dense phase gas to Aux Sable's Channahon, Illinois Plant for processing. The purchase agreement calls for the $185 million transaction to close in July 2011.

The Stanley Plant commenced operation in February 2010 and will have a capacity of 80 MMcf/d when a current expansion is completed in June 2011. The plant removes the heavier hydrocarbon compounds while leaving the majority of the natural gas liquids in the rich gas delivered into the Prairie Rose Pipeline.

The 12-inch diameter, 83-mile Prairie Rose Pipeline also commenced operation in February 2010 and gathers gas from the Stanley Plant and other sources for delivery into the Alliance Pipeline system at Bantry, North Dakota. The pipeline has an estimated capacity of 110 MMcf per day and can be easily expanded to meet additional demand.

"This acquisition represents a significant step forward in the pursuit of our strategic growth objectives in the Bakken area, as it provides key infrastructure assets that will lead to increased deliveries of liquids-rich natural gas to our Channahon facilities," said W.J. (Bill) McAdam, president and chief executive of Aux Sable. "With this acquisition, Aux Sable will be able to directly engage in and expand its role as a provider of value-added gathering and processing of natural gas and natural gas liquids from the Bakken play."

"As the largest crude oil producer in the North Dakota Bakken, EOG constructed these facilities when there was little infrastructure in the basin. We believe the time is right to sell these assets

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to an organization that specializes in gathering and processing, allowing us to focus on our core exploration and production activities in the region. We are pleased that Aux Sable recognized the value of both the Stanley Plant and the Prairie Rose Pipeline and are confident that under their management these facilities will benefit all operators in this part of North Dakota," said Ray L. Ingle, president of EOG's Pecan Pipeline (North Dakota), Inc. subsidiary.

Each of Aux Sable and Sable NGL is owned by Enbridge Inc. (42.7% equity interest), Veresen Inc. (42.7% equity interest) and Williams Partners (14.6% equity interest). Enbridge Inc. and Veresen Inc. each own a 50% interest in the Alliance Pipeline.

"We are pleased with this investment in that it bolsters our already strong position in the Bakken, one of the most prolific energy plays in North America," said Al Monaco, president, Gas Pipelines, Green Energy and International, Enbridge Inc. "The Pecan natural gas infrastructure increases the accessibility of the Alliance gas pipeline to Bakken-area producers and draws additional liquids-rich gas to the Aux Sable NGL fractionation plant near Chicago. The investment complements Enbridge's existing Bakken liquids pipeline systems in North Dakota and Saskatchewan. We look forward to working with producers to maximize the value of their resources in this region."

"This transaction demonstrates Veresen's commitment to execute on our strategic plans by expanding our services and presence in liquids-rich resource plays," said Stephen White, president and chief executive of Veresen Inc. "The Pecan assets allow us to leverage our existing infrastructure investments, including Aux Sable and Alliance, and enhance our capacity to provide high-value services both to producers and end users."

Progress Energy, Petronas Join Forces In $1.1B Montney JV

Progress Energy Resources Corp., Calgary, (TSX: PRQ) has executed a binding framework agreement to create a strategic partnership with the Malaysian national oil company, Petronas, to develop a portion of Progress' Montney shale assets in the Foothills of northeast British Columbia. Progress will sell 50% of its working interest in its Altares, Lily and Kahta properties to Petronas for $1.1B (CDN $1.07 billion). The agreement also reflects the desire by both parties to explore additional opportunities to develop liquefied natural gas (LNG) export capacity in British Columbia.

"This is a breakthrough transaction for Progress: the partnership we are launching will enable us to accelerate our growth strategy," says Michael Culbert, president and chief executive of Progress. "We are very pleased to form this long-term partnership with Petronas. They share our belief that our North Montney shale assets are a world-class resource that deserves significant investment. We look forward to benefitting from Petronas' significant global expertise including their leadership in developing infrastructure and accessing LNG markets. As well as enhancing Progress shareholder value, this partnership will also generate substantial economic benefits for local communities and the province of British Columbia, while leveraging the environmental benefits of Canada's abundant and clean-burning natural gas resources globally."

Under the terms of the framework agreement, Petronas will pay 25% of the total consideration (CDN $267.5 million) in cash at closing and 75% of the total consideration in the form of a capital carry whereby Petronas will pay 75% of Progress' share of future capital expenditures in the North Montney Joint Venture over the next five years to a total of CDN $802.5 million. The Transaction provides Progress with the capital required to accelerate the development of its unconventional assets and unlock the value underlying the company's vast Montney land holdings.

In addition to the above Transaction, Petronas and Progress will establish an LNG export joint venture (the "LNG Export Joint Venture") to be 80% and 20% owned, respectively. The LNG Export Joint Venture will launch a feasibility study to evaluate building and operating a new LNG export facility on the West Coast of British Columbia. PETRONAS would be the operator of this facility, and Petronas and Progress would jointly market the LNG utilizing Petronas' well-established and extensive network of customers in the largest LNG markets globally.

"Canada is poised to take a larger role on the world's energy stage. Developing new export options for Canadian natural gas producers is a logical step in connecting our vast resources with growing Asian demand for environmentally responsible energy sources like natural gas," adds Culbert. "We look forward to working with West Coast British Columbia communities as we pursue this opportunity to build a new facility that will add value to British Columbia's natural

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resources while creating considerable long-term local economic benefits."

In connection with the LNG Export Joint Venture, Petronas will provide a standby equity financing commitment of up to $600 million, for Progress' capital requirements arising from the North Montney and LNG Export joint ventures from which Progress can draw down at the time of a successful LNG final investment decision.

The North Montney Joint Venture comprises 149,910 working interest acres in which Petronas will acquire a 50% interest and Progress will be the operator. The North Montney Joint Venture lands represent approximately 20 percent of Progress' rights in its northeast British Columbia Foothills land holdings, which total approximately 700,000 net acres. Progress holds approximately 900,000 net acres of Montney rights over its entire British Columbia and Alberta land base, making it one of the largest Montney land rights holders. The joint venture properties include five wells with minimal production at this time.

BMO Capital Markets acted as exclusive financial advisor to Progress on this transaction.

Penn Virginia... *(continued from page 1)*

keep-whole contracts accounted for 52% of the company's agreements. They are now down to 16% as the company has increasingly focused on projects designed to provide fee-based operations.

"We like the consistency and the ratability of a fee-based contract versus a lot of commodity risk. We don't mind taking some [commodity risk] and what we do take, we go ahead and hedge actively with our hedging program, where about 20-25% of our volumes are commodity risk and we hedge two years out, generally 50-60% of the volumes. We're a little late on that for 2012 at this point, but we're looking to lock in some hedges as they make sense going forward," Shea said.

He added that the company's midstream business has tremendous organic growth opportunities, most notably from its project where it will provide midstream services to Range Resources Corp. in the Marcellus.

Although the company operates in about eight different basins, the primary growth opportunities are out of the Marcellus and Granite Wash. Production out of these plays helped the company's throughput grow from 355 million cubic feet per day (MMcf/d) in 2010 to more than 400 MMcf/d in Q1 2011.

"The coal business provides a tremendous base of operation and tremendous EBITDA generation for Penn Virginia, but the growth that we're going to see over the next couple of years, all things being equal, is going to come from the natural gas midstream side of the business," he said.

The bulk of this growth will be in the Marcellus and the Texas Panhandle, which are both experiencing tremendous production growth. Shea noted that production is growing at an especially high rate because of the high liquids content.

"We had budgeted about 50 well connections in the Panhandle for 2011. We've already done over 40 in four months and we're now thinking that we're going to do close to 100 well connects in the Panhandle area for 2011. It's a very prolific area, [and] very low-cost. It's every bit as good an area as the Marcellus and is especially advantaged because of the very high liquids content of the gas that's delivered," he said.

That is not to say that the Marcellus isn't prolific in its own way. Shea said that in 2010, Penn Virginia only had one small gathering system operating in the play and it was producing about 10 MMcf/d. That same system, combined with Phase I of its project with Range Resources that came online in mid-February 2011, is now doing 30- to 40 MMcf/d. Eventually the system will have a capacity of 850 MMcf/d, possibly growing to 1 billion cubic feet per day with added compression.

"That's only going to increase as Range brings wells on to our system. They've already drilled them, the platforms have already been there, they've drilled the wells, and they've completed them. They're just waiting to turn them into our system as we get it fully operational," he stated.

Although there are a lot of major names and players in the Marcellus, Penn Virginia is well positioned as a first mover in the region, according to Shea. "We've got some big players who have good acreage positions in this area. It's our view that there isn't (aren't?) going to be competing pipelines built. It's going to be very difficult to get them permitted and get them approved in any reasonable period of time at any reasonable cost. We think by being first in this area, we've got a real advantage and we're going to work with the producers to fill the pipeline up as quickly as we can as soon as it's constructed."

– Frank Nieto

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NEWS & TRENDS

High Sierra Water Services Acquires Marcum Midstream Assets

High Sierra Water Services, LLC, Denver, Colo., a wholly-owned subsidiary of High Sierra Energy, LP, has reported that it has acquired the assets of Marcum Midstream 1995-2 Business Trust and Marcum Midstream 1995-EC Holdings, LLC. Marcum has most recently operated as Conquest Water Services, LLC. Founded in 1993, Conquest is the largest oil and gas water disposal company in Colorado, operating exclusively within the prolific Denver-Julesberg Basin in northeast Colorado.

With drilling permits on the rise in the Basin and an increasing number of oil and gas rigs drilling for oil in the Niobrara Shale, water disposal demands are escalating in Weld County, Conquest's primary operating area. High Sierra expects to complement Conquest's existing operations and grow the business to serve the needs of its existing and prospective producer customers.

"High Sierra Water Services partners with leading oil and gas exploration and production companies to provide effective treatment and recycling of flow-back and produced water obtained in the drilling and production process," said James Burke, High Sierra Energy chief executive. "Our acquisition of Conquest will enable us to serve the growing number of producers in the Niobrara Shale play as well as the entire region, and provide a reliable source of treated, recycled water for customers through our innovative, proprietary water treatment technology."

With a focus on long-term, sustainable resource protection, High Sierra Water Services' state-of-the-art water treatment technology recycles oilfield water to surpass regulatory standards and, in some instances, discharges treated water back into local water supplies. With four patents issued and three patents-pending, the purification technology engineered by High Sierra Water Services has revolutionized water treatment in the oil industry.

Terms of the acquisition were not disclosed.

EXCO Reports Incident At Louisiana Midstream Facility

EXCO Resources Inc., Dallas, Texas, (NYSE: XCO) reported that an incident occurred at its 50% owned TGGT Holdings LLC amine treating facility in northwest Red River Parish, Louisiana on May 28, 2011. Appropriate governmental authorities were notified and have worked with the company in response to the incident. This incident resulted in the death of an EXCO employee, injury to a contract employee of TGGT, and an ongoing interruption of service at the facility.

The treating facility, which is north of Coushatta, Louisiana, was shut down immediately. As a precautionary measure, another TGGT amine treating facility located in DeSoto Parish, Louisiana was also shut down pending results of company directed investigations into causes and remediation actions. At this point, substantially all of the natural gas production has been re-routed to alternate pipeline facilities and is flowing to sales. The shut down at these facilities reduced EXCO's net production by an estimated 80-100 Mmcf per day for a six day period. As of today, approximately 10-20 Mmcf per day of EXCO's net production remains shut in pending space availability on alternate pipelines or resumption of treating operations at TGGT's plants.

The TGGT plant involved treats approximately 450 gross Mmcf of natural gas per day. Combined, both of the TGGT treating facilities treat approximately 900 gross Mmcf per day. EXCO's drilling and completion activities were unaffected and continue as planned. It is expected that production interruptions could continue for several weeks.

Total Sells Its Stake In Gassled, Statoil To Follow Suit

Total, Paris, France, has reported it has signed an agreement with Silex Gas Norway AS, a wholly owned subsidiary of Allianz, to sell its entire stake in Gassled (6.4%) and related entities for a price of NOK 4.64 billion (approximately US $870 million). The transaction is subject to approval by the relevant authorities.

Gassled is a joint venture formed in 2003 to transport natural gas from fields on the Norwegian Continental Shelf to Continental Europe and the U.K. Gassled's infrastructure assets comprise approximately 7,980 kilometers of natural gas pipelines and associated platforms, processing plants and terminals in Norway, Belgium, France, Germany and the U.K. Gassled derives its revenues from tariff payments from Shippers using the system, these tariffs being regulated by the Norwegian Ministry of Petroleum and Energy.

"Ownership of Norwegian midstream gas transportation assets is no longer a

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core business, and so this sale constitutes part of the Group's ongoing optimization of its portfolio," said Patrice de Vivies, senior vice president exploration & production Northern Europe, "Total remains fully committed to its long-term presence in the exploration and production of oil and gas in Norway."

Total will continue to be a major user of the Gassled system with long-term bookings to transport its equity gas production to customers in European markets.

Statoil ASA, Stavanger, Norway, also decided to divest a 24.1% direct and indirect stake in Gassled joint venture (JV) for a consideration of NOK 17.35 billion. Following this transaction, Statoil will continue to own 5.0% in the JV.

The buyer is Solveig Gas Norway AS, a holding company that is approximately 45% owned by Canada Pension Plan Investment Board, 30% by Allianz Capital Partners, a subsidiary of Allianz SE, and 25% by Infinity Investments SA, a wholly owned subsidiary of the Abu Dhabi Investment Authority.

"This transaction contributes to a further streamlining of Statoil's portfolio. The divestment is part of our continuous efforts to increase capital efficiency and maximize shareholder value creation," says executive vice president for Marketing, Processing and Renewable in Statoil, Eldar Sætre.

The transaction will be subject to government approval from the Norwegian Ministry of Petroleum and Energy (MPE) and the Norwegian Ministry of Finance (MF).

Chesapeake Completes Tender Offer For Bronco

Chesapeake Energy Corp., Oklahoma City, Okla., (NYSE: CHK) has successfully completed its tender offer for Bronco Drilling Co. Inc. (Nasdaq: BRNC).

Based on preliminary information from Computershare Trust Co., the depositary for the offer, as of the expiration of the tender offer, approximately 24,959,224 shares (which includes 691,967 shares that were tendered pursuant to guaranteed delivery procedures) were validly tendered and not withdrawn in the tender offer, representing approximately 86.7% of Bronco's issued and outstanding shares. All validly tendered shares have been accepted for payment, which will be made in accordance with the terms of the tender offer.

After exercise of a top-up option granted by Bronco, Chesapeake intends to complete its acquisition of the remaining shares of Bronco through a short-form merger as soon as practical. In the short-form merger, any remaining Bronco shares (other than those held by Chesapeake, Bronco or any wholly-owned subsidiary of Chesapeake or Bronco, and any shareholders who validly exercise their appraisal rights in connection with the merger) will be exchanged for $11.00 per share in cash, subject to applicable withholding taxes.

Johnson Rice & Co. LLC acted as financial advisor to Bronco. Thompson & Knight LLP and Richards, Layton and Finger PA acted as legal advisors to Bronco. Jefferies & Co. Inc. acted as financial advisor to Chesapeake. Commercial Law Group PC and Wachtell, Lipton, Rosen & Katz acted as legal advisors to Chesapeake.

PIPELINES & TECHNOLOGY

LyondellBasell to Purchase Olefins Pipeline System

LyondellBasell, Houston, has reported the signing of an agreement to purchase approximately 200 miles of pipeline near Houston from BP by its Equistar Chemicals, LP, subsidiary.

The pipelines and metering stations comprise a Houston area olefins distribution system transporting ethylene and propylene production from Channelview, Texas, to Equistar's storage terminal at Mont Belvieu, Texas, and facilities in Deer Park, La Porte, and the Bayport Industrial District in Pasadena, Texas. The purchase also includes a natural gas liquids (NGL) feedstock supply line into Channelview.

Equistar currently holds a long-term lease for use of the pipelines, which are owned and operated by BP. Acquiring the pipelines provides Equistar with a secure, cost-effective transportation system for its ethylene and propylene production in the Houston area.

Equistar's pipeline group currently operates and maintains approximately 1,200 miles of pipeline in Texas, and transports approximately 20 billion pounds of product and 80 million barrels of feedstock annually. An undetermined number of BP pipeline employees will join Equistar with the purchase.

The transaction is subject to government review and is expected to close in August. Terms of the transaction were not disclosed.

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El Paso Pipeline Selects Flow-Cal Software Solution

Flow-Cal Inc., Houston, has reported that El Paso Corp.'s Pipeline division has selected Flow-Cal to provide an advanced gas measurement software solution. Headquartered in Houston, the El Paso Pipeline Group's 42,000-mile interstate pipeline system is the nation's leading interstate natural gas pipeline franchise as measured not only by mileage, but also by access to key supply regions and major consuming markets.

Flow-Cal's Enterprise system links large, complex operations into a single centralized system, providing a common user interface to consolidate, review, validate, edit, store and report EFM data. El Paso Pipeline will be installing Flow-Cal's latest release, FLOWCAL Enterprise Version 8, replacing their existing legacy systems which were internally developed and maintained.

FLOWCAL Release 8 offers a number of improved features. Enhanced system balancing functions help users to identify and manage lost and unaccounted for gas in a timely manner. In addition, Flow-Cal's elaborate data validation and editing features automate field data processing, therefore reducing the need for costly prior period adjustments (PPA's).

"We are honored to have been selected for this project by such an esteemed pipeline organization," states Duane Harris, Vice President of Sales and Support for Flow-Cal. "With El Paso's exploration and production group already utilizing Flow-Cal's Enterprise and TES-Tit applications, we are excited to add another El Paso company to our growing customer base."

Resin Prices – Market Update – June 2, 2011					
TOTAL OFFERS: 12,060,684 lbs		SPOT		CONTRACT	
Resin	**Total lbs**	**Low**	**High**	**Bid**	**Offer**
PP Copolymer - Inj	2,772,368	0.86	1.00	0.88	0.92
HDPE - Blow Mold	1,969,496	0.71	0.75	0.67	0.71
PP Homopolymer - Inj	1,805,012	0.80	0.90	0.86	0.90
LDPE - Film	1,614,576	0.73	0.90	0.81	0.85
HDPE - Inj	1,102,300	0.67	0.74	0.69	0.73
LLDPE - Film	675,012	0.75	0.81	0.73	0.77
LDPE - Inj	482,368	0.83	0.83	0.80	0.84
GPPS	425,000	0.88	0.90	0.85	0.90
LLDPE - Inj	424,092	0.78	0.89	0.74	0.78
HMWPE - Film	410,460	0.70	0.78	0.70	0.74
HIPS	380,000	0.98	1.00	0.93	0.98

Source: Plastics Exchange – www.theplasticsexchange.com

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MIDSTREAM Monitor

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NGL PRICES

Conway Ethane Prices Down Due To Equistar Plant Outage

The outage of Equistar's ethylene plant in Morris, Illinois, is putting downward pressure on Conway ethane, which was already facing headwinds. The facility was struck by lightning last week and is facing 30 to 60 days of repair work, according to En*Vantage. This resulted in a 3% drop in price for ethane at Conway to 47¢ the week of June 1.

"We caution our clients not to panic, thinking this is the start of a long-term ethane oversupply situation. It is a temporary imbalance in the Mid-Continent, which is a very shallow market for ethane," the company said in its *Weekly Energy Report* for the week of June 9.

The Conway price was the lowest at the hub since it was 45¢ the week of February 9. While Conway ethane lost value for the third straight week, Mont Belvieu gained 3% to 73¢ to exceed its prices for the previous two weeks. Although it recorded a price increase, the Mont Belvieu price the week of June 1 remained below the average monthly price for both May and April.

Propane prices generally held firm at both Mont Belvieu and Conway this week as inventory levels rose slightly from higher refinery runs that increased production. However, inventories are still hitting five-year lows. Mont Belvieu propane rose 1% to $1.52, the highest price at the hub since it was $1.53 the week of May 4. The Conway price fell very slightly to $1.40, which was essentially its price the previous week.

Heavy NGLs remained more valuable than light NGLs at Mont Belvieu, but all three heavy NGLs lost value the week of June 1 while both light NGLs gained strength.

The biggest drop at the hub was for C_{5+}, which dropped 3% to $2.41. This was the lowest price at Mont Belvieu since it was $2.39 the week of March 16. The Conway price was also down 3% to $2.29, the lowest price at the hub since it was $2.25 the week of February 16.

Isobutane was the lone heavy NGL to experience a price gain the week of June 1, as it was up very slightly to $1.82 at Conway. The NGL dropped 1% to $1.98, the second week it was below the $2 threshold at Mont Belvieu. It was the lowest price at the hub since it was $1.96 the week of March 16.

Although butane global inventory levels are tight, this wasn't reflected in either the Mont Belvieu or Conway price as both fell 1%. The Mont Belvieu price was down to $1.81 while the Conway price was down to $1.65. The Mont Belvieu price was the lowest price at the hub since it was $1.76 the week of March 9 and the Conway price was the lowest at the hub since it was $1.63 the week of March 9.

– Frank Nieto

NGL PRICES

Mont Belvieu	Eth	Pro	Norm	Iso	Pen+	NGL Bbl
June 1 - 7 '11	73.25	151.80	180.50	197.64	241.20	$60.47
May 25 - 31, '11	70.65	149.53	182.50	199.90	248.18	$60.44
May 18 - 24, '11	73.18	150.16	187.47	201.32	241.48	$60.74
May 11 - 17, '11	74.21	151.30	186.96	204.88	251.77	$61.80
May '11	75.69	152.10	189.34	204.72	252.68	$62.31
April '11	75.74	144.44	189.72	203.15	256.33	$61.63
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
June 2 - 8, '10	55.63	108.32	146.40	157.82	167.82	$44.74
Conway, Group 140	**Eth**	**Pro**	**Norm**	**Iso**	**Pen+**	**NGL Bbl**
June 1 - 7 '11	46.52	139.52	164.80	182.13	229.12	$53.30
May 25 - 31, '11	49.08	140.00	166.13	182.00	236.65	$54.35
May 18 - 24, '11	50.98	140.62	171.98	188.57	230.44	$54.80
May 11 - 17, '11	52.18	141.38	174.90	200.00	233.00	$55.72
May '11	52.63	142.00	173.01	192.24	240.62	$56.08
April '11	54.31	134.59	175.54	199.58	246.21	$56.18
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
June 2 - 8, '10	30.22	102.08	129.05	141.00	161.50	$38.60

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

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FRAC SPREAD

Margins Largely Down Once Again

NGL frac spread margins were largely down the week of June 1 due to 5% increases in natural gas feedstock prices at both Conway and Mont Belvieu. Natural gas prices rose to $4.70 per million Btu (/MMBtu) at Conway and $4.83/MMBtu at Mont Belvieu. However, aside from Conway ethane most of the margin decreases were not large.

Conway ethane margins were down 21%, representing another large drop for the product at the hub in the past month. Despite these large decreases, ethane remains profitable to make in the Mid-Continent even though the market is small compared to Mont Belvieu. By comparison, the Mont Belvieu frac spread margin improved by 3% due to a price gain at the hub the week of June 1.

The only other NGL to experience a gain in margin during the week was Mont Belvieu propane, which improved at less than half a percent from the previous week. The Conway margin was down 3% from the final week of May.

The largest drop in margin for the week of June 1 at Mont Belvieu was for C_{5+}, which was down 5% from the previous week, which was the same drop experienced at Conway. These decreases were due to significant price drops at both hubs due to the stagnant nature of crude oil prices, which are closely linked to C_{5+} prices.

Overall, the price for the theoretical NGL barrel improved very slightly at Mont Belvieu to $60.47 per barrel (/bbl) with a frac spread margin of $42.82/bbl, a 2% decrease from the prior week. The Conway theoretical barrel price was down 2% to $53.30/bbl with a 5% drop in margin to $36.13/bbl. These price and margin discrepancies between the hubs were largely due to the difference in ethane prices, which make up the largest portion of the NGL theoretical barrel.

The most profitable NGL to make at both hubs remained C_{5+} at $1.77 per gallon (/gal) at Conway and $1.88/gal at Mont Belvieu. This was followed, in order, by isobutane at $1.35/gal at Conway and $1.50/gal at Mont Belvieu; butane at $1.16/gal at Conway and $1.30/gal at Mont Belvieu; propane at 97¢/gal at Conway and $1.08/gal at Mont Belvieu; and ethane at 15¢/gal at Conway and 41¢/gal at Mont Belvieu.

Natural gas in storage for the week of June 3, the most recent data available from the Energy Information Administration, continued to increase at a slower than normal rate for this time of year as it rose by 80 billion cubic feet to 2.187 trillion cubic feet (Tcf) from 2.107 Tcf. This was 10% below the storage level of 2.442 Tcf reported last year at the same time and 3% below the five-year average of 2.245 Tcf.

The forecast for the coming week should see less cooling demand for the Northeast according to the National Weather Service's forecast. The Northeast is expected to experience normal weather for early June, while New England and the West Coast are expected to experience cooler than normal temperatures. The Gulf Coast, Southeast and lower Midwest are expected to experience hotter than normal weather.

– Frank Nieto

Current Frac Spread (Cents/Gal)

June 9, 2011	Conway	Change from Start of Week	Mont Belvieu	Start of Week
Ethane	46.52		73.25	
Shrink	31.16		32.02	
Margin	15.36	-21.01%	41.23	2.68%
Propane	139.52		151.80	
Shrink	43.05		44.24	
Margin	96.47	-2.61%	107.56	0.15%
Normal Butane	164.80		180.50	
Shrink	48.74		50.09	
Margin	116.06	-3.10%	130.41	-3.25%
Iso-Butane	182.13		197.64	
Shrink	46.81		48.11	
Margin	135.32	-1.57%	149.53	-2.95%
Pentane+	229.12		241.20	
Shrink	52.12		53.56	
Margin	177.00	-5.39%	187.64	-4.83%
NGL $/Bbl	53.30	-1.94%	60.47	0.05%
Shrink	17.17		17.64	
Margin	36.13	-4.98%	42.82	-1.85%
Gas ($/mmBtu)	4.70	5.15%	4.83	5.00%
Gross Bbl Margin (in cents/gal)	82.98	-4.93%	99.96	-1.66%
NGL Value in $/mmBtu				
Ethane	2.56	-5.22%	4.03	3.68%
Propane	4.84	-0.34%	5.27	1.52%
Normal Butane	1.78	-0.80%	1.95	-1.10%
Iso-Butane	1.13	0.07%	1.23	-1.13%
Pentane+	2.95	-3.18%	3.11	-2.81%
Total Barrel Value in $/mmbtu	13.27	-1.98%	15.59	0.62%
Margin	8.57	-5.49%	10.76	-1.23%

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

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SNAPSHOT

Michigan Gas Transmission Provides 2.5 Bcf/d of Gas Into MI

The Michigan Gas Transmission has a system capacity of 2.5 billion cubic feet (Bcf) and seasonal storage of 128 Bcf, according to Hart Energy Mapping and Data Services.

Owned and operated by DTS Energy Co., the Michigan Gas Transmission has 2,600 miles of pipeline and seven compressor stations.

According to DTS Energy, natural gas was reintroduced widely to the residents of Detroit back in 1936. At that time the 1,200-mile Panhandle Pipeline, which stretched from Michigan to Texas, would supply the gas.

A merger in 1938 of the Detroit City Gas Co., the Grand Rapids Gas Light Co., the Washtenaw Gas Co. and the Ann Arbor Gas Co. created a new utility known as Michigan Consolidated Gas Co. (MichCon). To meet the increasing demand for natural gas, the Michigan-Wisconsin Pipeline was completed in 1945. Then in 1949, Michigan Consolidated Gas, the Milwaukee Gas Co., the Michigan-Wisconsin Gas Co., the Austin Field Pipeline Co. and the Milwaukee Solvay Co. became the American Natural Gas Co. MichCon remained part of that system until 1981, when it became a wholly-owned subsidiary of Primark Corp.

In 1988, Primark spun-off MichCon, and the MCN Corp. was established as the parent company of MichCon. On May 31, 2001, DTE Energy and MCN Energy Group completed a merger which created Michigan's largest energy company and a premier regional energy provider.

Today, the Michigan Gas Transmission links customers to energy sources in Texas, Oklahoma, the Rockies, Appalachia, the Gulf of Mexico and western Canada. Interstate pipeline connections include ANR Pipeline Co., Greak Lakes Gas Transmission, Panhandle Eastern Pipe Line Co. and Vector Pipeline.

– Rebecca Torrellas

Michigan Gas Transmission (Michcon) - General Statistics & Average Flows

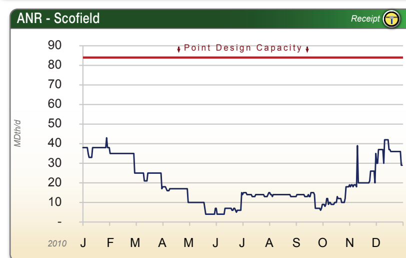
General Information

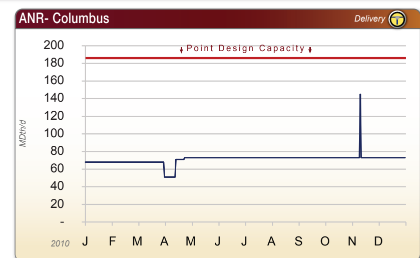
Owner:	DTE Energy Company	System Capacity:	2,500 MMcf/d
Operator:	DTE Energy Company	Seasonal Storage:	128 Bcf
Miles of Pipeline:	2,600	Compressor Stations:	7

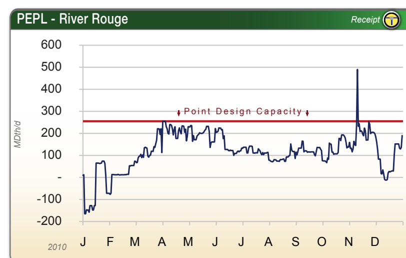
Interstate Pipeline Interconnections

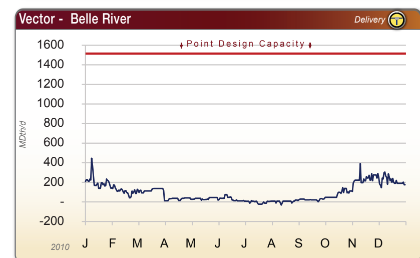
Refer to "Book Page" in this book for further details

ANR Pipeline Company	048	22
Great Lakes Gas Transmission	051	122
Panhandle Eastern Pipe Line Company	028	250
Vector Pipeline	175	338









Source: Hart Energy Mapping and Data Services

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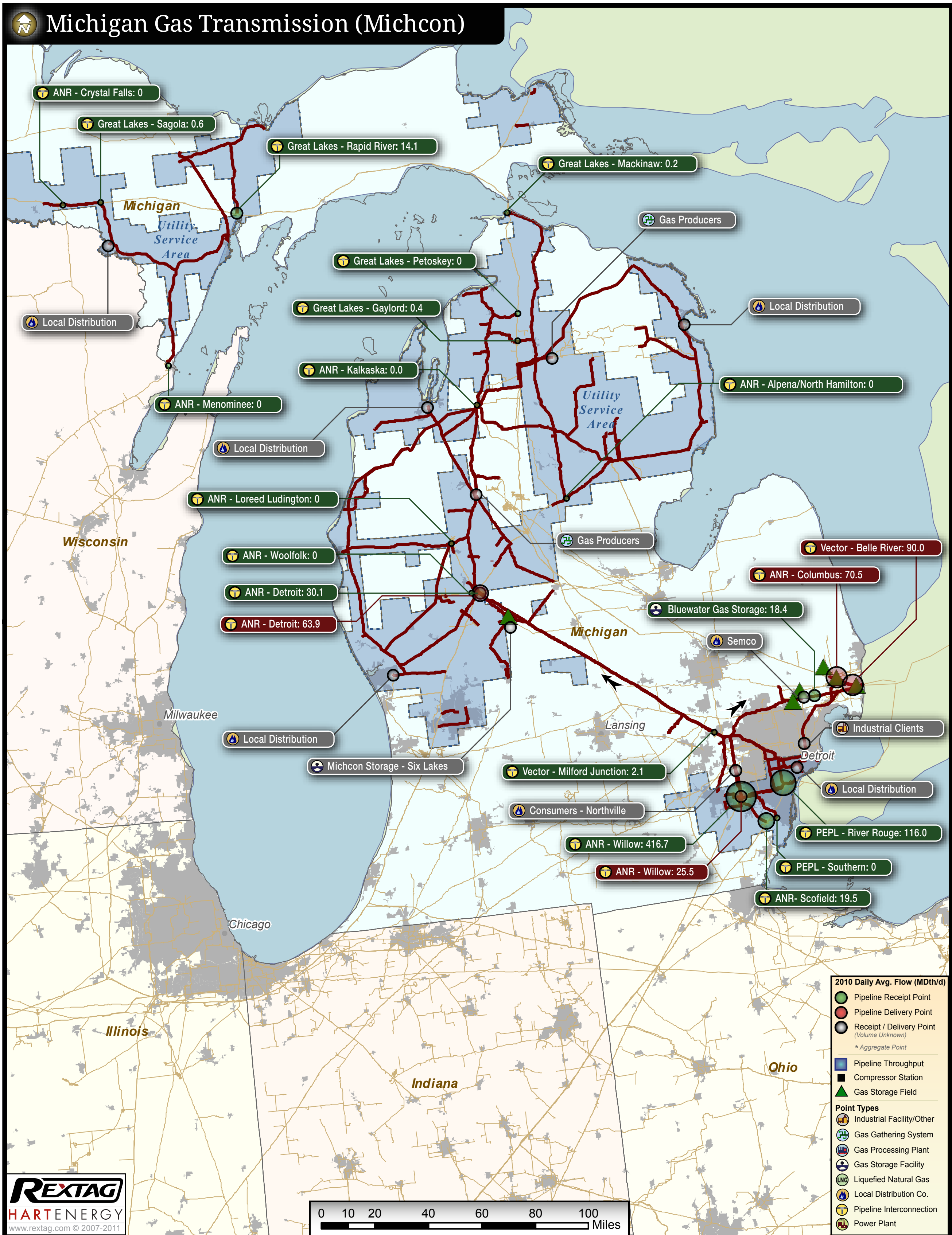

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