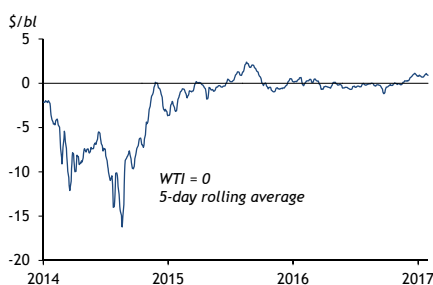


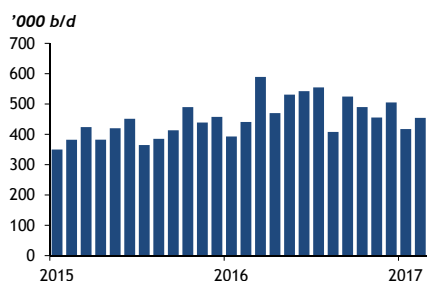
ARGUS AMERICAS CRUDE SUMMIT

A lack of pipeline space could push WTI Midland back to a wide discount to WTI Cushing

WTI Midland vs WTI Cushing



WTI Midland trade volume



Midland threatened by infrastructure constraints

WTI Midland crude is emerging as a liquid benchmark in the Americas, but its value remains tied to the infrastructure available to ship it from the Permian basin.

Pipeline access to Texas, the Gulf coast and export markets as well as to the Cushing storage hub have combined to push WTI Midland to a premium to benchmark WTI Cushing (*see graph*). The crude had fallen to a discount of more than \$14/bl to the marker as recently as mid-2014, when it came under pressure from limited pipeline capacity and had to be shipped by rail from the region.

Permian crude production has since slipped below pipeline capacity. But crude and condensate output could again overtake pipeline capacity if Permian basin production growth is on the high side of forecasts, Lipow Oil Associates consultant Andy Lipow says. This could again push WTI Midland to a wide discount to the benchmark, depressing it to the point at which it makes commercial sense to ship crude out of the region by rail. “You could see this crunch point in mid-2018,” Lipow said at the *Argus Americas Crude Summit* in Houston. “As soon as we have too many barrels, the Midland differential goes to the incremental [mode of transport], which is rail,” probably to the west coast, he says.

Pipeline capacity expansions are already under way. Plains All American announced on 19 January that it plans to expand its 250,000 b/d Cactus pipeline carrying Permian crude to Gardendale in south Texas to about 390,000 b/d by the end of the third quarter. Crude can flow from Gardendale to the 660,000 b/d Eagle Ford JV pipeline, a 50:50 partnership between Plains and Enterprise Products Partners that can ship crude to Corpus Christi – and the new 300,000 b/d Occidental Petroleum export terminal at nearby Ingleside – or Houston through Enterprise’s South Texas pipeline system.

Cactus was originally envisaged as a way of exporting processed condensate. But the December 2015 end to stringent crude export restrictions and the October 2016 opening of the Ingleside terminal gave Permian shippers a direct link to the Gulf coast and access to buyers overseas, as well as allowing exporters to avoid the congested Houston Ship Channel. Koch Industries subsidiary Flint Hills Resources operates a 200,000 b/d terminal at Ingleside that can take crude that has been transported along the Cactus line.

Cactus spikes

Shipments of WTI Midland through Cactus to Ingleside for export have supported the grade. Buyers like the consistent quality of WTI Midland compared with Eagle Ford crude from South Texas and Domestic Sweet Blend (DSW) from Cushing, as well as its increased availability. State-owned PetroPeru, a regular importer of DSW, recently upgraded its list of eligible import grades to include WTI Midland by way of Cactus. Spot demand for WTI Midland is increasing. More than 490,000 b/d of the grade traded on average last year, up from just over 410,000 b/d in 2015 (*see graph*).

But boosting the capacity of the Cactus pipeline may not be enough. Permian basin crude production is forecast to rise by just over 50,000 b/d to 2.2mn b/d in February, the EIA says, while the region has about 2.3mn b/d of long-haul pipeline export capacity, as well as some trucking capacity. The Cactus expansion will increase the pipeline figure to about 2.44mn b/d by October, but a projection by leading Permian upstream firm Pioneer Natural Resources indicates that this capacity could be filled by early to mid-2018 as the basin adds 300,000 b/d a year on average to its production between now and 2025.

“We do not think there is going to be a huge bottleneck in the Permian, but by the end of 2017, there will be some takeaway issues,” the chief oil analyst and

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Permian basin takeaway pipelines		
Pipeline	Destination	Cap '000 b/d
Existing capacity		
Basin	Cushing, Oklahoma	450
West Texas Gulf	Longview, Texas	300
BridgeTex	Houston	300
Cactus	Gardendale, Texas	250
Longhorn	Houston	225
Permian Express 2	Nederland, Texas	200
Permian Express 1	Nederland, Texas	150
Wink	El Paso, Texas	145
Centurion	Cushing, Oklahoma	140
WA Line	Borger, Texas	104
Line 80	Borger, Texas	28
Total		2,292
Planned capacity		
Midland to Sealy	Sealy, Texas	300
Cactus expansion	Gardendale, Texas	140
Total		440

co-founder of consultancy Energy Aspects, Amrita Sen, says. “Again, it leads us to believe you are going to have to have wider Midland differentials just to clear those barrels. That is bound to happen” without more export capacity, she says.

The next major project due on stream is Enterprise’s 300,000 b/d Midland-Sealy pipeline (see table). This will connect the company’s large Permian gathering system directly to its Houston-area crude system, principally its Echo storage facility and connected export terminal on the Houston Ship Channel. The project is due on stream in mid-2018 – possibly matching the supply surge – although it could be ready earlier that year, Enterprise chief executive Jim Teague tells Argus. The project will make Enterprise the only midstream company that controls pipeline infrastructure to southeast Texas from the Eagle Ford and Permian basins, as well as from the Nymex hub at Cushing.

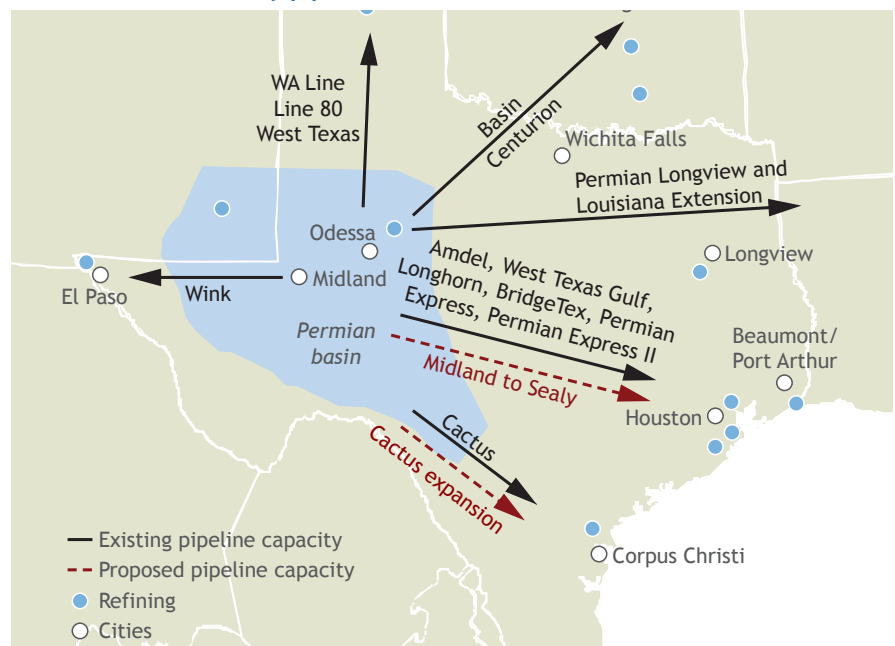
Dock and roll

Enterprise has deepwater docks at Houston, Texas City, Freeport and Beaumont and could load as much as 4mn b/d for export “without spending a penny” on new infrastructure, Teague says. “This is why Enterprise is building tankage and docks,” he says. “We want to be able to export everything we touch.” The Midland-Sealy pipeline can be expanded to 450,000 b/d by adding up to four pump stations, Enterprise says.

Plains estimates that another 200,000 b/d of capacity could come from expansions to existing pipelines such as Magellan’s 300,000 b/d BridgeTex line or Sunoco Logistics’ 200,000 b/d Permian Express 2 line. But that might only be sufficient to handle production growth in the first part of the next decade, based on Pioneer’s production growth projections.

Lipow notes that unused rail capacity exists and is ready to relieve any crude oversupply. And the construction of infrastructure in areas adjoining the basin makes trucking an option, whether to north Texas and Oklahoma or south to the Eagle Ford region, he says. “There are always ways the market is going to adjust,” Lipow says.

Permian basin takeaway pipelines

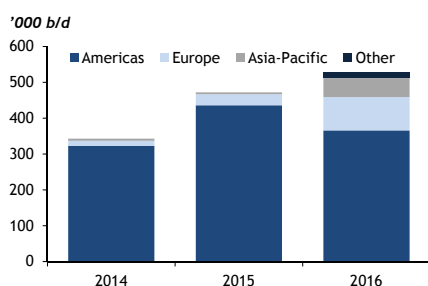


ARGUS AMERICAS CRUDE SUMMIT

US crude exports will rise on firm demand for reliable supply, taking over from 'risky' countries, Enterprise says

US export destinations		
'000 b/d	Jan-Nov 16	Jan-Nov 15
Canada	311	434
Netherlands	38	5
Curacao	29	0
Italy	21	5
China	19	1
UK	14	0
South Korea	12	3
Singapore	12	0
Colombia	10	0
Other	61	24
Total	527	472

US export destinations



Enterprise expects US exports to boom

Exports of light crude from the US will rise while imports hold steady at about 7mn b/d, Enterprise Products Partners chief executive Jim Teague says.

The US will become the first and most reliable crude supplier to replace shipments from “politically risky” nations, Teague told the Argus Americas Crude Summit in Houston. But the US will still import heavy crude from Saudi Arabia, Colombia, Venezuela and Canada regardless of how much it eventually exports, he says.

US crude exports rose to around 530,000 b/d in January-November, up by nearly 12pc on the 470,000 b/d exported to Canada and a handful of other countries a year earlier. Rising interest in exports since the US lifted 40-year-old restrictions in December 2015 is expected to lead to the development of a spot market on the Gulf coast in months, not years, Enterprise says.

Enterprise has built up its export capacity in the past few years to include 20 ship docks, of which 15 are capable of exporting a combined 4mn b/d of crude. Enterprise has exported crude and LPG to Europe, Latin America and Asia-Pacific, among others. And exports could rise further, Teague says.

The company’s docks “are a magnet” for US crude, as seen by the increasing efforts to move Permian basin supplies to the Gulf coast, Teague says. Plains All American plans to expand the capacity of its 250,000 b/d Cactus crude pipeline, which runs from the Permian basin to Gardendale, Texas, to about 390,000 b/d by the end of the third quarter. Cactus connects to Plains’ 660,000 b/d Eagle Ford JV pipeline, a 50:50 joint venture with Enterprise that serves Three Rivers and Corpus Christi, Texas, and which can extend to the Houston area through Enterprise’s South Texas pipeline system. Eagle Ford JV also serves Occidental Petroleum’s 300,000 b/d crude export terminal in Ingleside, close to Corpus Christi, which opened in October.

Another Enterprise project – the 300,000 b/d Midland-Sealy pipeline – will start up in the first quarter of 2018, Teague says. The line will transport crude from Enterprise’s Midland terminal to its Sealy storage facility west of Houston and connected export terminal on the Houston Ship Channel, providing another outlet for Permian production, including for export.

Going Dutch

US oil exports will range from 600,000 b/d to 1mn b/d depending on crude prices, the director of market analysis for deep-sea tankers at shipbroker Clarksons, Gary Morgan, says. The global reach of US light oil has been surprising, Morgan says. US crude exports went to a dozen countries – including Canada, the Netherlands, Colombia, Peru, China, South Korea and Singapore – in November, the most recent data show.

Increasing amounts of US crude will move to Latin America and the Caribbean, in large part because these countries regularly import on smaller vessels such as Aframax. Dredging projects along the US Gulf coast will enable bigger tankers to make the journey south, but the work will probably fall short of allowing the largest tankers – such as Suezmaxes and very large crude carriers (VLCCs) – to load except in limited circumstances, Morgan says.

Asia-Pacific is likely to be another increasingly important market, Energy Aspects chief oil analyst Amrita Sen says. “You are seeing strong demand for good quality Permian crude,” she says.

Occidental’s Ingleside terminal is expected to play an important role in this development. The start of regular WTI crude flows from the Midland hub in Texas to Ingleside along the Cactus system last year has enabled WTI Midland to emerge as the grade of choice for Asian buyers of US crude.

ARGUS AMERICAS CRUDE SUMMIT

Latin American demand could stall this year, one of three principal threats to rising oil prices identified by US firm Cargill

‘One of the biggest things I see is potentially a collapse in emerging markets, particularly Latin America’

‘What we can say from an economic standpoint is that Opec has drawn a line in the sand’

‘In the fourth quarter, when prices got above \$50/bl, we definitely got active with producers coming in to hedge’

Cargill outlines key market risks

US agriculture and commodities giant Cargill points to potential slowdowns in emerging Latin American markets, a stronger dollar and Opec compliance with the group’s production deal as possible threats to firming oil prices. Cargill managing director for energy derivatives Brian Jenisch and senior director for energy risk management Gregory Broussard spoke to Argus at the Argus Americas Crude Summit in Houston. Edited highlights follow:

What are the biggest risks that may derail the nascent oil market recovery?

Broussard: Coming into this year, one of the biggest things I see is potentially a collapse in emerging markets, particularly Latin America. With a rising rate environment in the US, the strong dollar policy is bearish for emerging markets – that could destroy some demand there. That is probably the biggest thing that no-one is thinking about. We still have a potential for a hard landing in China.

What is the strong dollar going to do to commodity prices? That is the big policy issue. What does the world look like when you have divergent Federal Reserve policies – because we will be in a rate hike mode while the rest of the world is not.

For the first part of the year, the oil story will be a supply-driven Opec compliance story, it is going to be fundamentals. Then over the course of the year, some of these macro issues will come into play in terms of how we reassess whether oil is going to go higher or lower. I think it is a highly volatile, rangebound year. We are going to see a lot of volatility, but it will be tough to break out of a range.

What role will the dollar play in influencing oil prices?

Broussard: Clearly there is a role because crude is priced in dollars. Because we do have such a strong supply-side story going into this year, the dollar will be ancillary, but will still be important. And where you see the dollar really impact is on the extremes. So we come back to big events, and that is where we see the dollar really take hold. It is probably not the number one issue, but it is an issue we need to pay attention to, particularly in a rising rate environment.

What are the key factors supporting oil prices?

Broussard: The supporting factor is ultimately Opec. Opec has told you that prices are not going below a certain level. In a matter of two years, they have had two massive policy shifts in order to get the market where they wanted it to be. This is more of an issue of a floor as opposed to a top. But what we can say from an economic standpoint is that Opec has drawn a line in the sand.

Jenisch: The wildcard is: Can Opec police themselves? That is the biggest wildcard that everyone has to watch every day.

Do you see US oil producers stepping up their hedge positions?

Jenisch: 2016 was a pretty dormant period, with not a lot of hedging taking place. But there is a magic number – \$50/bl. If the price got above \$50/bl, producers came in and hedged, below \$50/bl they did not. It was on or off. In the fourth quarter, when prices got above \$50/bl, we definitely got active with producers coming in to hedge. They added some significant flow for 2017, but they were shorter-dated than you would see historically. There was a lot of calendar 2017 and 2018, and nothing past that. Volumes were reduced as well. But they definitely picked up in the fourth quarter. It is certainly more active today than it was through the majority of 2016.



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US rig count rebounds from last week's fall

Houston, 20 January (Argus) — The US rig count rose this week, rebounding from a prior week decline as North American producers continue to move forward with plans to step up spending in 2017.

The count total rose by 35 to 694, according to weekly data from Baker Hughes, to the highest since 31 December 2015, when the number hit 698. Oil-directed rigs drove the increase, rising by 29 to 551, just below the end-November 2015 high of 555. Gas-directed rigs rose by six to 142. The total count has risen by some 72pc from the end-May number of 404, the lowest in at least three decades. The count had fallen by six last week, ending eight straight weeks of increases.

Oil field services giant Schlumberger said it is ready to focus “on the pursuit of growth” after nine straight quarters of relentless workforce reductions, cost cuts and restructuring.

“We maintain our constructive view of the oil markets,” chief executive Paal Kibsgaard said. “We expect the growth in investment to initially be led by land operators in North America, where continued negative free cash flows seem less of a constraint.”

The change in stance comes amid growing expectations for a recovery in oil prices as supply and demand balance continues to tighten and inventory levels decline. Kibsgaard cited spending surveys that showed 2017 North American exploration and production (E&P) investment are set to rise by around 30pc, led by the Permian basin in Texas. This should lead to both higher activity and a recovery in oilfield services costs.

Drilling activity is set to increase as benchmark Nymex WTI prices of above \$50/bl are enough to incentivize growth in US shale output, Bernadette Johnson, vice president at

energy data and analytics company DrillingInfo said at this week's Argus Americas Crude Summit. Breakeven prices are down by an average \$7.50/bl since the first quarter of last year because of a drop in drilling and completion costs, she said. Johnson forecast WTI crude futures will average \$52/bl in 2017.

The total North American rig count rose by 62 to 1,036, while the Canadian count increased by 27 to 342. The number of US rigs drilling horizontally rose by 22 to 559, while the tally of those drilling vertically gained by 12 to 75. The offshore number fell by one to 24. By state, Texas added the most, at 17, followed by Oklahoma, which added seven.

Crude Summit Q&A: Cargill outlines key market risks

Houston, 20 January (Argus) — US agriculture and commodities giant Cargill sees emerging Latin American markets, a stronger US dollar and Opec's ability to comply with its new output deal as possible threats to the nascent recovery in oil prices.

Brian Jenisch, Cargill's managing director for energy derivatives and Gregory Broussard, senior director for energy risk management, spoke with Argus this week at the Argus Americas Crude Summit. Below is an edited transcript of the interview.

Argus: What are the biggest risks that may derail the nascent oil market recovery?

Broussard: Coming into this year, one of the biggest things I see is potentially a collapse in emerging markets, particularly Latin America. With a rising rate environment in the US, the strong dollar policy is bearish for emerging markets – that could destroy some demand there. That is probably the biggest thing that no one is thinking about. We still have a potential for a hard landing in China. What's the strong dollar going to do to commodity prices?

Petroleum

illuminating the markets

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To me that is the big policy issue. What does the world look like when you have divergent Fed policies – because we will be in a rate hike mode while the rest of the world is not. For the first part of the year, the oil story will be a supply-driven Opec compliance story, it is going to be fundamentals. Then over the course of the year, some of these macro issues will come in to play in terms of how we reassess whether oil is going to go higher or lower. I personally think it is a highly volatile, range bound year. We are going to see a lot of volatility, but it will be tough to break out of a range. Argus: What role will the dollar play in influencing oil prices?

Broussard: Clearly there is a role because crude is priced in dollars. Because we do have such a strong supply-side story going into this year, the dollar will be ancillary, but will still be important. And where you see the dollar really impact is on the extremes. So we come back to big events, and that is where we see the dollar really take hold. It is probably not the number one issue, but it is an issue we need to pay attention to, particularly in a rising rate environment.

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Argus: Do you see US oil producers stepping up their hedge positions?

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shorter-dated than what you would see historically. There was a lot of calendar 2017 and 2018, and nothing past that. Volumes were reduced as well. But they definitely picked up in the fourth quarter. It is certainly more active today than it was through the majority of 2016.

Survey: Midland and beyond

Houston, 20 January (Argus) — As light, sweet WTI Midland crude evolves into one of the most liquid benchmarks in the Americas — and in fact, the world — its value remains inextricably tied to the infrastructure that pulls it out of the Permian basin.

While the grade ran at a more-than \$14/bl discount to WTI Cushing as recently as mid-2014 thanks to limited takeaway capacity, it is now at a premium as exports have begun in earnest and shippers scramble for supplies to fulfill pipeline commitments.

“They will bid up Midland until committed shippers satisfy demand. Once you get uncommitted shippers, then you get back to what I call the ‘normal’ arbitrage,” oil markets consultant Andy Lipow of Lipow Oil Associates said yesterday at the Argus Americas Crude Summit in Houston.

But Lipow warned that if Permian basin production increases are on the high side of forecasts, crude and condensate output once again could swamp available pipeline capacity, and a market in which shippers are willing to take mild losses to avoid paying pipeline penalties could swing back to big discounts.

“You could see this crunch point in mid-2018,” he said. “As soon as we have too many barrels, the Midland differential goes to the incremental [mode of transport], which is rail,” likely to the west coast.

Cactus growing

Plains All American Pipeline this week announced plans to expand capacity on its 250,000 b/d Cactus pipeline carrying Permian crude to south Texas to about 390,000 b/d by the end of the third quarter, the company said. At Cactus' Gardendale terminus, crude can flow onto the 660,000 b/d Eagle Ford JV pipeline, a 50:50 Plains part-

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nership with Enterprise Products Partners that can funnel crude both to Corpus Christi — and the new 300,000 b/d Occidental Petroleum (Oxy) export terminal at nearby Ingleside — or Houston via Enterprise's South Texas pipeline system.

WTI Midland is increasingly being shipped through the Cactus system to Ingleside, where it is emerging as the grade of choice for US exports to Asia and potentially Latin America. Importers like its consistent quality compared with Eagle Ford crude from South Texas and Domestic Sweet Blend (DSW) from Cushing, Oklahoma, coupled with its improved availability.

Cactus originally was pitched as an outlet that could help producers take advantage of the opening of legal processed condensate exports in 2014, leaving the growing infrastructure across the state to southeast Texas for WTI Midland and West Texas Sour (WTS) crudes. But the December 2015 liberalization of crude exports changed the calculus of US producers, and the October 2016 inauguration of the Oxy terminal gave Permian shippers — potentially including Oxy itself, the largest Permian producer — a direct link to the coast and interested buyers overseas. Koch Industries subsidiary Flint Hills Resources also runs a 200,000 b/d terminal at Ingleside that can take Cactus-originated crude. Oxy said late last year it has ample takeaway capacity to handle its expected production growth and expects to continue shipping third-party volumes to Houston on its BridgeTex capacity.

In the fourth quarter, coincidental to the Oxy terminal opening, the Argus WTI Midland deal count led all spot grades across the globe at 312. Physical volume traded lagged only North Sea Forwards and Russian ESPO Blend. Peruvian state-owned oil company PetroPeru, a frequent importer of DSW that travels through the Enterprise/Enterprise Seaway and TransCanada Marketlink pipelines from Cushing to southeast Texas, recently upgraded its list of eligible import grades to include WTI Midland by way of Cactus.

Enterprise jumps in
But adding pumps to Cactus probably will not be enough. The US Energy Information Administration (EIA) this week forecast Permian basin crude production will rise by 53,000

b/d to 2.2mn b/d in February, compared with about 2.5mn b/d of combined takeaway capacity between long-haul pipelines and regional refineries.

The Cactus expansion will increase that takeaway figure to about 2.74mn b/d by October if it is on time, but a projection by leading Permian driller Pioneer Natural Resources indicates that could fill up by early- to mid-2018 as the basin adds an average of 300,000 b/d annually until 2025.

“We do not think there is going to be a huge bottleneck in the Permian, but by the end of 2017 there will be some takeaway issues,” Amrita Sen, chief oil analyst and co-founder of consultancy Energy Aspects, said at the conference. “Again, it leads us to believe you are going to have to have wider Midland differentials just to clear those barrels. That is bound to happen” absent more takeaway capacity.

The next major project due to come on stream is Enterprise's 300,000 b/d Midland to Sealy pipeline, which will connect the company's large Permian gathering system directly to its Houston-area crude system, principally its Echo storage facility and connected export terminal on the Houston Ship Channel.

The project is due to come on stream in mid-2018 — possibly matching the supply surge — and chief executive Jim Teague told Argus yesterday it could be ready earlier next year. The project from Midland to Sealy will make Enterprise the only midstream company to control pipeline infrastructure into southeast Texas from the Eagle Ford and Permian basins as well as from the Nymex hub at Cushing. Once at the destination, Enterprise has deepwater docks at Houston, Texas City, Freeport and Beaumont and could load as much as 4mn b/d “without spending a penny” on new infrastructure, Teague said at the Summit.

“This is why Enterprise is building tankage and docks,” he said. “We want to be able to export everything we touch.” The pipeline is expandable to 450,000 b/d by adding up to four pump stations, Enterprise has said. As of late last year, about 60pc of capacity — or 180,000 b/d — was locked up by long-term contracts.

Plains estimates that another 200,000 b/d could emerge from expansions on existing pipelines such as Magellan's

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300,000 b/d BridgeTex line or Sunoco Logistics' 200,000 b/d Permian Express 2, but based on Pioneer's projections that might only handle production growth into the first part of the next decade.

Lipow noted that unlike the first production boom earlier this decade, this time rail capacity exists and sits at the ready to relieve oversupply. He also said the build-out of infrastructure in areas adjoining the basin makes trucking an option, whether it is north Texas and Oklahoma or south to the Eagle Ford region.

"There are always ways the market is going to adjust," Lipow said.

Q&A: Permian to drive US oil, gas M&A: Milisavljevic

Houston, 20 January (Argus) — The booming Permian basin, spread over Texas and Mexico, will drive mergers and acquisitions (M&A) in the US oil and gas industry even though valuations are high. But other regions are not to be overlooked, said Mile Milisavljevic, a principal in PwC's US energy sector deals strategy business. From the sidelines of the Argus Americas Crude Summit in Houston, he tells Argus the factors driving M&A and shares his outlook on the US conventional oil industry.

Edited highlights below:

Is the Permian going to drive US oil, gas M&A and why?

Milisavljevic: The Permian is already driving M&A as we are coming close to \$10bn in deal value in last 10 days or so. A number of things are contributing to that. First, Permian, in terms of breakevens, is one of the best places we have in the US unconventional sector. So economics work. Second, companies have been drilling in the Permian for a long time and there is a lot of known things about the Permian and there is also infrastructure that has been built out. All of these things contribute to give a higher level of comfort with acquisitions rather than opening up a completely new province, where you haven't done anything and it is far away from everything. This is kind of the exact opposite of that.

Are Permian valuations getting too expensive?

Milisavljevic: Prices in the Permian are high. They are high

compared to other things that are transacting. If you look at who is buying in the Permian, what you see is in part a trend toward position consolidation and position extensions, which are important for scale. After all, the unconventional industry is like manufacturing, so scale actually helps you drive the cost curve down. So if you already have a position and you are in a position to extend it, with all the knowledge that you have and the scale curve that you are going to get, you should be able to pay a little bit more. That sets up some companies for a higher willingness to pay more. Other companies, if you are brand new coming in to Permian, it is a lot harder math to digest. You don't have a position, you are subscale, it is harder.

It also depends on the asset, depends on your position. I think it is frothy on an overall basis, but there is still room for this wave to go.

What about other shale acreages?

Milisavljevic: I would not underestimate the other basins. A lot of it is overshadowed by the Permian at the moment, but let's not forget that the Eagle Ford is still pretty good, Scoop/Stack (Oklahoma) are still pretty good. I wouldn't just discount the rest of the continental United States. There are folks that come to talk to us about those quite often — it is not with the frequency and scale the Permian commands, but there is quite a bit of interest. On the other side is Bakken (in North Dakota), which is more a story of consolidation and pullout of fringe and non-core positions. So it is a different rationale, but it is still M&A. It is not that you cannot make Bakken work, you just have to have a position in the right place. The Utica/Marcellus is always interesting, and Haynesville has been heating up in the last year as well.

What is your big-picture view? What are you telling your clients on the outlook of the market?

Milisavljevic: What we have been telling them is: welcome to recovery. This is how it looks like. As far as price recovery is concerned, unless there are big disruptions, it will be wise not to expect massive price recovery down the road. Maybe disruptions come in and we are in a completely different playing field. But absent of that, the dynamics are such that it is hard to envision a case where we are going to be short of production at least in the next few years. So price recovery is here, and profit recovery is going to

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happen on efficiencies and on the cost side. Those will be somewhat offset by the loss of capabilities we have had in the industry. We have had a massive human capital loss in the industry with all the layoffs, we have had supply chain loss and production capability has gone away as some assets have been mothballed. We don't even know how much of the cold-stacked stuff is actually going to be deployable. So there will be some cost escalation in the supply chain as activity picks up. You have to be very cautious about coming in and jumping in.

Crude Summit: Tesoro sees biofeedstock in near future

Houston, 19 January (Argus) — Tesoro could run a “meaningful amount” of renewable feedstocks at its refineries within seven years, executive vice president of operations Cynthia Warner said today.

The company has for years pursued renewable or biofuel alternatives in its predominantly US west coast refining system, both to generate credits needed to satisfy state and federal regulations and to further increase its feedstock options. A joint venture agreement with Fulcrum BioEnergy reached last year remained on track to supply 800 b/d of feedstock to Tesoro's 168,000 b/d Golden Eagle refinery in Martinez, California, Warner said on the sidelines of the Argus Crude Summit in Houston.

If successful, the partnership could allow Fulcrum and other partners to scale up production to supply a more significant amount of the feedstock in five to seven years, Warner said. Both independent refiners and major oil companies have pursued various biofuels projects. US independent refiner Valero is one of the largest US producers of ethanol, and Shell participates in joint venture sugarcane ethanol production in Brazil. Both products blend into finished gasoline but cannot move by traditional petroleum pipelines or be generated at either company's refineries.

Tesoro preferred to find technologies that worked with their existing refining equipment instead of building new specialized facilities. The company purchased Virent last year to acquire a process that generates fuels chemically identical to conventional gasoline, distillate and jet fuels from renewable sources, generating both fuel sales and valuable regulatory credits.

Tesoro could also sell the feedstock or license the technology to other refiners.

“It is our view that once it is ready for scale up, the way to maximize its impact on the market is not to be the only ones using it,” Warner said.

Crude Summit: Non-Opec supply, workforce key risks

Houston, 19 January (Argus) — A sharp decline in non-Opec oil supply, rehiring manpower lost during the price downturn and wide price swings are some key factors to look out for in the oil market this year.

A panel of experts discussing challenges in 2017 at the Argus Americas Crude Summit listed those and other factors, such as an increase in drilling costs in US shale oil operations, among the surprises to look for as the market recovers.

Market participants must not be complacent about oil prices holding around current levels, said Energy Aspects chief oil analyst Amrita Sen. The industry must also accept that they will “never go above \$60/bl,” just like the industry earlier thought that prices will never go below \$100/bl, Sen said.

Non-Opec oil supplies outside of the US, particularly from countries like Nigeria, face risks of disruption, which may lead to wide price swings, she said.

Conversely, prices may also weaken further, Bernadette Johnson, vice president at energy data and analytics company DrillingInfo said.

“There could be supply surprises on the upside and we don't have a lot of room in storage,” she said. She cited the example of Libya, where supplies have recovered sharply when many market participants were expecting output from the country to remain low.

“Markets are volatile and will stay that way,” Johnson said. Libyan crude production has risen to around 715,000 b/d, benefiting from the restart of the 350,000 b/d Sharara field. Oilfield services companies such as Schlumberger, Halliburton and Baker Hughes have laid off tens of thousands of employees, particularly in the US, in the downturn that began in 2014. Now as the rig count recovers and producers

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begin to complete wells, the ability of companies to rehire fracking crews will be crucial, Johnson said.

For Andy Lipow, president of Lipow Oil Associates, a key factor the oil market needs to brace for is a change in international fuel specifications for ships starting in 2020, wherein ships will start using fuel oil with a lower sulfur content. The refining industry needs to start investing in changes in their processes now to produce more of the low sulfur fuel that will be mandated.

Crude Summit: US oil exports could reach 1mn b/d

Houston, 19 January (Argus) — US exports of crude could reach 1mn b/d this year as the country becomes an increasingly important player in the global market, a shipping analyst with shipbroker Clarksons said.

US oil exports should be in a range of 600,000 b/d to 1mn b/d, depending on the recovery of crude prices, said Gary Morgan, the group's director of market analysis for deep sea tankers, at the Argus America's Crude Summit in Houston.

Crude exports last week averaged about 700,000 b/d, according to the US Energy Information Administration.

Since the Obama administration lifted a 40-year old ban on most oil exports in December 2015, the global reach of US light oil has been surprising, Morgan said on the sidelines of the conference.

The most recent federal monthly data shows that US crude exports in November averaged about 597,000 b/d and went to a dozen countries, including Canada, the Netherlands, Colombia, Peru, China, South Korea and Singapore.

Increasing volumes of US crude will likely continue to move to Latin America and the Caribbean, in large part because of the common use of smaller vessels, such as Aframax tankers, analysts said.

Dredging projects along the US Gulf coast currently underway will help to facilitate bigger ships, but this will probably fall short of allowing the largest tankers, such as Suezmax and VLCCs, to load in ports except in limited circumstances, Morgan said.

Asia is also likely to become an increasingly important market for US crude, said Amrita Sen, chief oil analyst at Energy Aspects.

"You are seeing strong demand for good quality Permian crude," she said.

Occidental Petroleum's new 300,000 b/d crude export facilities in Ingleside, Texas, near Corpus Christi, Texas marks the start of this trend. WTI crude from Midland, Texas, is increasingly being shipped through the Cactus pipeline system to Ingleside, where it is emerging as the grade of choice for US exports to Asia.

The US could also benefit from possible supply disruptions in Nigeria and Libya, as Europe may need to find alternate supplies, analysts said.

Crude Summit: Limited rail potential from Permian

Houston, 19 January (Argus) — Ample existing infrastructure will constrain the Permian basin from rekindling a boom in railed crude movements.

Rising crude production could create a short window for railed movements out of the Permian basin to the US west coast, experts said today at the Argus Crude Summit in Houston. But US independent Tesoro, the largest west coast operator by capacity and an early adopter of railed crude to the west, still expects the Texas and New Mexico fields make more sense heading east to the US Gulf coast. "I would not say never," Tesoro executive vice president of operations Cynthia Warner said on the conference sidelines. "But generally speaking that would be, in our view, the most logical thing that would happen."

Booming North American crude production far from traditional oil infrastructure triggered a renaissance in 2012 of moving crude by train to markets across the country. The movement peaked in 2014. But Permian crude production has lagged available pipeline capacity. Shippers who made minimum volume commitments to ensure access to pipelines connecting the region to the Texas coast have bid up the price of crude at Midland, oil industry consultant Andy Lipow said.

Even less competitive barrels moved from west Texas to

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Houston made more economic sense than taking penalties assessed by midstream companies for moving nothing at all, Lipow said. That experience could cool shipper interest in making commitments to new pipeline space.

“I would have a really hard time standing in front of my boss and saying ‘I think we ought to sign up for this take-or-pay on a new project,’” said Dan Gordon, executive vice president for business development at US Gulf coast independent refiner Delek. The company has begun the final stages this year of an acquisition of Alon USA, which includes a 73,000 b/d refinery in the Permian at Big Spring, Texas.

Capacity out of the region continues to grow. Plains All American said yesterday it plans to expand its 250,000 b/d Cactus pipeline to 390,000 b/d by the end of the third quarter. Enterprise plans to bring a 300,000 b/d Midland-to-Houston pipeline online in the first quarter of 2018. The company has commitments for 60pc of that line’s capacity, chief executive Jim Teague said today.

“There seems to be plenty of pipeline capacity out there now,” Teague said.

If Permian production surprises shippers and pipeline operators, the region could see stranded crude akin to what sent Bakken and other production to the rails in recent years. Plenty of west Texas and New Mexico rail infrastructure exists to send that production to the west coast, Lipow said.

Tesoro continues to pursue a 360,000 b/d rail offloading facility in Vancouver, Washington, to supply its west coast refining system with barrels gathered in the Bakken. The project has stalled under state regulatory review.

The company also plans to this year acquire Western Refining, which has logistics assets in the Permian supplying its 125,000 b/d refinery in El Paso, Texas. Warner declined to discuss the acquisition, but said the Permian generally still made more economic sense headed to the Texas coast. “There was always more infrastructure there to begin with, closer to market,” Warner said.

Enterprise instead expects US light, sweet production to flow to the coast for export [as replacement for crude from politically unstable countries](<http://direct.argusmedia.com/newsandanalysis/article/1388511>), Teague said.

Crude Summit: Enterprise sees US exports boom

Houston, 19 January (Argus) — Exports of US light crude will continue to grow even as imports keep steady at about 7mn b/d, said Enterprise Products Partners chief executive Jim Teague.

The US will become the first and most reliable crude supplier to replace oil from “politically risky” nations, he said, at the Argus Americas Crude Summit in Houston. The US will continue to import heavy crude from Saudi Arabia, Colombia, Venezuela and Canada regardless of how much is eventually exported.

Enterprise has rapidly built up export capacity in the past few years with 20 ship docks, of which 15 are capable of exporting a combined 4mn b/d of crude. Enterprise has exported crude and LPG around the globe, including to Europe, Latin America, and Asia, but Teague would not comment on current nominated volumes. He said capacity is not maxed out.

Teague said the company’s docks “are a magnet” for US crude, as evidenced by increasing efforts to move Permian basin oil to the Gulf coast. For example, Plains All American Pipeline said yesterday that it plans to expand capacity on its 250,000 b/d Cactus crude pipeline from the Permian basin to Gardendale, Texas, to about 390,000 b/d by the end of the third quarter.

Cactus connects to Plain’s 660,000 b/d Eagle Ford JV pipeline, a 50:50 joint venture with Enterprise that serves Three Rivers and Corpus Christi, Texas, and can access the Houston area on Enterprise’s South Texas pipeline system.

Another Enterprise project -- the 300,000 b/d Midland-to-Houston pipeline -- will be in service in the first quarter of 2018, Teague said. That line would move crude from Enterprise’s Midland terminal to its Sealy storage facility west of Houston, providing another outlet for Permian production to multiple markets, including for export.

The rising interest in exports since the US lifted a 40-year-old ban on most exports in December 2015 will likely lead to a crude spot market developing on the Gulf coast within months, not years, Enterprise officials said today.

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Crude Summit: DAPL may hit western Bakken lines

Houston, 19 January (Argus) — The startup of the 470,000 b/d Dakota Access crude pipeline (DAPL) linking the Williston basin to the US midcontinent and Gulf coast could take oil off of western Bakken pipelines as well as rail, consultant Andy Lipow said today.

Bakken crude will become focused on Dakota Access -- in part fed by future partner Enbridge's existing system -- with about 50,000-100,000 b/d heading west on the rails, Lipow said at the Argus Americas Crude Summit in Houston today. "DAPL and the Enbridge system mostly likely will be taking barrels out of the western exit of the Bakken," Lipow said, adding that Dakota Access should keep Bakken differentials to WTI Cushing consistently narrower than in the past.

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Crude Summit: Enterprise could set LPG export record

Houston, 19 January (Argus) — Enterprise Products Partners could set an LPG export record at its Houston Ship Channel docks this month of 17.5mn bl, although bad weather could cause it to fall short, chief executive Jim Teague said today. The facility has recently signed two more cargoes to lift out of Asia, and is on pace to hit the record this month "if the fog does not get in our way," Teague said at the Argus Americas Crude Summit in Houston, Texas. Houston vessel traffic frequently is interrupted during the winter because of fog, and has seen several delays this month.

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Crude Summit: Nymex WTI to average \$52/bl in 2017

Houston, 19 January (Argus) — Nymex WTI crude futures will average \$52/bl in 2017, according to one scenario created by energy data and analytics company DrillingInfo.

The outlook is based on 1.2pc global demand growth, expectations that Opec members won't adhere to output cuts, US shale oil production grows by 376,000 b/d and global production stays flat, DrillingInfo vice president Bernadette Johnson said at the Argus Americas Crude Summit.

But WTI prices will average \$47/bl if demand growth stays flat "in a struggling economic environment," and Opec is unable to stick with its output plans, she said. At that price

level, US shale output will grow by 267,000 b/d in 2017. Prices may rise to over \$67/bl if Opec members are successful in meeting their output target and demand grows by 1.2pc.

A successful implementation by Opec of supply cuts is an unlikely scenario as "cuts can't last too long and the supply deficit would be too large," she said.

Benchmark Nymex WTI, which settled at \$51/bl yesterday, has largely held around \$50/bl in recent months, recovering from a low of around \$26/bl in the first quarter of last year. Opec members in November finalized a plan to curb output, which was followed up by a similar agreement in December from major non-Opec producers including Russia. A joint ministerial committee comprising Kuwait, Russia, Algeria, Venezuela and Oman has been set up to monitor producers' compliance, which it is hoped will accelerate a rebalancing of the global oil market.

WTI prices above \$50/bl are enough to incentivize growth in US shale output, with breakeven prices down by an average \$7.50/bl since the first quarter of last year because of a drop in drilling and completion costs, Johnson said. Areas including the Spraberry, the Wolfcamp, the Bone Spring, which are all part of the Permian basin in Texas and New Mexico, have breakeven prices of less than \$35/bl. The Anadarko basin, which is part of the Stack and Scoop acreage in Oklahoma, and some parts of the Eagle Ford region in Texas, also have breakeven prices below \$35/bl, she said.

Amid that increase in prices and declining costs, the US rig count has risen, largely driven by the Permian and the Anadarko basin.

Technology advancements will help US shale oil companies post strong production performance this year, said Mile Milisavljevic, a principal in PwC's US energy sector deals strategy business.

"Technology advancements continue to push production costs down improving wellhead economics of unconventional plays and moving them up the supply curve," he said.

A further boost to the US oil and gas industry may come

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from new Trump Administration policies, including lowering corporate taxes and opening up onshore and offshore leasing on federal land, he said. Those measures can stimulate additional production, he said.

Crude Summit: Crestwood expects less railed US crude

Houston, 18 January (Argus) — US crude-by-rail shipments will decline sharply but remain useful in certain markets amid tight margins and rising pipeline capacity, a Crestwood Energy Partners official said today.

“It would be really premature to call it dead,” said vice president of western US commercial operations Brian Freed, speaking at the Argus Americas Crude Summit in Houston. Tighter spreads between onshore and coastal crude prices, along with greater pipeline availability from the US Williston basin mostly in North Dakota, have shrunk crude-by-rail volumes out of the region from a peak of about 759,000 b/d in October 2014 to about 300,000 b/d in the third quarter of 2016. But a much smaller Brent-WTI spread has made such shipments less attractive.

Some movements of Bakken crude to the Pacific northwest at a cost of \$9-\$10/bl to supply refineries will likely continue, Freed said. Shipping crude by rail to the US Gulf coast should decline dramatically and only exist in niche market situations, especially if the Dakota Access crude pipeline (DAPL) is completed, he said.

That line – being developed by Energy Transfer Partners – would carry at least 470,000 b/d of crude from the Bakken fields in North Dakota to Patoka, Illinois, for further delivery to the Gulf coast. DAPL has been delayed for months after large protests and federal regulatory hurdles. The situation could shift course in a few days, as president-elect Donald Trump will take office on 20 January, at which time the government may change its legal strategy to ease approval for the project.

Feed predicted that only a handful of crude-by-rail terminals in North Dakota will eventually be needed. Some terminals will likely be converted for other uses including to handle sand used in hydraulic fracturing, a well-completion technique, he said.

Q&A: Panetta warms to several Trump cabinet picks

Houston, 18 January (Argus) — Leon Panetta served in several key positions in the administrations of former US presidents Bill Clinton and Barack Obama, including as chief of staff under Clinton and as CIA director and then defense secretary under Obama.

Panetta is also the co-founder of the Panetta Institute for Public Policy, based at California State University, Monterey Bay.

Panetta sat down with Argus Media after delivering a keynote address at the Argus Americas Crude Summit. Below is an edited transcript of the interview.

You’ve complimented some of president-elect Donald Trump’s Cabinet nominees as “good people,” and said that you support his choice to lead the CIA, representative Mike Pompeo. Do you think that Trump will be able to effectively exploit US intelligence community assets to let his administration exert the kind of global leadership that you say is needed?

A president’s first duty is to defend the country and protect our national security. Frankly no president can do that without good intelligence as to what our adversaries are doing. I have been concerned about this kind of running gun battle between the president-elect and the intelligence agencies over intelligence information. My hope is that ultimately Mike Pompeo is the new director of the CIA. We’ve got a new director of national intelligence, Dan Coats, who I have a lot of regard for. I think if they can get in there and work with the intelligence officials and develop a trusting relationship with the new president that we might be able to put this back on the right track.

Trump’s nominee to head the State Department, former ExxonMobil chairman Rex Tillerson, talked tough on US-Russia relations at his confirmation hearing and the need to meet force with force when it comes to Russian incursions. Do you think that Mr Tillerson will be able to counter the threat from Russia and from Russian President Vladimir Putin, who you describe as a bully?

I know Rex Tillerson. I think he is a good man. Obviously he has provided great leadership in the industry. But he also

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knows the world. He knows how to deal with a lot of very complex issues. More importantly he has good common sense and I think that helps a great deal in dealing with a complex world. So when I listened to his testimony I think he took the right positions with regards to our adversaries abroad. I think he reflects what I would call the more traditional approach to foreign policy. I think he'll be a good person to be at the table when President Trump is trying to decide what steps to take. If President Trump is willing to listen to people like Rex Tillerson and to James Mattis, the new Secretary of Defense, as well as Mike Pompeo and others, I feel much more confident that he will make the right decisions.

You used the term “flashpoints” several times in your speech today, and describe the US as being in a similar position that they were at the end of World War II. On global oil supply, what are the most vulnerable flashpoints and what should the US be doing to protect those vulnerabilities?

There are a large number of flashpoints in the world. The key ones are the continuing terrorist threat that we are confronting with Isis and al-Shabab and Boko Haram and al-Qaida in the Middle East and elsewhere. They have the potential to conduct attacks against our country and against other countries and create tremendous disruption in terms of that entire region. In addition the failed states in the Middle East represent a real threat because what's happening in Syria, Libya and Yemen feeds into this instability that's there. The same thing is true for Iran and some of the support that they continue to provide to terrorist groups. Those are some of the principal threats because they happen in a region that produces oil. If we continue to see instability in that region it will continue to impact both prices and supply.

Crude Summit: No sweeping change in US energy regs

Houston, 18 January (Argus) — State and local governments will play a bigger role in energy regulation but legislation will limit the new Trump administration from making sweeping changes to US environmental policy, Sutherland energy law attorney Jacob Dweck said today.

An aggressive Republican administration led by president-elect Donald Trump could make administrative changes

to the biofuel mandates broadly loathed by the refining industry, Dweck told the Argus Crude Summit in Houston, Texas. It could also mean a halt to US advocacy on global greenhouse gas reductions.

Renewable energy growth would continue and other, more sweeping ideas, such as a restoration of the coal industry or a reopening Atlantic and Arctic offshore areas for drilling, would falter.

“Clearly, some of Trump’s actions are going to be helpful to various sectors of the fossil fuel industry, but I don’t believe they represent a fundamental redirection,” Dweck said. The new administration would likely reduce the mandated volume of biofuels refiners, importers and other companies would need to ensure enter the US fuel supply in 2018 under the Renewable Fuel Standard. Volumes have been repeatedly reduced by the Environmental Protection Agency (EPA) over the past four years as advanced biofuels production and gasoline demand both trail volumes assumed when Congress passed the current form of the Renewable Fuel Standard more than five years ago.

Other major ideas would require support from a Congress with which Trump already appears to be out of step. Law cited by the departing Obama administration to close sections of the Arctic and Atlantic oceans off to offshore drilling was vague enough to require lengthy litigation to undo, Dweck said.

And the president-elect earlier this week criticized a signature tax reform that would pay for a corporate tax cut by increasing the cost of US imports. Such a proposal would roil US and global energy trade and almost certainly face retaliatory trade actions from other countries, he said. The combination of a Trump administration and Republican Congress mean that so-called border tax idea would become a more common feature of tax reform discussions going forward, even if it may not pass soon, Dweck said. “I think such a radical proposal really requires a lot more thought and analysis, and I think that’s where we’ll end up,” Dweck said.

Crude Summit: Oil rebalancing to be “bumpy ride”

Houston, 18 January (Argus) — The crude market is on its way to rebalancing, but faces headwinds including the risk

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of global supply disruptions, the impact of booming financial flows, and political change in the US and Europe.

“It will be a bumpy ride and there will be surprises,” said global head of commodities at Citi Research Edward Morse at the Argus Americas Crude Summit in Houston, Texas, today.

The production cuts by Opec and non-Opec countries, part of a 30 November agreement, look convincing for now, he said. But February data could be different as many in the market harbor doubts about the plan’s full implementation. February and March are also when many refineries schedule maintenance, reducing crude demand. February outages alone could be 1.1mn b/d, which translates into lost refinery demand for crude of 800,000 b/d, mostly concentrated in the US Gulf coast.

Imports from the Mideast Gulf are expected to grow based on loadings from last year and will likely show up in very late February or early March, Morse said.

This is all likely bearish for near-term prices.

Another potential wildcard is the vast increase in oil market investment as investor focus becomes increasingly short-term, posing further risks to price stability. Combined open interest in the crude benchmarks WTI and Brent on the CME and ICE exchanges have increased by 48pc in the past two years, from 2.95bn bl at the end of 2014 to 4.3bn bl at the end of 2016, according to Citi Research.

The flows have been “fickle,” increasing and decreasing in waves coinciding with the ups and downs of perceptions of whether Opec would forge the supply cut agreement on its own or with non-Opec producers.

Amrita Sen, chief oil analyst at Energy Aspects, is more optimistic about the Opec/non-Opec deal to curb output, giving it an 80pc chance of compliance. The two countries that tend to cheat the most on such agreements are Venezuela and Iran, she said. Venezuela is already seeing steep production declines amid internal turmoil and Iran is exempt from the Opec agreement.

Other factors could hinder a market rebalancing, Sen said, including potential supply disruptions in Nigeria where a

militant group known as the Movement for the Emancipation of the Niger Delta (Mend), could resurface.

The leading rebel group, Niger Delta Avengers, on 6 January called an end to its ceasefire in the delta region. “The likelihood of significant supply disruptions is very high,” Sen said.

Crude Summit: Global instability needs US leadership

Houston, 18 January (Argus) — Global tensions are at their highest level since the end of World War II, so the United States must assert itself to counter terrorism in the Middle East, Russian aggression and the rising threat of cyber-attacks, former CIA director Leon Panetta said today.

“We are at a turning point in 2017,” Panetta said in a keynote speech at the Argus Americas Crude Summit. “It’s not a cliché to say that at this point that our nation is at a crossroads.”

Panetta, a Democrat who served in several key positions under presidents Bill Clinton and Barack Obama, refrained from outright criticism of US President-elect Donald Trump, who officially takes office on 20 January. “The only predictable thing about Donald Trump is that he is unpredictable,” Panetta said, pointing out that he has nominated “good people” for his Cabinet.

But he said the new administration will need to work hard to break domestic gridlock and show the US can lead globally. America can be a country in renaissance in the 21st century, with a strong economy and strong growth.

The country could also drift from crisis to crisis, caught in a downward spiral of gridlock and dysfunction, Panetta said. Panetta was dismissive of one of the few well-defined policies being discussed by the new Congress, a border tax that would tax imports as a way to reform corporate taxes and cut the deficit. “There is not a damn chance we’re going to reduce the debt with that kind of crap,” he said.

Rather it will take the kind of hard work that lawmakers from both sides of the aisle took part in while he was in Congress in the 1980s, where long negotiations led to a balanced budget and a surplus. With a budget deal “we will have to pay a heavy price for it,” he said. “We have to take some tough decisions.”

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On Russia, Panetta said that the United States is facing “a new chapter in the Cold War,” pointing to Russian President Vladimir Putin’s incursions into Crimea and Ukraine, as well as Russian efforts to tamper with the US presidential elections.

“Like any bully [Putin] senses weaknesses and will take advantage of them,” Panetta said. “You have to deal with Putin from strength and not from weakness.”

Iran remains a security threat through its financing of terror groups and its efforts to develop missile technology, Panetta said. “The reality is that Iran continues to support terrorism,” he said.

The United States must continue to rely on airstrikes, advisors, and special forces to counter militant groups like Isis, he said.

The US must also engage more effectively with moderate allies in the Middle East, who share the same concern as our nation, he said. Without a strong leadership from the United States, governments around the world risk getting the impression that “... America is dysfunctional and cannot be relied upon,” he said.

“We can’t just walk away from the Middle East. We cannot delegate that responsibility to someone else,” he said. Panetta pointed to cyber-attacks as perhaps the worst threat facing US leaders, calling them “the battlefield of the future.”

“You can paralyze a nation using cyber attacks,” Panetta said, pointing to the Shamoon virus that hit Saudi Arabia’s state-owned Saudi Aramco in 2012.

Crude Summit: Tillerson may be tough on Russia

Houston, 18 January (Argus) — Secretary of state nominee Rex Tillerson could be an effective counterpoint to president-elect Donald Trump’s enthusiasm for improved Russian relations, the former US ambassador to Russia said. In a speech at the opening dinner of the Argus Americas Crude Summit in Houston last night, Michael McFaul said that while Trump’s “obsession” with Russian president Vladimir Putin is troubling, he has been heartened by Tillerson, who recently stepped down from his post as chief executive of ExxonMobil.

“He is someone that definitely understands Russia,” McFaul said of Tillerson. “You do not put together a \$500 bn deal with Putin and [Rosneft chief executive Igor] Sechin without understanding how that system works.”

Tillerson managed ExxonMobil’s holdings in Russia and the Caspian region before taking over as chief executive in 2006. ExxonMobil leads the Sakhalin 1 production sharing agreement (PSA) project in Russia’s far east, in partnership with Rosneft, Japan’s Sodeco and India’s ONGC, one of the biggest and longest-standing foreign investments in the Russian energy sector.

Tillerson also established a strong working relationship with Sechin, a close Putin associate and former deputy prime minister and Kremlin official, who now heads Rosneft, a Russian state-controlled oil company Rosneft.

While McFaul was disappointed with Tillerson’s unwillingness to commit to keeping in place US sanctions against Russia imposed following its annexation of Crimea, other parts of Tillerson testimony before a Senate committee last week were encouraging to him. This included Tillerson saying he still stood by his 2008 statement that in Russia there is no respect for the rule of law.

“Tillerson sounds much tougher on Russia than his future boss,” McFaul tweeted during the hearings last week. “Just (confirmation) talk or real policy differences?”

McFaul, a commentator on NBC News who also served as a special advisor to President Barack Obama on Russia and Eurasia affairs, was also complimentary of secretary of defense nominee James Mattis and his tough stance toward Russia. But he worries Mattis might see his role in the administration too narrowly.

“Would he go beyond just speaking up when in the room and asked about defense ... “ or would he offer more strategic advice on handling Russia, McFaul asked. McFaul said he also thought Russia was pleased with its relationship with Opec following its recent agreement to restrain oil output as part of an effort to raise prices.

“That relationship has been complicated in the past,” he said as the Russian economy was on the verge of collapse. But with a rebound in prices and greater stability in its

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economy, Russians “... feel like they have turned a corner.” He does not expect US relations with Russia to improve, even with Trump taking office this week. Putin may make some conciliatory gestures soon after Trump takes office — such as once again allowing US families to adopt Russian children — because he wants to help counter the criticism the future president has faced. But US and Russian interests will not be aligned any time soon.

“While Mr Putin is in power, I do not see any overlap in what we want,” McFaul said. “He does not trust the US, he does not trust markets. I do not see any long term agreements.”

Crude Summit: Mexico oil sector gets broad interest

Houston, 17 January (Argus) — Forty-nine companies from 14 countries are now managing some of Mexico’s oil and natural gas operations, as the nation’s historic energy reform moves forward, an official with Mexico’s Comisión Nacional de Hidrocarburos (CNH) said today.

“We are getting the experience of oil production from 14 different nations,” said commissioner Hector Moreira, at the Argus Americas Crude Summit in Houston.

The companies include Mexican firms in addition to state-owned Pemex. Some are participating in partnerships. Mexico’s first licensing round ended in December with the award of eight out of 10 deepwater blocks in the Gulf of Mexico, and the allocation of state-owned Pemex’s first project farm-out, Trion, to the private sector.

The upstream awards are starting to yield a small independent production stream in addition to output from Pemex, whose monopoly was dismantled under the 2014 package of energy reforms.

Mexico tendered a total of 55 areas for exploration and 39 areas were awarded, Moreira said. The country now has 43,000 square km dedicated to private production, he said. CNH earlier this month deferred a tender for 15 shallow-water blocks by three months, in the hope of attracting more participants.

When asked how much crude production could come out of these two rounds, Moreira said potentially around 400,000

b/d, but qualified his estimate as only a “wild guess.” The second auction, initially scheduled for 22 March, is now due to take place on 19 June. The deadline to request access to geological data has been extended from 11 January to 21 March, while the pre-qualification process will now end on 12 May, instead of 7 March. The blocks on offer are located along the coast of Veracruz, Tabasco and Campeche states, in the oil producing Tampico-Misantla and Southeastern basin regions of the Gulf of Mexico.

As of 23 December, 22 companies had shown interest in the tender, nine of which had begun the pre-qualification process. These include BP, Shell, Chevron, US independent ConocoPhillips, Norway’s Statoil, Germany’s Dea, the UK’s Premier Oil and local firms Sierra and Citla.

Also as part of Mexico’s opening of its energy sector, Pemex is offering up to 15pc of its gasoline and diesel storage capacity, equivalent to 161,600 bl. This infrastructure is located in the northwestern state of Baja California and neighboring state of Sonora.

The open season started last week and is scheduled to be awarded on 15 February.

Oil investment forecast to drive US GDP growth

Washington, 25 January (Argus) — The rebound of oil drilling activity is expected to be a key contributor to US economic growth in 2017, the Congressional Budget Office (CBO) said.

The non-partisan agency projects that US real GDP growth will accelerate to 2.3pc in 2017 from an estimated 1.8pc in 2016, primarily as a result of an increase in US energy sector activity. The positive effect on the GDP likely will taper off in 2018 as oil prices and drilling investment hold steady, the CBO said yesterday in its updated budget and economic outlook for 2017-2027. It projected real GDP growth at 1.9pc in 2018.

US oil and gas exploration accounts for just over 1pc of GDP, but investment in shale drilling and exploration was a major driver of US economic activity in 2010-13. US oil production nearly doubled between 2008-2015, when it reached 9.42mn b/d.

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The US overall gained from the decline in oil prices in 2014-15 because rising real income as a result of lower gasoline prices offset falling energy sector investment. But the positive effects tapered off last year while investment remained low, depressing GDP growth.

US crude oil output should increase to 9mn b/d this year and 9.3mn b/d in 2018, from 8.89mn b/d in 2016, according to the US Energy Information Administration (EIA).

The EIA, in its latest Short-Term Energy Outlook, projected WTI average spot prices rising to \$52.50/bl in 2017 and \$55.18 in 2018, from 2016's average of \$43.33/bl. US shale producers have economic incentives to produce at WTI prices above \$50/bl, energy analytics company DrillingInfo vice president Bernadette Johnson told participants the Argus Americas Crude Summit on 19 January.

Oil prices and US drilling activity picked up late last year as Opec and some key, non-Opec producers reached an agreement to limit production in the first six months of 2017. US producers operated 551 oil-directed rigs as of last week, just below the high in November 2015 of 555 and up by 72pc from 404 in May 2016, the lowest level in at least three decades, Baker Hughes data show.

The projected increase in US oil and gas sector capital expenditures should boost overall US business fixed investment by 5pc in 2017, up from a 0.2pc increase last year, the CBO said.

The projected growth in GDP in 2017-18 will nearly eliminate all "slack" in the economy, the CBO said, meaning that the US economy finally will catch up to a level it would have reached without the negative effects of a recession in 2008-09. The CBO also expects the already low unemployment rate — at 4.7pc in December — to decrease as a result of further growth.

The CBO projections do not take into account the expected increase in fiscal spending as the Republican-controlled Congress and President Donald Trump's administration prepare a package of tax cuts and infrastructure spending. Trump has suggested his policies would lift the US long-term economic growth rate above 4pc/yr - a level last seen on a sustained basis in the late 1990s.

But CBO director Keith Hall said yesterday that boosting US economic growth above projected levels "faces signifi-

cant challenges," including slower growth in labor supply because of aging population and uncertain prospects for immigration reform.

Trump risks trade war with Mexico over wall

The president continues to tout his 'America first' vision, but how it will be achieved remains a matter of debate Washington, 27 January (Argus) — US president Donald Trump is flirting with a possible trade war with Mexico, as he looks for a way to pay for his promised wall along the US-Mexico border.

Trump has proposed the implementation a 20pc border tax on imports from Mexico to fund the estimated \$12bn-15bn cost of the infrastructure project. In his zeal to force Mexico to pay for the construction of the wall, he seemingly cast aside his own reservations about a border adjustment tax proposed by Republican leaders in the US House of Representatives. But he later backpedalled, with the White House eventually describing the plan as just "one idea". In a further sign of the souring of US-Mexico relations, Mexican president Enrique Pena Nieto abruptly cancelled a planned 31 January trip to Washington. Trump insists that the decision was mutual — "unless Mexico is going to treat the US fairly, with respect, such a meeting would be fruitless," he says.

The spat with Mexico in Trump's first week in office is a product of the new president's "America first" vision of governance. He has vowed to punish companies that relocate US manufacturing operations overseas by introducing a tariff on those that sell their products back to the US. Until this standoff with Mexico, Trump had been at odds with Republicans in the House of Representatives over their vision for overhauling the US tax code. Led by speaker Paul Ryan, House Republicans are proposing a 20pc tax on imports, including crude and refined oil products. The border adjustment tax would form part of a broader revamp of the US tax system, which would lower the rate of corporate tax by 15 percentage points to 20pc — Trump is pushing for an even lower rate of 15pc.

The president had dismissed the House Republicans' tax proposals as "too complicated" — providing support to US refiners and retailers that oppose the plan. But he appears to be altering his strategy in the face of Mexico's insistence that it will not pay for his wall.

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The House tax plan would establish a territorial tax system — a long-time goal of US oil firms — under which multinational companies would not pay US taxes on foreign operations, unless they repatriate the associated revenue. The move is intended to eliminate corporate inversions — US firms moving their headquarters abroad, but maintaining the bulk of their operations in the US. “Our tax system encourages businesses to move overseas,” Ryan says. “It encourages them to leave America and outsource.”

Borderline prospects

The border adjustment tax could allow marker WTI crude to increase by \$13/bl, and raise US gasoline prices by around 30¢/USG, UK bank Barclays says. Gasoline costs for the median US family could climb by \$300-400/yr, Barclays estimates. US gasoline prices could rise by 30¢/USG if benchmark Brent crude trades at \$50/bl, according to a

previous report by energy market researcher Philip Verleger and consultancy the Brattle Group.

Concerns over higher oil prices are “valid”, House ways and means committee chairman Kevin Brady says. But such expectations assume a “static economy” where behaviour does not change, he says. Any tax plan that lifts consumer fuel costs will face political hurdles in the US, given the country’s heavy car use.

The chances of a border adjustment tax applying to oil are around one in four, Texas-based consultancy Lipow Associates’ president, Andrew Lipow, told the Argus Americas Crude Summit in Houston on 19 January. “Such a radical tax proposal requires a lot more thought and analysis,” US legal firm Sutherland partner Jacob Dweck says.



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