

GAS DAILY

Tuesday, November 13, 2018

NEWS HEADLINES

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- Cheniere nears first export from Texas terminal
- Exact timing, other specifics not yet disclosed

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Costa Azul HOA sparks talk of Mexico LNG exports

- States of Senora, Sinaloa advantageously located
- Mexico's mainland Pacific Coast potentially less risky

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Colorado companies boost production in DJ Basin

- Processing capacity limits overall growth
- DCP moves forward on plant following Prop 112 defeat

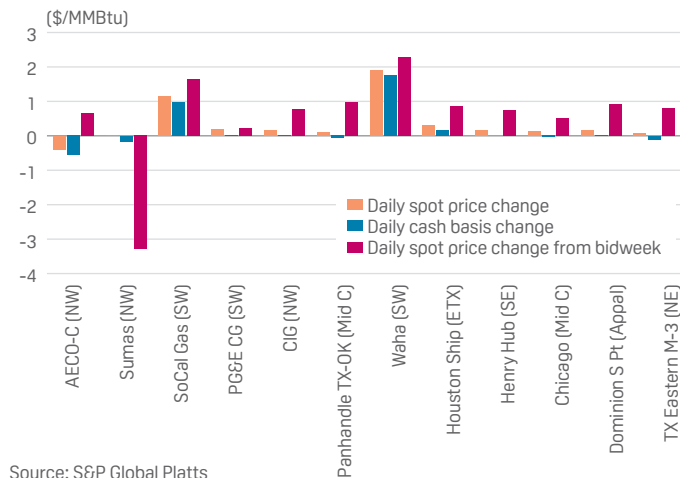
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FERC approves in-service for assets of TEAL phase 1

- Approval follows in-service decision for Nexus last month
- Projects expected to move gas out of Appalachian Basin

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SPOT PRICE AND BASIS CHANGES



Source: S&P Global Platts

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FINAL DAILY PRICE SURVEY - PLATTS LOCATIONS (\$/MMBtu)

NATIONAL AVERAGE PRICE: 4.020

Trade date: 12-Nov

Flow date(s): 13-Nov



	Midpoint	+/-	Absolute	Common	Vol.	Deals
Northeast						
Algonquin, city-gates	IGBEE21	4.560	+0.230	4.450-4.750	4.485-4.635	223 54
Algonquin, receipts	IGBDK21	3.880	+0.150	3.880-3.880	3.880-3.880	0.78 1
Dracut, Mass.	IGBDW21	—	—	—	—	—
Iroquois, receipts	IGBCR21	4.200	+0.145	4.150-4.240	4.180-4.225	485 139
Iroquois, zone 1	IGBRP21	4.240	+0.165	4.240-4.240	4.240-4.240	0.18 1
Iroquois, zone 2	IGBJ21	4.205	+0.100	4.200-4.250	4.200-4.220	94 25
Niagara	IGBCS21	3.970	+0.170	3.950-4.000	3.960-3.985	21 9
Tennessee, z5 (200 leg)	IGBRQ21	4.340	+0.120	4.250-4.400	4.305-4.380	70 8
Tennessee, z6 (300 leg) del.	IGBJC21	—	—	—	—	—
Tennessee, zone 6 del.	IGBEI21	4.715	-0.130	4.450-6.270	4.450-5.170	154 42
Tx. Eastern, M-3	IGBEK21	3.815	+0.060	3.795-3.850	3.800-3.830	380 73
Transco, zone 5 del.	IGBEN21	4.045	-0.045	4.000-4.250	4.000-4.110	698 121
Transco, zone 5 del. North	IGCGL21	4.070	-0.050	4.000-4.250	4.010-4.135	144 31
Transco, zone 5 del. South	IGCHL21	4.035	-0.050	4.000-4.185	4.000-4.080	555 90
Transco, zone 6 N.Y.	IGBEM21	3.955	-0.020	3.890-4.050	3.915-3.995	116 34
Transco, zone 6 non-N.Y.	IGBEL21	3.880	-0.115	3.850-4.010	3.850-3.920	167 51
Transco, zone 6 non-N.Y. North	IGBJS21	3.880	-0.115	3.850-4.010	3.850-3.920	167 50
Transco, zone 6 non-N.Y. South	IGBJT21	4.010	-0.050	4.010-4.010	4.010-4.010	0.25 1
Northeast regional average	IGCAA00	4.150				
Appalachia						
Columbia Gas, App.	IGBDE21	3.730	+0.090	3.670-3.760	3.710-3.755	326 78
Columbia Gas, App. non-IPP	IGBJU21	—	—	—	—	—
Dominion, North Point	IGBDB21	3.690	+0.170	3.650-3.750	3.665-3.715	223 46
Dominion, South Point	IGBDC21	3.685	+0.170	3.620-3.750	3.655-3.720	946 195
Lebanon Hub	IGBFJ21	3.875	+0.140	3.860-3.880	3.870-3.880	146 33
Leidy Hub	IGBDD21	—	—	—	—	—
Millennium, East receipts	IGBIW21	3.770	+0.195	3.750-3.800	3.760-3.785	68 33
Tennessee, zone 4-200 leg	IGBJN21	3.740	+0.125	3.710-3.775	3.725-3.755	413 69
Tennessee, zone 4-300 leg	IGBFL21	3.715	+0.140	3.695-3.740	3.705-3.725	135 39
Tennessee, zone 4-313 pool	IGCFL21	3.715	+0.120	3.700-3.750	3.705-3.730	301 67
Texas Eastern, M-2 receipts	IGBJE21	3.675	+0.150	3.600-3.725	3.645-3.705	1095 195
Transco, Leidy Line receipts	IGBIS21	3.795	+0.160	3.700-3.825	3.765-3.825	323 93
Appalachia regional average	IGDAA00	3.740				
Midcontinent						
ANR, Okla.	IGBBY21	3.835	+0.150	3.770-3.900	3.805-3.870	62 14
Enable Gas, East	IGBCA21	3.930	+0.130	3.880-3.990	3.905-3.960	138 13
NGPL, Amarillo receipt	IGBDR21	3.955	+0.175	3.900-4.050	3.920-3.995	164 30
NGPL, Midcontinent	IGBBZ21	3.765	+0.080	3.685-3.830	3.730-3.800	747 107
Oneok, Okla.	IGBCD21	3.180	+0.345	2.900-3.500	3.030-3.330	513 77
Panhandle, Tx.-Okla.	IGBCE21	3.755	+0.100	3.720-3.800	3.735-3.775	343 69
Southern Star	IGBCF21	3.790	+0.090	3.770-3.850	3.770-3.810	27 4
Tx. Eastern, M-1 24-in.	IGBET21	3.945	+0.095	3.945-3.945	3.945-3.945	9 2
Midcontinent regional average	IGEAA00	3.770				
Upper Midwest						
Alliance, into interstates	IGBDP21	3.995	+0.105	3.890-4.060	3.955-4.040	831 120
ANR, ML 7	IGBDQ21	4.025	+0.075	3.900-4.075	3.980-4.070	35 5
Chicago city-gates	IGBDX21	4.040	+0.125	3.910-4.140	3.985-4.100	1457 186
Chicago-Nicor	IGBEX21	4.045	+0.135	3.950-4.140	4.000-4.095	586 88
Chicago-NIPSCO	IGBFX21	4.050	+0.140	3.910-4.080	4.010-4.080	257 43
Chicago-Peoples	IGBGX21	4.040	+0.115	3.950-4.080	4.010-4.075	605 54
Consumers city-gate	IGBDY21	3.905	+0.120	3.890-3.920	3.900-3.915	284 41
Dawn, Ontario	IGBCX21	3.990	+0.095	3.925-4.020	3.965-4.015	602 78
Emerson, Viking GL	IGBCW21	4.020	+0.040	3.945-4.080	3.985-4.055	177 48
Mich Con city-gate	IGBDZ21	3.870	+0.105	3.840-3.910	3.855-3.890	1308 178
Northern Bdr., Ventura TP	IGBGH21	4.080	+0.085	3.950-4.100	4.045-4.100	177 35
Northern, demarc	IGBDV21	4.085	+0.100	3.970-4.110	4.050-4.110	510 72
Northern, Ventura	IGBDU21	4.070	+0.055	3.940-4.105	4.030-4.105	397 64
REX, Zone 3 delivered	IGBRO21	3.905	+0.140	3.870-3.950	3.885-3.925	1301 229
Upper Midwest regional average	IGFAA00	4.000				

Unladen LNG tanker Golar Tundra stationed at jetty at Corpus Christi facility

- **Cheniere nears first export from Texas terminal**
- **Exact timing, other specifics not yet disclosed**

An unladen LNG tanker was moored to a jetty at Cheniere Energy's Corpus Christi LNG terminal on Monday as the company inched closer to exporting the first cargo from the Texas facility, its second in the US, S&P Global Platts Analytics' vessel tracking tool cFlow shows.

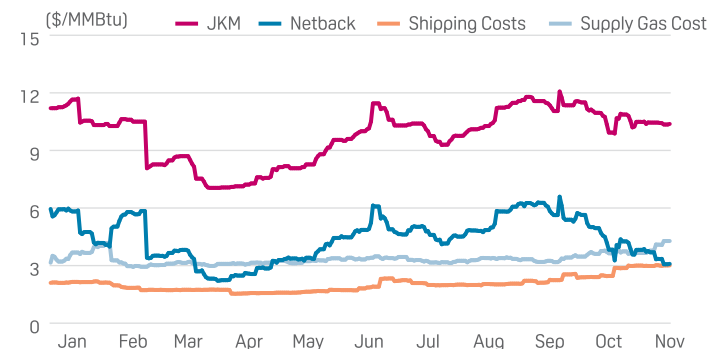
An event to mark the opening of the Texas facility is scheduled for Thursday. The CEO of the Port of Corpus Christi Authority, Sean Strawbridge, has said he expects the first cargo to ship soon after that, though Cheniere has been mum on its specific operational plans or timing, as market conditions can often make such decisions a fluid process.

A Cheniere spokesman did not respond to messages seeking comment on the Golar Tundra's arrival.

Feedgas deliveries to the Corpus Christi LNG facility fell to 39 MMcf/d over the last three days, a 30% drop from the prior 10-day average, Platts Analytics data shows. Train 1 has a nameplate liquefaction capacity of 600 MMcf/d, suggesting that it would take approximately six days to liquefy a standard 3.5 Bcf LNG cargo once it ramps up to full capacity.

However, Cheniere doesn't necessarily need to liquefy a full cargo in order to complete its first export from the Corpus Christi facility. The first cargo loaded from its Sabine Pass export terminal in Louisiana was reported at roughly 2 Bcf onto the Asia Vision, which has a fully loaded capacity of 3.3 Bcf.

SABINE PASS LNG NETBACK TO ASIA



Source: S&P Global Platts Analytics

The Golar Tundra arrived at the Texas facility on Sunday. It appears to have traveled from Petronet LNG's Dahej receiving terminal in India, departing from there on October 12. Its last loading appears to have been at the Chevron-backed Angola LNG export terminal at Soyo, in West Africa, in September, cFlow data shows.

Atlantic Basin LNG vessel charter rates have risen to a high of \$140,000/day in November, the highest monthly average since August 2012. This suggests that vessel Charter costs in November have risen to roughly \$1.90/MMBtu for deliveries to the Platts JKM market, a 118% build over last year, and fully loaded shipping costs

are now more than \$3/MMBtu.

But with Platts JKM, the benchmark price for spot LNG in Northeast Asia, still trending above \$10/MMBtu, a US Gulf Coast LNG exporter is still capturing an estimated \$3.37/MMBtu netback to Asia, with roughly \$1-\$2/MMBtu of upside if it has secured its own shipping capacity.

Therefore, it appears likely that Cheniere will fully utilize this new capacity, with breakeven production costs at Corpus Christi LNG estimated at just below \$3/MMBtu and Cheniere's marketing unit operating its own fleet of long term-chartered LNG vessels.

Operational outlook

During a November 8 investor conference call to discuss third-quarter financial results, a Cheniere executive said the company at that moment was "very close" to producing LNG at the Corpus Christi facility. The company has not provided an update in the days since then.

Cheniere became the first US exporter of LNG produced from shale gas in February 2016 when Sabine Pass shipped its initial cargo. Dominion Energy began exporting LNG in March from its Cove Point terminal in Maryland.

Currently, Cheniere has five liquefaction trains in operation at Sabine Pass. A final investment decision is expected by early 2019 about whether to build a sixth train at Sabine Pass.

At Corpus Christi, three trains are under construction. Train 1 is the unit that is expected to produce the first commissioning cargo soon.

— *Harry Weber and Ross Wyeno*

Costa Azul HOA sparks talk of more Mexico LNG export capacity

- **States of Senora, Sinaloa advantageously located**
- **Mexico's mainland Pacific Coast potentially less risky**

As Mexico looks to develop its natural gas export prowess, its mainland Pacific Coast is getting more attention from LNG exporters following a heads of agreement announced last week by Sempra Energy.

The preliminary sales contracts could see Southern California-based Sempra reach a final investment decision on its proposed Baja California Costa Azul LNG export terminal by late 2019.

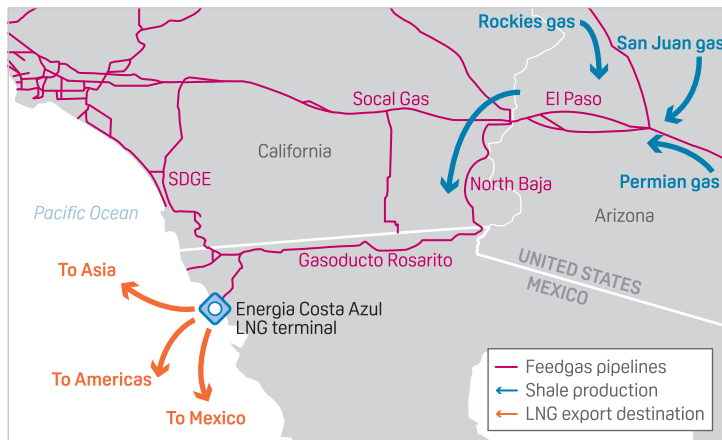
With high-profile buyers, including Total, Mitsui and Tokyo Gas, potentially signing on to 20-year supply contracts from the facility, there's now growing interest in Mexico's Pacific Coast as a potential hub for LNG exports.

"We've seen some interest in Senora and Sinaloa," John Hilfiker, an energy analyst with S&P Global Platts Analytics, said Monday at the US-Mexico LDC Gas Forum in San Antonio, Texas.

The two Mexican Pacific Coast states offer an advantage over exports from the US Gulf Coast given their proximity to northeast Asia's fast-growing LNG import market.

"It's a story of being closer to markets," Hilfiker said, noting that the Pacific Coast location eliminates both the fees and potential constraints associated with transiting the Panama Canal.

PROPOSED ENERGA COSTA AZUL LNG EXPORT PROJECT



Source: IEnova

Costa Azul

The proposed Costa Azul LNG export terminal does offer advantages, but also poses new risks.

First, the underutilized LNG import terminal can be reconfigured for export at a relatively low cost, comparable to similarly sized brownfield projects on the US Gulf Coast.

Second, its location on the Pacific Coast offers a shorter transit distance to the Asian market, compared with the US Gulf Coast. Exports from Mexico also avoid regulatory and environmental hurdles that have long dogged West Coast LNG projects proposed on the US side of the border, such as the Jordan Cove and Oregon LNG projects.

The Costa Azul LNG project location, though, also poses certain supply risks.

One potential risk to the Baja California site is that it's largely disconnected from Mexico's mainland gas and power grids, making the region isolated and more heavily dependent on imports from the US. Adding to that potential supply risk are constraints in the Southern California gas market.

"It has interaction with the SoCal border" Hilfiker said, highlighting the recent transmission constraints into the southern California market, and the region's record-high gas prices this past summer.

Supply

Longer term, LNG export projects from Mexico's Baja California or even its mainland Pacific Coast, could face risks if the country's anticipated growth in gas supply fails to materialize.

"Beyond 2020, a lot depends on Mexico's ability to revitalize its own upstream production," Ross Wyeno, a senior energy analyst with Platts Analytics, said Thursday at the Platts Mexican Energy Conference.

"The energy reforms were optimistic about what we would see in terms of new oil and gas drilling," Wyeno said. With the recent election of Lopez Obrador, though, there's reason for pause.

According to Wyeno, an unanticipated delay in Mexico's upstream development, which seems likely under its new leadership, means that import pipelines from the US are likely to become constrained by 2022 or 2023.

"If Mexican natural gas production is not capable of growing in the mid-2020s, then that would suggest that Mexico needs to begin seriously considering the addition of new pipeline capacity... right now," he said.

— *J. Robinson*

Colorado companies boost oil and gas production in DJ Basin

- Processing capacity limits overall growth
- DCP moving forward on plant following Prop 112's defeat

Even as the oil and gas industry in Colorado faced the threat of a now defeated November 6 ballot proposition that they believed would have caused them harm, local producers ran on full steam last quarter, with multiple companies increasing their year-over-year production rates by 20% or more in the Denver-Julesburg Basin.

Higher prices for oil and natural gas liquids drove the production gains for Colorado-based companies such as Extraction Oil and Gas and PDC Energy. They could have driven production even higher but were somewhat limited due to midstream issues.

Midstream

"After DCP's Plant 10 became operational in August, we were achieving sustained production in excess of 90 Mboe/d, reaching almost 93 Mboe/d at one point," said Extraction Oil & Gas CEO Mark Erickson during the company's third-quarter earnings call. "After DCP imposed production allocations later in August, we were forced to choke our wells back considerably, and since that time, we have not realized the full, sustained production potential of our outstanding DJ Basin wells."

"We initially expected that DCP's Plant 10 would provide much more relief than what we have seen to date," he added. "We estimate that DCP negatively impacted our production by approximately 18 Mboe/d during the third quarter. Once Plant 10 came online, we did not expect that DCP would be basing allocations on production data from August 2017, and as a result, our gas production on DCP's system is currently curtailed by over 35%."

Other new processing facilities are being completed by DCP and other midstream companies in late 2018 and in 2019 in the DJ Basin, which is expected to help companies continue to increase production.

The average price for a barrel of oil sold by Extraction during the quarter was \$62.32, an increase of more than \$20/b compared with the same period in 2017. NGLs were sold at an average of \$24.49/b compared with \$21.74 the year prior. Natural gas, however, was priced down to \$1.95/Mcf compared with \$2.76/Mcf last year.

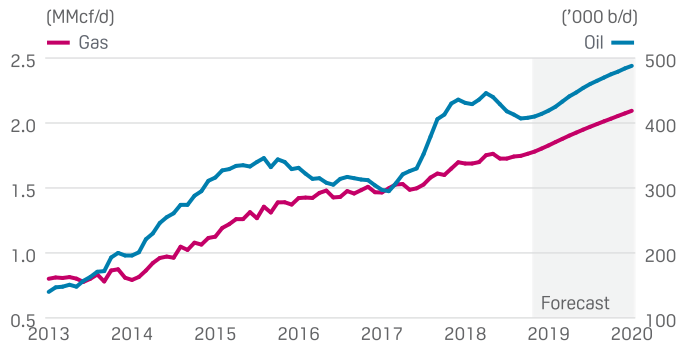
PDC Energy grew its production by 21% year over year in the DJ Basin. The company anticipates exiting 2018 with about 200 approved permits and 100 drilled but uncompleted wells in the field. Its production starting to benefit from DCP Plant 10 and the company anticipates further performance uplift from Plant 11 in 2019. However, the company also requires more takeaway and processing capacity in the region to continue such strong gains.

"Our Wattenberg operating performance is beginning to improve, as production and costs are both trending in the right direction," said CEO Bart Brookman. "However, our production continues to be curtailed by the shortfall in midstream capacity in the basin."

Production

Overall, oil and gas production in the DJ is projected to continue growing over the next year. Average daily gas production is expected to surpass 2 Bcf/d by next September, according to S&P Global Platts

DJ BASIN OIL AND GAS PRODUCTION



Source: S&P Global Platts Analytics

Analytics. Oil is expected to hit 470,000 b/d at that time. As recently as 2014, oil production was only around 200,000 b/d.

With the defeat of Proposition 112, DCP Midstream now plans to move forward on its final investment decision on the Bighorn facility. The massive processing plant will have up to 1 Bcf/d of capacity and is expected to begin operations in 2020. DCP is also adding NGL takeaway to the DJ Basin with Southern Hills pipeline extension via the White Cliffs NGL pipeline. The initial capacity out of the DJ Basin is expected to be 90 MBbls/d, expandable to 120 MBbls/d, with an anticipated fourth-quarter 2019 in-service date.

— [Brandon Evans](#)

FERC approves in-service for remaining assets of TEAL phase 1

- Approval follows in-service decision for Nexus last month
- Projects expected to move gas out of Appalachian Basin

The US Federal Energy Regulatory Commission approved for service the remaining facilities of phase 1 of Enbridge's Texas Eastern Appalachian Lease project, one of the key supply sources for the company's Nexus Gas Transmission pipeline.

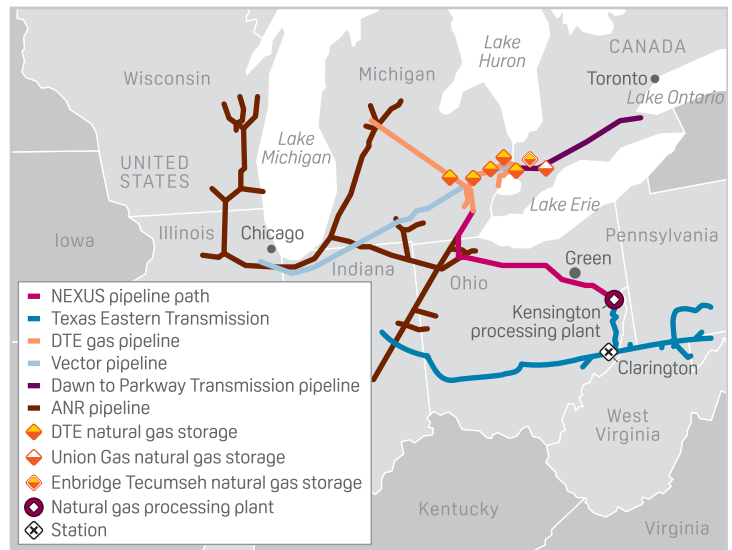
Along with FERC's approval last month of Nexus' request to place certain facilities into commercial service, Friday's approval is expected to allow for additional capacity to move gas produced in the Marcellus and Utica shale plays from Texas Eastern Transmission's system to markets served by Nexus. The additional facilities should boost TEAL's capacity to 657 MMcf/d, up from its current 638 MMcf/d.

Enbridge affiliate Spectra Energy Partners had begun placing Nexus and TEAL project facilities into service in early October, Enbridge spokesman Adam Parker said. Nexus began accepting nominations on October 12 for its first day of gas flow on October 13.

"Placing these two projects into service represents the successful culmination of more than four years of working with many stakeholders to provide natural gas to markets in Ohio, Michigan and Ontario," he said.

Nexus' impact on Northeast pricing and production has thus far been relatively muted, likely due to the high shipping costs eating into any arbitrage opportunities between the Northeast and Midcontinent

NEXUS GAS TRANSMISSION



Source: Nexus Gas Transmission

markets, according to S&P Global Platts Analytics.

Since coming online, Nexus has delivered an average of 270 MMcf/d to the DTE system in Washtenaw County, Michigan, with most of the remaining volumes being delivered to the Vector system or across the US/Canada border to St. Clair, Ontario, via the Vector and Union Gas systems.

According to Platts Analytics data, Union Gas receipts at Dawn, Ontario, are up nearly 290 MMcf/d over last month, with the increase coming from the Enbridge and Michcon systems, both of which Nexus can access via its leased capacity.

Total receipts on Nexus have averaged 691 MMcf/d over the last week on a firm contracted capacity of 650 MMcf/d. Five anchor shippers — Chesapeake Energy, DTE Electric, DTE Gas, Union Gas and Enbridge — have all had their firm contracts strike for a combined capacity of 565 MMcf/d, with an additional 85 MMcf/d subscribed on firm contracts expiring at the end of the month.

Project approvals

FERC on October 10 granted Nexus' request to place certain project facilities into commercial service, including about 256 miles of 36-inch-diameter greenfield pipeline and associated compression.

For the TEAL project, FERC's director of the office of energy projects on September 12 granted Texas Eastern's request to place certain TEAL facilities into service. FERC on Friday granted Texas Eastern's October 23 request to place the remaining TEAL Phase I facilities into service.

With the rest of Phase I now approved, Nexus has begun to post additional receipt points at interconnects in Ohio and West Virginia. At this time, though, these new points have yet to schedule any volumes, according to Platts Analytics.

In addition to bringing online new points, the rest of TEAL Phase I in-service will usher in two additional firm contracts — CNX's contract for 115 MMcf/d and Noble Energy's 110 MMcf/d contract will both strike