S&P Global Platts

GAS DAILY

Thursday, October 24, 2019

NEWS HEADLINES

Forward gas markets see more Permian constraints in 2020

- April, May contracts hit record lows at 26 cents, 27 cents
- Negative prices likely at output upwards of 12.7 Bcf/d

AECO hub rallies near Chicago prices on rising Alberta demand

- Weather, inventory dearth driving demand
- Exports to Midwest look to remain low

Trump targets pipeline resistance at Pittsburgh conference

- N.Y. blocking itself, New England from Pa. gas: Trump
- President touts his support for coal industry

Lloyds proposes LNG terminal offshore Alaska North Slope to bring cargoes to Asia

- Lloyds formed in 2013 to develop floating LNG projects
- ExxonMobil signed preliminary supply agreement

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PLATTS ICE GAS INDICES AMERICAS (GIA), (\$/MMBtu)

Trade Date: Oct 23 Flow Date(s): Oct 24

| | | Average | Daily Change | |
|-------------------|---------|---------|--------------|--|
| GIA Northeast | IGKAA00 | 1.838 | -0.103 | |
| GIA South | IGLAA00 | 1.234 | +0.054 | |
| GIA Midwest | IGMAA00 | 2.254 | +0.163 | |
| GIA West | IGNAA00 | 2.653 | +0.007 | |
| GIA North America | IGOAA00 | 1.960 | +0.003 | |

Assessment rationale: The GIA daily natural gas indices comprise 20 locations across 4 regions in the US and Canada and are based upon trade data reported to Platts by market participants and the Intercontinental Exchange. Details on GIA methodology can be found at

https://www.spglobal.com/platts/en/our-methodology/methodology-specifications/natural-gas. Details on historical prices and locations, location weightings, and region weightings can be found at http://plattsinfo.platts.com/GIA.

This rationale applies to symbols found in market category GH listed at http://plts.co/uwHX30kyPG0

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

| | | | | | Powered by | / [| ce |
|-----------------------------------------------------------|--------------------|-----------|--------|-------------------------|----------------------------|------------|----------|
| Northeast | | Midpoint | +/- | Absolute | Common | Vol. I | |
| Algonquin, city-gates | IGBEE21 | 1 955 | -0.205 | 1.850-2.170 | 1.875-2.035 | 130 | 29 |
| Algonquin, receipts | IGBDK21 | | _ | | | | |
| Dracut, Mass. | IGBDW21 | | _ | | | _ | _ |
| Iroquois, receipts | IGBCR21 | | -0.110 | 2.080-2.200 | 2.080-2.140 | 45 | 16 |
| Iroquois, zone 1 | IGBRP21 | . — | _ | | | | _ |
| Iroquois, zone 2 | IGBEJ21 | 2.085 | -0.150 | 2.050-2.150 | 2.060-2.110 | 33 | 13 |
| Niagara | IGBCS21 | 2.115 | +0.035 | 2.090-2.140 | 2.105-2.130 | 32 | 10 |
| Tennessee, z5 (200 leg) | IGBRQ21 | 2.095 | -0.055 | 2.070-2.110 | 2.085-2.105 | 75 | 11 |
| Tennessee, z6 (300 leg) del. | IGBJC21 | . — | _ | | | _ | _ |
| Tennessee, zone 6 del. | IGBEI21 | 2.155 | -0.050 | 2.100-2.250 | 2.120-2.195 | 114 | 29 |
| Tennessee, zone 6, del. North | IGBRR21 | | -0.055 | 2.250-2.250 | 2.250-2.250 | 6 | 3 |
| Tennessee, zone 6, del. South | IGBRS21 | | -0.035 | 2.100-2.200 | 2.130-2.180 | 108 | 26 |
| Tx. Eastern, M-3 | IGBEK21 | | -0.125 | 1.840-1.930 | 1.875-1.920 | 168 | 33 |
| Transco, zone 5 del. | IGBEN21 | | +0.035 | 2.100-2.285 | 2.215-2.285 | 131 | 29 |
| Transco, zone 5 del. North | IGCGL21 | | +0.055 | 2.100-2.200 | 2.140-2.190 | 3 | 3 |
| Transco, zone 5 del. South | IGCHL21 | | +0.035 | 2.250-2.285 | 2.255-2.275 | 127 | 26 |
| Transco, zone 6 N.Y. | IGBEM21 | | -0.155 | 1.900-2.050 | 1.915-1.990 | 94 | 20 |
| Transco, zone 6 non-N.Y. | IGBEL21 | | -0.115 | 1.880-2.070 | 1.920-2.015 | 314 | 78 |
| Transco, zone 6 non-N.Y. North | IGBJS21 | | -0.115 | 1.880-2.070 | 1.920-2.015 | 314 | 78 |
| Transco, zone 6-non-N.Y. South Northeast regional average | IGBJT21 IGCAA00 | | _ | | | | |
| | IGCAAOO | 2.000 | | | | | |
| Appalachia | | | | | | | |
| Columbia Gas, App. | IGBDE21 | | -0.025 | 1.910-2.000 | 1.910-1.945 | 208 | 49 |
| Columbia Gas, App. non-IPP | IGBJU21 | | | | | | _ |
| Dominion, North Point | IGBDB21 | | -0.105 | 1.750-1.880 | 1.825-1.880 | 25 | 9 |
| Dominion, South Point | IGBDC21 | | -0.080 | 1.750-2.000 | 1.785-1.910 | 700 | |
| Lebanon Hub | IGBFJ21 | | +0.100 | 2.160-2.180 | 2.105-2.175 | 53 | 8 |
| Leidy Hub Millennium, East receipts | IGBDD21 IGBIW21 | | -0.175 | 1.770-1.820 | 1.780-1.805 | 60 | 13 |
| Tennessee, zone 4-200 leg | IGBIW21 | | +0.000 | 1.990-2.075 | 2.025-2.065 | 146 | 36 |
| Tennessee, zone 4-300 leg | IGBFL21 | | -0.170 | 1.730-1.815 | 1.730-1.755 | 52 | 13 |
| Tennessee, zone 4-313 pool | IGCFL21 | | -0.055 | 1.965-2.000 | 1.980-2.000 | 130 | 34 |
| Texas Eastern, M-2 receipts | IGBJE21 | | -0.095 | 1.740-1.910 | 1.785-1.870 | 410 | 75 |
| Transco, Leidy Line receipts | IGBIS21 | | -0.135 | 1.790-1.840 | 1.795-1.820 | 375 | 87 |
| Appalachia regional average | IGDAA00 | | | | | | - |
| Midcontinent | | | | | | | |
| ANR, Okla. | IGBBY21 | 2 000 | +0.110 | 2.000-2.140 | 2.055-2.125 | 89 | 22 |
| Enable Gas, East | IGBCA21 | | +0.165 | 2.000-2.100 | 2.000-2.040 | 225 | 30 |
| NGPL, Amarillo receipt | IGBCA21 IGBDR21 | | +0.105 | 2.210-2.305 | 2.260-2.305 | 152 | 26 |
| NGPL, Midcontinent | | | | 1.850-2.000 | | 290 | 42 |
| | IGBBZ21 | | +0.235 | | 1.945-2.000 | | |
| Oneok, Okla. | IGBCD21 | | +0.165 | 1.500-1.630 | 1.550-1.615 | 114 | 20 |
| Panhandle, TxOkla. | IGBCE21 | | +0.345 | 1.790-1.965 | 1.840-1.930 | 341 | 71 |
| Southern Star | IGBCF21 | | +0.210 | 1.880-2.080 | 1.905-2.005 | 83 | 9 |
| Tx. Eastern, M-1 24-in. | IGBET21 | | _ | | | | |
| Midcontinent regional average | IGEAA00 | 1.970 | | | | | |
| Upper Midwest | | | | | | | |
| Alliance, into interstates | IGBDP21 | | +0.170 | 2.210-2.300 | 2.250-2.295 | | |
| ANR, ML 7 | IGBDQ21 | | +0.125 | 2.280-2.300 | 2.280-2.290 | 114 | 3 |
| Chicago city-gates | IGBDX21 | | +0.190 | 2.235-2.345 | 2.265-2.320 | 615 | |
| Chicago-Nicor | IGBEX21 | | +0.200 | 2.240-2.345 | 2.270-2.320 | 313 | 68 |
| Chicago-NIPSCO | IGBFX21 | | +0.180 | 2.240-2.330 | 2.260-2.305 | 196 | 33 |
| Chicago-Peoples | IGBGX21 | | +0.190 | 2.235-2.340 | 2.265-2.315 | 106 | 34 |
| Consumers city-gate | IGBDY21 | | +0.130 | 2.140-2.250 | 2.190-2.245 | 433 | 72 |
| Dawn, Ontario Emerson, Viking GL | IGBCX21 | | +0.115 | 2.115-2.285 | 2.175-2.260 | 829 | |
| Mich Con city-gate | IGBCW21 IGBDZ21 | | +0.185 | 2.225-2.340 2.160-2.220 | 2.270-2.330 2.180-2.210 | 180 402 | 39 |
| non oon ory-yate | IGBDZ21 IGBGH21 | | +0.165 | 2.160-2.220 | 2.180-2.210 | 238 | 68 42 |
| Vorthern Bdr. Venture TD | 10000021 | | | 2.220-2.400 | 2.300-2.390 | 615 | 93 |
| Northern Bdr., Ventura TP | TGRDV21 | 2 2 2 2 2 | | | | | |
| Northern, demarc | IGBDV21 | | +0.225 | | | | |
| Northern, demarc Northern, Ventura | IGBDU21 | 2.360 | +0.255 | 2.200-2.430 | 2.305-2.420 | 559 | 109 |
| Northern, demarc | | 2.360 | | | | 559 | |





Forward gas markets see more Permian constraints in 2020

- April, May contracts hit record lows at 26 cents, 27 cents
- Negative prices likely at output upwards of 12.7 Bcf/d

Natural gas forwards markets are anticipating more price pain for Permian producers next year as rising output again overwhelms the basin ahead of key midstream capacity expansions expected in 2021.

On Tuesday, Waha forwards prices for the shoulder season months of April and May sank to their lowest on record at just 26 cents and 27 cents, respectively. As recently as late August, both contracts traded close to, or above, 90 cents/MMBtu, S&P Global Platts most recently published M2MS forwards data shows.

Following the September 25 startup of Kinder Morgan's 2 Bcf/d Gulf Coast Express Pipeline, Permian production has already increased by an estimated 300 MMcf/d compared to the September average, rising to about 10.8 Bcf/d in October, according to data compiled by S&P Global Platts Analytics.

WAHA 2020 FORWARDS PRICES



Source: S&P Global Platts

A midstream forecast for the Permian shows effective production takeaway capacity maxing out around 12 Bcf/d. Including an estimated 700 MMcf/d absorbed by local demand then, Permian producers could push output to about 12.7 Bcf/d, at which point in-basin cash prices are likely to turn negative again.

PLATTS LOCATIONS NATURAL GAS DAILY FINAL ASSESSMENT RATIONALE

Platts Gas Daily indices are based upon trade data reported to Platts by market participants and the Intercontinental Exchange.

These locations were assessed by Platts and deviated from the standard volume weighted average methodology in the following ways:

1. Texas Gas, Zone SL: Price of \$2.195/MMBtu was assessed at a 4-cent premium to Texas Gas, Zone 1 based on recent daily gas trading and verified by ICE bid/offer activity.

This rationale applies to symbols found in the Market Data category GD listed at http://plts.co/uwHX30kyPG0

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

Trade date: 23-Oct Flow date(s): 24-Oct

| Flow date(s): 24-Oct | | | | | | | |
|-----------------------------------------------|--------------------|----------|-----------|----------------------------|----------------------------|-----------|----------|
| | | Midpoint | +/- | Absolute | Common | Vol. [| Deals |
| Fact Toxoo | | • | | | | | |
| East Texas | TCDAV21 | 2145 | 10.025 | 2 100 2 150 | 2 125 2 150 | | |
| Agua Dulce Hub Carthage Hub | IGBAV21 IGBAF21 | | +0.025 | 2.100-2.150 | 2.135-2.150 1.990-2.050 | 23 31 | 6 |
| Florida Gas, zone 1 | IGBAF21 | | +0.000 | 2.190-2.210 | 2.195-2.205 | 47 | 4 |
| Houston Ship Channel | IGBAP21 | | +0.095 | 2.140-2.160 | 2.150-2.160 | 30 | 6 |
| Katy | IGBAQ21 | | +0.095 | 2.140-2.180 | 2.150-2.170 | 196 | 37 |
| NGPL, STX | IGBAZ21 | | _ | | | _ | |
| NGPL, Texok zone | IGBAL21 | | +0.125 | 2.100-2.175 | 2.115-2.155 | 2163 | 285 |
| Tennessee, zone 0 | IGBBA21 | | +0.100 | 2.100-2.190 | 2.120-2.165 | 498 | 96 |
| Tx. Eastern, ETX | IGBAN21 | 2.120 | +0.260 | 2.100-2.170 | 2.105-2.140 | 51 | 12 |
| Tx. Eəstern, STX | IGBBB21 | 2.170 | +0.085 | 2.150-2.190 | 2.160-2.180 | 97 | 16 |
| Transco, zone 1 | IGBBC21 | 2.150 | +0.040 | 2.130-2.180 | 2.140-2.165 | 102 | 14 |
| Transco, zone 2 | IGBBU21 | 2.165 | +0.115 | 2.160-2.170 | 2.165-2.170 | 55 | 14 |
| East Texas regional average | IGGAA00 | 2.140 | | | | | |
| Louisiana/Southeast | | | | | | | |
| ANR, La. | IGBBF21 | 2.175 | +0.110 | 2.160-2.190 | 2.170-2.185 | 64 | 14 |
| Columbia Gulf, La. | IGBBG21 | 2.140 | -0.010 | 2.125-2.145 | 2.135-2.145 | 43 | 8 |
| Columbia Gulf, mainline | IGBBH21 | 2.105 | +0.145 | 2.060-2.160 | 2.080-2.130 | 557 | 86 |
| Florida city-gates | IGBED21 | 2.540 | +0.070 | 2.535-2.585 | 2.535-2.555 | 105 | 10 |
| Florida Gas, zone 2 | IGBBJ21 | 2.190 | +0.095 | 2.190-2.190 | 2.190-2.190 | 10 | 1 |
| Florida Gas, zone 3 | IGBBK21 | 2.365 | +0.075 | 2.350-2.400 | 2.355-2.380 | 229 | 33 |
| Henry Hub | IGBBL21 | 2.275 | +0.075 | 2.220-2.300 | 2.255-2.295 | 244 | 38 |
| Pine Prairie Hub | IGBRU21 | 2.185 | +0.040 | 2.180-2.190 | 2.185-2.190 | 381 | 48 |
| Southern Natural, La. | IGBB021 | | +0.045 | 2.200-2.240 | 2.205-2.225 | 255 | 43 |
| Tennessee, zone 1 | IGBHI21 | | +0.090 | 2.110-2.210 | 2.145-2.195 | 462 | 74 |
| Tennessee, 500 Leg | IGBBP21 | | +0.040 | 2.200-2.250 | 2.205-2.230 | 675 | 90 |
| Tennessee, 800 Leg | IGBBQ21 | | +0.075 | 2.130-2.180 | 2.145-2.170 | 254 | 40 |
| Tx. Eastern, ELA | IGBBS21 | | +0.040 | 2.155-2.175 | 2.160-2.170 | 193 | 38 |
| Tx. Eastern, M-1 30-in. | IGBDI21 | | +0.050 | 2.150-2.155 | 2.150-2.150 | 179 | 24 |
| Tx. Eastern, WLA | IGBBR21 IGBA021 | | +0.045 | 2.180-2.200 | 2.185-2.195 2.135-2.170 | 137 | 22 70 |
| Tx. Gas, zone 1 Tx. Gas, zone SL | | | +0.100 | | | 612 | 0 |
| Transco, zone 3 | IGBB121 | 2.195** | +0.090 | 2.195-2.195 2.180-2.220 | 2.195-2.195 | 0 251 | 39 |
| Transco, zone 4 | IGBBV21 | | +0.030 | 2.180-2.220 | 2.195-2.215 | 802 | 121 |
| Trunkline, ELA | IGBBX21 | | +0.120 | 2.170-2.170 | 2.170-2.170 | 2 | 2 |
| Trunkline, WLA | IGBBW21 | | | | | | |
| Trunkline, zone 1A | IGBGF21 | | +0.100 | 2.130-2.160 | 2.140-2.155 | 166 | 29 |
| Louisian/Southeast regional average | | | | | | | |
| Rockies/Northwest | | | | | | | |
| Cheyenne Hub | IGBC021 | 2 105 | +0.150 | 2.070-2.130 | 2.090-2.120 | 456 | 54 |
| CIG, Rockies | IGBCK21 | | +0.190 | 2.080-2.140 | 2.115-2.140 | 271 | 34 |
| GTN, Kingsgate | IGBCY21 | | +0.035 | 2.180-2.185 | 2.185-2.185 | 35 | 14 |
| Kern River, Opal | IGBCL21 | | -0.055 | 2.195-2.260 | 2.195-2.225 | 638 | 111 |
| NW, Can. bdr. (Sumas) | IGBCT21 | | +0.110 | 2.930-3.080 | 2.930-3.005 | 115 | 34 |
| NW, Rocky Mtn. Pool | IGBRW21 | 2.115 | +0.130 | 2.110-2.130 | 2.110-2.120 | 115 | 8 |
| NW, s. of Green River | IGBCQ21 | 2.110 | +0.125 | 2.000-2.130 | 2.080-2.130 | 115 | 9 |
| NW, Wyo. Pool | IGBCP21 | 2.215 | -0.050 | 2.200-2.260 | 2.200-2.230 | 270 | 56 |
| PG&E, Malin | IGBD021 | 2.240 | -0.025 | 2.230-2.280 | 2.230-2.255 | 181 | 37 |
| Questar, Rockies | IGBCN21 | . — | — | | | _ | _ |
| Stanfield, Ore. | IGBCM21 | 2.235 | -0.045 | 2.220-2.245 | 2.230-2.240 | 218 | 38 |
| TCPL Alberta, AECO-C* | IGBCU21 | 2.490 | +0.080 | 2.415-2.530 | 2.460-2.520 | 621 | 106 |
| Westcoast, station 2* | IGBCZ21 | 0.260 | +0.105 | 0.050-0.400 | 0.175-0.350 | 193 | 50 |
| White River Hub | IGBGL21 | | +0.135 | 2.095-2.140 | 2.105-2.125 | 211 | 30 |
| Rockies/Northwest regional average | IGIAA00 | 2.240 | | | | | |
| Southwest | | | | | | | |
| El Paso, Bondad | IGBCG21 | 1.820 | +0.495 | 1.700-2.000 | 1.745-1.895 | 76 | 22 |
| El Paso, Permian | IGBAB21 | 0.160 | +0.060 | 0.000-1.750 | 0.000-0.600 | 996 | 169 |
| El Paso, San Juan | IGBCH21 | | +0.360 | 1.500-1.900 | 1.615-1.815 | 250 | 48 |
| El Paso, South Mainline | IGBFR21 | | -0.335 | 2.350-2.650 | 2.370-2.520 | 72 | 12 |
| El Paso, West Texas | IGBRT21 | | +0.050 | 0.000-0.250 | 0.055-0.180 | 968 | 163 |
| Kern River, delivered | IGBES21 | | -0.315 | 2.400-2.600 | 2.460-2.560 | 724 | 139 |
| PGSE city-gate | IGBEB21 | | -0.040 | 3.140-3.170 | 3.155-3.170 | | 144 |
| PG&E, South | IGBDM21 | | +0.580 | 1.840-2.150 | 1.940-2.095 | 167 | 50 |
| SoCal Gas | IGBDL21 | | -0.165 | 1.780-2.650 | 2.085-2.520 | 806 | 153 |
| SoCal Gas, city-gate Transwestern, Permian | IGBGG21 | | +0.075 | 3.350-3.450 | 3.375-3.425 | 193 38 | 52 10 |
| Transwestern, San Juan | IGBAE21 IGBGK21 | | +0.085 | 0.050-0.110 | 0.070-0.100 | 101 | 18 |
| Waha | IGBGK21 | | +0.035 | -0.200-0.250 | -0.040-0.190 | | |
| Southwest regional average | IGJAA00 | | 0.000 | 5.200 0.200 | 5.0 .0 0.100 | | 2.10 |
| *Price in C\$ per gj; C\$1=US\$0.7642;* | | | Volume ir | n 000 MMRtu/da | v Symbols reg | Jresen | t nas |
| flow date | | | | | ,. 0,0000101 | | - 900 |

*Price in C\$ per gj; C\$1=US\$0.7642;**Assessed Prices; Volume in 000 MMBtu/day. Symbols represent gas flow date. The wider West Texas-Gulf Coast price spreads implied by a negative Permian cash market, though, could ultimately see takeaway capacity expand to about 12.7 Bcf/d as shippers max out spare and interruptible capacity, particularly on intrastate pipelines.

Under that scenario, total Permian output could reach as high as 13.5 Bcf/d prior to the startup of new midstream projects, according to high-side estimates from Platts Analytics.

Expansions outlook

The looming promise of midstream capacity growth got a bit more distant last week when Kinder Morgan announced a delay to it 2.1 Bcf/d Permian Highway Pipeline.

During its third-quarter 2019 earnings call, the company said that regulatory approvals for the pipeline have been slower than previously anticipated and would delay the project's in-service date to early 2021.

Currently, the pipeline has about 85% of its required regulatory right-of-way permits but is still awaiting further authorizations, which are likely to defer the startup of mainline construction.

Despite delays, construction on the western spread of the project has already begun near Waha.

Since Kinder Morgan's public announcement of a delay to Permian Highway, autumn forwards prices at Waha have tumbled as much as 65%. On Tuesday, calendar-month contracts for October and November were assessed at just 51 cents and 69 cents/MMBtu, respectively – also their lowest on record, S&P Global Platts data shows.

Potentially adding to the disillusionment for Permian producers, Kinder Morgan also announced last week a decision to postpone its proposed Permian Pass pipeline project to a date beyond 2022.

The decision follows a recent slowdown in commercial interest for the project and reflects a shift in producer sentiment in the Permian. Already this year alone, producer in the West Texas basin have shed more than 70 rigs as lower oil prices and capital discipline come increasingly into focus.

Following an FID on the 2 Bcf/d Whistler Pipeline in June by developers, MPLX, WhiteWater Midstream, Stonepeak Infrastructure Partners and West Texas Gas Inc, Permian producers can still bank on combined midstream capacity growth of at least 4.1 Bcf/d in 2021.

At least four additional pipeline projects with early 2020s startup dates have also been proposed – none of which have reached a positive final investment decision yet.

- <u>J. Robinson, Tyler Jubert, Emmanuel Corral</u>

2-DAY-AHEAD TEMPERATURE FORECAST MAP

October 23 forecast for October 25



Source: S&P Global Platts, Custom Weather

AECO hub rallies near Chicago prices on rising Alberta demand

- Weather, inventory dearth driving demand
- Exports to Midwest look to remain low

AECO hub basis has recently surged to prices not seen in years during the shoulder season as cooler weather drives up demand all while Alberta has also started injecting higher volumes of gas into storage.

The basis almost reached parity with the Chicago hub over the past several days. This stemmed from AECO's need to compete with Chicago for supply due to stronger demand, according to S&P Global Platts Analytics. At the same time, Alberta is injecting at multi-year highs. AECO's tightening has also led to a drop in

PERMIAN BASIN MIDSTREAM CAPACITY EXPANSIONS

| Company | Project | Capacity (Bcf/d) | Target ISD | Receipt | Delivery | Status |
|------------------------------------|------------------------------------|---------------------|------------|---------|----------------------|-------------------------|
| Kinder Morgan | Gulf Coast Express Pipeline | 2.00 | Oct-19 | Waha | Agua Dulce | Operating |
| Kinder Morgan | Permian Highway Pipeline | 2.10 | early-2021 | Waha | US Gulf Coast, Texas | FID, under construction |
| MPLX, WhiteWater Midstream, | | | | | | |
| Stonepeak Infrastructure Partners, | | | | | | |
| West Texas Gas Inc. | Whistler Pipeline Project | 2.00 | 03-21 | Waha | Agua Dulce | FID, under construction |
| Sempra LNG & Midstream | | | | | | |
| and Boardwalk Pipeline Partners | Permian-Katy (P2K) | 1.70 | 03-20 | Permian | Katy, | Proposed |
| | | to 2.25 | | | Houston Ship Channel | |
| Williams | Bluebonnet Market Express Pipeline | 2.00 | late-2020 | Waha | Katy, Texas | Proposed |
| NAmerico Partners LP | Pecos Trail Pipeline | 2.00 | 02-21 | Permian | Agua Dulce | Proposed |
| Tellurian | Permian Global Access Pipeline | 2.00 | 2023 | Waha | Gillis, LA | Proposed |

Source: S&P Global Platts Analytics

outflows to the Midwest.

A recent amendment to NOVA Gas Transmission system's tariff policy allows for higher daily storage injections. Alberta is currently building storage more rapidly than recorded during the peak of past two injection seasons.

NGTL SYSTEM DEMAND INCLUDING INJECTIONS



Source: S&P Global Platts Analytics

Total demand on NGTL's system, including injections, averaged 5 Bcf/d in September, according to Platts Analytics. Temperatures have dropped 10 degrees this month, also spurring demand. Still, the majority of the increased tightness has resulted from stronger injections. In total, demand and injections have tightened NGTL and AECO by about 0.8 Bcf/d in October compared to September.

Production has gained 0.5 Bcf/d so far in October over September. During the summer, AECO regularly traded \$1/MMBtu below Henry Hub, resulting in producers shutting in wells. The boost in production likely results from operators bringing some of those wells back online due to AECO's recent increased access to storage, according to Platts Analytics.

AECO basis averaged more than \$2/MMBtu below Henry Hub during September. It has averaged only 44 cents below over the past seven days. AECO is currently only 5 cents behind Chicago. It averaged \$1.61 lower than Chicago last month.

The extra production has still not met AECO's increased demand, however, so flows to the Midwest have slowed, as AECO's recent price jump has driven weaker NGTL system outflows at Empress.



AECO FIGHTS FOR SUPPLY WITH US MIDWEST

Empress outflows are averaging just 2.6 Bcf/d so far in October, dipping as low as 2.3 Bcf/d. This is about a 0.2 Bcf/d drop this month from September. Great Lakes Gas Transmission has accounted for most of it. Empress outflows to Eastern Canada along TC Energy's Mainline have remained flat since September. Great Lakes on the other hand, which delivers gas from Alberta to Upper Midwest markets in the US, has seen its outflows drop considerably.

The reduced exports flows at Empress could be a sign of what will continue throughout the winter. Despite rapid injections and aggressive builds over the past several weeks, Alberta still looks to finish injection season with stocks well below historical norms.

A strong production rebound in Alberta early this winter also looks unlikely since the 1.7 Bcf/d North Montney Mainline's in-service date was recently delayed from December 15 until mid-January.

If production fails to grow, outflows at Empress, and to US Midwest markets, could be reduced further to help meet AECO demand. — Brandon Evans, Richard Frey

Trump targets pipeline resistance at Pittsburgh conference

- N.Y. blocking itself, New England from Pa. gas: Trump
- President touts his support for coal industry

President Donald Trump singled out New York and its governor, Democrat Andrew Cuomo, for his opposition to new natural gas pipelines in the state during a speech at an industry conference in Pittsburgh Wednesday.

Major lines have been stalled or blocked on state authority in recent years, including the Williams-led Constitution Pipeline and the PennEast Pipeline systems, which would deliver natural gas from Marcellus Shale fields to New Jersey, New York and eastern Pennsylvania. New York has also blocked National Fuel Gas' Northern Access and Williams' Northeast Supply Enhancement pipelines, crimping in-state capacity.

"New York should allow pipelines to go through," Trump said in his speech at the Shale Insight 2019 conference, hosted by industry trade group Marcellus Shale Coalition at the downtown convention center. "There has to be something we can do," Trump added.

Under Cuomo, New York banned hydraulic fracturing in 2014 as a health hazard, effectively cutting off development of the portion of the Marcellus Shale along the state's Southern Tier of counties north of Pennsylvania, and has used its authority to deny water permits to most new-build gas pipelines, as part of a general policy directed at lowering fossil fuel use.

"It never made sense to me," Trump, a New Yorker, told an audience from both the industry and the general public, invited for his speech. "They don't drill, they don't frack." Arguing that in-state shale development would help New York to pay off its debt and cut taxes, Trump said he would "be talking to Governor Cuomo," without giving any further detail.

"They're sitting on a gold mine of energy," Trump said.

Fifteen years into the development of its shale gas resources, Pennsylvania, which has a per-well impact fee but no severance tax on gas production, still carries billions in state debt and has not lowered its state taxes appreciably because of gas development.

Trump said New York is not only blocking itself off from cheap Pennsylvania gas but the New England region also, with its de facto ban on new pipelines. "We can't let that hold us up," Trump said of New York's policies. "Energy prices in New England would be cut in half" if pipelines could be built through New York, Trump claimed.

The bulk of Trump's speech touched on what he said were his accomplishments at bringing back the coal industry, eliminating President Barack Obama's Clean Power Plan, loosening regulations on energy producers, and igniting an energy boom in Appalachia.

He also took time to endorse local Republicans running for office and pressure Democrats in Congress to take action on pending trade bills.

Referring to his speech three years ago at the same conference, Trump said he delivered on his promise to unshackle the energy industry from regulation and claimed his actions have driven the fortunes of the gas industry to new heights.

On the eve of their third-quarter earnings announcements beginning next week, most Pennsylvania shale gas drillers are struggling to make profits as the commodity price of gas stays below \$3 MMBtu, making it difficult to generate any returns for investors. — <u>Bill Holland, S&P Global Market Intelligence</u>

Lloyds proposes LNG terminal offshore Alaska North Slope to bring cargoes to Asia

- Lloyds formed in 2013 to develop floating LNG projects
- ExxonMobil signed preliminary supply agreement

Lloyds Energy is studying the feasibility of direct shipments of LNG from the Alaska North Slope to Asia, officials with Lloyds subsidiary Qilak LNG said Wednesday.

With an overland 800-mile gas pipeline to southern Alaska apparently on the back burner, Lloyds is the first to propose an alternative project in to ship gas from the North Slope in ice-breaking tankers through the Beaufort Sea and Bering Strait.

"We've been trying to market North Slope gas by pipeline for 50 years and nothing has worked. It's time to try something different," former Alaska Lieutenant Governor Mead Treadwell said in a press conference in Anchorage Wednesday. Treadwell is chairman and CEO of Qilak LNG, which is based in Alaska.

If the feasibility study is positive and the project moves ahead an investment decision could come in 2022 and shipments of LNG could start as early as 2024, Treadwell said.

Dubai-based Lloyds Energy was formed in 2013 to develop floating LNG projects. One project the company is now engaged in, with Mitsubishi. is an LNG-fueled 1,200-MW power plant in the Philippines.

For the Alaska project ExxonMobil has signed a preliminary agreement to supply gas to an LNG plant from the ExxonMobil-operated Point Thomson gas field east of Prudhoe Bay. David Clarke, Qilak Energy's chief operating officer, said in a briefing for reporters. Clarke said the gas volume is sufficient to allow the export of 4 million mt/year of LNG.

That would increase to 6 million mt/year if other gas owners at Point Thomson contribute gas, Clarke said. BP is the principal minority owner after ExxonMobil, the majority owner.

Point Thomson holds about 8 Tcf of gas and 200 million barrels of liquid condensate.

BP's Point Thomson holdings are being sold to Hilcorp Energy, which is also buying BP's share in the Prudhoe Bay Field. Clarke said Qilak Energy hopes to negotiate a preliminary gas sales agreement with Hilcorp similar to one now held with ExxonMobil.

ExxonMobil is now operating a gas cycling and concentrate production project at the field, injecting produced gas back into the high-pressure reservoir and shipping the liquid condensate by pipeline 60 miles west to the Trans Alaska Pipeline System. The gas cycling and condensate project has been technically-challenged, however. Clarke said elimination of the gas injection by selling produced gas as LNG for export will allow ExxonMobil to maximize liquid concentrate output.

Treadwell said a preliminary feasibility assessment indicates than an Alaskan Arctic LNG project could supply LNG to Asia for about \$1,250/mt at 4 million mt/year, about half of \$2,150/mt of LNG for the proposed Alaska LNG Project, which must ship 20 million mt/year to be viable.

The shipping distance from an Arctic LNG plant to Asia via the Bering Strait is also about the same as from Cook Inlet, in southern Alaska, to Asia.

The location also has an advantage over the Yamal LNG project in Russia's Arctic, which now ships LNG via a route across the top of Russia, Treadwell said.

"LNG tankers from Yamal must travel 2,600 miles to reach ice-free waters," he said. "From the North Slope the distance is 600 miles."

Clarke said Qilak Energy would have an LNG plant built at a fabrication center in more temperate climates and move it to Point Thomson by barge in an open-water summer "sealift." The plant would be positioned six to 10 miles offshore Point Thomson and supplied with gas by pipeline.

The company has idenfied one site north of Flaxman Island, northwest of Point Thomson, where bottom conditions are favorable for a construction of a structure to support the LNG plant, he said.

Winter ice in the Beaufort Sea is mostly first-year ice, thin enough for navigation by icebreaking tankers similar to those used on the Yamal project, Treadwell said.

Clarke said the company would likely position an icebreaker off Point Barrow as a contingency. Point Barrow is a geographic feature extending out from the Alaska coast that is sometimes an impediment to shipping because of ice jams.

<u> — Tim Bradner</u>

Curbing emissions, joining coalitions seen as key to gas sector's seat at low carbon table

- Addressing venting, flaring seen as key to credibility
- Worries of disruption from 'less efficient' policies

The natural gas industry will need to solve its venting and flaring problems if it wants be part of conversations about how the world moves toward a lower carbon energy system, an adviser to a US LNG developer said Wednesday.

The comments came as the 2019 North American Gas Forum in

Washington, organized by Energy Dialogues, turned more of its focus on the implications for gas markets of the growing national and global debate about carbon regulation.

"First of all we have to solve the flaring problem; we have to solve the venting problem," Octávio Simões, senior adviser to the CEO of Tellurian, Meg Gentle, told the conference. "If we don't do that we have absolutely no credibility to be part of the dialogue" about the energy transition, he said.

Rapid change scenario

Berkeley Research Group's Christopher Goncalves said US gas demand would see increases through 2025 as it displaces coal, but decline thereafter as renewables displace gas. Goncalves backed his assertions with BRG forecasts through 2035 on the impact of a rapid implementation of aggressive climate policies, based on an analysis of the International Energy Agency's "sustainable development scenario."

LNG exports would decline for all countries, under the scenario, although the US decline would be mitigated by the timing of final investment decisions and relatively cheap US supplies, and Qatar would see little impact. Russian and Australian gas exports are expected to take the largest hit, according to the BRG analysis, while India would see a steep demand increase, upwards of 20%, while China demand would grew more modestly.

To head off more polarized politics, and the more disruptive policy prescriptions that might bring, multiple conference participants said the gas industry needed to take part in broad coalitions with other stakeholders – and make the case for gas to play a key role backing up renewables.

Paul Jefferiss, head of group policy for BP International, said collaboration with governments will need to be extended and be faster if the Paris climate agreement goals are to be met.

BP welcomes a rapid transition, he said, viewing that as preferable to a late and disruptive shift. While for two decades, BP has called for a carbon price, so far progress around the world on that has been "piecemeal and slow," he said. In the meantime, he expressed concern that, with such a vacuum, some governments were moving toward more "direct interventions" that are less economically efficient, up to and including a ban on new gas infrastructure.

Pressure for regulation

Representatives from the Environmental Defense Fund, which frequently collaborates with industry, pressed the gas sector representatives to join several oil and gas majors already objecting to a Trump administration proposal to reduce federal regulation of methane emissions created by the industry's operations.

At a time when technology is advancing to make reducing emissions cheaper and more effective, Mark Brownstein, senior vice president of EDF, said the public backlash against gas is growing in major markets. "Campaigns to rollback federal regulation or oppose state action will hand opponents a club to use against the industry, and they will use it," he said.

Brownstein also provided details on an upcoming EDF initiative, estimated to cost \$80 million, to launch a satellite to regularly monitor methane emissions, allowing for more accurate estimates of industry emissions and increased accountability.

Simões suggested the methane regulation swings were a "complete illustration of polarization," in which an odd approach on one extreme is answered by an odd approach on another.

"That's the kind of dynamic that leads us nowhere," he said. In spite of the Trump administration's deregulatory push, he said companies are listening to their customers, and if the customers are saying that methane is an issue that needs to be resolved, "they will work to resolve it."

<u>— Maya Weber</u>

NGPL project to serve LNG demand gets favorable environmental review

A proposal to expand a Kinder Morgan-operated natural gas pipeline system received a positive environmental review, paving the way for a decision approving the project that would boost supplies to Cheniere Energy's LNG export facility in Texas.

Natural Gas Pipeline Company of America, or NGPL, applied in February for a Natural Gas Act certificate allowing the compressionbased expansion of its Gulf Coast Mainline natural gas system. The estimated \$145.2 million project would enable the system to provide 300,000 Dt/d of firm southbound transportation capacity to Corpus Christi Liquefaction. It would also allow NGPL to make 28,000 Dt/d available to the market (CP19-99).

The Federal Energy Regulatory Commission's Office of Energy Projects in an environmental assessment released Wednesday recommended that any commission order on the project contain a finding of "no significant impact" and include 12 environmental mitigation and construction requirements as conditions.

"We have determined that if Natural abandons, constructs and operates the proposed facilities in accordance with its application and supplements, and the staff's recommended mitigation measures below, approval of the project would not constitute a major action significantly affecting the quality of the human environment," FERC staff said.

The project would include a new 10,000-horsepower compressor unit and related facilities at a compressor station in Victoria County, Texas; a new 15,900-hp turbine at a station in Wharton County, Texas; and two new 23,470-hp turbines at a station in Harrison County, Texas. NGPL would also abandon in place some existing compressor units at two of those stations.

The same pipeline system also provides a backbone of feedgas to Cheniere Energy's Sabine Pass LNG export terminal in Louisiana.

Two liquefaction trains are complete and exporting gas at Corpus Christi LNG, and a third is under construction. Each of the trains was designed to produce about 4.5 million mt per annum of LNG. But Cheniere has said the actual run rate has risen as the company has become more efficient in its production and maintenance.

Cheniere sought federal approval September 27 to increase the LNG production capacity at both of the company's export terminals. For Corpus Christi LNG, Cheniere asked FERC to authorize an increase of 108.16 Bcf/year, pushing the authorized capacity up to 875.16 Bcf per year, or to around 5.7 million mt/year per train. Cheniere asked FERC to approve those requests by May 1.

Cheniere is also working to commercialize a 9.5 million mt/year expansion of the Corpus Christi terminal in anticipation of a final investment decision on the project by the first half of next year. — Corey Paul, S&P Global Market Intelligence

Vista sees slower oil production growth with crude price freeze in Argentina

- Vista cuts production target for 2019
- Mexico-based company is waiting until prices improve to step up investment
- Despite setbacks, Vista sees huge oil production and export potential in Vaca Muerta

Argentina-focused Vista Oil & Gas has scaled back a target for increasing its average oil and natural gas production this year, as a crude price freeze there has led the company to slash investment despite the huge growth potential in the Vaca Muerta shale play, CEO Miguel Galuccio said Wednesday.

The Mexico City-based company expects its average production this year to reach between 28,000 boe/d and 29,000 boe/d, down from a previous forecast of 29,900 boe/d.

The reason is that a 90-day price freeze imposed by the Argentinian government in mid-August to contain inflation after a sudden depreciation of the local currency against the dollar has cut local crude prices 23% to \$42.5/b from \$55.5/b, Galuccio said in a conference call with investors to present third-quarter results.

The government has said it plans to lift the freeze on November 14, but there are doubts about whether it can do so given that inflation is running above 50% and the peso has been slumping against the dollar in the run up to this Sunday's presidential election.

Until crude prices improve, Galuccio said the development of Vaca Muerta on the whole is "on standby."

The freeze has slashed the average crude oil price for Vista by 28% to \$48.7/b in the third quarter of this year from \$67.5/b a year earlier. The company said it was getting \$55.5/b in the first half of this past third quarter, but that dropped to \$42.5/b in the second half of the quarter because of the freeze.

Natural gas prices also have dropped, falling 31% to an average of \$3.5/MMBtu in the third quarter of this year from \$5.1/MMBtu a year earlier as surging production out of Vaca Muerta has created a glut of supplies.

A halt in activity

In response to oil price freeze, Galuccio said the company has suspended drilling and completion activity in Vaca Muerta, and instead is focusing on cash preservation as it waits for an improvement in prices.

"We are super prepared to restart activity," he said.

When asked when this could come, Galuccio said it depended on the transition out of the price freeze and return to the previous prices that were tracking Brent, the international crude reference price followed in Argentina.

"We need to see prices returning to import parity," he said. "It doesn't mean that we are going to get there tomorrow; it means that we are going to get there gradually." In the meantime, Vista will not put a third pad into production on Bajada del Palo Oeste, its main block in Vaca Muerta's oil window, because it doesn't want to sell the output at a loss or at low margins, Galuccio said.

"It is just a matter of having the conditions to realize that value," he said of the block's production. "We are not going to destroy value if the conditions are not there because the resources will be there for a long time."

Even so, Galuccio said a restart of activity on the third pad could come in December if the conditions improve accordingly.

"We are ready to do it. We are just waiting for the conditions, we are waiting for the price," he said.

Presidential election

The wait comes in the run-up to Sunday's presidential election in Argentina and potentially a second round in November. This election has raised concerns about the direction of energy policy going forward.

Even so, Galuccio said he thinks that no matter who wins the election — the right-of-center incumbent President Mauricio Macri or the front-running left-of-center politician Alberto Fernandez — the development of Vaca Muerta will be a key strategy because of the country's need for dollars to pay debts and run the state as an economic recession is expected to run through 2020.

Vaca Muerta, one of the world's biggest shale plays, is only about 5% in full-scale development, meaning that there is scope for an increase in dollar inflows from oil companies investing in the play. There is also potential for dollar inflows on crude exports, given the play's production potential and the fact that Argentina is running a surplus of supplies, with production at nearly 520,000 b/d, or more than the 490,000 to 500,000 b/d of average domestic demand.

"Vaca Muerta has a huge capacity to make Argentina a net crude oil exporter," Galuccio said. "Whoever is in the driver's seat will require investment and will require US dollars, and there is one new source of potential US dollars" in Argentina, Galuccio said of the next administration and Vaca Muerta.

FORUM



PLATTS GLOBAL ENERGY OUTLOOK FORUM – 2019

Join us to discuss the energy transition the increasing demand for energy, and investing in the future while navigating a diverse energy landscape.

When: December 11, 2019 Where: New York Marriott Downtown, NYC Cost: See site for cost details CTA: Purchase seats

Register here: http://plts.co/QeLT30pvKPo

S&P Global Platts

Surging output

Vista has ramped up production so fast from the play that today it is the second-biggest shale oil producer in Argentina after state-backed YPF, Galuccio said, citing data from the Argentinian Energy Secretariat.

That puts it ahead of Chevron, ExxonMobil, Shell and a few other companies that are starting on or in full-scale production in the play.

Vista's production surged 31% to 31,600 boe/d in the third quarter from 24,200 boe/d in the year-earlier quarter.

The growth was led by a 37% rise in oil production to 20,300 boe/d in the third quarter, of which 6,900 boe/d was unconventional and

13,400 boe/d was conventional. That was up from a total of 14,800 boe/d a year earlier, when all of it is was conventional. Gas production rose 22% to 1.68 million cu m/d from 1.38 million cu m/d over the same period, the company said.

Galuccio said the results at Bajada del Palo Oeste "once again exceeded expectations," with the block's production reaching 10,000 boe/d in mid-August after a second drilling pad was connected to sell supplies. About 90% of the output from the block is crude, he said, adding that well productivity there is "among the best in the basin."

- <u>Charles Newbery</u>

PLATTS DAILY CANADIAN OTC INDICES

Trade Date: Oct 23

| | | Average | Daily change | Low | High | Vol | Deals |
|--------------------------------------|---------|---------|--------------|-------|-------|-----|-------|
| Dawn, Ontario OTC | PVBCX93 | 2.225 | +0.090 | 2.140 | 2.250 | 11 | 2 |
| Emerson, Viking GL OTC | PVBCW93 | 2.280 | +0.060 | 2.280 | 2.280 | 8 | 4 |
| Northwest, Canadian Brd. (Sumas) OTC | PVBCT93 | 2.970 | +0.120 | 2.950 | 3.000 | 27 | 6 |
| TCPL Alberta, AECO-C OTC* | PVBCU93 | 2.505 | +0.100 | 2.500 | 2.510 | 22 | 4 |
| Westcoast, station 2 OTC* | PVBCZ93 | 0.230 | +0.000 | 0.150 | 0.265 | 45 | 3 |
| | | | | | | | |

*Price in C\$ per Gj

Canadian OTC indices assessment rationale: The Canadian OTC indices are a volume weighted average of bilateral trade data reported to Platts by market participants. ICE NGX trades are not included in the indices. Platts editors screen the data for outliers and do not assess prices if there are no transactions. Questions may be directed to Ryan Ouwerkerk at 713-655-2202 or ryan.ouwerkerk@spglobal.com. This rationale applies to symbols found in market category GD listed at <u>http://plts.co/uwHX30kyPG0</u>

SUBSCRIBER NOTES:

Q3 2019 Marketer Rankings

S&P Global Platts is currently compiling data for the Q3 2019 ranking of North American gas marketers by daily physical wholesale volumes sold.

Platts staff intends to compile the rankings from information appearing in reports filed with the Securities and Exchange Commission. For companies that are not publicly traded or do not provide such data to the SEC, staff requests that quarterly gas sales data be reported in writing, and verified by executive personnel, no later than Friday, November 1, 2019.

Please submit your data by email, listing volumes of gas your company marketed, in Bcf/d, for Q3 2019 as well as Q3 2018, with the subject line "Q3 Marketer Volumes" to Jim Magill at <u>jim.magill@spglobal.com</u>, or Brandon Evans at <u>bevans@spglobal.com</u>.

For questions, contact Jim Magill, by email or by phone at 713-658-3229, or Brandon Evans, by email or phone at (720) 264 6671.

S&P Global Platts modifies existing transport rates for daily Mexico prices Beginning flow date October 23, S&P Global Platts has modified the transport

Beginning flow date October 23, S&P Global Platts has modified the transport rates that are utilized to calculate the daily Mexico natural gas indices at the Tuxpan and Tula locations in the Mexico market, reflecting updates to existing transport rates along Sur Texas Tuxpan

Please send any comments to <u>americasgaspricing@spglobal.com</u> or <u>pricegroup@spglobal.com</u>. For written comments, please provide a clear indication if comments are not intended for publication by Platts for public viewing. Platts will consider all comments received and will make comments not marked as confidential available upon request.

PLATTS GAS DAILY MEXICO PRICES (\$/MMBtu)

Trade Date: 23-Oct Flow Date(s): 24-Oct

| Location | Region | | Net Forward Location | Net Forward Price | Transport Cost | Price |
|----------------------------|-----------|---------|----------------------------|----------------------|-------------------|-------|
| Rosarito | Baja | AAZMC21 | Socal Border | 2.300 | 0.258 | 2.558 |
| Aguascalientes | Central | AAZMO21 | El Encino | 0.699 | 0.512 | 1.211 |
| Tula | Central | AAZMN21 | Tuxpan | 3.231 | 0.622 | 3.853 |
| Valtierrilla | Central | AAZMH21 | Los Ramones - Monterrey | 2.745 | 0.572 | 3.317 |
| Villa de Reyes | Central | AAZMI21 | Los Ramones - Monterrey | 2.745 | 0.580 | 3.325 |
| El Encino | North | AAZME21 | Waha | 0.075 | 0.624 | 0.699 |
| Juarez | North | AAZMA21 | Waha | 0.075 | 0.491 | 0.566 |
| Los Ramones - Monterrey | Northeast | AAZMF21 | Tennessee, zone | 0 2.140 | 0.605 | 2.745 |
| Reynosa | Northeast | AAZMB21 | TETCO STX | 2.170 | 0.467 | 2.637 |
| Sierrita | Northwest | AAZMD21 | Waha | 0.075 | 0.904 | 0.979 |
| Topolobampo | Northwest | AAZMP21 | El Encino | 0.699 | 0.559 | 1.258 |
| Merida | Peninsula | AAZMK21 | Ciudad Pemex | 3.442 | 0.667 | 4.109 |
| Ciudad Pemex | South | AAZMJ21 | Tuxpan | 3.231 | 0.211 | 3.442 |
| Puente Moreno | South | AAZMG21 | Los Ramones - Monterrey | 2.745 | 0.443 | 3.188 |
| Tuxpan | South | AAZML21 | Reynosa | 2.637 | 0.593 | 3.231 |
| Guadalajara | West | AAZMM21 | Aguascalientes | 1.211 | 0.617 | 1.827 |
| | | | | | | |

 Guadalajara
 West
 AAZMM21
 Aguascalientes
 1.211
 0.617
 1.8

 Prices are a netforward calculation using selected Platts Gas Daily indices plus fully loaded transportation costs and are published in USD per MMBtu.
 1.211
 0.617
 1.8

PLATTS GAS DAILY MEXICO

CRE MEXICO NATURAL GAS PRICES

| Туре | | Month | Price (MXN/GJ) | Price (\$/MMBtu) | Vol.(GJ) | Counter- parties | Deals Reported | Deals Excl. |
|------------|-----------|----------|-------------------|---------------------|-----------------|---------------------|-------------------|----------------|
| IPGN | ACRPA00 | Dec-18 | 87.9815 | 4.6005 | 196440198.0 | . 22 | 294 | 13 |
| IPGN | ACRPA00 | Jan-19 | 79.6786 | 4.3749 | 205463002.7 | 23 | 286 | 13 |
| IPGN | ACRPA00 | Feb-19 | 69.4891 | 3.8204 | 186743113.5 | 22 | 297 | 13 |
| IPGN | ACRPA00 | Mar-19 | 57.3685 | 3.1469 | 210576916.0 | 23 | 311 | 13 |
| IPGN | ACRPA00 | Apr-19 | 51.9383 | 2.8806 | 179868052.2 | 18 | 252 | 9 |
| IPGN | ACRPA00 | May-19 | 54.3010 | 3.0014 | 187328627.0 | 23 | 303 | 7 |
| IPGN | ACRPA00 | Jun-19 | 50.8769 | 2.7825 | 198841133.8 | 21 | 243 | 5 |
| IPGN | ACRPA00 | Jul-19 | 47.4129 | 2.6236 | 247247711.3 | 25 | 356 | 9 |
| IPGN | ACRPA00 | Aug-19 | 52.9270 | 2.8505 | 263827975.8 | 26 | 326 | 33 |
| Region I | ACREB00 | Jul-19 | 25.9540 | 1.4362 | | NA | 1 | 22 |
| Region II | ACREC00 | Jul-19 | 30.4370 | 1.6842 | | NA | 1 | 52 |
| Region III | ACRED00 | Jul-19 | 53.4745 | 2.9590 | | NA | 4 | 71 |
| Region IV | ACREE00 | Jul-19 | 69.5310 | 3.8475 | | NA | 1 | 29 |
| Region V | ACREF00 | Jul-19 | 56.2118 | 3.1105 | | NA | 2 | 153 |
| Region VI | ACREG00 | Jul-19 | 44.0756 | 2.4389 | | NA | 2 | 29 |
| Region I | ACREB00 | Aug-19 | 32.7381 | 1.7632 | | NA | 2 | 21 |
| Region II | ACREC00 | Aug-19 | 35.5630 | 1.9154 | | NA | 5 | 47 |
| Region III | ACRED00 | Aug-19 | 52.9713 | 2.8529 | | NA | 9 | 68 |
| Region IV | ACREE00 | Aug-19 | 64.6413 | 3.4815 | | NA | 8 | 27 |
| Region V | ACREF00 | Aug-19 | 68.2554 | 3.6761 | | NA | 28 | 140 |
| Region VI | ACREG00 | Aug-19 | 58.3306 | 3.1416 | | NA | 3 | 23 |
| Dricos aro | oublichod | by CDE a | nd rofloot th | o woighted a | worage of patur | al aga trap | anotiona re | oortod |

Prices are published by CRE and reflect the weighted average of natural gas transactions reported by month.



Source: S&P Global Platts

NATURAL GAS FUTURES

NYMEX November gas nudges 1 cent higher on autumnal forecast

The NYMEX November natural gas futures contract inched higher Wednesday as the first batch of colder autumnal temperatures started to boost demand.

November settled at \$2.282/MMBtu Wednesday, up 1 cent from Tuesday's settlement. The contract held a tight range of \$2.251/MMBtu to \$2.305/MMBtu.

"Psychology is a subtle but important factor in these markets," said Jay Levine, EnerJay principal. "To me, the price point of \$2.25 is pivotal right now. It isn't a coincidence that the lowest traded price today is \$2.251 - I think it is a psychological point of resistance in the market currently."

"Markets have been depressed, and gas is relatively cheap. I don't think it can go much lower, but there is still too much supply and not enough demand," said Levine.

Total US gas demand was expected to rise 400 MMcf Wednesday, supported by stronger residential and commercial demand and higher exports to Mexico. Although LNG feedgas demand was set to fall 100 MMcf day on day, the 7 Bcf anticipated for Wednesday remains historically high.

Total supply was set to fall 600 MMcf day on day to 94.9 Bcf on projected decreases in dry gas production and imports from Canada.

The average national temperature was expected to fall 3 degrees Fahrenheit to 58 F Wednesday, according to S&P Global Platts Analytics, and remain in the mid- to high 50s F throughout the next seven days. The cooler temperatures were projected to dampen gas-fired power demand across the country, with total power burn set to fall 1.1 Bcf Wednesday to 28.8 Bcf and fall a further 900 MMcf Thursday to 27.9 Bcf.

Looking further ahead, the US National Weather Service's eight- to 14-day outlook calls for colder-than-average temperatures across the majority of the country. Several Southeast states are expected to see warmer-than-average temperatures, including Florida.

California and southwest Oregon can expect normal temperatures. – <u>Kelsey Hallahan</u>

MONTH-AHEAD TEMPERATURE FORECAST MAP

November departure from average



Source: S&P Global Platts, Custom Weather

| | FIGUS | nign | LOW | CIUSE | Change | Flevious Days | FIEVIOUS Day S |
|----------|---------|-------|-------|-------|--------|---------------|----------------|
| | Symbol | | | | | Volume | Open Interest |
| Nov 2019 | MNNG001 | 2.305 | 2.251 | 2.282 | 0.010 | 72218 | 136,513 |
| Dec 2019 | MNNG002 | 2.460 | 2.415 | 2.427 | -0.022 | 36026 | 305,146 |
| Jan 2020 | MNNG003 | 2.572 | 2.526 | 2.532 | -0.036 | 9673 | 229,083 |
| Feb 2020 | MNNG004 | 2.535 | 2.494 | 2.499 | -0.032 | 3756 | 86,952 |
| Mar 2020 | MNNG005 | 2.443 | 2.401 | 2.405 | -0.031 | 4054 | 140,109 |
| Apr 2020 | MNNG006 | 2.257 | 2.227 | 2.232 | -0.020 | 4128 | 86,200 |
| May 2020 | MNNG007 | 2.243 | 2.218 | 2.224 | -0.018 | 722 | 71,475 |
| Jun 2020 | MNNG008 | 2.286 | 2.262 | 2.268 | -0.016 | 437 | 25,256 |
| Jul 2020 | MNNG009 | 2.334 | 2.311 | 2.316 | -0.016 | 373 | 22,118 |
| Aug 2020 | MNNG010 | 2.343 | 2.328 | 2.328 | -0.015 | 96 | 23,775 |
| Sep 2020 | MNNG011 | 2.329 | 2.309 | 2.314 | -0.014 | 529 | 19,885 |
| Oct 2020 | MNNG012 | 2.361 | 2.338 | 2.343 | -0.014 | 1454 | 43,677 |
| Nov 2020 | MNNG013 | 2.426 | 2.409 | 2.415 | -0.013 | 433 | 19,148 |
| Dec 2020 | MNNG014 | 2.601 | 2.580 | 2.585 | -0.012 | 286 | 16,254 |
| Jan 2021 | MNNG015 | 2.716 | 2.699 | 2.705 | -0.013 | 261 | 12,835 |
| Feb 2021 | MNNG016 | 2.677 | 2.658 | 2.664 | -0.011 | 27 | 7,130 |
| Mar 2021 | MNNGØ17 | 2.557 | 2.542 | 2.549 | -0.009 | 135 | 9,445 |
| Apr 2021 | MNNG018 | 2.290 | 2.271 | 2.276 | -0.006 | 205 | 7,509 |
| May 2021 | MNNG019 | 2.259 | 2.250 | 2.252 | -0.005 | 2 | 3,402 |
| Jun 2021 | MNNGØ2Ø | 2.293 | 2.285 | 2.288 | -0.003 | 3 | 2,241 |
| Jul 2021 | MNNG021 | 2.332 | 2.326 | 2.326 | -0.003 | 9 | 2,138 |
| Aug 2021 | MNNGØ22 | 2.335 | 2.333 | 2.333 | -0.004 | 7 | 1,488 |
| Sep 2021 | MNNGØ23 | 2.325 | 2.320 | 2.320 | -0.006 | 5 | 1,062 |
| Oct 2021 | MNNG024 | 2.353 | 2.346 | 2.346 | -0.005 | 5 | 2,677 |
| Nov 2021 | MNNGØ25 | 2.416 | 2.416 | 2.416 | -0.005 | 0 | 1,387 |
| Dec 2021 | MNNGØ26 | 2.596 | 2.596 | 2.596 | -0.004 | 5 | 2,000 |
| Jan 2022 | MNNGØ27 | 2.721 | 2.721 | 2.721 | -0.004 | 0 | 3,177 |
| Feb 2022 | MNNGØ28 | 2.695 | 2.693 | 2.693 | -0.005 | 0 | 560 |
| Mar 2022 | MNNGØ29 | 2.583 | 2.583 | 2.583 | -0.005 | 0 | 1,205 |
| Apr 2022 | MNNG030 | 2.327 | 2.327 | 2.327 | -0.006 | 0 | 1,571 |
| May 2022 | MNNG031 | 2.310 | 2.310 | 2.310 | -0.006 | 0 | 444 |
| Jun 2022 | MNNGØ32 | 2.345 | 2.345 | 2.345 | -0.006 | 0 | 358 |
| Jul 2022 | MNNGØ33 | 2.385 | 2.385 | 2.385 | -0.006 | 0 | 165 |
| Aug 2022 | MNNGØ34 | 2.397 | 2.397 | 2.397 | -0.006 | 0 | 187 |
| Sep 2022 | MNNGØ35 | 2.327 | 2.327 | 2.389 | -0.006 | 0 | 229 |
| Oct 2022 | MNNGØ36 | 2.415 | 2.415 | 2.415 | -0.006 | 0 | 627 |
| Total | MNNG000 | | | | | 445,534 | 1,289,633 |
| | | | | | | | |

NYMEX HENRY HUB GAS FUTURES CONTRACT CLOSINGS, OCT 23

Close Change Previous Day's Previous Day's

Platts

High

Low

NYMEX PROMPT MONTH FUTURES CONTINUATION



Note: The entire wick of the candlestick depicts the high and low daily front-month Henry Hub futures price range. The body of the candlestick depicts the price range between the open and close, with a red candlestick indicating a close on the downside and a green candlestick indicating a close on the high end. Source: S&P Global Platts

US GAS STORAGE SURPLUS vs ROLLING 5-YEAR AVERAGE



NORTHEAST GAS MARKETS

Northeast cash prices slide after slight gains

US Northeast natural gas spot prices slid Wednesday for next-day flows, as demand in the region was expected to fall Thursday, after a short rally of gains since Friday.

Algonquin city-gates (non-G) dropped 20.50 cents to settle at \$1.955/MMBtu for next-day flows, trading on the Intercontinental Exchange.

Iroquois zone 2 fell 15 cents to settle at \$2.085, with Transco Zone 6 (NY) dropping 15.50 cents to settle at \$1.95/MMBtu.

Production areas have dropped as well, with Dominion South sliding 8 cents to settle \$1.845/MMBtu.

Total Northeast demand is up by more than 1 Bcf Wednesday, averaging a total of 15.96 Bcf/d, according to S&P Global Platts Analytics. However, it's expected to drop to 15.2 Bcf Thursday, which may be pressuring the prices down.

The demand decrease is expected to continue over the week into the weekend, dropping to 13.78 Bcf Sunday. It will tick back up after Sunday, reaching above 16 Bcf at 16.8 Bcf October 30, and average 17.19 Bcf/d in the next eight to 14 days, above the 16.5 Bcf/d averaged month-to-date during the same time last year.

Cooler temperatures in the region could be affecting this jump in demand. The most recent eight- to 14-day weather outlook from the National Weather Service calls for a likelihood of cooler-than-average temperatures for most of the country, except for parts in the Southeast. According to Platts Analytics data, temperatures in the Northeast are forecast to average 52.26 degrees Fahrenheit for the next two weeks, dropping below the 50 degree threshold November 4, the lowest temperatures the region has seen since April 2019.

Total Northeast supply was down on the day at 33.05 Bcf Wednesday and is forecast by Platts Analytics to have a gradual increase over the next few days, reaching an average of 33.23 Bcf/d in the next eight to 14 days. Supply continued to add downward pressure on gas prices, despite increases in demand.

Courtney Love



NORTHEAST SPOT AND FORWARD BASIS (\$/MMBtu)

| | | | | | | | | - | | | |
|-----------------------------|--------|--------|-------|------|-------------|------------------|-------|---------------------|--------|------|--|
| | | | Spot | t ba | sis | | | Prompt forward basi | | | |
| | 23-0ct | 22-0ct | Chg | | MTD Avg. | MTD last year | Chg | 23-0ct | 22-0ct | CI | |
| Henry Hub | 2.28 | 2.20 | 0.08 | | 2.22 | 3.23 | -1.01 | 2.28 | 2.27 | 0.0 | |
| Northeast region | | | | | | | | | | | |
| Algonquin CG | -0.32 | -0.04 | -0.28 | | -0.47 | -0.07 | -0.40 | 0.79 | 0.93 | -0. | |
| Iroquois Zn2 | -0.19 | 0.04 | -0.23 | | -0.41 | 0.08 | -0.50 | 0.55 | 0.55 | 0.0 | |
| Tenn Zn6 Dlvd | -0.12 | 0.01 | -0.13 | | -0.35 | 0.14 | -0.49 | 0.65 | 0.79 | -0.1 | |
| Transco Zn 6 NY | -0.33 | -0.10 | -0.23 | | -0.65 | -0.45 | -0.20 | -0.05 | 0.02 | -0.0 | |
| Transco Zn5 Dlvd | -0.02 | 0.03 | -0.04 | | -0.04 | 0.02 | -0.06 | 0.06 | 0.12 | -0.0 | |
| Transco Zn6 Non-NY | -0.31 | -0.12 | -0.19 | | -0.67 | -0.49 | -0.18 | -0.15 | -0.08 | -0.0 | |
| TX Eastern M-3 | -0.38 | -0.18 | -0.20 | | -0.71 | -0.68 | -0.03 | -0.10 | 0.00 | -0. | |
| Appalachia | | | | | | | | | | | |
| Col Gas Appal | -0.36 | -0.26 | -0.10 | | -0.70 | -0.31 | -0.38 | -0.32 | -0.31 | -0.0 | |
| Dominion N Pt | -0.42 | -0.24 | -0.18 | | -0.77 | -0.88 | +0.11 | -0.62 | -0.57 | -0.0 | |
| Dominion S Pt | -0.43 | -0.28 | -0.16 | _ | -0.77 | -0.90 | +0.12 | -0.47 | -0.42 | -0.0 | |
| Lebanon Hub | -0.11 | -0.13 | 0.03 | | -0.41 | -1.93 | +1.52 | -0.11 | -0.10 | -0.0 | |
| Millennium East Receipts | -0.49 | -0.24 | -0.25 | | -0.78 | -0.85 | +0.08 | -0.49 | -0.43 | -0.0 | |
| Tenn Zn4-200 Leg | -0.23 | -0.16 | -0.08 | | -0.47 | -0.25 | -0.22 | -0.29 | -0.25 | -0.0 | |
| Tennessee zone 4-300 leg | -0.54 | -0.30 | -0.25 | | -0.82 | -0.90 | +0.08 | -0.58 | -0.53 | -0.0 | |
| Texas Eastern M-2 receipts | -0.45 | -0.28 | -0.17 | | -0.81 | -0.90 | +0.09 | -0.53 | -0.46 | -0.0 | |
| Transco Leidy Line receipts | -0.47 | -0.26 | -0.21 | | -0.76 | -0.84 | +0.08 | -0.48 | -0.42 | -0.0 | |
| Other locations | | | | | | | | | | | |
| Dracut MA | _ | _ | _ | | _ | _ | _ | 1.13 | 1.28 | -0.1 | |
| Iroquois Receipts | -0.17 | 0.02 | -0.19 | | -0.38 | 0.06 | -0.44 | 0.18 | 0.18 | 0.0 | |
| Niagara | -0.16 | -0.12 | -0.04 | | -0.46 | -0.11 | -0.35 | 0.09 | 0.12 | -0.0 | |
| Source: Platts M2M data | | | | 17 | | | | | | | |

NORTHEAST DEMAND FORECAST



APPALACHIA FORWARD BASIS

- Col Gas App - Dominion S - Tennessee Z4-300 - Transco Leidy (\$/MMBtu) 0.0 -0.2



SOUTHEAST GAS MARKETS

Southeast, East Texas spot gas prices rise amid strong LNG feedgas demand

Cash prices for Thursday flows of natural gas in the Southeast and East Texas strengthened in a second consecutive day of higher trading as month-to-date Gulf Coast LNG feedgas demand averaged over 6 Bcf/d.

Spot gas prices in the Southeast region moved up on Wednesday, with the sole exception of Columbia Gulf, Louisiana, which settled just 1 cent lower at \$2.14/MMBtu.

Cash Henry Hub settled 7.50 cents higher at \$2.275/MMBtu, recovering further from reaching a two-month low of \$2.04/MMBtu in Friday's settlement. The location has moved in a 50.50-cent range over the past 30 days of \$2.04-\$2.545/MMBtu.

Total Southeast gas demand was expected to fall 750 MMcf on the day to 22.8 Bcf, according to S&P Global Platts Analytics projections, driven lower by weaker gas-fired power demand. Residentialcommercial demand was expected to tick up slightly at 2.67 Bcf. The average regional temperature was set to fall 7 degrees to 62 degrees Fahrenheit, and remain in the 60s through Sunday.

Although Gulf Coast LNG feedgas demand was set to fall slightly on the day to 6.26 Bcf on Wednesday, demand levels remain historically high. Month-to-date demand has averaged 6.17 Bcf/d, more than double last October's month-to-date average of 2.92 Bcf/d.

In East Texas, Houston Ship Channel was trading up 9.30 cents at \$2.153/MMBtu.

Northeast Texas prices all settled above \$2/MMBtu on Wednesday, as the East Texas price bifurcation between the northeast and southeast parts of the state continues to close. NGPL TexOk settled up 12.50 cents at \$2.135/MMBtu, narrowing the location's discount to cash Henry Hub to 14 cents. The location's spread to Henry Hub has averaged 44 cents so far this October, ballooning to 65 cents on October 7.

Total demand for gas in Texas was set to fall 682 MMcf on the day to 9.46 Bcf, as mild temperatures keep a lid on gas-fired power generation demand for air conditioning.

The average temperature in Texas was set to climb 4 degrees to 66 degrees Fahrenheit on Wednesday. This small bump in temperatures was forecast to be short-lived, with the average temperature predicted to fall to 61 degrees F on Thursday and continue to fall to the 50s F for the week following.

— <u>Kelsey Hallahan</u>

SOUTHEAST FORWARD BASIS



| | | | Spot | t basis | | | Prompt | forward | basis |
|-------------------------|--------|--------|-------|------------|-------|-------|--------|---------|-------|
| | 23-0ct | 22-0ct | Chg | MTC Avg | | Chg | 23-0ct | 22-0ct | Chg |
| Henry Hub | 2.28 | 2.20 | 0.08 | 2.22 | 3.23 | -1.01 | 2.28 | 2.27 | 0.01 |
| Southeast | | | | | | | | | |
| ANR LA | -0.10 | -0.14 | 0.04 | -0.07 | -0.19 | +0.12 | -0.09 | -0.09 | 0.00 |
| Col Gulf LA | -0.14 | -0.05 | -0.09 | -0.14 | -0.09 | -0.05 | -0.09 | -0.09 | 0.00 |
| Col Gulf-Mainline | -0.17 | -0.24 | 0.07 | -0.43 | -0.18 | -0.26 | -0.22 | -0.23 | 0.01 |
| FL Gas Zn1 | -0.08 | -0.14 | 0.07 | -0.05 | -0.05 | +0.00 | -0.01 | -0.01 | 0.00 |
| FL Gas Zn2 | -0.09 | -0.11 | 0.02 | -0.08 | -0.03 | -0.05 | 0.00 | 0.00 | 0.00 |
| FL Gas Zn3 | 0.09 | 0.09 | 0.00 | 0.10 | 0.10 | +0.00 | 0.04 | 0.04 | 0.00 |
| Florida CG | 0.27 | 0.27 | -0.01 | 0.28 | 0.61 | -0.34 | 0.33 | 0.33 | 0.00 |
| SoNat LA | -0.06 | -0.03 | -0.03 | -0.03 | -0.04 | +0.01 | -0.06 | -0.06 | 0.00 |
| Tenn LA 500 Leg | -0.06 | -0.03 | -0.04 | -0.04 | -0.04 | +0.01 | -0.05 | -0.05 | 0.00 |
| Tenn LA 800 Leg | -0.12 | -0.12 | 0.00 | -0.17 | -0.09 | -0.08 | -0.13 | -0.14 | 0.01 |
| TETCO-M1 | -0.13 | -0.10 | -0.03 | -0.19 | -0.14 | -0.05 | -0.06 | -0.06 | 0.00 |
| Texas Gas Zn SL | -0.08 | -0.10 | 0.02 | -0.14 | -0.14 | +0.01 | -0.22 | -0.22 | 0.00 |
| Texas Gas Zn1 | -0.12 | -0.15 | 0.03 | -0.36 | -0.16 | -0.20 | -0.22 | -0.22 | 0.00 |
| Transco Zn2 | -0.11 | -0.15 | 0.04 | -0.06 | -0.06 | +0.00 | -0.05 | -0.05 | 0.00 |
| Transco Zn3 | -0.07 | -0.05 | -0.03 | -0.04 | -0.04 | +0.00 | -0.06 | -0.06 | 0.00 |
| Transco Zn4 | -0.06 | -0.03 | -0.03 | -0.03 | -0.02 | -0.01 | -0.02 | -0.02 | 0.00 |
| Trunkline E LA | -0.11 | -0.15 | 0.05 | -0.11 | -0.09 | -0.01 | -0.11 | -0.12 | 0.01 |
| Trunkline WLA | _ | _ | _ | -0.10 | -0.06 | -0.04 | -0.06 | -0.06 | 0.00 |
| Tx Eastern E LA | -0.11 | -0.08 | -0.04 | -0.16 | -0.17 | +0.01 | -0.10 | -0.10 | 0.00 |
| TX Eastern W LA | -0.09 | -0.06 | -0.03 | -0.07 | -0.06 | -0.01 | -0.08 | -0.08 | 0.00 |
| East & South Texas | | | | | | | | | |
| Agua Dulce | -0.13 | -0.08 | -0.05 | -0.03 | 0.15 | -0.18 | -0.04 | -0.03 | -0.01 |
| Carthage Hub | -0.26 | -0.24 | -0.02 | -0.42 | -0.15 | -0.27 | -0.21 | -0.21 | 0.00 |
| Houston Ship Channel | -0.12 | -0.14 | 0.02 | -0.04 | 0.23 | -0.27 | -0.10 | -0.09 | -0.01 |
| Katy | -0.12 | -0.14 | 0.02 | -0.06 | 0.17 | -0.22 | -0.10 | -0.09 | -0.01 |
| NGPL S TX | _ | _ | _ | -0.08 | -0.02 | -0.06 | -0.09 | -0.08 | -0.01 |
| NGPL Texok Zn | -0.14 | -0.19 | 0.05 | -0.40 | -0.14 | -0.26 | -0.17 | -0.16 | -0.01 |
| Tenn Zn0 | -0.14 | -0.16 | 0.03 | -0.21 | -0.16 | -0.05 | -0.15 | -0.15 | 0.01 |
| Transco Zn1 | -0.13 | -0.09 | -0.04 | -0.07 | -0.05 | -0.02 | 0.00 | -0.01 | 0.01 |
| TX Eastern E Tx | -0.16 | -0.34 | 0.19 | -0.36 | -0.11 | -0.25 | -0.13 | -0.12 | -0.01 |
| TX Eastern S TX | -0.11 | -0.12 | 0.01 | -0.07 | 0.03 | -0.10 | -0.07 | -0.08 | 0.01 |
| Source: Platts M2M data | | | | | | | | | |

SOUTHEAST SPOT AND FORWARD BASIS (\$/MMBtu)

Source: Platts M2M data

SOUTHEAST & TEXAS DEMAND FORECAST



EAST AND SOUTH TEXAS FORWARD BASIS

(\$/MMBtu) — Agua Dulce — Houston Ship Chnl — NGPL Texok Zn — TX Eastn S TX 0.1



CENTRAL GAS MARKETS

Central gas prices rise as demand reaches multi-month high

Cash natural gas prices in the US Central region rose by double digits Wednesday as demand levels are expected to reach some of the highest levels since April.

Chicago city-gates jumped 19 cents to reach \$2.29/MMBtu during trading Wednesday as temperatures in the city are expected to reach the low 40 degrees Thursday, and continue down into the upper 30s at the weekend, driving heating demand higher.

Residential and commercial demand is expected to account for the bulk of Thursday's day-on-day increase of around 600 MMcf/d to 13.2 Bcf/d to boost the entire demand stack to 16.65 Bcf/d, its highest level since mid-April, according to S&P Global Platts Analytics.

Further bullishness could be on the horizon, with temperatures expected to continue to decrease, possibly pushing residential and commercial demand over the 14 Bcf/d hump at the weekend for the first time since April, according to Platts Analytics.

The storage scenario in the Midwest combined with increased flow optionality from various basins could help minimize volatility as the winter approaches, with a year-on-year flow increase from the Northeast up 1.6 Bcf/d, while storage stocks sit 141 Bcf above year-ago levels, US Energy Information Administration data shows.

Platts M2MS forward curve data show the Chicago city-gates November contract strengthened to \$2.309/MMBtu Tuesday, a nearly 13-cent increase day on day, flipping the prompt-month contract to a premium to the NYMEX November futures contract.

In the spot market, pricing around the Ventura transfer point rose even more steeply than at the Chicago city-gates, with both the Northern Natural and Northern Border points climbing around 24 cents day on day to reach \$2.36/MMBtu and \$2.345/MMBtu, respectively.

Flows from Western Canada hovered around 3.24 Bcf/d over the last seven days, about 230 MMcf/d below the October average.

In the production zone, Panhandle, Tx-Ok surged 35 cents to \$1.885/MMBtu, the largest day-on-day surge in the region.

- <u>Ryan Ouwerkerk</u>

| | | | Spot | t b | asis | | | Prompt forward basis | | |
|-------------------------|--------|--------|------|-----|-------------|------------------|-------|----------------------|--------|-------|
| | 23-0ct | 22-0ct | Chg | | MTD Avg. | MTD last year | Chg | 23-0c | 22-0ct | Chg |
| Henry Hub | 2.28 | 2.20 | 0.08 | | 2.22 | 3.23 | -1.01 | 2.28 | 2.27 | 0.01 |
| Midwest/East Canada | | | | | | | | | | |
| ANR ML 7 | 0.01 | -0.04 | 0.05 | | -0.32 | -0.02 | -0.30 | -0.02 | 0.04 | -0.06 |
| Chicago CG | 0.02 | -0.10 | 0.12 | [| -0.35 | -0.05 | -0.29 | -0.01 | 0.04 | -0.05 |
| Consumers Energy CG | -0.06 | -0.12 | 0.06 | | -0.37 | -0.01 | -0.36 | -0.10 | -0.05 | -0.05 |
| Dawn Ontario | -0.06 | -0.10 | 0.04 | | -0.37 | 0.02 | -0.39 | 0.03 | -0.04 | 0.07 |
| Mich Con CG | -0.08 | -0.17 | 0.09 | [| -0.40 | -0.02 | -0.38 | -0.12 | -0.07 | -0.05 |
| Northern Ventura | 0.09 | -0.10 | 0.18 | | -0.38 | -0.08 | -0.29 | 0.04 | 0.14 | -0.09 |
| Viking-Emerson | 0.03 | -0.09 | 0.11 | | -0.38 | -0.09 | -0.28 | 0.05 | 0.09 | -0.04 |
| Midcontinent | | | | | | | | | | |
| ANR OK | -0.19 | -0.22 | 0.04 | | -0.74 | -0.37 | -0.37 | -0.36 | -0.30 | -0.06 |
| Enable Gas East | -0.26 | -0.35 | 0.09 | [| -0.47 | -0.26 | -0.21 | -0.26 | -0.23 | -0.03 |
| NGPL Midcontinent | -0.30 | -0.46 | 0.16 | [| -0.87 | -0.51 | -0.35 | -0.50 | -0.46 | -0.04 |
| Northern NG Demarc | 0.06 | -0.09 | 0.15 | | -0.38 | -0.10 | -0.29 | -0.01 | 0.02 | -0.03 |
| Oneok OK | -0.70 | -0.79 | 0.09 | | -0.96 | -1.23 | +0.27 | -0.64 | -0.62 | -0.03 |
| Panhandle TX-OK | -0.39 | -0.66 | 0.27 | | -0.93 | -0.44 | -0.48 | -0.48 | -0.45 | -0.03 |
| Southern Star TxOkKs | -0.32 | -0.46 | 0.14 | | -0.76 | -0.50 | -0.26 | -0.37 | -0.34 | -0.02 |
| Source: Platts M2M data | | | | | | | | | | |

CENTRAL SPOT AND FORWARD BASIS (\$/MMBtu)

MIDWEST & MIDCONTINENT DEMAND FORECAST



MIDWEST FORWARD BASIS



MIDCONTINENT FORWARD BASIS



WEST GAS MARKETS

West natural gas cash prices stay mixed amid tight supply

US West natural gas spot prices remained mixed Wednesday amid a colder-than-average temperature forecast and tight supply.

In the Northwest, Cheyenne Hub rose 15 cents to \$2.11/MMBtu, the highest level in more than a month, for Thursday delivery. Colorado Interstate Gas Mainline gained 19 cents to \$2.13/MMBtu. It was the highest level since mid-May, as maintenance is effective along Northwest pipeline October 15-26 on the segment between the La Plata B and Pleasant Valley compressor stations in Colorado, resulting in a net flow of zero MMcf/d northbound and southbound through those stations.

The maintenance coincides with a bout of cold weather that was forecast to blanket much of the West over the next six to 10 days, according to the National Weather Service. Low temperatures in Denver were forecast to drop to 21 degrees Fahrenheit Thursday, more than 10 degrees below seasonal norms.

Canadian inflows remain restricted on the back of ongoing work in the Westcoast station 4B South constraint after an explosion in early October 2018. Flows have increased to about 1.2 Bcf/d in recent days after averaging below 1 Bcf/d across much of July and August. Pipeline operators expect flows to reach 90-95% of capacity of 1.7 Bcf/d by mid-November, but until then, prices in the US Pacific Northwest will likely continue to surge whenever significant weather appears.

The maintenance as well as the demand surge in British Columbia amid cooler temperatures pinched inflows through the Sumas inlet to 646 MMcf Wednesday, S&P Global Platts Analytics data showed. Flows through the inlet 30 days prior to the explosion averaged about 1.1 Bcf/d.

The Sumas pricing location rose 11 cents day on day to \$2.97/MMBtu. Looking to the Southwest, Kern River delivered fell 32 cents to

\$2.51/MMBtu, while Southern California Gas city-gate dropped 8 cents day on day to \$3.40/MMBtu as temperatures in Los Angeles were forecast to average about 79 degrees, in line with seasonal norms.

SoCal Gas completed its L4000 maintenance three weeks ahead of the original completion date and was set to return the line to pressure, allowing flows to begin Thursday. Total receipt capacity at Topock/ Needles will increase to 440 MMcf/d Thursday from the current level of 170 MMcf/d, according the company.

— <u>Veda Chowdhury</u>

WEST SUPPLY LOCATIONS FORWARD BASIS



| WEST SPOT | AND FORWARD | BASIS (\$/MMBtu) |
|-----------|-------------|------------------|
|-----------|-------------|------------------|

| | Spot basis | | | | | | Prom | Prompt forward basis | | | | |
|----------------------|------------|--------|-------|---|-------------|------------------|-------|----------------------|----|--------|-------|--|
| | 23-0ct | 22-0ct | Chg | | MTD Avg. | MTD last year | Chg | 23-0 | ct | 22-0ct | Chg | |
| Henry Hub | 2.28 | 2.20 | 0.08 | | 2.22 | 3.23 | -1.01 | 2.2 | 8 | 2.27 | 0.01 | |
| Northwest | | | | | | | | | | | | |
| GTN Kingsgate | -0.09 | -0.05 | -0.04 | | -0.05 | -0.37 | +0.32 | -0.1 | 3 | -0.04 | -0.10 | |
| Northwest Sumas | 0.69 | 0.66 | 0.04 | | 1.20 | 1.58 | -0.38 | 1.4 | 0 | 1.50 | -0.10 | |
| Northwest Stanfield | -0.04 | 0.08 | -0.12 | | 0.00 | -0.30 | +0.30 | -0.1 | 1 | -0.11 | 0.00 | |
| Rockies | | | | | | | | | | | | |
| Cheyenne Hub | -0.17 | -0.25 | 0.08 | | -0.72 | -0.39 | -0.33 | -0.3 | 9 | -0.40 | 0.01 | |
| CIG Rockies | -0.15 | -0.26 | 0.12 | | -0.71 | -0.43 | -0.28 | -0.3 | 9 | -0.40 | 0.01 | |
| Kern River Opal | -0.07 | 0.07 | -0.13 | | -0.06 | -0.37 | +0.32 | -0.0 | 3 | 0.08 | -0.10 | |
| NW WY Pool | -0.06 | 0.07 | -0.13 | | -0.05 | -0.36 | +0.32 | -0.0 | 3 | 0.08 | -0.10 | |
| Questar Rky | _ | - | _ | | -0.29 | -0.44 | +0.15 | -0.0 | 5 | 0.06 | -0.11 | |
| Southwest | | | | . | | | | | | | | |
| El Paso Permian | -2.12 | -2.10 | -0.02 | | -1.30 | -1.40 | +0.10 | -1.5 | 8 | -1.62 | 0.05 | |
| El Paso San Juan | -0.56 | -0.85 | 0.29 | | -0.82 | -1.03 | +0.21 | -0.4 | 7 | -0.59 | 0.12 | |
| Kern River Dlvd | 0.24 | 0.63 | -0.39 | | 0.46 | -0.18 | +0.64 | 0.1 | 2 | 0.26 | -0.14 | |
| PG&E CG | 0.89 | 1.00 | -0.12 | | 0.94 | 0.37 | +0.56 | 0.7 | 9 | 0.89 | -0.09 | |
| PG&E Malin | -0.04 | 0.07 | -0.10 | | 0.00 | -0.30 | +0.30 | 0.0 | 7 | 0.15 | -0.09 | |
| PG&E South | -0.26 | -0.77 | 0.51 | | -0.71 | -0.91 | +0.20 | -0.3 | 8 | -0.50 | 0.12 | |
| SoCal Gas | 0.03 | 0.27 | -0.24 | | 0.28 | -0.38 | +0.65 | 0.1 | 3 | 0.28 | -0.15 | |
| SoCal Gas Citygate | 1.13 | 1.28 | -0.15 | | 1.34 | 0.53 | +0.81 | 0.8 | 6 | 1.01 | -0.15 | |
| Transwestern Permian | -2.19 | -2.20 | 0.01 | | -1.32 | -1.44 | +0.12 | -1.4 | 9 | -1.54 | 0.05 | |
| Waha | -2.20 | -2.16 | -0.04 | | -1.31 | -1.43 | +0.11 | -1.6 | 3 | -1.67 | 0.05 | |
| West Canada | | | | . | | | | | | | | |
| AECO-C | 0.22 | 0.21 | 0.01 | | -0.25 | -1.66 | +1.41 | -0.5 | 1 | -0.51 | 0.00 | |

Source: Platts M2M data

SOUTHWEST, NORTHWEST, ROCKIES DEMAND FORECAST



WEST DEMAND LOCATIONS FORWARD BASIS



TOTAL NET PIPELINE FLOWS BY REGION (MMcf/d*)

| | 22-0ct | 23-0ct | Change | MTD avg. | MTD last year | Change |
|---------------------|--------------------|--------|--------|-------------|------------------|--------|
| Supply regions – ne | t pipeline outflo | ws | | | | |
| Texas | 11,891 | 12,486 | -595 | 11,383 | 10,083 | 1,300 |
| West Canada | 7,570 | 7,475 | 95 | 7,606 | 8,188 | -582 |
| Rockies | 6,128 | 5,835 | 293 | 6,243 | 5,969 | 274 |
| Midcontinent | 3,708 | 3,707 | 1 | 3,542 | 3,786 | -244 |
| Northeast | 14,064 | 13,767 | 297 | 14,360 | 11,266 | 3,094 |
| Demand regions – r | net pipeline inflo | ws | | | | |
| Southwest | 4,549 | 4,322 | -227 | 4,375 | 4,063 | 312 |
| Southeast | 13,524 | 13,134 | -390 | 13,814 | 11,447 | 2,367 |
| Northwest | 2,141 | 2,241 | 100 | 2,221 | 1,890 | 331 |
| Midwest | 13,866 | 13,893 | 27 | 13,464 | 13,437 | 27 |
| East Canada | 3,854 | 3,977 | 123 | 3,726 | 3,534 | 192 |

* Net pipeline flows by region are the aggregated total interstate pipeline flows across the regional border. Net supply regions are those that historically have had more supply than demand within the region and have been net suppliers of gas to other regions. Net demand regions historically have had more demand than supply and have been net receivers of pipeline gas from other regions.

HENRY HUB/NYMEX SPREAD



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Gas Daily Market Fundamentals Data (xls)

Gas Daily Monthly Price Guide (pdf)

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SHALE VALUE CHAIN ASSESSMENTS, OCT 23

| | \$/MMBtu | +/- |
|------------------------------------------------------|----------|--------|
| Gulf Coast ethane fractionation spread | 0.552 | -0.095 |
| Gulf Coast E/P mix fractionation spread | 0.138 | -0.095 |
| E/P mix Midcontinent to Rockies fractionation spread | -0.476 | -0.115 |
| E/P mix Midcontinent fractionation spread | -0.326 | -0.160 |
| National raw NGL basket price | 5.240 | -0.037 |
| National composite fractionation spread | 3.085 | -0.132 |

The methodology for these assessments is available at: www.platts.com/IM.Platts.Content/MethodologyReferences/MethodologySpecs/shale-value-chain.pdf

PLATTS OIL PRICES, OCT 23

| | (\$/b) | (\$/MMBtu) | |
|-------------------|-------------|------------|--|
| Gulf Coast spot | | | |
| 1% Resid (1) | 64.30-64.32 | 10.29 | |
| HSFO(1) | 37.42-37.44 | 5.99 | |
| Crude spot | | | |
| WTI (Nov) (2) | 55.81-55.83 | 9.62 | |
| New York spot | | | |
| No.2 (1) | 77.54-77.59 | 12.41 | |
| 0.3% Resid LP (3) | 77.09-77.11 | 12.34 | |
| 0.3% Resid HP (3) | 77.09-77.11 | 12.34 | |
| 0.7% Resid (3) | 66.84-66.86 | 10.70 | |
| 1% Resid (3) | 63.84-63.86 | 10.22 | |

1= barge delivery; 2= pipeline delivery; 3= cargo delivery

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FINAL DAILY GAS INDICES - ICE LOCATIONS (\$/MMBtu)

| Location Symbol Index Plange Low High Low High Volume Description ULT Algrangia (Triggin) CE (L. L. and Claveles) 3.4442 1.945 1.955 2.200 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 1.916 | Trade date: 23-Oct Flow date(s): 24-Oct | | | Daily | Absolute | Absolute | Common | Common | Powered by | Lice |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|--------------------|-------|--------|----------|----------|--------|--------|---------------|-------|
| Nethesist NAM22 1.948 2.000 1.910 1.928 1.000 DE Aportauri, TGP-Adventergiots XAM22 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | Symbol | Index | - | | | | | Volume | Deals |
| TA ApproxIC (Exp. L., and It identification (Minime) JAMA21 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - | | 0,11001 | moex | Change | LUW | . ngn | LOW | ingi | Volume | 0.013 |
| CE Algonzia, Minemia-Brange neglection Amme 9 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - <td></td> <td>7444424</td> <td>1.045</td> <td>0.215</td> <td>1.050</td> <td>2 000</td> <td>1 010</td> <td>1.005</td> <td>110</td> <td>22</td> | | 7444424 | 1.045 | 0.215 | 1.050 | 2 000 | 1 010 | 1.005 | 110 | 22 |
| Dic A garoam, Misemian-Ramour regults 304000 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - | | | | | | | | | | 22 |
| Dick Agenome - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - <th< td=""><td></td><td></td><td></td><td></td><td>_</td><td></td><td></td><td>_</td><td></td><td></td></th<> | | | | | _ | | | _ | | |
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| ICE ImageHuns Point and CaseAnnual aICE Martines, and Northesa Playeine US (Dury's chuice deliverue)300021 | | | 2.100 | 0.350 | 2.100 | 2.100 | 2.100 | 2.100 | 407 | 12 |
| ICE Mardimes and Baverly SalemSACR1CE Columbia Cos | ICE Iroquois, zone 2 (non-Hunts Point/Eastchester Lateral) | JAABT21 | 2.065 | -0.175 | 2.050 | 2.080 | 2.060 | 2.075 | 25 | 12 |
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| Appalachin UE: Commos Gas, NA Pool SAM 23 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - CE Stande Gas, Nath Pool only | | | | | | | | | | 74 |
| IE Compton Tennessee 384/121 | | | | | | | | | | |
| ICE Contrubite Gas, A04 Pool 3AAAU21 </td <td></td> <td>TAAFT21</td> <td>_</td> <td>_</td> <td>_</td> <td></td> <td>_</td> <td>_</td> <td></td> <td></td> | | TAAFT21 | _ | _ | _ | | _ | _ | | |
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| ICE Minimum Mpeline (upper) Choice delivered) JAMA21 <td></td> <td></td> <td>_</td> <td>_</td> <td>_</td> <td></td> <td>_</td> <td>_</td> <td>_</td> <td>_</td> | | | _ | _ | _ | | _ | _ | _ | _ |
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| ICE Taxas Eastern, M2 Zone (delivered) JAHV21 — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … | ICE Millennium Pipeline (buyers' choice delivered) | JAAHA21 | _ | _ | - | _ | _ | _ | _ | _ |
| Midcontinent SAMP21 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - <t< td=""><td></td><td>JAAET21</td><td>2.045</td><td>+0.000</td><td>1.990</td><td>2.075</td><td>2.025</td><td>2.065</td><td>121</td><td>32</td></t<> | | JAAET21 | 2.045 | +0.000 | 1.990 | 2.075 | 2.025 | 2.065 | 121 | 32 |
| LCE Bennington, Oklahoma (buyers' choice) JAMR21 | ICE Texas Eastern, M2 Zone (delivered) | JAAEV21 | | _ | _ | | _ | — | _ | _ |
| ICE Enable Gas, Flex Pool only JAME22 2.015 +0.170 2.000 2.100 2.000 2.040 225 ICE Enable Gas, North Pool only JAME721 — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — … … … … … … … … … … … … … … … … … | Midcontinent | | | | | | | | | |
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| ICE Enable Gas, West Pool JAMB221 — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … | | | | | | | | _ | | |
| ICE NGPL, Gulf Coast Mainline Pool JAAC21 — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — … … … … … … … <td></td> <td></td> <td></td> <td></td> <td>_</td> <td></td> <td>_</td> <td>_</td> <td>_</td> <td></td> | | | | | _ | | _ | _ | _ | |
| ICE NGPL, Mid-Continent Storage PIN JAAC021 — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … </td <td></td> | | | | | | | | | | |
| ICE Northern Natural, Mid 13 - 16A Pool JAACK21 — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — … … … … … … … … … … … … … … … … … … … … … … … … … … … <td< td=""><td>· · · · ·</td><td></td><td></td><td></td><td></td><td></td><td></td><td>_</td><td></td><td></td></td<> | · · · · · | | | | | | | _ | | |
| ICE Northern Natural, Mid 1-7 Pool JAACY21 — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — … … … … … … … … … … … <td></td> <td></td> <td>_</td> <td></td> <td>_</td> <td>_</td> <td></td> <td>_</td> <td>_</td> <td>_</td> | | | _ | | _ | _ | | _ | _ | _ |
| ICE Salt Plains Storage (buyers' choice) JAADV21 — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … <t< td=""><td></td><td>JAACX21</td><td>_</td><td>_</td><td>_</td><td>_</td><td>_</td><td>_</td><td>_</td><td>_</td></t<> | | JAACX21 | _ | _ | _ | _ | _ | _ | _ | _ |
| ICE Salt Plains Storage (in-ground transfer only) JAADN21 — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — … … | ICE Northern Natural, Mid 8 -12 Pool | JAACY21 | — | _ | _ | _ | _ | _ | _ | _ |
| Upper Midwest ICE Alliance, Chicago Exchange Hub JAAA221 2.265 +0.165 2.210 2.300 2.245 2.290 1410 2 ICE Alliance, ANR Interconnect JAAAD21 — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … | ICE Salt Plains Storage (buyers' choice) | JAADV21 | _ | _ | _ | _ | _ | _ | | |
| ICE Alliance, Chicago Exchange Hub JAAAC21 2.265 +0.165 2.210 2.300 2.245 2.290 1410 2 ICE Alliance, ANR Interconnect JAAA221 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - | ICE Salt Plains Storage (in-ground transfer only) | JAADW21 | _ | _ | _ | _ | _ | _ | _ | _ |
| ICE Alliance, ANR Interconnect JAAAD21 — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … | Upper Midwest | | | | | | | | | |
| ICE Alliance, Midwestern Interconnect JAAFX21 — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … | ICE Alliance, Chicago Exchange Hub | JAAAC21 | 2.265 | +0.165 | 2.210 | 2.300 | 2.245 | 2.290 | 1410 | 228 |
| ICE Alliance, NGPL Interconnect JAAAF21 — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — … … … … … … … | | JAAAD21 | | _ | _ | _ | _ | _ | _ | _ |
| ICE Alliance, Nicor Interconnect JAAAG21 | · · · · · | | _ | | | | | | | |
| ICE Alliance, Vector Interconnect JAAAH21 ICE ANR, Joliet Hub CDP JAAAK21 ICE Bluewater Gas Storage JAAAN21 ICE Great Lakes Gas, St. Clair JAABN21 ICE Guardian, Guardian Hub JAABN21 <td>•</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> | • | | | | | | | | | |
| ICE ANR, Joliet Hub CDP JAAAK21 ICE Bluewater Gas Storage JAAAN21 <t< td=""><td>· · · · ·</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<> | · · · · · | | | | | | | | | |
| ICE Bluewater Gas Storage JAAAN21 — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … | | | | | | | | | | |
| ICE Great Lakes Gas, St. Clair JAABM21 — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — … … … … … … … … … … … … … … … … … … … … … … … … … … … … … … | · · · · · | | | | | | | | _ | |
| ICE NGPL, Amarillo Pooling PIN JAAC621 2.285 +0.235 2.210 2.305 2.260 2.305 152 ICE NGPL, Amarillo Storage PIN JAACH21 — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — # # | 0 | | | | | | | | | _ |
| ICE NGPL, Amarillo Storage PIN JAACH21 — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — = = = | ICE Guardian, Guardian Hub | | _ | _ | _ | | _ | _ | _ | _ |
| ICE NGPL, Iowa-Illinois GC Pool JAAHN21 — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — = = = | ICE NGPL, Amarillo Pooling PIN | JAACG21 | 2.285 | +0.235 | 2.210 | 2.305 | 2.260 | 2.305 | 152 | 26 |
| ICE NGPL, Iowa-Illinois AM Pool JAAH021 — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — = = = | ICE NGPL, Amarillo Storage PIN | JAACH21 | _ | _ | _ | _ | _ | _ | _ | _ |
| ICE NGPL, Iowa-Illinois GC Storage JAAHP21 2.205 +0.525 2.180 2.210 2.200 2.210 114 ICE NGPL, Iowa-Illinois AM Storage JAAHQ21 — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — = — # # <td></td> <td>JAAHN21</td> <td>_</td> <td>_</td> <td>_</td> <td>_</td> <td>_</td> <td>_</td> <td></td> <td>_</td> | | JAAHN21 | _ | _ | _ | _ | _ | _ | | _ |
| ICE NGPL, Iowa-Illinois AM Storage JAAHQ21 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - <td>· · · · · · · · · · · · · · · · · · ·</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> | · · · · · · · · · · · · · · · · · · · | | | | | | | | | |
| ICE NGPL, Mid-American Citygate JAACN21 2.305 +0.205 2.290 2.320 2.300 2.315 83 ICE Northern Border, Harper Transfer Point JAACS21 2.360 +0.265 2.355 2.360 2.360 2.360 40 ICE Northern Border, Nicor Interconnect JAACT21 — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — # # | | | | | | | | | | 12 |
| ICE Northern Border, Harper Transfer Point JAAC521 2.360 +0.265 2.355 2.360 2.360 2.360 40 ICE Northern Border, Nicor Interconnect JAAC721 — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — # # # # # # # # # # # # # # | | | | | | | | | | 10 |
| ICE Northern Border, Nicor Interconnect JAACT21 — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — — = = = </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>10</td> | | | | | | | | | | 10 |
| ICE Northern Border, Vector Interconnect JAACU21 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -< | | | | | | | | | | 4 |
| ICE Northern Border, Will County JAACV21 2.350 +0.395 2.275 2.360 2.330 2.360 58 | | | | | | | | | | |
| | | | | | | 2.360 | | | | 10 |
| ICE REX (East), delivered into ANR JAADK21 2.195 +0.120 2.185 2.210 2.190 2.200 222 | ICE REX (East), delivered into ANR | JAACV21 JAADK21 | 2.195 | | 2.185 | 2.210 | 2.190 | 2.200 | 222 | 36 |

FINAL DAILY GAS INDICES - ICE LOCATIONS (\$/MMBtu)

| Trade | date: | 23-0ct | |
|-------|-------|--------|--|
| | | | |

| | | | Deile | Abaaluta | Abaaluta | 0 | 0 | | |
|--------------------------------------------------------------------|--------------------|-------|--------|----------|----------|---------|---------|--------|-------|
| Flow date(s): 24-Oct | 0 stat | 1.1. | Daily | Absolute | Absolute | Common | Common | Mal | Durk |
| Location | Symbol | Index | Change | Low | High | Low | High | Volume | Deals |
| Upper Midwest | | | | | | | | | |
| ICE REX (East), delivered into Lebanon Hub | JAAHC21 | _ | _ | _ | _ | _ | _ | _ | _ |
| ICE REX (East), delivered into Midwestern Gas | JAADL21 | 2.230 | +0.165 | 2.180 | 2.260 | 2.210 | 2.250 | 246 | 38 |
| ICE REX (East), delivered into NGPL | JAADM21 | 2.200 | +0.140 | 2.150 | 2.225 | 2.180 | 2.220 | 638 | 88 |
| ICE REX (East), delivered into Panhandle | JAADN21 | 2.200 | +0.160 | 2.200 | 2.200 | 2.200 | 2.200 | 50 | 6 |
| ICE REX (East), delivered into Trunkline | JAAD021 | 2.230 | +0.305 | 2.230 | 2.230 | 2.230 | 2.230 | 7 | 2 |
| ICE REX (West), delivered into ANR | JAADP21 | _ | _ | _ | _ | _ | _ | _ | _ |
| ICE REX (West), delivered into Northern Natural | JAADQ21 | _ | _ | _ | | _ | _ | _ | _ |
| ICE REX (West), delivered into Panhandle | JAADR21 | _ | _ | _ | _ | _ | _ | _ | _ |
| ICE REX, zone 3 receipts | JAAHS21 | _ | _ | _ | | _ | _ | _ | _ |
| ICE Rover, delivered into ANR | JAAHI21 | 2.165 | +0.140 | 2.110 | 2.195 | 2.145 | 2.185 | 192 | 32 |
| ICE Rover, delivered into Panhandle | JAAHJ21 | 2.165 | +0.145 | 2.120 | 2.200 | 2.145 | 2.185 | 234 | 52 |
| ICE Rover, receipts | JAAHR21 | _ | _ | _ | _ | _ | _ | | _ |
| East Texas | - | | | | | | | | |
| | 3446724 | 2145 | 10.025 | 2 1 0 0 | 2 1 5 0 | 2 1 2 5 | 2 1 5 0 | 22 | 6 |
| ICE Agua Dulce Hub | JAAGI21 | 2.145 | +0.025 | 2.100 | 2.150 | 2.135 | 2.150 | 23 | 6 |
| ICE Atmos, zone 3, receipts | JAAAL21 | 1.950 | +0.135 | 1.940 | 1.960 | 1.945 | 1.955 | 40 | 10 |
| ICE Banquete Hub | JAAHX21 | | | | - | | - | | |
| ICE Carthage Hub Tailgate | JAAAQ21 | 2.020 | +0.060 | 1.980 | 2.100 | 1.990 | 2.050 | 31 | 6 |
| ICE ENT, STX Map | JAAHT21 | _ | _ | _ | _ | _ | _ | _ | |
| ICE ETC, Cleburne | JAAHH00 | 1.900 | 0.100 | 1.900 | 1.900 | 1.900 | 1.900 | 2 | 2 |
| ICE ETC, Maypearl | JAABK21 | 1.990 | +0.090 | 1.930 | 2.100 | 1.950 | 2.035 | 120 | 12 |
| ICE Golden Triangle Storage & Hub | JAABL21 | | _ | | | | | | |
| ICE Gulf South, Pool Area #16 | JAABP21 | 2.130 | +0.160 | 2.120 | 2.135 | 2.125 | 2.135 | 38 | 12 |
| ICE HPL, East Texas Pool | JAABR21 | _ | | — | — | | | | |
| ICE HSC-Kinder Morgan | JAAWM21 | _ | _ | _ | _ | — | _ | | _ |
| ICE Katy, ENSTOR Pool (excl. Kinder Morgan Texas) | JAABW21 | 2.170 | +0.080 | 2.170 | 2.180 | 2.170 | 2.175 | 25 | 6 |
| ICE Katy, Lonestar (warranted as Intrastate) | JAABX21 | | | | | | | | |
| ICE Katy, Lonestar Interstate | JAABY21 | 2.150 | +0.075 | 2.140 | 2.150 | 2.150 | 2.150 | 54 | 12 |
| ICE Katy, Oasis Pipeline | JAABZ21 | 2.160 | +0.100 | 2.150 | 2.160 | 2.160 | 2.160 | 102 | 18 |
| ICE Moss Bluff Interconnect (buyers' choice delivered) | JAACD21 | 2.225 | +0.055 | 2.190 | 2.230 | 2.215 | 2.230 | 33 | 4 |
| ICE Moss Bluff Storage (in-ground transfers only) | JAACE21 | _ | | _ | _ | _ | — | | _ |
| ICE NGPL, TXOK East Pool | JAACP21 | 2.135 | +0.125 | 2.100 | 2.170 | 2.120 | 2.155 | 2097 | 280 |
| ICE NGPL, TXOK West Pool | JAACQ21 | _ | | _ | | | _ | | _ |
| ICE NorTex, Tolar Hub | JAACR21 | 1.955 | +0.095 | 1.920 | 2.000 | 1.935 | 1.975 | 176 | 20 |
| ICE Tennessee, zone 0 North | JAAEP21 | 2.120 | +0.090 | 2.100 | 2.130 | 2.115 | 2.130 | 275 | 62 |
| ICE Tennessee, zone 0 South | JAAEQ21 | 2.165 | +0.115 | 2.130 | 2.190 | 2.150 | 2.180 | 223 | 36 |
| ICE Tres Palacios Hub - Injection | JAAFE21 | 2.170 | +0.070 | 2.170 | 2.170 | 2.170 | 2.170 | 35 | 6 |
| ICE Tres Palacios Hub - Withdrawal | JAAFF21 | 2.245 | +0.025 | 2.230 | 2.250 | 2.240 | 2.250 | 29 | 8 |
| Louisiana/Southeast | | | | | | | | | |
| ICE ANR, SE Transmission Pool | JAAAI21 | 2.175 | +0.110 | 2.160 | 2.190 | 2.170 | 2.185 | 64 | 14 |
| ICE ANR, SE Gathering Pool | JAAAJ21 | _ | _ | _ | _ | _ | _ | | _ |
| ICE Bobcat Interconnect (buyers' choice delivered) | JAAA021 | _ | _ | _ | | _ | _ | | |
| ICE Bobcat Storage (in-ground transfer only) | JAAAP21 | _ | _ | | _ | _ | _ | | _ |
| ICE Egan Interconnect (buyers' choice delivered) | JAAAZ21 | _ | _ | _ | _ | _ | _ | | |
| ICE Egan Storage (in-ground transfer only) | JAABA21 | _ | _ | | | _ | | | _ |
| ICE Enable Gas, Perryville Hub | JAABG21 | | | _ | | | | | _ |
| ICE Enable Gas, South Pool only | JAABH21 | | _ | _ | | _ | | | _ |
| ICE Gillis Hub | JAAUL21 | _ | | _ | | | _ | _ | |
| ICE Gulf South, Perryville Exchange Point | JAAWE21 JAAB021 | _ | | | | | | | |
| ICE Jefferson Island Storage and Hub | JAABU21 JAABV21 | | | | | | | | |
| ICE MS Hub Storage | JAABV21 JAACF21 | | | | | | | | |
| ICE NGPL, Louisiana Pooling PIN | | | | | | _ | | | |
| ICE NGPL, Louisiana Pooling PIN ICE NGPL, Louisiana Storage PIN | JAACL21 | | | | | | | | |
| | JAACM21 | | | | | | | | |
| ICE Sonat, Zone 0 | JAAHE21 | 2 215 | | 2 200 | | | | | |
| ICE Sonat, Zone 0 South Louisiana Pool | JAAEJ21 | 2.215 | +0.050 | 2.200 | 2.240 | 2.205 | 2.225 | 251 | 44 |
| ICE Sonat, Zone 1 North Pool | JAAEK21 | | | | | | | | |
| ICE Southern Pines Hub | JAAEM21 | | _ | _ | _ | _ | _ | | |
| ICE Stingray, pool delivery | JAAE021 | | | - | | | - | | |
| ICE Tennessee, zone 1 100 Leg Pool | JAAER21 | 2.115 | +0.045 | 2.110 | 2.125 | 2.110 | 2.120 | 88 | 16 |
| ICE Tennessee, zone 1 800 Leg Pool | JAAXM21 | 2.125 | +0.075 | 2.100 | 2.135 | 2.115 | 2.135 | 219 | 24 |
| | | | | | | | | | |

FINAL DAILY GAS INDICES - ICE LOCATIONS (\$/MMBtu)

| Trade date: 23-Oct | | | | | | | | | |
|----------------------------------------------------------|--------------------|--------|--------|----------|----------|--------|--------|--------|-------|
| Flow date(s): 24-Oct | | | Daily | Absolute | Absolute | Common | Common | | |
| Location | Symbol | Index | Change | Low | High | Low | High | Volume | Deals |
| Louisiana/Southeast | | | 5 | | 5 | | 3 | | |
| ICE Tennessee, zone 1, Station 87 Pool | JAAES21 | 2.180 | +0.100 | 2.125 | 2.210 | 2.160 | 2.200 | 349 | 56 |
| ICE Texas Gas, Mainline Pool | JAAEX21 | 2.150 | +0.095 | 2.080 | 2.165 | 2.130 | 2.165 | 552 | 68 |
| ICE Texas Gas, North Louisiana Pool | JAAEY21 | | | | | | | | |
| Rockies/Northwest | | | | | | | | | |
| ICE CIG, Mainline (sellers' choice, non-lateral) | JAAFY21 | 2.130 | +0.190 | 2.080 | 2.140 | 2.115 | 2.140 | 271 | 34 |
| ICE CIG, Mainline Pool | JAAF721 | | | | | | | | |
| ICE CIG, Mainline South (sellers' choice) | JAAAT21 | 2.060 | +0.510 | 2.060 | 2.060 | 2.060 | 2.060 | 38 | 6 |
| ICE Kern River, on system receipt | JAACA21 | 2.210 | -0.050 | 2.195 | 2.260 | 2.195 | 2.225 | 406 | 70 |
| ICE Opal Plant Tailgate | JAADB21 | 2.220 | -0.050 | 2.210 | 2.260 | 2.210 | 2.235 | 192 | 40 |
| ICE PG&E, Onyx Hill | JAAHB21 | | | | | | | | |
| ICE Pioneer Plant Tailgate | JAADG21 | _ | | | _ | _ | _ | | _ |
| ICE Questar, North Pool | JAADI21 | | | _ | _ | _ | _ | | _ |
| ICE Questar, South Pool | JAADJ21 | | | _ | _ | _ | _ | | _ |
| ICE Ruby, Onyx Hill | JAADS21 | 2.235 | -0.065 | 2.230 | 2.240 | 2.235 | 2.240 | 30 | 4 |
| ICE Ruby, Receipt Pool | JAADT21 | _ | _ | _ | _ | _ | | _ | |
| ICE Ryckman Creek Gas Storage | JAADU21 | _ | _ | | _ | _ | _ | | _ |
| ICE WIC, Pool | JAAFH21 | | _ | _ | _ | _ | | | _ |
| Southwest | | | | | | | | | |
| ICE Agua Blanca Pool | JAAHU21 | _ | _ | _ | _ | _ | _ | _ | |
| ICE El Paso, Anadarko Pool | JAAHO21 JAAHZ21 | _ | | | _ | _ | | | _ |
| ICE El Paso, Keystone Pool | JAABB21 | 0.120 | +0.040 | 0.050 | 0.230 | 0.075 | 0.165 | 330 | 54 |
| ICE El Paso, Plains Pool | JAABC21 | 1.750 | +0.580 | 1.750 | 1.750 | 1.750 | 1.750 | 28 | 6 |
| ICE El Paso, Waha Pool | JAABD21 | 0.115 | +0.070 | 0.000 | 0.250 | 0.055 | 0.180 | 635 | 108 |
| ICE GCX West Pool | JAAWK21 | _ | | | _ | _ | | | _ |
| ICE Oasis, Waha Pool | JAACZ21 | -0.085 | +0.070 | -0.200 | 0.110 | -0.165 | -0.010 | 108 | 12 |
| ICE ONEOK, Westex Pool | JAADA21 | 0.065 | +0.025 | 0.000 | 0.100 | 0.040 | 0.090 | 243 | 42 |
| ICE PG&E, Daggett | JAADC21 | _ | _ | _ | _ | _ | _ | _ | _ |
| ICE PG&E, Kern River Station | JAADD21 | _ | _ | _ | _ | _ | _ | _ | _ |
| ICE PG&E, Topock | JAADE21 | 2.015 | +0.580 | 1.840 | 2.150 | 1.940 | 2.095 | 167 | 50 |
| ICE Socal, Blythe | JAADX21 | _ | | | _ | _ | _ | | _ |
| ICE Socal, Ehrenberg (delivered) | JAADY21 | 2.440 | -0.410 | 2.100 | 2.650 | 2.305 | 2.580 | 143 | 32 |
| ICE Socal, Firm Storage only (Citygate) | JAADZ21 | | _ | | _ | _ | _ | | _ |
| ICE Socal, In-ground transfer only (Citygate) | JAAEA21 | — | — | — | — | — | — | _ | — |
| ICE Socal, Interruptible Storage only (Citygate) | JAAEB21 | — | _ | — | — | — | — | — | _ |
| ICE Socal, Kern River Station | JAAEC21 | 2.490 | -0.350 | 2.450 | 2.550 | 2.465 | 2.515 | 78 | 16 |
| ICE Socal, Kramer Junction | JAAED21 | 2.505 | -0.355 | 2.380 | 2.650 | 2.440 | 2.575 | 229 | 42 |
| ICE Socal, Needles | JAAEE21 | 1.945 | +0.415 | 1.780 | 2.150 | 1.855 | 2.040 | 226 | 40 |
| ICE Socal, sellers' choice delivered incl. CA production | JAAEF21 | _ | | _ | — | — | _ | | _ |
| ICE Socal, Topock | JAAHD21 | — | | | — | — | | | _ |
| ICE Socal, Topock, El Paso | JAAEG21 | _ | | | — | — | | | _ |
| ICE Socal, Topock, Transwestern | JAAEH21 | _ | | _ | — | — | _ | | _ |
| ICE Socal, Wheeler Ridge | JAAEI21 | 2.480 | -0.380 | 2.380 | 2.550 | 2.440 | 2.525 | 82 | 18 |
| ICE Transwestern, Central Pool | JAAFB21 | | _ | — | _ | — | _ | _ | _ |
| ICE Transwestern, Panhandle Pool | JAAFC21 | _ | _ | _ | _ | _ | _ | _ | |
| ICE Transwestern, West Texas Pool | JAAFD21 | 0.085 | +0.085 | 0.050 | 0.110 | 0.070 | 0.100 | 38 | 10 |
| ICE Waha Hub, West Texas (buyer's choice delivered) | JAAFG21 | 0.070 | -0.020 | -0.100 | 0.200 | -0.005 | 0.145 | 450 | 70 |

ICE GAS DAILY ASSESSMENT RATIONALE

The daily indices for ICE locations are a volume weighted average of ICE Exchange trades submitted to Platts by ICE. No other sources of data are used. Platts editors do not screen the data for outliers or assess prices if there are no transactions. Questions may be directed to Ryan Quwerkerk at 713-655-2202 or ryan.ouwerkerk@spglobal.com