



# Competitive Energy Services Weekly Market Summary

August 7 - 11, 2017

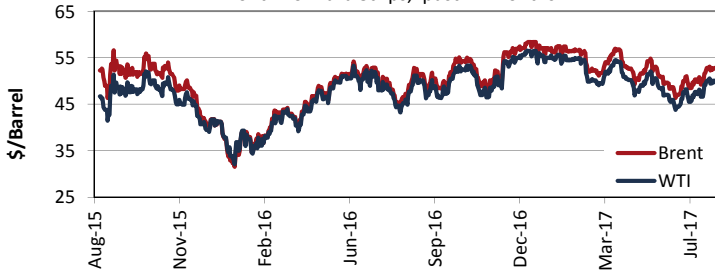
## Synopsis of Last Week's Energy Markets

Crude oil finished down last week as the market resisted the \$50 mark for prompt month WTI. An OPEC meeting resulted in a "recommitment" to the cuts, which did not impact the market. Domestically, crude stocks saw an unexpectedly large drop. Natural gas prices climbed from five-month lows as forecasts released last week showed warming trends through mid-August. Inventory surplus has tightened to 2% to the 5-year average as injections continue to fall short of typical gains for mid-late summer.

## Oil Market

### Crude Oil - WTI & Brent

12-Month Forward Strips, past 24 months

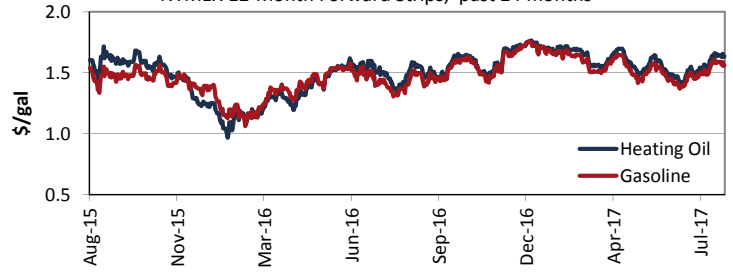


| NYMEX WTI              | last close | previous week | 24-month high | 24-month low |
|------------------------|------------|---------------|---------------|--------------|
| 12 month strip, \$/bbl | \$49.36    | \$50.03       | \$56.70       | \$32.40      |
| date                   | 8/11/17    | 8/4/17        | 1/6/17        | 1/20/16      |
| change from last close |            | -1.3%         | -12.9%        | 52%          |

| US STORAGE (in million bbls)   | crude oil |
|--------------------------------|-----------|
| domestic stocks as of          | 8/4/17    |
|                                | 475       |
| gain / loss from previous week | -6.5      |
| comparison to historic range   | within    |

### Heating Oil & Gasoline

NYMEX 12-Month Forward Strips, past 24 months



| NYMEX Heating Oil      | last close | previous week | 24-month high | 24-month low |
|------------------------|------------|---------------|---------------|--------------|
| 12 month strip, \$/gal | \$1.63     | \$1.65        | \$1.76        | \$0.97       |
| date                   | 8/11/17    | 8/4/17        | 1/2/17        | 1/20/16      |
| change from last close |            | -0.7%         | -7%           | 69%          |

| US STORAGE (in million bbls)   | distillate | propane | gasoline |     |
|--------------------------------|------------|---------|----------|-----|
| domestic stocks as of          | 8/4/17     | 148     | 68       | 231 |
| gain / loss from previous week | -1.7       | 0.0     | 3.4      |     |
| comparison to historic range   | within     | within  | within   |     |

## Natural Gas Market

### NYMEX Henry Hub Futures: 12 Month Forward Strip

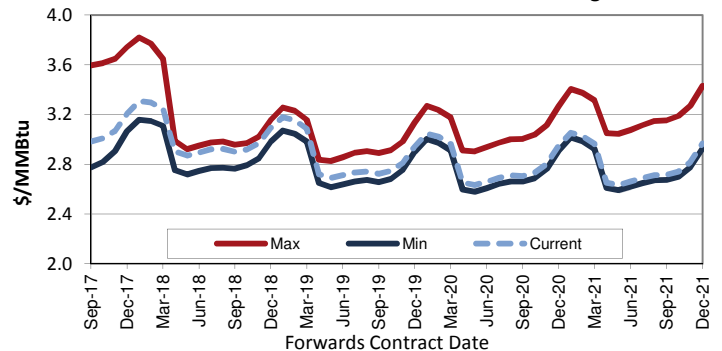


| NYMEX PRICING          | last close | previous week | 24-month high | 24-month low |
|------------------------|------------|---------------|---------------|--------------|
| 12 mo. strip, \$/MMBtu | \$3.05     | \$2.93        | \$3.70        | \$2.11       |
| date                   | 8/11/17    | 8/4/17        | 12/28/16      | 2/25/16      |
| change from last close |            | 4.2%          | -17%          | 45%          |

| CES SCORE |    |
|-----------|----|
| 12 month  | 57 |
| 18 month  | 49 |
| 24 month  | 53 |
| 36 month  | 62 |

The Score provides a measure of how current prices compare to their 52-week range. A score close to 0 indicates that current prices are close to their 52-week highs; a score close to 100 indicates that current prices are close to their 52-week lows.

### NYMEX Natural Gas Forwards vs. 1 Year Range



| FORWARDS         | 12 month | 18 month | 24 month | 36 month |
|------------------|----------|----------|----------|----------|
| strip (\$/MMBtu) | \$3.05   | \$3.05   | \$2.98   | \$2.92   |

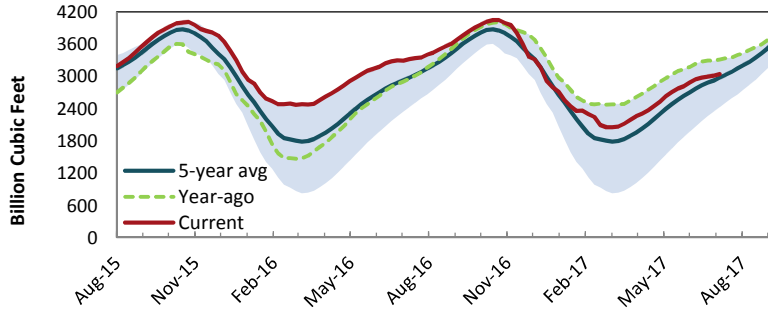
Natural gas futures are useful for both natural gas and electricity consumers because they drive electricity pricing in many U.S. markets. This chart compares the current natural gas price for each forward month on the NYMEX exchange to the highest and lowest prices for the same month over the past 12 months.



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### Natural Gas Storage

Working Gas in Underground Storage Compared With 5-Year Range



This chart shows the amount of natural gas in storage at each point in time (red line) compared to the highest, lowest, and average amounts in the past 5 calendar years.

| EIA Storage Data           | date    | Bcf   | + / - |
|----------------------------|---------|-------|-------|
| Previous Stock Level       | 7/28/17 | 3,010 |       |
| Most Recent Stock Level    | 8/4/17  | 3,038 |       |
| Year-ago Stock Level       |         | 3,313 | -8.3% |
| 5-Year Average Stock Level |         | 2,977 | 2.0%  |
| Most Recent Net Change     | 8/4/17  | 28    |       |
| Year-Ago Net Change        |         | 24    |       |
| 5-Year Average Net Change  |         | 54    |       |

Data Source: EIA <http://tonto.eia.doe.gov/oog/info/ngs/ngs.html>

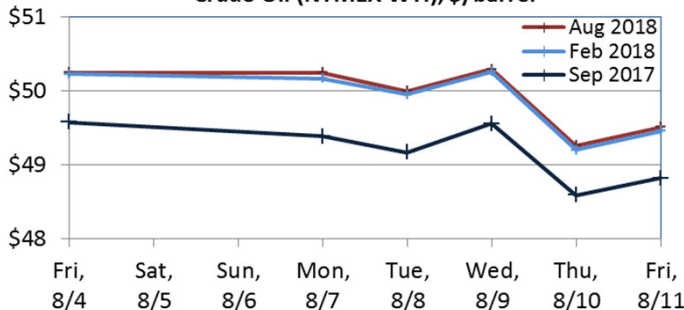
### Market Assessment

#### NYMEX Futures Summary Statistics

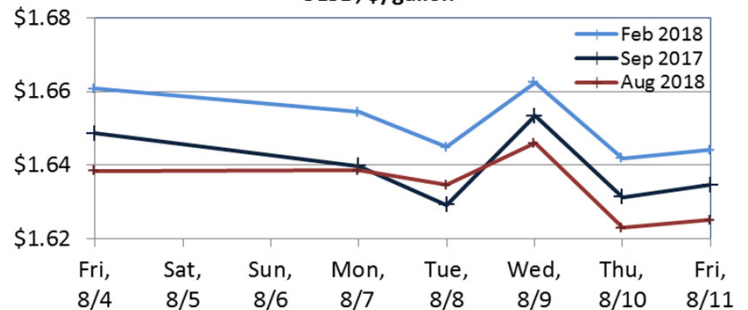
|             | Last Expired Contract | Exp. Date | Price   | Prompt Month | Price   | Most Expensive Next 12 Months | Price   | Least Expensive Next 12 Months | Price   | Next Winter Avg (Nov17-Mar18) |
|-------------|-----------------------|-----------|---------|--------------|---------|-------------------------------|---------|--------------------------------|---------|-------------------------------|
| Crude oil   | Aug-17                | 7/20/17   | \$46.79 | Sep-17       | \$48.82 | May-18                        | \$49.58 | Sep-17                         | \$48.82 | \$49.34                       |
| Heating oil | Aug-17                | 7/31/17   | \$1.65  | Sep-17       | \$1.63  | Jan-18                        | \$1.64  | Jun-18                         | \$1.62  | \$1.64                        |
| Natural gas | Aug-17                | 7/27/17   | \$2.97  | Sep-17       | \$2.77  | Jan-18                        | \$3.16  | May-18                         | \$2.77  | \$3.22                        |

#### NYMEX End-of-Day Settlements

Crude Oil (NYMEX WTI), \$/barrel

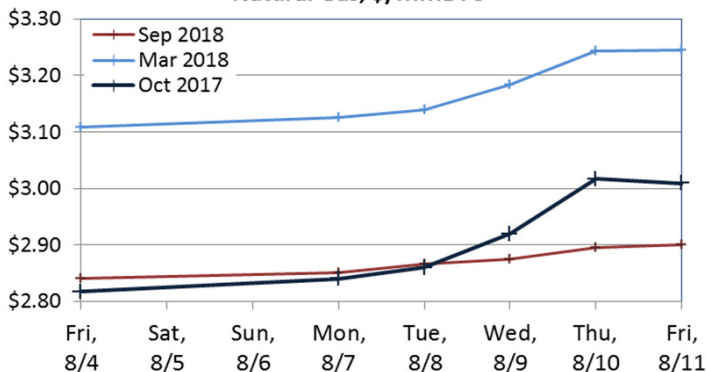


ULSD, \$/gallon



WTI has traded in a narrow band between \$49 and \$50 for much of the past two weeks until Thursday's drop. Domestically, the EIA report was bullish. Crude stockpiles fell 6.45M barrels, almost 3 times analysts' projections. This was countered by a 3.4M barrel gain in gasoline stocks, which was unexpected in the middle of the summer driving season. U.S. production dipped slightly. Internationally, OPEC's meeting early last week resulted in a "recommitment" to the production cuts, especially from the least-compliant members. However, data showed that OPEC's July output rose for the third consecutive month, nearing pre-production cut levels.

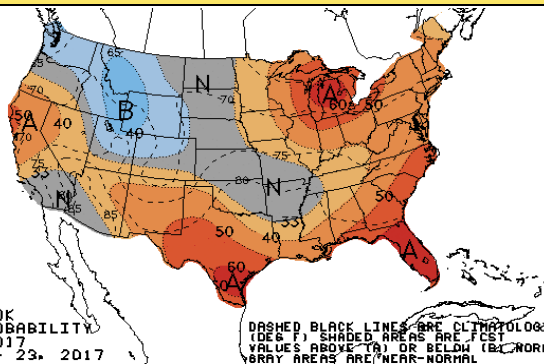
Natural Gas, \$/MMBTU



Natural gas futures gained 7.5% last week as weather forecasts predicted warmer weather and the storage surplus continued to narrow. Futures climbed each day amid outlooks for stronger cooling demand in the central and northeastern U.S., a departure from previous forecasts for mild weather. Prices were bolstered on Thursday when the EIA reported a 28 Bcf inventory gain; this is the fifth below-average gain in a row and the twelfth since the start of the injection season in April. The low injections follow strong cooling demand in the south-central region and high pipeline and LNG exports. Futures for September delivery gained 21 cents by the end of the week, closing on Friday afternoon at \$2.98.

The National Weather Service near-term forecast calls for above-normal temperatures for most of the eastern half of the US, plus parts of the Southwest and California. The natural gas market scores on page 1 declined from the previous week. Clients with electricity or natural gas contracts expiring in 2017 or 2018 should consult with a CES representative for customized guidance.

**National Weather Service Forecast**



**6 - 10 Day Forecast for August 19 - 23, 2017**

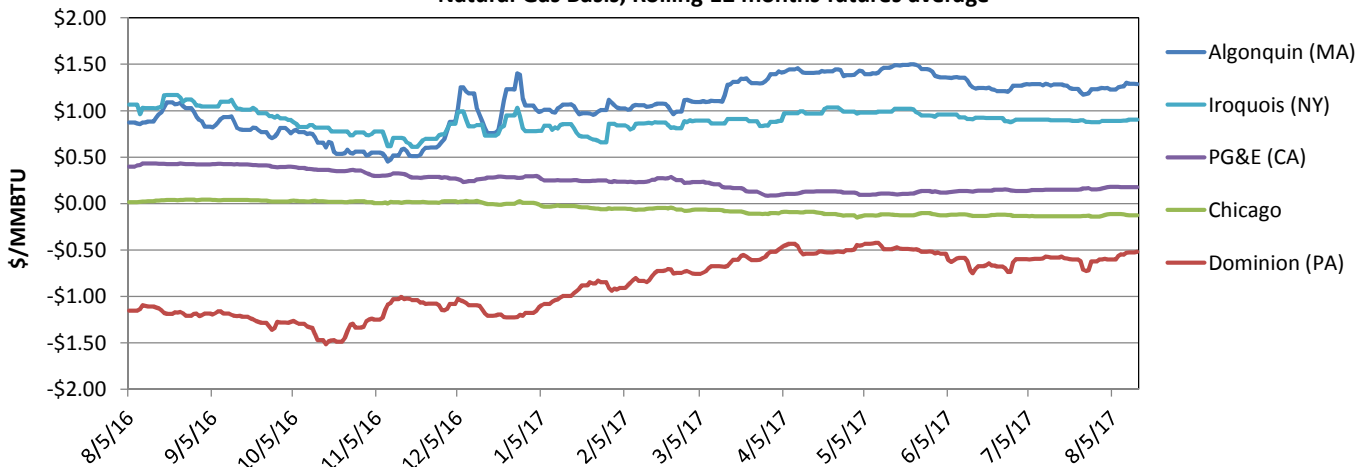
This map depicts forecasted temperatures for next week compared to the long term average. The blue/purple areas are forecast to be colder than normal, white areas are normal, and yellow/orange/red areas are warmer than normal. Abnormally hot weather in the summer and cold weather in the winter can increase the price for natural gas, oil, and electricity.

Source: Chart from the National Weather Service Climate Prediction Center [www.cpc.ncep.noaa.gov](http://www.cpc.ncep.noaa.gov)

**Natural Gas Basis Futures**

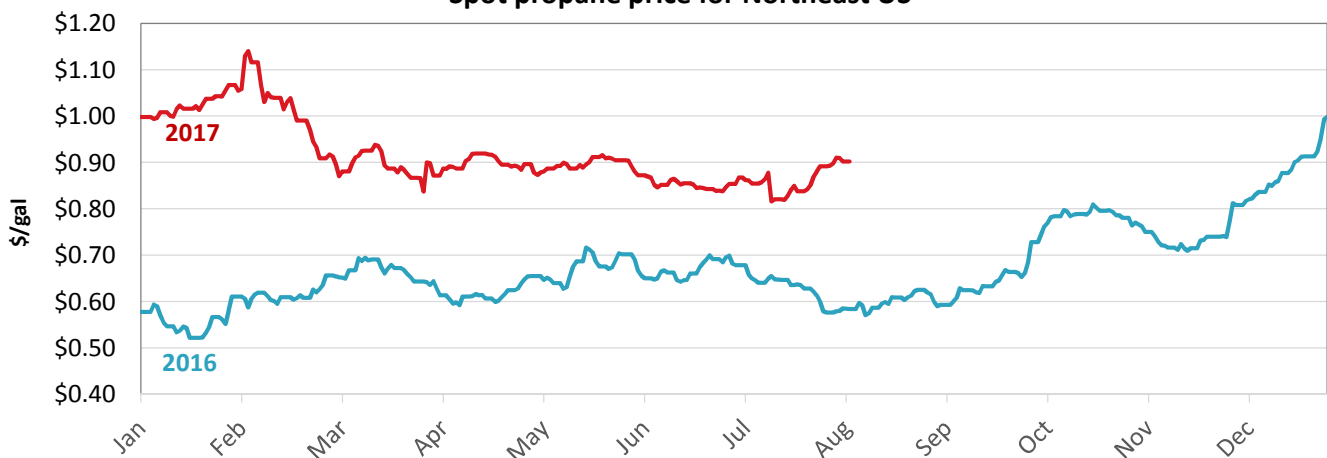
Basis is the price differential between Henry Hub, located in Erath, Louisiana, and the liquidity point closest to the end-user. Because Henry Hub is used as the delivery point for NYMEX natural gas futures contracts, the cost of using natural gas in any geographic region of the country can be approximated by adding the basis price for the appropriate liquidity point to the NYMEX futures contract. Basis prices can be negative (indicating that natural gas at a liquidity point is cheaper than at the Henry Hub) or positive (indicating that natural gas at a different liquidity point is more expensive than at the Henry Hub). Basis prices are a key component of regional electricity and natural gas costs.

**Natural Gas Basis, Rolling 12 months futures average**



**Propane**

**Spot propane price for Northeast US**



**Spot Prices**

|                        |                        | New England ISO Real Time Power Pricing By Zone (\$/MWh) |   |        |         |         |         |         | Avg  |     |
|------------------------|------------------------|--|---|--------|---------|---------|---------|---------|------|-----|
|                        |                        | 8/7/17   | 8/8/17  | 8/9/17 | 8/10/17 | 8/11/17 | 8/12/17 | 8/13/17 |      |     |
| Power (\$/MWh)         | Maine RT On Pk         | 42   | 40  | 27     | 34      | 54      |         |         | 39   |     |
|                        | Maine RT Off Pk        | 14   | 20  | 29     | 19      | 27      | 29      | 13      | 22   |     |
|                        | NH RT On Pk            | 42   | 42  | 28     | 36      | 55      |         |         | 41   |     |
|                        | NH RT Off Pk           | 15   | 21  | 30     | 20      | 27      | 29      | 12      | 22   |     |
|                        | Vermont RT On Pk       | 42   | 42  | 28     | 36      | 54      |         |         | 40   |     |
|                        | Vermont RT Off Pk      | 15   | 21  | 30     | 20      | 27      | 29      | 14      | 22   |     |
|                        | Connecticut RT On Pk   | 42   | 43  | 28     | 36      | 55      |         |         | 41   |     |
|                        | Connecticut RT Off Pk  | 15   | 21  | 30     | 20      | 28      | 29      | 14      | 22   |     |
|                        | Rhode Island RT On Pk  | 41   | 42  | 27     | 35      | 54      |         |         | 40   |     |
|                        | Rhode Island RT Off Pk | 15   | 21  | 30     | 20      | 27      | 29      | 14      | 22   |     |
|                        | NE Mass RT On Pk       | 42   | 42  | 27     | 35      | 55      |         |         | 40   |     |
|                        | NE Mass RT Off Pk      | 15   | 21  | 30     | 20      | 27      | 29      | 14      | 22   |     |
|                        | SE Mass RT On Pk       | 42   | 42  | 27     | 35      | 55      |         |         | 40   |     |
|                        | SE Mass RT Off Pk      | 15   | 21  | 30     | 20      | 27      | 29      | 14      | 22   |     |
|                        | WC Mass RT On Pk       | 42   | 42  | 28     | 36      | 55      |         |         | 41   |     |
|                        | WC Mass RT Off Pk      | 15   | 21  | 30     | 20      | 27      | 29      | 14      | 22   |     |
|                        |                        |  | New York ISO Real Time Power Pricing By Zone (\$/MWh) |        |         |         |         |         |      | Avg |
|                        | Capital RT On Pk       | 43   | 39  | 27     | 36      | 38      |         |         |      | 37  |
|                        | Capital RT Off Pk      | 17   | 21  | 24     | 32      | 24      | 27      | 17      |      | 23  |
|                        | Central RT On Pk       | 42   | 37  | 26     | 27      | 31      |         |         |      | 33  |
| Central RT Off Pk      | 16                     | 20   | 23  | (27)   | 22      | 19      | 14      |         | 13   |     |
| Hudson RT On Pk        | 44                     | 39   | 28  | 33     | 37      |         |         |         | 37   |     |
| Hudson RT Off Pk       | 18                     | 21   | 25  | 12     | 24      | 25      | 16      |         | 20   |     |
| Mohawk RT On Pk        | 43                     | 35   | 26  | 24     | 32      |         |         |         | 32   |     |
| Mohawk RT Off Pk       | 16                     | 20   | 23  | (37)   | 23      | 20      | 14      |         | 11   |     |
| Milwood RT On Pk       | 45                     | 40   | 29  | 33     | 38      |         |         |         | 37   |     |
| Milwood RT Off Pk      | 18                     | 21   | 25  | 9      | 24      | 26      | 16      |         | 20   |     |
| NYC RT On Pk           | 45                     | 39   | 29  | 33     | 39      |         |         |         | 37   |     |
| NYC RT Off Pk          | 18                     | 22   | 25  | 0      | 25      | 26      | 17      |         | 19   |     |
|                        |                        | PJM Real Time Power Pricing By Zone (\$/MWh)             |   |        |         |         |         |         | Avg  |     |
| Eastern Hub On Pk      | 40                     | 34   | 30  | 34     | 34      |         |         |         | 34   |     |
| Eastern Hub Off Pk     | 15                     | 20   | 21  | 18     | 18      | 18      | 18      |         | 18   |     |
| Western Hub On Pk      | 41                     | 34   | 30  | 34     | 34      |         |         |         | 35   |     |
| Western Hub Off Pk     | 18                     | 20   | 21  | 18     | 18      | 18      | 18      |         | 19   |     |
| PPL Zone On Pk         | 39                     | 33   | 29  | 33     | 33      |         |         |         | 33   |     |
| PPL Zone Off Pk        | 16                     | 19   | 20  | 18     | 18      | 18      | 18      |         | 18   |     |
| AEP RT On Pk           | 41                     | 31   | 29  | 37     | 37      |         |         |         | 35   |     |
| AEP RT Off Pk          | 20                     | 20   | 21  | 19     | 19      | 19      | 19      |         | 19   |     |
| Chicago RT On Pk       | 40                     | 29   | 32  | 37     | 37      |         |         |         | 35   |     |
| Chicago RT Off Pk      | 19                     | 20   | 20  | 18     | 18      | 18      | 18      |         | 19   |     |
| New Jersey Hub On Pk   | 40                     | 35   | 30  | 34     | 34      |         |         |         | 35   |     |
| New Jersey Hub Off Pk  | 15                     | 20   | 21  | 18     | 18      | 18      | 18      |         | 18   |     |
|                        |                        | California ISO Real Time Power Pricing (\$/MWh)          |   |        |         |         |         |         | Avg  |     |
| SoCal Edison RT On Pk  | 33                     | 42   | 53  | 78     | 38      |         |         |         | 49   |     |
| SoCal Edison RT Off Pk | 26                     | 29   | 33  | 34     | 31      | 23      | 26      |         | 29   |     |
|                        |                        | 8/7/17   | 8/8/17  | 8/9/17 | 8/10/17 | 8/11/17 | 8/12/17 | 8/13/17 | Avg  |     |
| Natural Gas \$/MMBtu   | Henry Hub, LA          | 2.84   | 2.75  | 2.77   | 2.78    | 2.76    |         |         | 2.78 |     |
|                        | TZ6, MA                | 2.71   | 2.68  | 3.23   | 2.49    | 1.91    |         |         | 2.60 |     |
|                        | Algonquin, MA          | 2.74   | 2.67  | 3.27   | 2.61    | 1.94    |         |         | 2.65 |     |
|                        | Chicago Hub, IL        | 2.78   | 2.71  | 2.77   | 2.76    | 2.67    |         |         | 2.74 |     |
|                        | New York, NY           | 1.90   | 1.83  | 1.69   | 1.71    | 1.64    |         |         | 1.75 |     |
|                        | Dominion South, PA     | 1.85   | 1.94  | 1.92   | 1.70    | 1.46    |         |         | 1.77 |     |
|                        | Opal Hub, WY           | 2.66   | 2.59  | 2.59   | 2.54    | 2.46    |         |         | 2.57 |     |
|                        | PG&E Citygate, CA      | 3.25   | 3.20  | 3.25   | 3.25    | 3.18    |         |         | 3.23 |     |
|                        | Kern River Deliveries  | 3.11   | 3.18  | 3.26   | 3.07    | 2.87    |         |         | 3.10 |     |