



# Competitive Energy Services Weekly Market Summary

December 31 - January 4, 2019

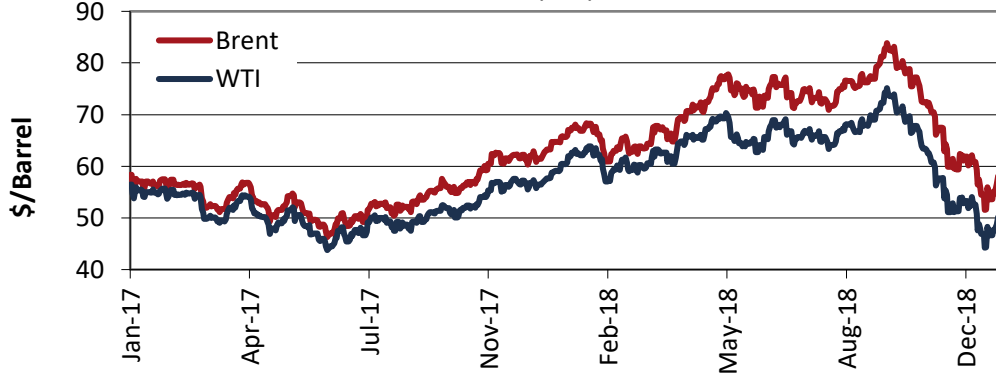
## Synopsis of Last Week's Energy Markets

Crude oil prices broke a three-week streak of losses; contracts for 2019 gained 6-7% over the week. Analysts are estimating that OPEC members had already started cutting production in December, ahead of the new obligations which started in January. Natural gas futures slipped 7.8% in the first week of the new year. This follows two bearish inventory reports and forecasts for mild weather that could continue to erode the now-17% storage deficit.

## Oil Market

### Crude Oil - WTI & Brent

12-Month Forward Strips, past 24 months

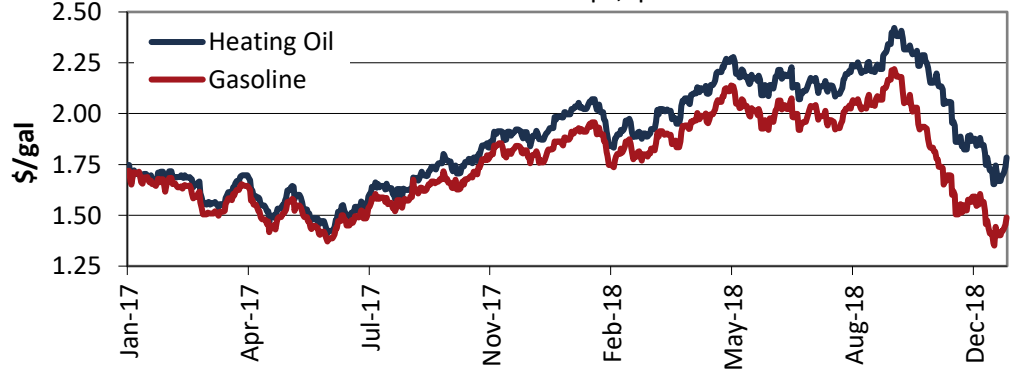


NYMEX WTI	last close	previous week	24-month high	24-month low
12 month strip, \$/bbl	\$49.86	\$46.62	\$75.39	\$43.82
date	1/4/19	12/28/18	10/3/18	6/21/17
change from last close		6.9%	-33.9%	14%

US STORAGE (in million bbls)		crude oil
domestic stocks as of	12/28/18	441
gain / loss from previous week		0.0
comparison to historic range		within

### Heating Oil & Gasoline

NYMEX 12-Month Forward Strips, past 24 months

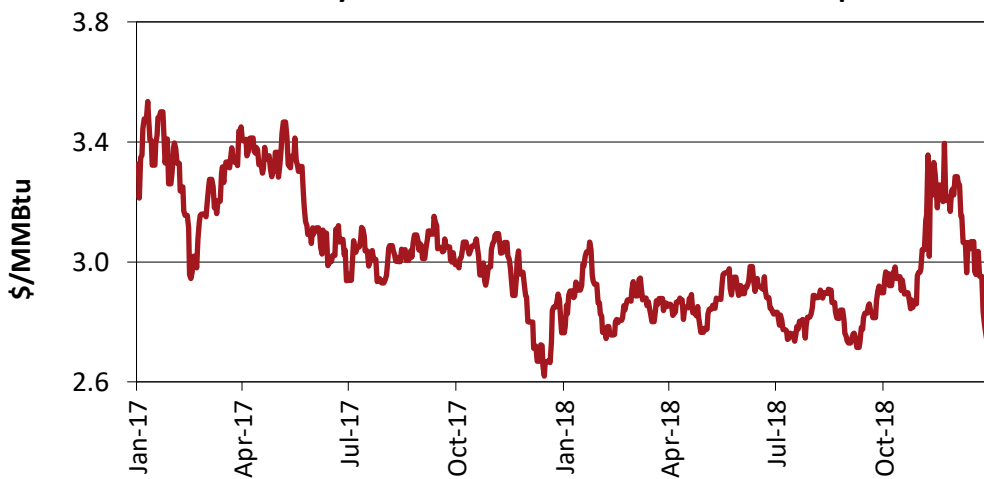


NYMEX Heating Oil	last close	previous week	24-month high	24-month low
12 month strip, \$/gal	\$1.77	\$1.67	\$2.43	\$1.41
date	1/4/19	12/28/18	10/3/18	6/21/17
change from last close		6.3%	-27%	26%

US STORAGE (in million bbls)		distillate	propane	gasoline
domestic stocks as of	12/28/18	129	71	240
gain / loss from previous week		9.5	-1.6	6.9
comparison to historic range		within	within	above

## Natural Gas Market

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



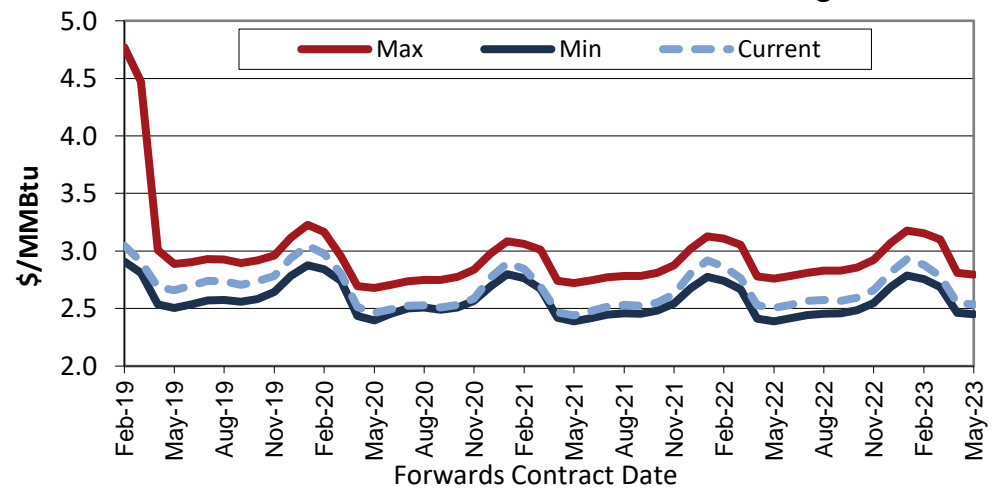
NYMEX PRICING	last close	previous week	24-month high	24-month low
12 mo. strip, \$/MMBtu	\$2.81	\$2.95	\$3.50	\$2.61
date	1/4/19	12/28/18	1/17/17	12/21/17
change from last close		-4.9%	-20%	7%

#### CES SCORE

12 month	62
18 month	67
24 month	71
36 month	73

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



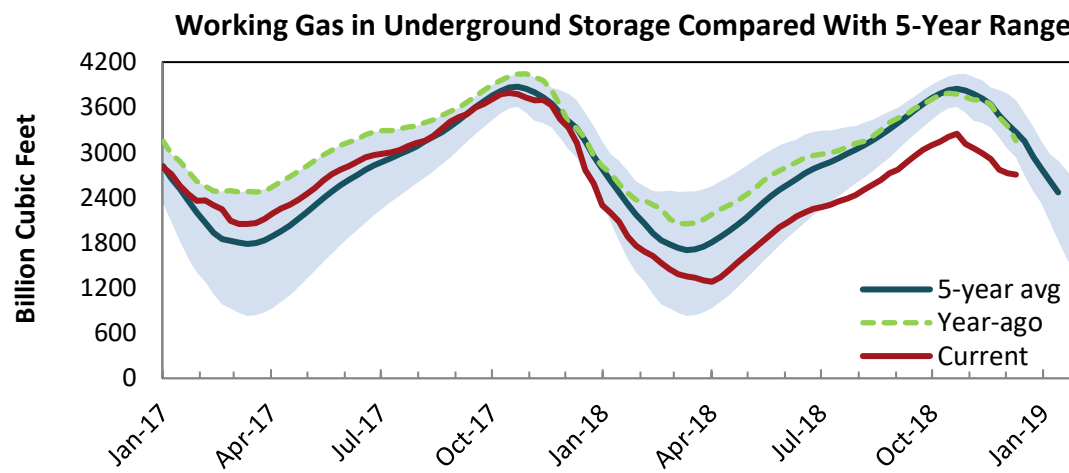
FORWARDS	12 month	18 month	24 month	36 month
strip (\$/MMBtu)	\$2.81	\$2.75	\$2.72	\$2.69

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



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		12/21/18	2,725	
Most Recent Stock Level		12/28/18	2,705	
Year-ago Stock Level			3,155	-14.3%
5-Year Average Stock Level			3,265	-17.2%
Most Recent Net Change		12/28/18	-20	
Year-Ago Net Change			-193	
5-Year Average Net Change			-107	

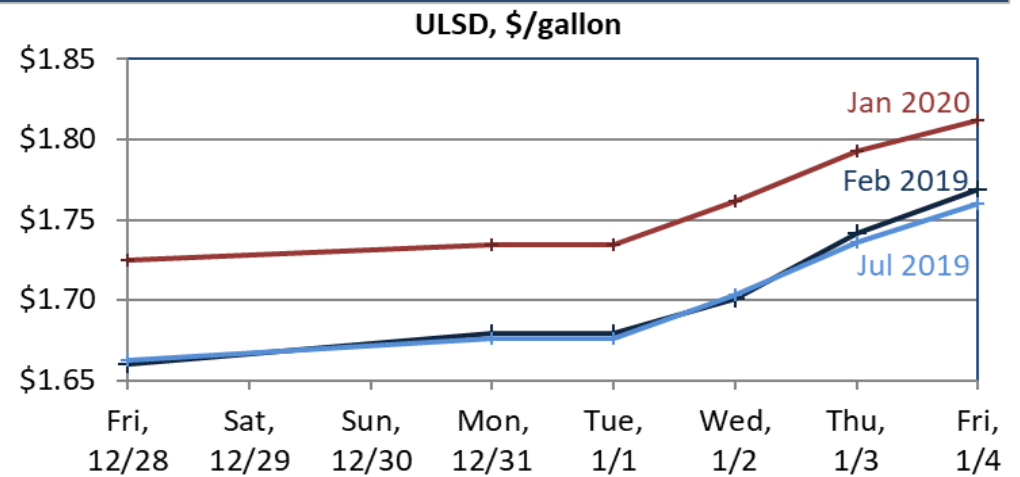
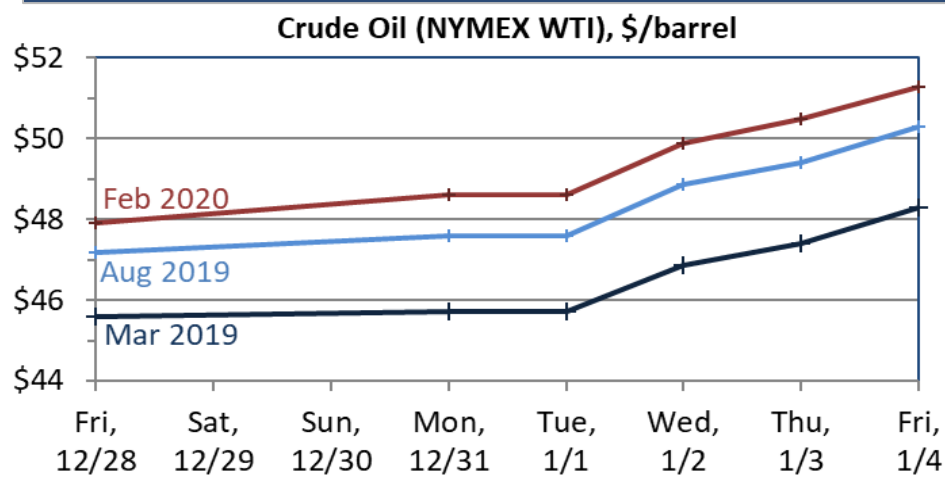
Data Source: EIA <http://tonto.eia.doe.gov/oog/info/ngs/ngs.html>

### Market Assessment

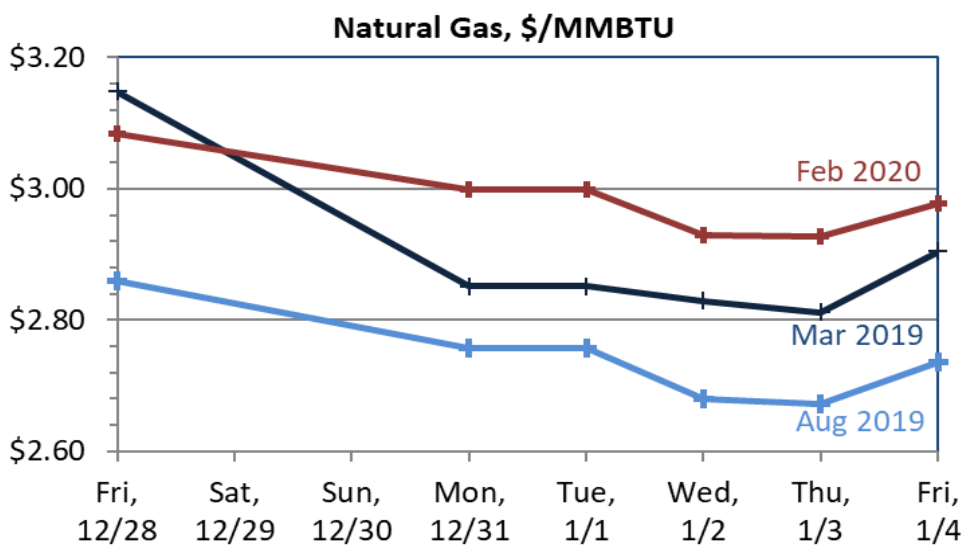
#### NYMEX Futures Summary Statistics

	Last Expired Contract	Exp. Date	Price	Prompt Month	Price	Most Expensive Next 12 Months	Price	Least Expensive Next 12 Months	Price	Next Winter Avg (Nov19-Mar20)
Crude oil	Jan-19	12/19/18	\$47.20	Feb-19	\$47.96	Jan-20	\$51.18	Feb-19	\$47.96	\$51.66
Heating oil	Jan-19	12/31/18	\$1.68	Feb-19	\$1.77	Jan-20	\$1.81	May-19	\$1.74	\$1.81
Natural gas	Jan-19	12/27/18	\$3.64	Feb-19	\$3.04	Jan-20	\$3.05	May-19	\$2.66	\$2.91

#### NYMEX End-of-Day Settlements



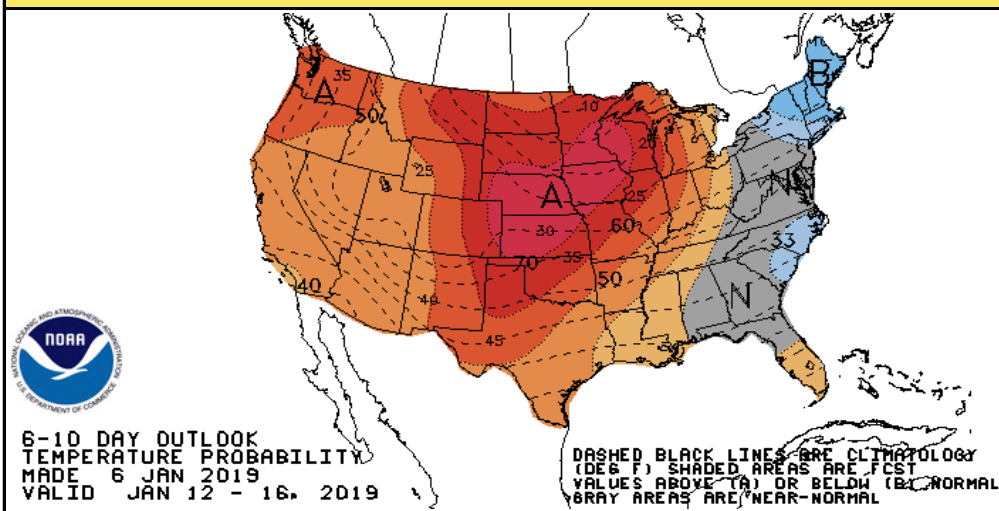
Crude oil climbed each trading session last week. Prices rose along with equities but more importantly, a survey of analysts estimates that OPEC's December production fell 500,000 barrels per day (bpd) from November's totals. This would mean that OPEC, particularly Saudi Arabia, began shedding barrels ahead of its commitment to shed 800,000 bpd in January. Russia committed to reducing 400,000 bpd from October's rate. Oil prices largely ignored a surprising storage report from the EIA, which showed that stockpiles were flat for a second straight week, in contrast to a projected drop. Distillates and gasoline stocks posted large gains, which also should have weighed on prices when the EIA's report was released Friday. Instead, NYMEX crude oil futures jumped 6-7% over the week, the first weekly gain in the last 4 weeks.



Natural gas prices fell 7.8% in the first week of the year, marking the fifth consecutive weekly decline and returning prices to levels last seen before the early-winter rally. February futures sank below \$3/MMBtu during the week and closed at \$3.04/MMBtu on Friday afternoon. Forecasts show mild weather across the country that is expected to cap heating demand. This follows two bearish inventory reports from the EIA that showed withdrawals of under 50 Bcf, compared to typical triple-digit winter draws. With muted demand and strong domestic production, this trend could continue in upcoming reports. Inventories remain well below typical levels, however, and remain vulnerable to any intense cold that may come through the remainder of the winter.

The National Weather Service near-term forecast calls for above-normal temperatures west of the Appalachians but below-normal temperatures for the Northeast. The natural gas market scores on page 1 improved from the previous week. Clients with electricity or natural gas contracts expiring in 2019 should consult with a CES representative for customized guidance.

**National Weather Service Forecast**



**6 - 10 Day Forecast for Jan 12 - 16**

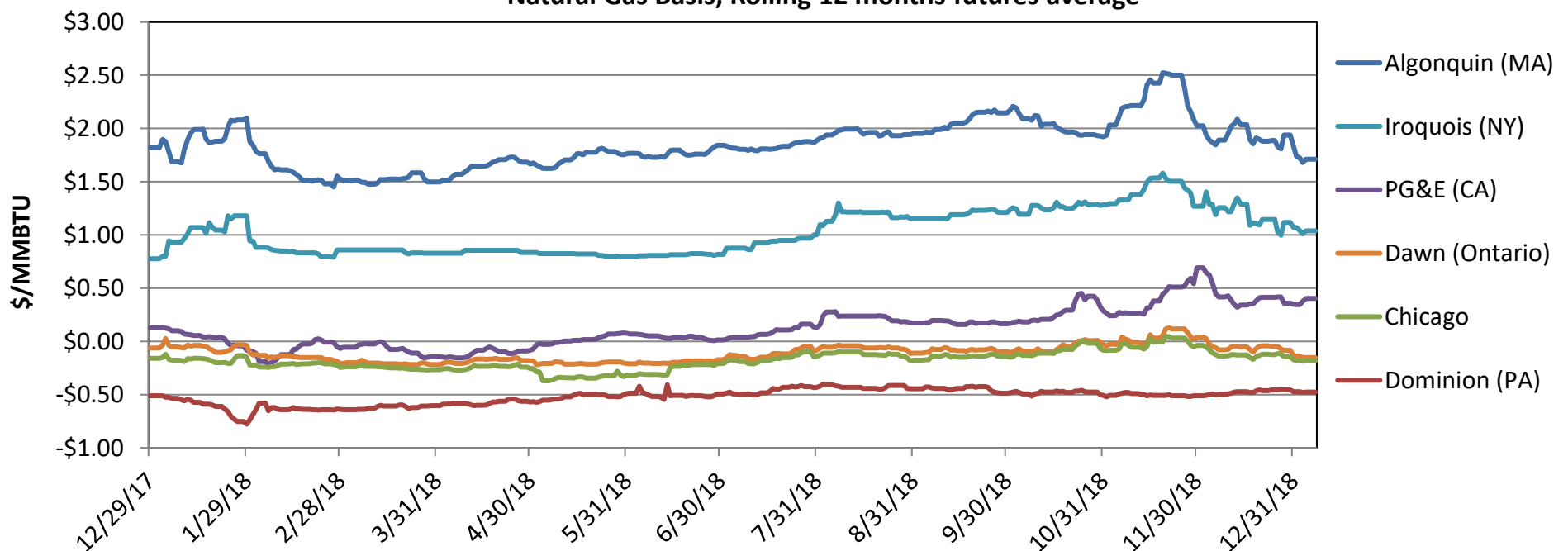
This map depicts forecasted temperatures for next week compared to the long term average. The blue/purple areas are forecast to be colder than normal, white areas are normal, and yellow/orange/red areas are warmer than normal. Abnormally hot weather in the summer and cold weather in the winter can increase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

Source: Chart from the National Weather Service Climate Prediction

**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**

		<b>New England ISO Real Time Power Pricing By Zone (\$/MWh)</b>							<b>Avg</b>	
		12/31/18	1/1/19	1/2/19	1/3/19	1/4/19	1/5/19	1/6/19		
<b>Power (\$/MWh)</b>	Maine RT On Pk	37	24	32	25	32			30	
	Maine RT Off Pk	28	24	22	20	22	11	24	21	
	NH RT On Pk	36	25	33	26	32			30	
	NH RT Off Pk	28	24	23	20	22	11	24	22	
	Vermont RT On Pk	36	24	32	25	31			30	
	Vermont RT Off Pk	28	24	23	20	21	11	23	21	
	Connecticut RT On Pk	36	25	32	25	31			30	
	Connecticut RT Off Pk	28	24	23	20	22	11	23	22	
	Rhode Island RT On Pk	35	25	32	25	32			30	
	Rhode Island RT Off Pk	28	25	23	20	22	11	23	22	
	NE Mass RT On Pk	36	25	33	25	32			30	
	NE Mass RT Off Pk	28	25	23	20	22	11	24	22	
	SE Mass RT On Pk	36	25	32	25	32			30	
	SE Mass RT Off Pk	28	25	23	20	22	11	23	22	
	WC Mass RT On Pk	36	25	32	25	32			30	
	WC Mass RT Off Pk	28	25	23	20	22	11	23	22	
		<b>New York ISO Real Time Power Pricing By Zone (\$/MWh)</b>							<b>Avg</b>	
<b>Power (\$/MWh)</b>	Capital RT On Pk	41	27	33	24	47			34	
	Capital RT Off Pk	31	27	25	21	28	18	24	25	
	Central RT On Pk	10	24	30	19	15			20	
	Central RT Off Pk	21	20	16	20	23	17	22	20	
	Hudson RT On Pk	34	27	33	23	38			31	
	Hudson RT Off Pk	29	26	24	21	27	18	24	24	
	Mohawk RT On Pk	11	25	30	19	15			20	
	Mohawk RT Off Pk	22	21	17	20	24	17	22	20	
	Milwood RT On Pk	35	27	33	23	38			31	
	Milwood RT Off Pk	29	26	24	21	27	18	24	24	
	NYC RT On Pk	34	28	33	24	38			31	
	NYC RT Off Pk	29	26	24	21	27	19	24	24	
			<b>PJM Real Time Power Pricing By Zone (\$/MWh)</b>							<b>Avg</b>
	<b>Power (\$/MWh)</b>	Eastern Hub On Pk	25	25	27	23	23			25
Eastern Hub Off Pk		23	25	26	23	23	23	23	24	
Western Hub On Pk		24	24	32	23	23			25	
Western Hub Off Pk		22	24	26	22	22	22	22	23	
PPL Zone On Pk		24	24	27	22	22			24	
PPL Zone Off Pk		22	24	25	22	22	22	22	23	
AEP RT On Pk		24	24	28	22	22			24	
AEP RT Off Pk		22	24	25	22	22	22	22	23	
Chicago RT On Pk		23	23	27	21	21			23	
Chicago RT Off Pk		21	23	24	14	14	14	14	18	
New Jersey Hub On Pk		24	24	27	23	23			24	
New Jersey Hub Off Pk		22	24	25	22	22	22	22	23	
		<b>California ISO Real Time Power Pricing (\$/MWh)</b>							<b>Avg</b>	
<b>Power (\$/MWh)</b>		SoCal Edison RT On Pk	36	35	37	40	46			39
	SoCal Edison RT Off Pk	35	29	36	37	44	36	29	35	
		12/31/18	1/1/19	1/2/19	1/3/19	1/4/19	1/5/19	1/6/19	<b>Avg</b>	
<b>Natural Gas \$/MMBtu</b>	Henry Hub, LA	3.57		3.42	3.10	3.25			3.34	
	TZ6, MA			3.87	3.35	3.37			3.53	
	Algonquin, MA			3.75	3.49	3.45			3.56	
	Chicago Hub, IL	3.26		2.96	2.97	3.06			3.06	
	New York, NY	3.29		3.06	2.91	3.05			3.08	
	Dominion South, PA	3.09		2.95	2.78	2.82			2.91	
	Opal Hub, WY	3.59		4.07	3.72	3.75			3.78	
	PG&E Citygate, CA	4.09		4.11	3.96	3.95			4.03	