



## Short-Term Energy Outlook (STEO)

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### Forecast highlights

#### *Global liquid fuels*

- North Sea Brent crude oil spot prices averaged \$58 per barrel (b) in October, an increase of \$1/b from the average in September. EIA forecasts Brent spot prices to average \$53/b in 2017 and \$56/b in 2018.
- West Texas Intermediate (WTI) crude oil prices are forecast to average almost \$5/b lower than Brent prices in 2018. After averaging \$2/b lower than Brent prices through the first eight months of 2017, WTI prices averaged \$6/b lower than Brent prices in September and October. The spread between Brent and WTI prices is expected to remain at this level through the first quarter of 2018 before narrowing to \$4/b during the second half of 2018.
- NYMEX contract values for February 2018 delivery that traded during the five-day period ending November 2 suggest that a range of \$45/b to \$67/b encompasses the market expectation for February WTI prices at the 95% confidence level.
- EIA estimates U.S. crude oil production averaged 9.3 million barrels per day (b/d) in October, down 90,000 b/d from the September level. Crude oil production in the Gulf of Mexico averaged 1.4 million b/d in October, which was 260,000 b/d lower than the September level. The lower production reflected the effects of Hurricane Nate. At the time of publication, most oil production platforms in the Gulf of Mexico had returned to operation following the hurricane, and EIA forecasts overall U.S. crude oil production will continue to grow in the coming months. EIA forecasts total U.S. crude oil production to average 9.2 million b/d for all of 2017 and 9.9 million b/d in 2018, which would mark the highest annual average production, surpassing the previous record of 9.6 million b/d set in 1970.
- U.S. regular gasoline retail prices averaged \$2.51 per gallon (gal) in October, a decrease of 14 cents/gal from the average in September, which was the highest monthly average since July 2015. The September prices reflected the effects of market disruptions following hurricanes Harvey and Irma. EIA forecasts the average U.S. regular gasoline retail price will average \$2.47/gal in November and \$2.39/gal in December. EIA forecasts that U.S. regular gasoline retail prices will average \$2.40/gal in 2017 and \$2.45/gal in 2018.

## *Natural gas*

- U.S. dry natural gas production is forecast to average 73.4 billion cubic feet per day (Bcf/d) in 2017, a 0.6 Bcf/d increase from the 2016 level. Natural gas production in 2018 is forecast to be 5.5 Bcf/d higher than the 2017 level.
- In October, the average Henry Hub natural gas spot price was \$2.88 per million British thermal units (MMBtu), down 10 cents/MMBtu from the September level. Expected growth in natural gas exports and domestic natural gas consumption in 2018 contribute to the forecast Henry Hub natural gas spot price rising from an annual average of \$3.01/MMBtu in 2017 to \$3.10/MMBtu in 2018. NYMEX contract values for February 2018 delivery that traded during the five-day period ending November 2 suggest that a range of \$2.08/MMBtu to \$4.52/MMBtu encompasses the market expectation for February Henry Hub natural gas prices at the 95% confidence level.

## *Electricity, coal, renewables, and emissions*

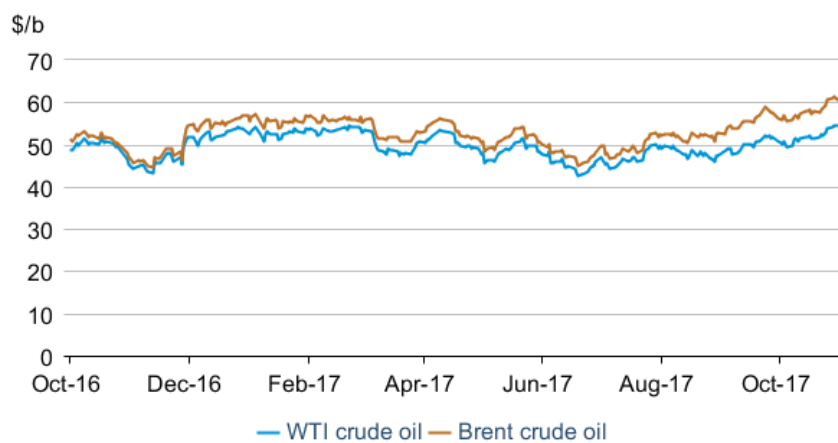
- EIA expects the share of U.S. total utility-scale electricity generation from natural gas will fall from an average of 34% in 2016 to about 31% in 2017 as a result of higher natural gas prices and increased generation from renewables and coal. Coal's forecast generation share rises from 30% last year to 31% in 2017. The projected annual generation shares for natural gas and coal in 2018 are 32% and 31%, respectively. Generation from renewable energy sources other than hydropower grows from 8% in 2016 to a forecast share of about 9% in 2017 and 10% in 2018. Generation from nuclear energy accounts for almost 20% of total generation in each year from 2016 through 2018.
- Coal production for the first 10 months of 2017 is estimated to have been 656 million short tons (MMst), 59 MMst (10%) higher than production for the same period in 2016. Annual production is expected to be about 790 MMst in both 2017 and 2018.
- [Wind electricity generating capacity](#) at the end of 2016 was 82 gigawatts (GW). EIA expects wind capacity additions in the forecast to bring total wind capacity to 88 GW by the end of 2017 and to 96 GW by the end of 2018.
- Total utility-scale solar electricity generating capacity at the end of 2016 was 22 GW. EIA expects solar capacity additions in the forecast will bring total utility-scale solar capacity to 27 GW by the end of 2017 and to 31 GW by the end of 2018.
- After declining by 1.6% in 2016, energy-related carbon dioxide (CO<sub>2</sub>) emissions are projected to decrease by 0.8% in 2017 and then to increase by 2.1% in 2018. Energy-related CO<sub>2</sub> emissions are sensitive to changes in weather, economic growth, and energy prices.

# Petroleum and natural gas markets review

## Crude oil

**Prices:** The front-month futures price for North Sea Brent crude oil settled at \$60.62 per barrel (b) on November 2, an increase of \$4.50/b from October 2. Front-month futures prices for West Texas Intermediate (WTI) crude oil for delivery at Cushing, Oklahoma, increased by \$3.96/b over the same period, settling at \$54.54/b on November 2 (**Figure 1**). October Brent and WTI monthly average spot prices were \$1.36/b and \$1.76/b higher, respectively, than the September average spot prices.

**Figure 1. Crude oil front-month futures prices**



eia Bloomberg L.P.

The Brent crude oil price closed at its highest level in more than two years in late October, settling at more than \$60/b for the first time since July 2015. Global economic data remain robust and support rising oil demand. Global refinery outages were below their five-year average in October as refiners likely deferred maintenance to take advantage of high crack spreads (the difference between petroleum product prices and crude oil prices), which increased near-term demand for crude oil. In addition, some near-term supply disruptions temporarily removed crude oil from the market. Market participants could also be expecting an extension to the crude oil [supply reduction](#) agreement at the next meeting of the Organization of the Petroleum Exporting Countries (OPEC) on November 30, as leaders in Saudi Arabia and Russia made public announcements supporting a nine-month extension to the end of 2018.

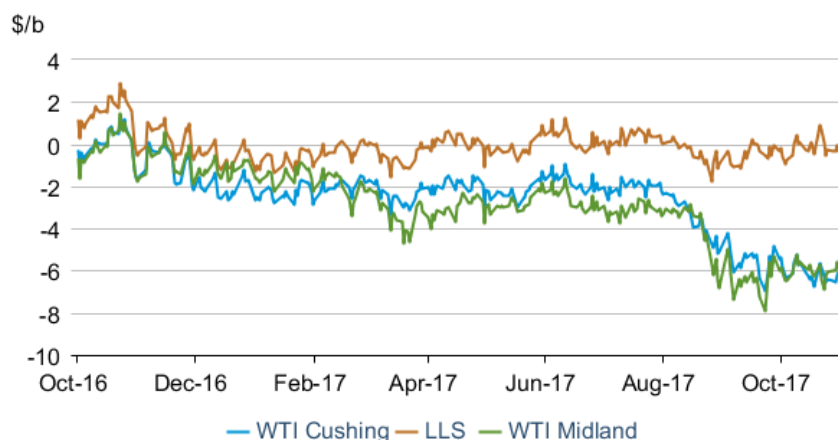
Oil deliveries from the Kurdistan Region of Iraq and Kirkuk area of Iraq to the Turkish port of Ceyhan declined to less than 0.3 million barrels per day (b/d) in October, as the Iraqi central government took control of the Kirkuk oil fields following the Kurdistan Regional Government's independence vote in September. Previously, exports from the Kurdistan Region to Ceyhan had been about 0.5 million b/d. Although a significant supply disruption could put upward pressure on crude oil prices, Iraq made up for the shortfall by increasing exports from its southern Basra port, because infrastructure expansions to increase export capacity were completed recently.

[Hurricane Nate](#) disrupted crude oil production in the Federal Offshore Gulf of Mexico briefly, but operations and production resumed by the week ending October 20. The disruptions in Iraq and the United States slightly reduced EIA’s estimates for liquid fuels supply in October, but total [global unplanned supply disruptions](#) remain low by historical standards.

Despite the recent increase in Brent crude oil prices to more than \$60/b, EIA forecasts Brent prices to ease somewhat in the coming months and to average \$56/b in 2018. EIA expects global oil supply growth to outpace global oil demand growth in 2018, contributing to global oil inventories rising by a forecast 0.3 million b/d in 2018, compared with an estimated 0.2 million b/d draw in 2017. However, global economic developments, geopolitical events, and crude oil production dynamics in the United States and in other major producers in the coming months have the potential to push oil prices higher or lower than the current STEO price forecast.

WTI crude oil price differentials with Brent remain near their widest levels of the year. Based on spot prices, the WTI Cushing-Brent spread settled at -\$6.09/b on November 2, and the WTI Midland-Brent spread settled at -\$5.84/b. In comparison, the Light Louisiana Sweet (LLS)-Brent spread settled at -34 cents/b (**Figure 2**).

**Figure 2. U.S. crude oil spot price differentials to Brent**



 U.S. Energy Information Administration, Bloomberg L.P.

The WTI Cushing-Brent likely reflects the transportation costs associated with bringing light sweet crude oil from Cushing, Oklahoma, to the U.S. Gulf Coast and the costs to export the crude oil to the marginal market. Because LLS is produced in the Gulf of Mexico, it competes with global waterborne crude oils without the same transportation costs faced by inland crude oil and, as a result, trades closer to Brent prices.

The widening WTI Cushing-Brent spread in recent months could reflect increasing constraints on the capacity to transport additional crude oil from Cushing to the U.S. Gulf Coast. Increasingly constrained transportation and related high levels of crude oil stocks in [Petroleum Administration for Defense District \(PADD\) 2](#) are likely affecting WTI prices—both in Cushing, Oklahoma and in Midland, Texas—compared with waterborne crude oils like Brent and LLS.

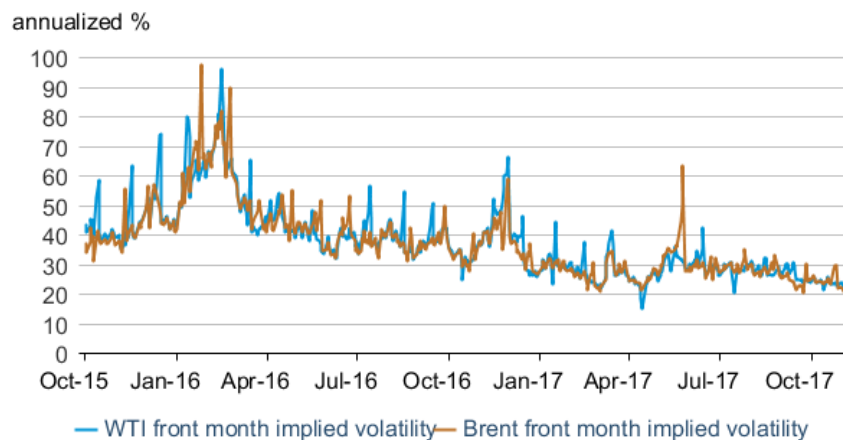
Total commercial U.S. crude oil inventories declined by 27 million barrels from the last week of July to the last week in October, according to EIA's *Weekly Petroleum Status Report* (WPSR), whereas inventories in Cushing, Oklahoma, increased by 8 million barrels.

Pipeline expansions in recent years have increased crude oil flows from rising Canadian and Bakken output into Cushing, Oklahoma, contributing to relatively high stock levels in the region. In addition, increased output from the Permian basin in West Texas and New Mexico is flowing into Cushing, Oklahoma. At the same time, new pipeline connectivity has also allowed more Permian barrels to [flow directly to the U.S. Gulf Coast](#).

Until new pipeline capacity is brought online in the first quarter of 2018, EIA expects Brent crude oil prices to remain \$6/b higher than WTI prices. EIA expects this spread to narrow to \$4/b during the second half of 2018. In the Texas region of the Permian Basin [the 0.4 million b/d Midland to Sealy pipeline](#) is scheduled to come online by the second quarter of 2018, which will increase Permian crude oil flows to the U.S. Gulf Coast. [The 0.2 million b/d Diamond pipeline from Cushing, Oklahoma, to Memphis, Tennessee](#), is scheduled to be complete by the end of 2017 and could begin to reduce some of the stocks in Cushing, Oklahoma.

**Implied volatility:** Crude oil implied volatility reached some of the lowest levels of the year in October. The WTI front-month average volatility was the lowest since September 2014 and settled at 21.2% on November 2. Although Brent front-month average volatility increased compared with September levels, settling at 20.7% on November 2 (**Figure 3**), it has remained lower than levels during much of the past two years. Despite considerable uncertainty ahead of the November 30 OPEC meeting, market participants expect less price volatility than they did ahead of the previous OPEC meeting in May 2017.

**Figure 3. Crude oil implied volatility**

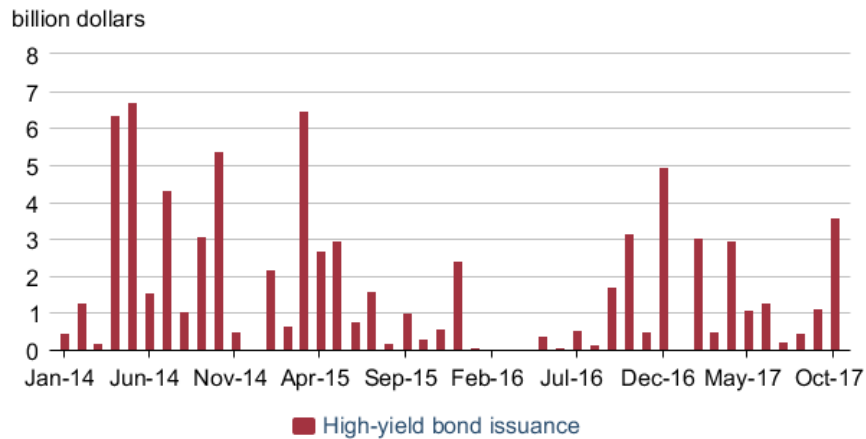


eia Bloomberg L.P.

**High-Yield bond issuance:** U.S. exploration and production companies issued \$3.6 billion in high-yield bonds in October, the largest amount issued during any month in 2017 (**Figure 4**). Companies with a rating below investment grade by one of the corporate rating agencies (S&P,

Moody's, and Fitch) have already issued more bonds through October 2017 than during all of 2016, based on Bloomberg data. Many U.S. oil companies have been [expanding drilling programs and development expenditures](#) this year, and [borrowing costs remain at levels similar to those when crude oil prices were more than \\$100/b](#). Access to capital is necessary for many companies to increase investment spending, and it supports growth in U.S. crude oil production.

**Figure 4. U.S. exploration and production company high-yield bond issuance**



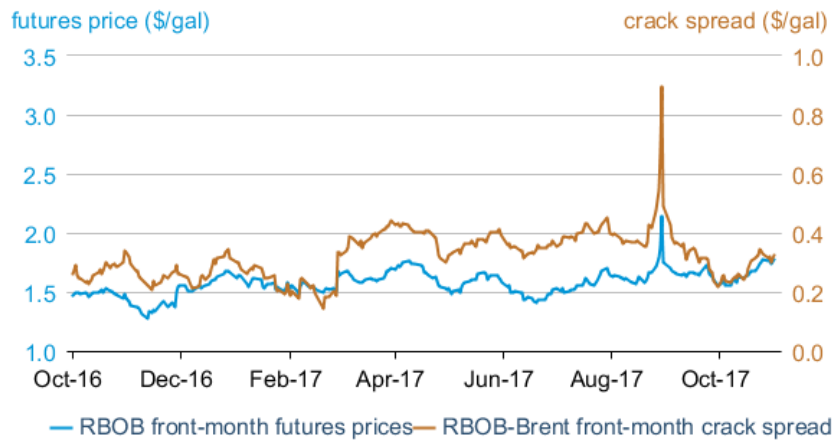
 U.S. Energy Information Administration, Bloomberg L.P.

## Petroleum products

**Gasoline prices:** The front-month futures price of reformulated blendstock for oxygenate blending (RBOB, the petroleum component of gasoline used in many parts of the country) rose by 21 cents per gallon (gal) from October 2 to settle at \$1.77/gal on November 2 (**Figure 5**). The RBOB-Brent crack spread (the difference between the price of RBOB and the price of Brent crude oil) rose by 11 cents/gal to settle at 33 cents/gal over the same period. EIA compares RBOB prices to Brent prices because [EIA research indicates that U.S. gasoline prices usually move with Brent prices](#), the international crude oil benchmark.

The average [gasoline crack spread](#) in October was 12 cents/gal higher than the five-year average for October, as gasoline inventories declined and as U.S. gasoline consumption increased. In this STEO, EIA estimates U.S. gasoline consumption in October averaged 9.3 million b/d, which would be a record high for the month of October. Also in this STEO, EIA estimates that gasoline stocks at the end of October were 7.2 million barrels (3%) lower than the end-of-September levels and 13.2 million barrels (6%) lower than the level at the end of October 2016.

**Figure 5. Historical RBOB futures prices and crack spread**

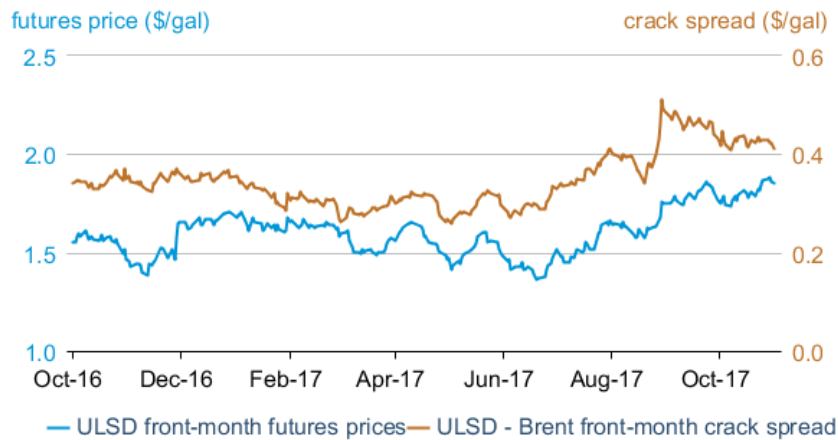



 Bloomberg L.P., RBOB=reformulated blendstock for oxygenate blending

**Ultra-low sulfur diesel prices:** The ultra-low sulfur diesel (ULSD) futures price increased by 9 cents/gal from October 2 to settle at \$1.85/gal on November 2. The ULSD-Brent crack spread (the difference between the price of ULSD and the price of Brent crude oil) declined 2 cents/gal over the same period, settling at 41 cents/gal (**Figure 6**).

The **ULSD crack spread** has remained higher than last year's level each month since July 2017, as distillate consumption and exports increased and U.S. distillate inventories declined. For much of 2017, year-over-year levels of U.S. distillate consumption and exports have been higher. During the first three quarters of 2017, EIA estimates U.S. distillate consumption was almost 70,000 b/d (2%) higher than during the same period in 2016. Distillate fuel exports set new five-year highs in all but one month so far in 2017, according to the *Petroleum Supply Monthly* (PSM). Higher consumption and exports have contributed to the decline in U.S. distillate stocks. EIA estimates that U.S. distillate inventories at the end of both September and October were below the five-year average for those respective months. These two months were the first since March 2015 that distillate inventories were below the five-year average at the end of any month.

**Figure 6. Historical ULSD futures price and crack spread**



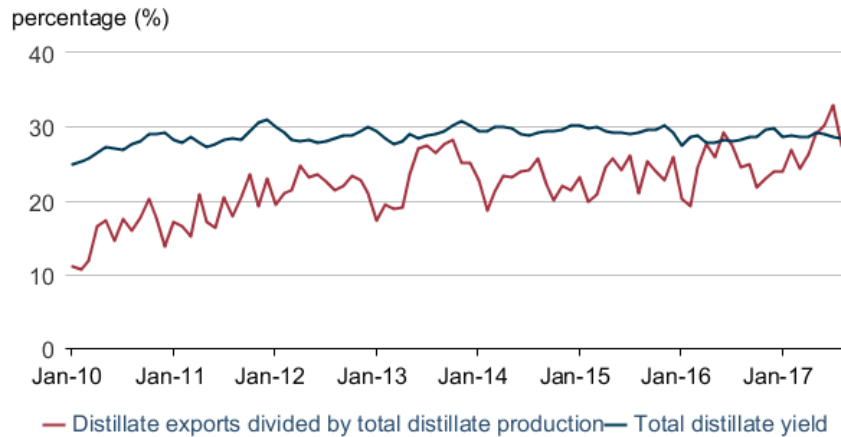
 Bloomberg L.P., ULSD=ultra-low sulfur diesel

[U.S. distillate exports](#) have risen significantly in 2017. In July 2017, U.S. distillate exports rose to a record 1.7 million b/d before declining to 1.4 million b/d in August. Looking at U.S. distillate exports as a percentage of U.S. distillate production illustrates the growing importance of [U.S. exports in the global distillate market](#). U.S. distillate exports as a share of U.S. distillate production rose to a record high of 33% in July but then declined to 27% in August (**Figure 7**).

Compared with the first eight months of 2016, distillate exports this year were 16% higher, with increased exports to most major regions. The largest increases in U.S. distillate exports were to Central and South America, as oil distributors in Brazil began purchasing more competitively priced fuel from overseas sources rather than from its state-owned oil company, Petrobras. Beyond regional factors, broad-based economic growth among developed and emerging markets is a major contributor to increased distillate consumption globally.



**Figure 7. U.S. distillate yield and export share**



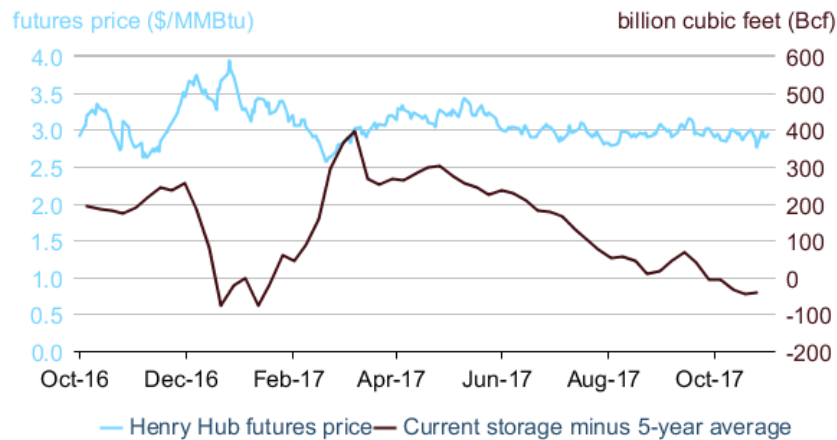
 U.S. Energy Information Administration

## Natural Gas

**Prices and storage:** The front-month natural gas futures contract for delivery at Henry Hub settled at \$2.94/million British thermal units (MMBtu) on November 2, an increase of 2 cents/MMBtu from October 2 (**Figure 8**). Futures prices traded within a 31 cents/MMBtu range in October, the narrowest range for that month since 1995. Working natural gas injections in storage were below average in October, bringing inventories for the week ending October 27 to 3.8 trillion cubic feet, which is 1.1% lower than the five-year average and 4.6% lower than last year at this time.

Liquefied natural gas (LNG) exports in October increased from September, as the Gulf Coast region recovered from hurricane-related service disruptions. Despite growing export demand and below-average storage injections—factors that could contribute to upward pressure on prices—front-month futures prices remained in a narrow trading range. The National Oceanic and Atmospheric Administration’s (NOAA) [revised winter forecast](#) called for milder temperatures, putting downward pressure on futures prices and contributing to the January natural gas futures contract price falling to the lowest level since March 2016. The Henry Hub natural gas spot price averaged \$2.88/MMBtu in October, 10 cents/MMBtu lower than in September.

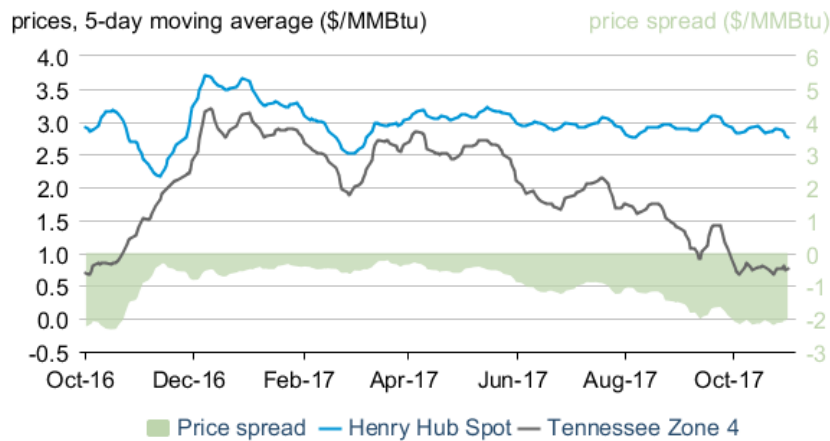
**Figure 8. U.S. natural gas prices and storage**



eia U.S. Energy Information Administration, Bloomberg L.P.

**Marcellus area spot prices:** The five-day moving average spot price in Tennessee Zone 4 (in the northern part of the Marcellus region) declined to 68 cents/MMBtu on October 6, the lowest level in a year (Figure 9). The price spread between Tennessee Zone 4 and Henry Hub reached -\$2.19/MMBtu on October 25, the widest point since last year. The differential to Henry Hub, which had widened in October 2016 because of constraints in takeaway capacity, narrowed after projects such as the Ohio Valley Connector, the Rockies Express, and the Algonquin Incremental Market pipelines entered service in the last quarter of 2016 and the beginning of 2017. However, with increased natural gas production in 2017, takeaway capacity is constrained again. The ramp-ups of the Rover pipeline, the Cove Point LNG facility, and the Nexus Gas Transmission Project in the last quarter of 2017 and the first quarter of 2018, which will have a combined 5.5 billion cubic feet per day (Bcf/d) of new takeaway capacity, will likely narrow the spread between Marcellus area and Henry Hub prices.

**Figure 9. Henry Hub and Tennessee Zone 4 natural gas spot prices**



eia U.S. Energy Information Administration, Bloomberg L.P.

## Notable forecast changes

- EIA expects West Texas Intermediate crude oil prices to average almost \$5/b lower than Brent prices in 2018. Previously EIA had expected that spread to be almost \$4/b. The wider spread reflects the assumption of increasing near-term constraints in moving light sweet crude oil from Cushing, Oklahoma, to the U.S. Gulf Coast, where it can compete with globally traded crude oil.
- For more information, see the [detailed STEO table of forecast changes](#).

This report was prepared by the U.S. Energy Information Administration (EIA), the statistical and analytical agency within the U.S. Department of Energy. By law, EIA's data, analyses, and forecasts are independent of approval by any other officer or employee of the United States Government. The views in this report therefore should not be construed as representing those of the U.S. Department of Energy or other federal agencies.

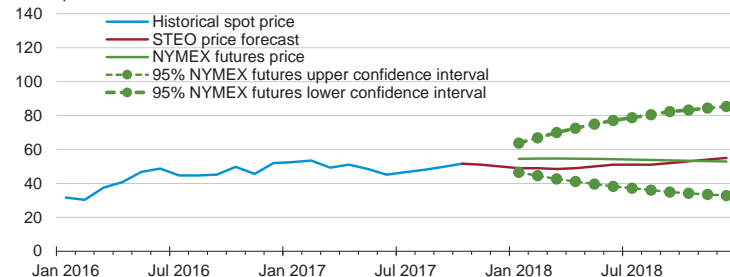


# Short-Term Energy Outlook

## Chart Gallery for November 2017

West Texas Intermediate (WTI) crude oil price

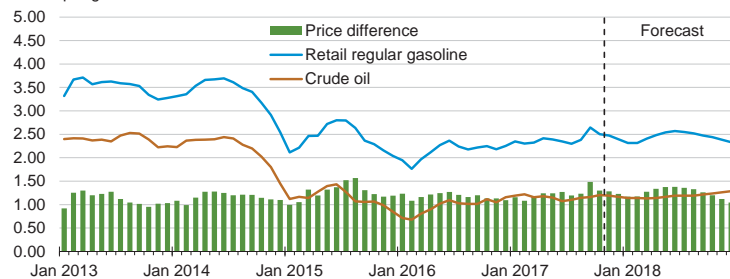
dollars per barrel



Note: Confidence interval derived from options market information for the 5 trading days ending Nov 2, 2017. Intervals not calculated for months with sparse trading in near-the-money options contracts.  
Source: Short-Term Energy Outlook, November 2017, and CME Group.

U.S. gasoline and crude oil prices

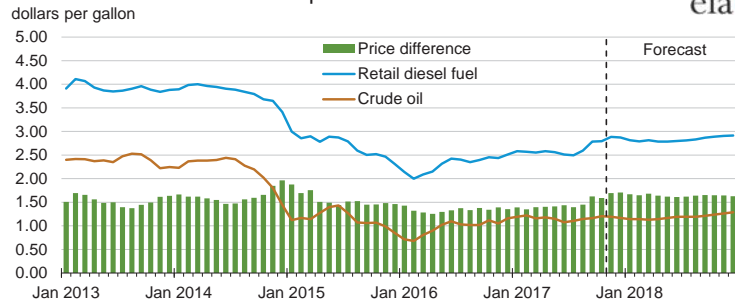
dollars per gallon



Crude oil price is composite refiner acquisition cost. Retail prices include state and federal taxes.

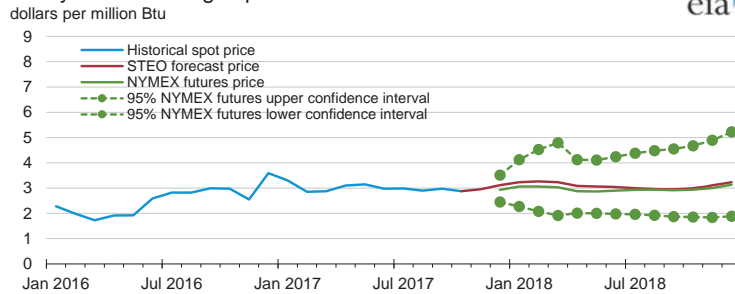
Source: Short-Term Energy Outlook, November 2017.

### U.S. diesel fuel and crude oil prices



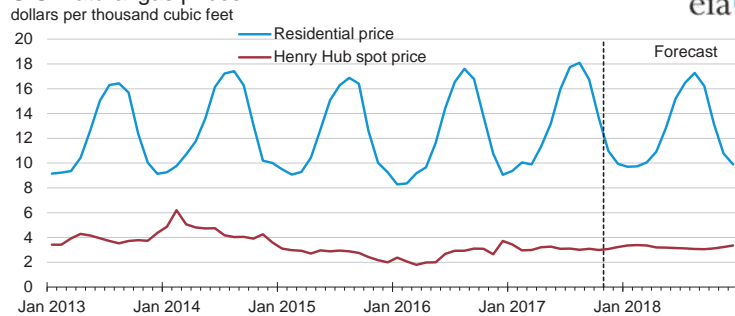
Crude oil price is composite refiner acquisition cost. Retail prices include state and federal taxes.  
 Source: Short-Term Energy Outlook, November 2017.

### Henry Hub natural gas price



Note: Confidence interval derived from options market information for the 5 trading days ending Nov 2, 2017. Intervals not calculated for months with sparse trading in near-the-money options contracts.  
 Source: Short-Term Energy Outlook, November 2017, and CME Group.

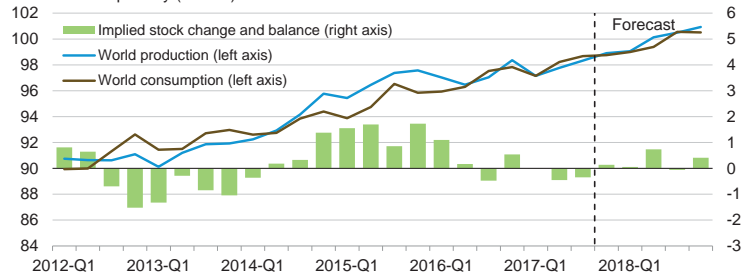
### U.S. natural gas prices



Source: Short-Term Energy Outlook, November 2017, and Thomson Reuters.

### World liquid fuels production and consumption balance

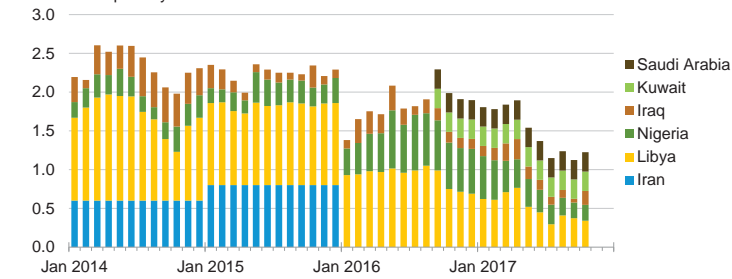
million barrels per day (MMb/d)



Source: Short-Term Energy Outlook, November 2017.

### Estimated historical unplanned OPEC crude oil production outages

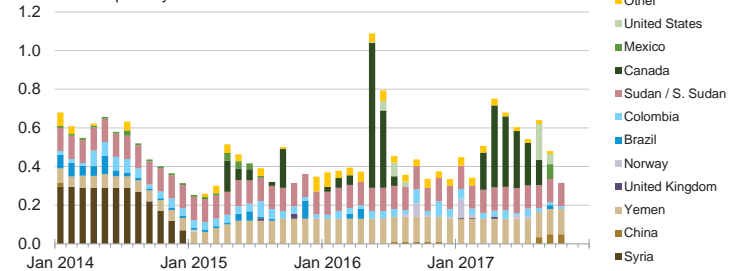
million barrels per day



Source: Short-Term Energy Outlook, November 2017.

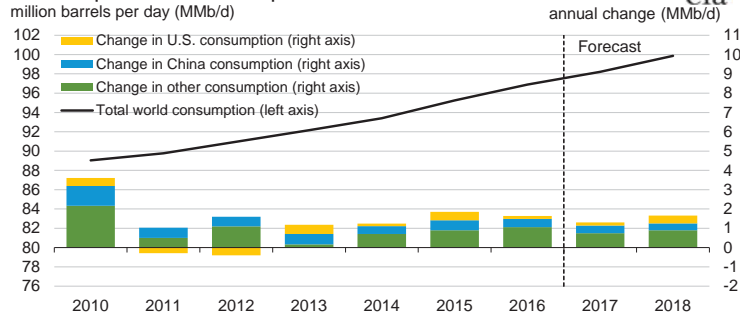
### Estimated historical unplanned non-OPEC liquid fuels production outages

million barrels per day



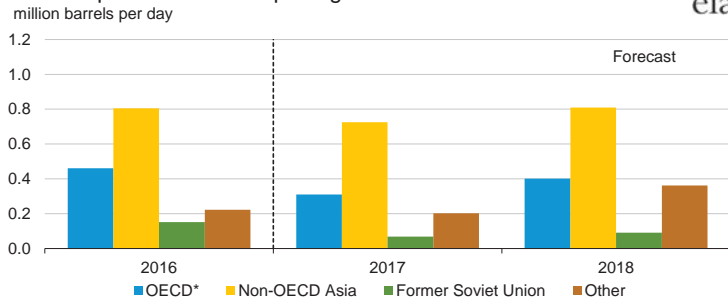
Source: Short-Term Energy Outlook, November 2017.

### World liquid fuels consumption



Source: Short-Term Energy Outlook, November 2017.

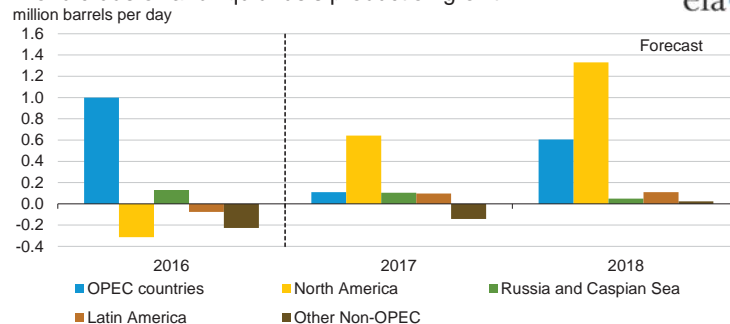
### World liquid fuels consumption growth



\* Countries belonging to the Organization for Economic Cooperation and Development

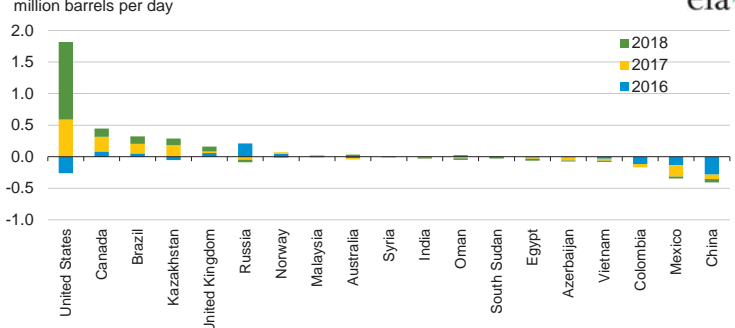
Source: Short-Term Energy Outlook, November 2017.

### World crude oil and liquid fuels production growth



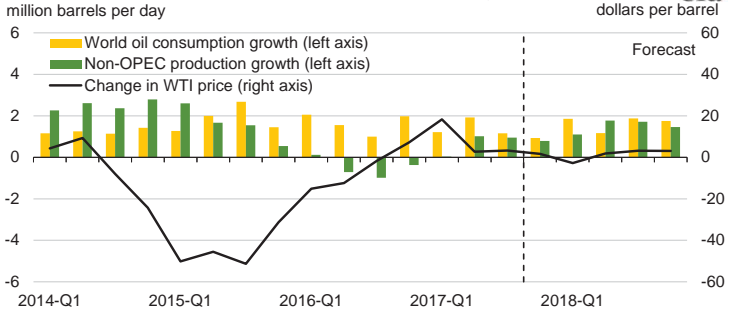
Source: Short-Term Energy Outlook, November 2017.

### Non-OPEC crude oil and liquid fuels production growth



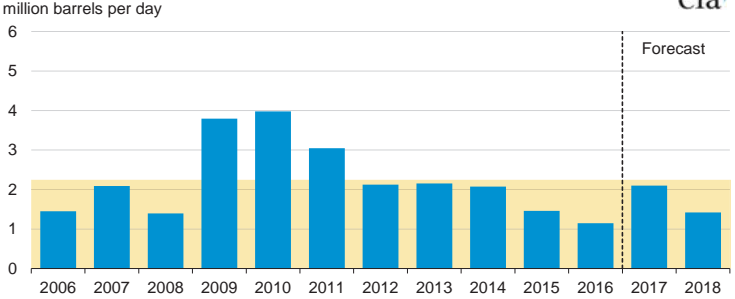
Source: Short-Term Energy Outlook, November 2017.

### World consumption and non-OPEC production growth



Source: Short-Term Energy Outlook, November 2017.

### OPEC surplus crude oil production capacity

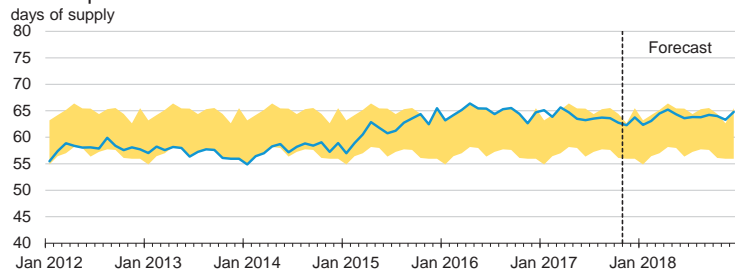


Note: Shaded area represents 2006-2016 average (2.2 million barrels per day).

Source: Short-Term Energy Outlook, November 2017.

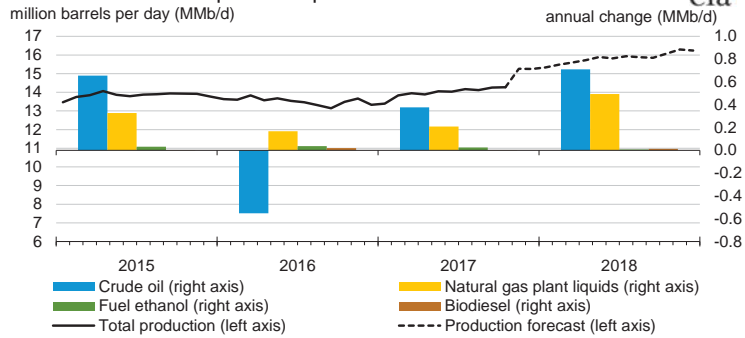


### OECD commercial stocks of crude oil and other liquids



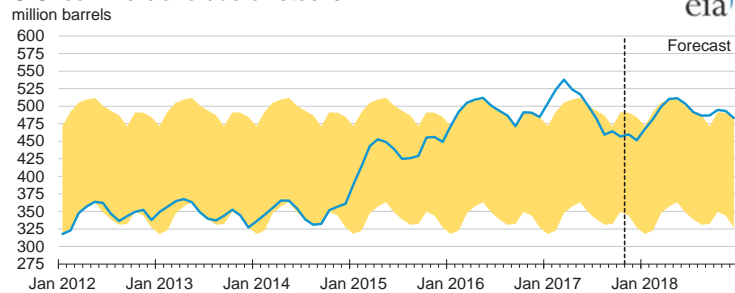
Note: Colored band around days of supply of crude oil and other liquids stocks represents the range between the minimum and maximum from Jan. 2012 - Dec. 2016.  
Source: Short-Term Energy Outlook, November 2017.

### U.S. crude oil and liquid fuels production



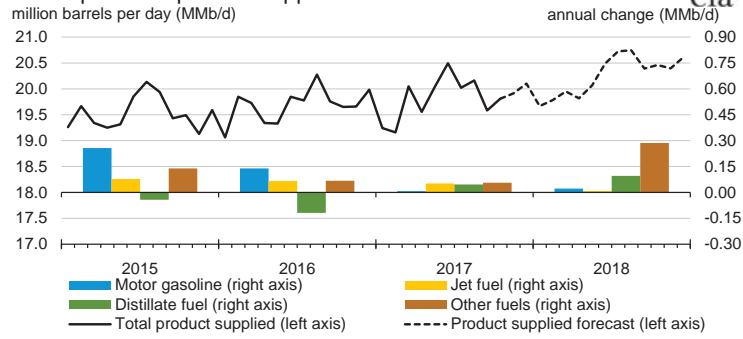
Source: Short-Term Energy Outlook, November 2017.

### U.S. commercial crude oil stocks



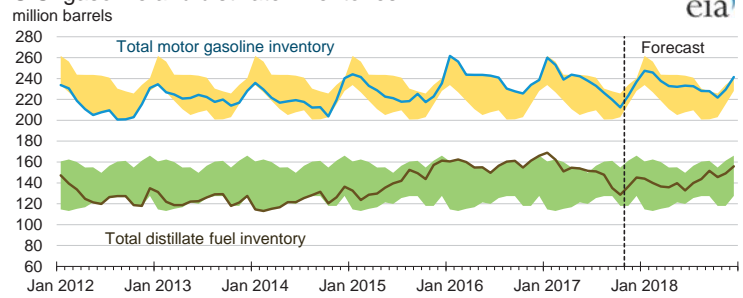
Note: Colored band around storage levels represents the range between the minimum and maximum from Jan. 2012 - Dec. 2016.  
Source: Short-Term Energy Outlook, November 2017.

### U.S. liquid fuels product supplied



Source: Short-Term Energy Outlook, November 2017.

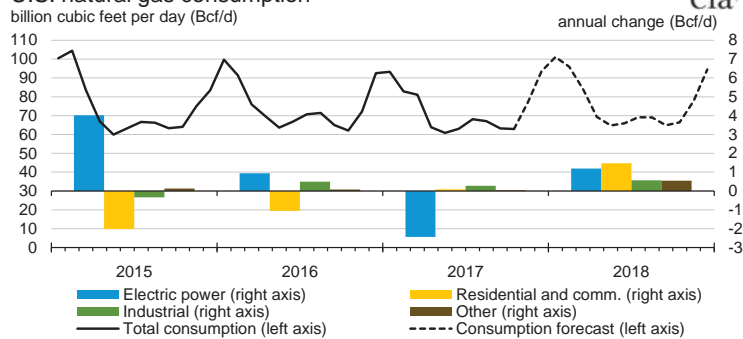
### U.S. gasoline and distillate inventories



Note: Colored bands around storage levels represent the range between the minimum and maximum from Jan. 2012 - Dec. 2016.

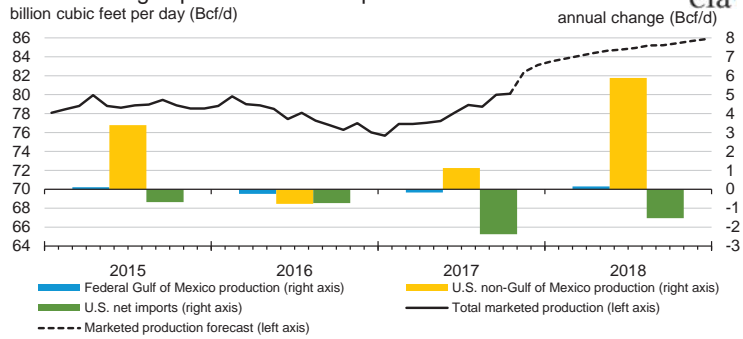
Source: Short-Term Energy Outlook, November 2017.

### U.S. natural gas consumption



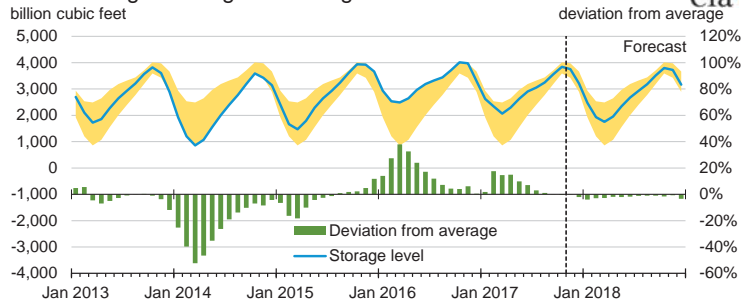
Source: Short-Term Energy Outlook, November 2017.

### U.S. natural gas production and imports



Source: Short-Term Energy Outlook, November 2017.

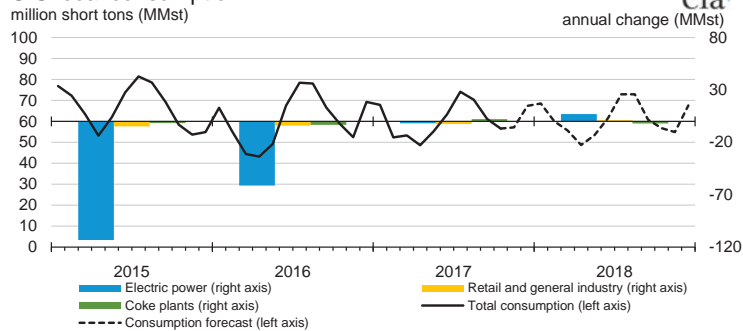
### U.S. working natural gas in storage



Note: Colored band around storage levels represents the range between the minimum and maximum from Jan. 2012 - Dec. 2016.

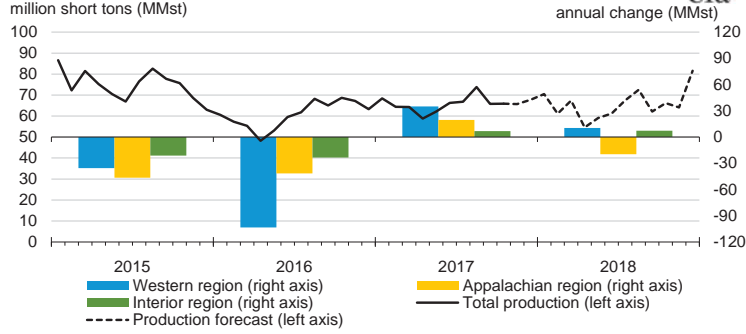
Source: Short-Term Energy Outlook, November 2017.

### U.S. coal consumption

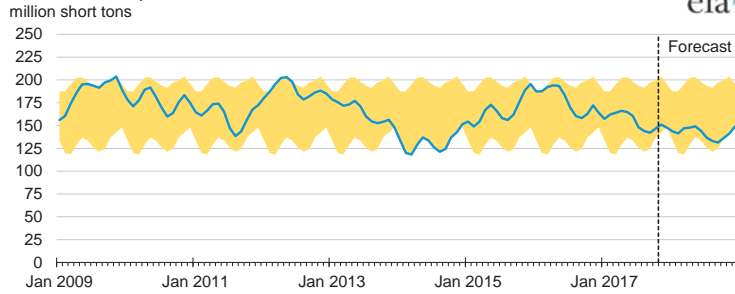


Source: Short-Term Energy Outlook, November 2017.

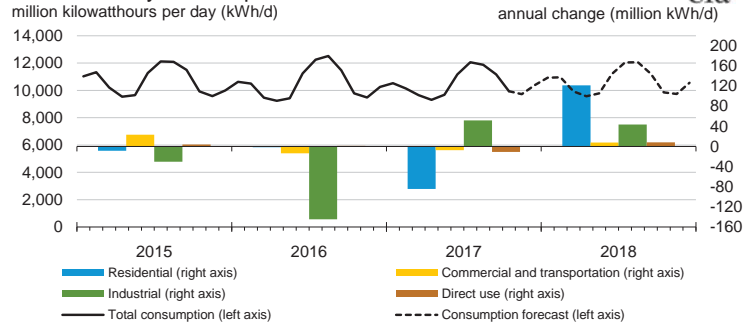
### U.S. coal production



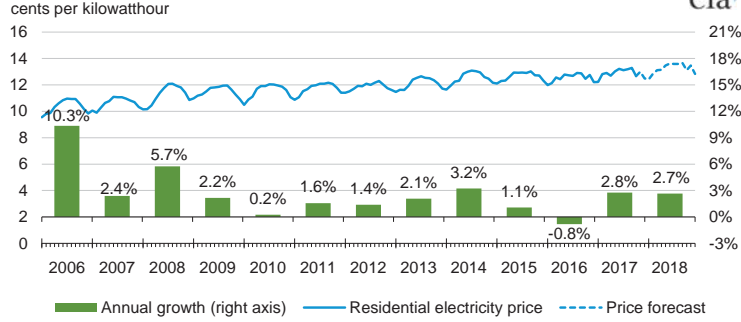
### U.S. electric power coal stocks



### U.S. electricity consumption

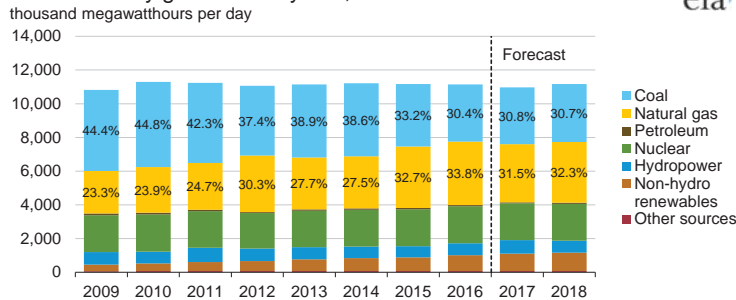


### U.S. residential electricity price



Source: Short-Term Energy Outlook, November 2017.

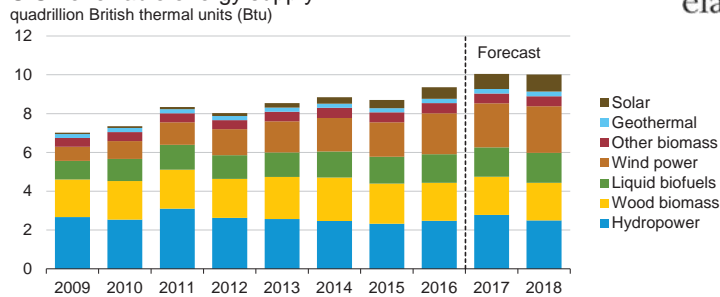
### U.S. electricity generation by fuel, all sectors



Note: Labels show percentage share of total generation provided by coal and natural gas.

Source: Short-Term Energy Outlook, November 2017.

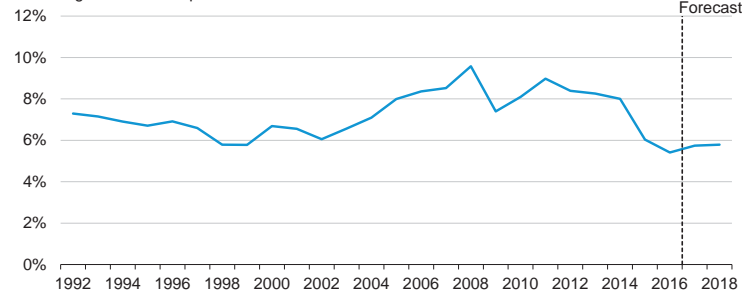
### U.S. renewable energy supply



Note: Hydropower excludes pumped storage generation. Liquid biofuels include ethanol and biodiesel. Other biomass includes municipal waste from biogenic sources, landfill gas, and other non-wood waste.

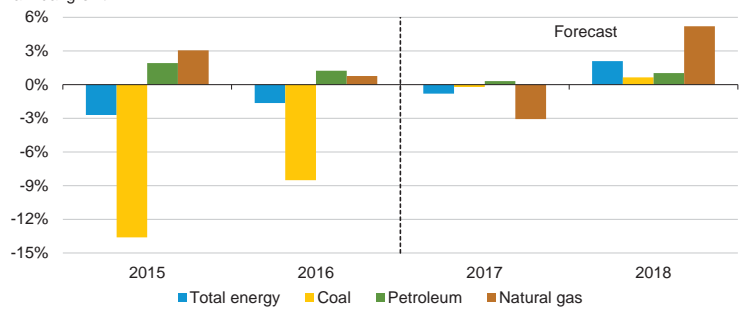
Source: Short-Term Energy Outlook, November 2017.

### U.S. annual energy expenditures share of gross domestic product



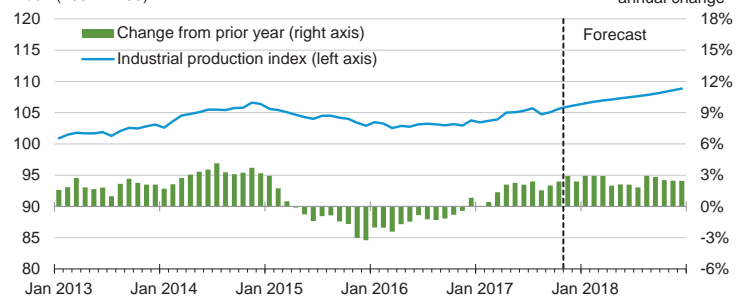
Source: Short-Term Energy Outlook, November 2017.

### U.S. energy-related carbon dioxide emissions annual growth



Source: Short-Term Energy Outlook, November 2017.

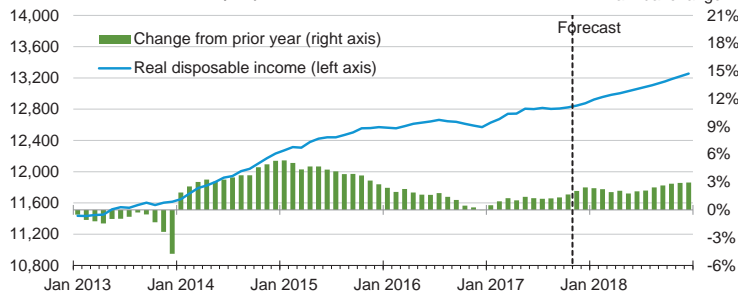
### U.S. total industrial production index index (2007 = 100)



Source: Short-Term Energy Outlook, November 2017.

### U.S. disposable income

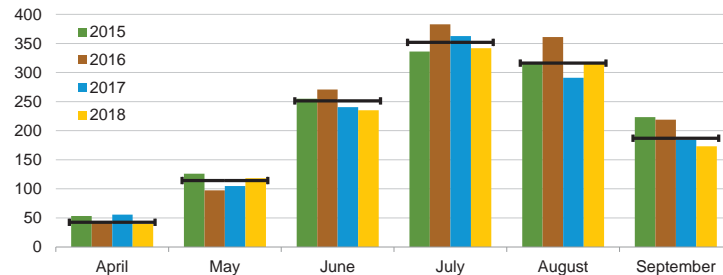
billion 2009 dollars, seasonally adjusted



Source: Short-Term Energy Outlook, November 2017.

### U.S. summer cooling degree days

population-weighted

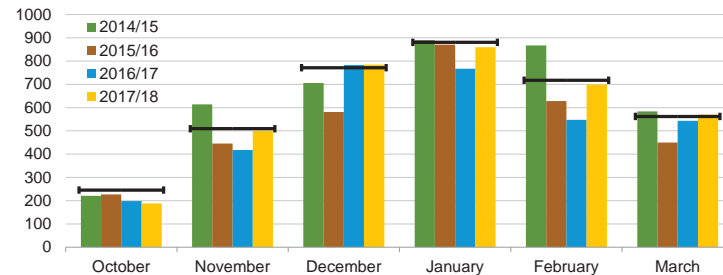


Note: EIA calculations based on from the National Oceanic and Atmospheric Administration data. Horizontal lines indicate each month's prior 10-year average (2008-2017). Projections reflect NOAA's 14-16 month outlook.

Source: Short-Term Energy Outlook, November 2017.

### U.S. winter heating degree days

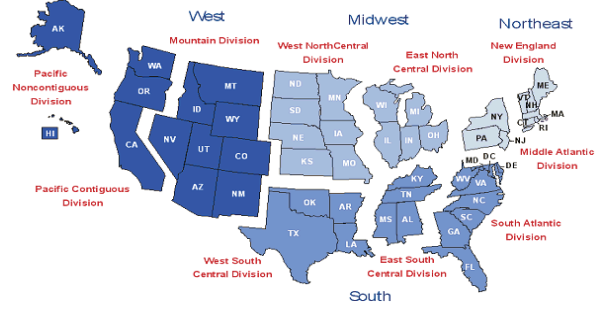
population-weighted



Note: EIA calculations based on National Oceanic and Atmospheric Administration (NOAA) data. Horizontal lines indicate each month's prior 10-year average (Oct 2007 - Mar 2017). Projections reflect NOAA's 14-16 month outlook.

Source: Short-Term Energy Outlook, November 2017.

# U.S. census regions and divisions



Source: Short-Term Energy Outlook, November 2017.



**Table WF01. Average Consumer Prices and Expenditures for Heating Fuels During the Winter**

U.S. Energy Information Administration | Short-Term Energy Outlook - November 2017

Fuel / Region	Winter of							Forecast	
	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	% Change
<b>Natural Gas</b>									
<b>Northeast</b>									
Consumption (Mcf**)	80.7	66.5	76.1	84.1	84.7	67.8	72.6	74.9	3.1
Price (\$/mcf)	12.66	12.21	11.71	11.53	10.82	10.19	10.74	11.13	3.7
Expenditures (\$)	1,022	812	891	969	916	691	780	833	6.9
<b>Midwest</b>									
Consumption (Mcf)	80.3	65.4	77.6	88.1	83.1	67.7	68.9	76.1	10.4
Price (\$/mcf)	9.23	8.99	8.36	8.69	8.56	7.58	8.31	8.80	5.9
Expenditures (\$)	740	587	648	766	711	513	573	669	16.9
<b>South</b>									
Consumption (Mcf)	49.3	40.8	46.5	52.1	50.5	40.7	38.6	45.3	17.4
Price (\$/mcf)	11.02	11.45	10.71	10.77	10.82	10.80	12.28	11.73	-4.5
Expenditures (\$)	543	468	498	561	546	440	473	531	12.1
<b>West</b>									
Consumption (Mcf)	49.4	49.1	48.6	46.4	41.5	45.9	46.8	47.9	2.2
Price (\$/mcf)	9.67	9.35	9.13	9.96	10.72	9.93	10.69	10.70	0.2
Expenditures (\$)	478	459	444	462	444	456	501	513	2.4
<b>U.S. Average</b>									
Consumption (Mcf)	65.0	55.7	62.5	68.0	64.8	55.8	56.9	61.3	7.7
Price (\$/mcf)	10.46	10.25	9.72	9.97	9.91	9.30	10.11	10.30	1.9
Expenditures (\$)	680	571	607	678	642	519	575	631	9.7
<b>Heating Oil</b>									
<b>U.S. Average</b>									
Consumption (gallons)	580.8	471.2	545.6	607.3	608.1	481.7	517.9	538.1	3.9
Price (\$/gallon)	3.38	3.73	3.87	3.88	3.04	2.06	2.41	2.71	12.4
Expenditures (\$)	1,966	1,757	2,114	2,353	1,849	993	1,248	1,457	16.8
<b>Electricity</b>									
<b>Northeast</b>									
Consumption (kWh***)	7,076	6,437	6,863	7,223	7,253	6,497	6,714	6,811	1.4
Price (\$/kwh)	0.154	0.154	0.152	0.163	0.168	0.164	0.165	0.168	1.9
Expenditures (\$)	1,091	993	1,046	1,177	1,219	1,069	1,108	1,145	3.4
<b>Midwest</b>									
Consumption (kWh)	8,733	7,898	8,589	9,169	8,857	8,031	8,097	8,508	5.1
Price (\$/kwh)	0.105	0.111	0.112	0.112	0.118	0.121	0.123	0.126	2.5
Expenditures (\$)	915	875	958	1,031	1,045	974	996	1,072	7.7
<b>South</b>									
Consumption (kWh)	8,221	7,467	7,974	8,382	8,281	7,460	7,314	7,840	7.2
Price (\$/kwh)	0.104	0.107	0.107	0.109	0.111	0.111	0.112	0.113	1.3
Expenditures (\$)	855	798	851	913	919	825	819	889	8.6
<b>West</b>									
Consumption (kWh)	7,217	7,192	7,151	6,983	6,602	6,955	7,028	7,116	1.2
Price (\$/kwh)	0.112	0.115	0.119	0.123	0.127	0.130	0.132	0.135	2.5
Expenditures (\$)	809	825	848	861	836	902	926	961	3.8
<b>U.S. Average</b>									
Consumption (kWh)	7,843	7,252	7,671	7,981	7,801	7,242	7,227	7,593	5.1
Price (\$/kwh)	0.113	0.116	0.117	0.120	0.123	0.124	0.125	0.127	1.6
Expenditures (\$)	884	842	895	955	960	896	906	967	6.7

**Table WF01. Average Consumer Prices and Expenditures for Heating Fuels During the Winter**

U.S. Energy Information Administration | Short-Term Energy Outlook - November 2017

Fuel / Region	Winter of							Forecast	
	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	% Change
<b>Propane</b>									
<b>Northeast</b>									
Consumption (gallons)	717.6	595.7	676.0	745.4	751.5	607.7	651.1	667.6	2.5
Price* (\$/gallon)	3.24	3.34	3.00	3.56	3.00	2.71	3.06	3.30	7.8
Expenditures (\$)	2,322	1,991	2,031	2,654	2,254	1,647	1,992	2,203	10.6
<b>Midwest</b>									
Consumption (gallons)	792.0	644.4	766.4	868.7	813.2	667.7	679.1	751.7	10.7
Price* (\$/gallon)	2.11	2.23	1.74	2.61	1.91	1.47	1.73	1.93	11.6
Expenditures (\$)	1,674	1,437	1,334	2,267	1,553	982	1,175	1,451	23.5
<b>Number of households by primary space heating fuel (thousands)</b>									
<b>Northeast</b>									
Natural gas	11,118	11,236	11,345	11,522	11,694	11,786	11,913	12,011	0.8
Heating oil	5,858	5,701	5,458	5,241	5,092	4,913	4,767	4,620	-3.1
Propane	744	761	813	845	855	888	899	901	0.2
Electricity	2,776	2,894	3,011	3,036	3,090	3,243	3,356	3,421	1.9
Wood	512	548	582	585	569	515	442	388	-12.1
Other/None	315	324	377	436	437	430	445	468	5.1
<b>Midwest</b>									
Natural gas	17,977	18,019	18,054	18,072	18,190	18,204	18,151	18,022	-0.7
Heating oil	419	393	360	336	319	301	283	263	-7.1
Propane	2,073	2,037	2,063	2,088	2,083	2,074	2,061	2,050	-0.5
Electricity	4,922	5,119	5,333	5,422	5,509	5,726	5,926	6,111	3.1
Wood	618	631	640	632	616	584	566	553	-2.3
Other/None	289	282	319	353	350	352	363	375	3.3
<b>South</b>									
Natural gas	13,657	13,636	13,681	13,793	13,907	13,954	14,029	14,013	-0.1
Heating oil	853	790	738	698	681	653	624	595	-4.6
Propane	2,098	2,024	1,982	1,943	1,923	1,900	1,875	1,831	-2.3
Electricity	26,555	27,283	27,857	28,230	28,817	29,521	30,111	30,619	1.7
Wood	599	609	612	616	592	547	545	569	4.4
Other/None	309	304	367	419	407	414	423	429	1.5
<b>West</b>									
Natural gas	15,020	15,021	15,009	15,059	15,213	15,317	15,432	15,456	0.2
Heating oil	279	261	247	234	225	220	212	202	-4.9
Propane	914	885	909	930	914	926	921	901	-2.3
Electricity	8,126	8,439	8,671	8,754	8,919	9,214	9,460	9,689	2.4
Wood	725	736	728	744	748	717	714	718	0.7
Other/None	850	829	903	1,015	1,074	1,082	1,097	1,156	5.4
<b>U.S. Totals</b>									
Natural gas	57,771	57,912	58,088	58,446	59,004	59,262	59,525	59,502	0.0
Heating oil	7,408	7,145	6,803	6,509	6,317	6,087	5,885	5,679	-3.5
Propane	5,829	5,707	5,766	5,806	5,776	5,787	5,756	5,683	-1.3
Electricity	42,380	43,734	44,873	45,442	46,335	47,704	48,854	49,841	2.0
Wood	2,454	2,524	2,563	2,576	2,526	2,362	2,266	2,229	-1.7
Other/None	1,763	1,739	1,965	2,222	2,269	2,278	2,328	2,428	4.3
<b>Heating degree days</b>									
Northeast	5,338	4,219	4,965	5,596	5,647	4,323	4,707	4,874	3.5
Midwest	5,774	4,485	5,545	6,452	6,002	4,689	4,792	5,416	13.0
South	2,629	2,020	2,428	2,784	2,689	2,012	1,881	2,325	23.6
West	3,259	3,231	3,183	2,991	2,568	2,955	3,045	3,133	2.9
U.S. Average	3,939	3,225	3,721	4,110	3,881	3,202	3,257	3,601	10.6

Note: Winter covers the period October 1 through March 31. Fuel prices are nominal prices. Fuel consumption per household is based only on households that use that fuel as the primary space-heating fuel. Included in fuel consumption is consumption for water heating, appliances, and lighting (electricity). Per-household consumption based on an average of EIA 2005 and 2009 Residential Energy Consumption Surveys corrected for actual and projected heating degree days. Number of households using heating oil includes kerosene.

\* Prices exclude taxes

\*\* thousand cubic feet

\*\*\* kilowatthour

**Table 1. U.S. Energy Markets Summary**

U.S. Energy Information Administration | Short-Term Energy Outlook - November 2017

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
<b>Energy Supply</b>															
Crude Oil Production (a) (million barrels per day) .....	9.14	8.82	8.65	8.81	9.02	9.13	9.26	9.53	9.85	9.99	9.87	10.07	8.86	9.23	9.95
Dry Natural Gas Production (billion cubic feet per day) .....	74.14	73.28	72.45	71.55	71.44	72.16	73.85	76.29	78.06	78.74	79.17	79.62	72.85	73.45	78.90
Coal Production (million short tons) .....	173	161	195	199	197	187	206	199	199	175	202	212	728	790	788
<b>Energy Consumption</b>															
Liquid Fuels (million barrels per day) .....	19.54	19.50	19.94	19.77	19.49	20.03	19.93	19.94	19.80	20.12	20.62	20.49	19.69	19.85	20.26
Natural Gas (billion cubic feet per day) .....	89.02	66.66	69.14	75.63	85.83	62.54	66.16	77.87	93.63	66.65	67.72		75.10	73.06	76.83
Coal (b) (million short tons) .....	166	160	223	181	174	167	206	181	184	164	207	179	730	727	734
Electricity (billion kilowatt hours per day) .....	10.19	9.96	12.09	9.84	10.11	10.05	11.70	10.02	10.60	10.18	11.78	10.05	10.52	10.47	10.65
Renewables (c) (quadrillion Btu) .....	2.60	2.59	2.43	2.53	2.76	2.96	2.55	2.57	2.65	2.84	2.63	2.66	10.14	10.84	10.78
Total Energy Consumption (d) (quadrillion Btu) .....	25.27	22.98	24.80	24.45	25.02	23.22	24.09	24.40	25.57	23.12	24.42	24.79	97.50	96.73	97.89
<b>Energy Prices</b>															
Crude Oil West Texas Intermediate Spot (dollars per barrel) .....	33.35	45.46	44.85	49.18	51.64	48.15	48.16	50.89	48.82	50.00	51.30	53.95	43.33	49.70	51.04
Natural Gas Henry Hub Spot (dollars per million Btu) .....	2.00	2.14	2.88	3.04	3.01	3.08	2.95	2.99	3.24	3.06	2.97	3.11	2.51	3.01	3.10
Coal (dollars per million Btu) .....	2.13	2.13	2.11	2.08	2.08	2.12	2.12	2.19	2.19	2.20	2.21	2.21	2.11	2.13	2.20
<b>Macroeconomic</b>															
Real Gross Domestic Product (billion chained 2009 dollars - SAAR) .....	16,572	16,664	16,778	16,851	16,903	17,031	17,128	17,246	17,329	17,411	17,507	17,628	16,716	17,077	17,468
Percent change from prior year .....	1.4	1.2	1.5	1.8	2.0	2.2	2.1	2.3	2.5	2.2	2.2	2.2	1.5	2.2	2.3
GDP Implicit Price Deflator (Index, 2009=100) .....	110.6	111.3	111.6	112.2	112.8	113.0	113.4	114.0	114.6	115.3	116.0	116.7	111.4	113.3	115.6
Percent change from prior year .....	1.2	1.2	1.2	1.5	2.0	1.6	1.6	1.7	1.6	2.0	2.3	2.3	1.3	1.7	2.1
Real Disposable Personal Income (billion chained 2009 dollars - SAAR) .....	12,568	12,627	12,649	12,591	12,680	12,783	12,808	12,849	12,955	13,031	13,114	13,220	12,609	12,780	13,080
Percent change from prior year .....	2.2	1.7	1.4	0.2	0.9	1.2	1.3	2.0	2.2	1.9	2.4	2.9	1.4	1.4	2.3
Manufacturing Production Index (Index, 2012=100) .....	102.9	102.6	102.7	103.1	103.7	104.4	104.2	105.0	105.5	106.1	106.6	107.4	102.8	104.3	106.4
Percent change from prior year .....	0.3	0.1	-0.1	0.5	0.8	1.7	1.5	1.8	1.8	1.6	2.3	2.3	0.2	1.5	2.0
<b>Weather</b>															
U.S. Heating Degree-Days .....	1,948	481	51	1,399	1,858	429	65	1,473	2,129	494	80	1,527	3,880	3,824	4,229
U.S. Cooling Degree-Days .....	54	411	963	129	70	401	838	122	43	393	832	91	1,557	1,431	1,358

- = no data available

Prices are not adjusted for inflation.

(a) Includes lease condensate.

(b) Total consumption includes Independent Power Producer (IPP) consumption.

(c) Renewable energy includes minor components of non-marketed renewable energy that is neither bought nor sold, either directly or indirectly, as inputs to marketed energy.

EIA does not estimate or project end-use consumption of non-marketed renewable energy.

(d) The conversion from physical units to Btu is calculated using a subset of conversion factors used in the calculations of gross energy consumption in EIA's Monthly Energy Review. Consequently, the historical data may not precisely match those published in the MER or the Annual Energy Review (AER).

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.**Historical data:** Latest data available from Energy Information Administration databases supporting the following reports: *Petroleum Supply Monthly*, DOE/EIA-0109;*Petroleum Supply Annual*, DOE/EIA-0340/2; *Weekly Petroleum Status Report*, DOE/EIA-0208; *Petroleum Marketing Monthly*, DOE/EIA-0380; *Natural Gas Monthly*, DOE/EIA-0130;*Electric Power Monthly*, DOE/EIA-0226; *Quarterly Coal Report*, DOE/EIA-0121; and *International Petroleum Monthly*, DOE/EIA-0520.

Minor discrepancies with published historical data are due to independent rounding.

**Projections:** EIA Regional Short-Term Energy Model. Macroeconomic projections are based on Global Insight Model of the U.S. Economy.

Weather projections from National Oceanic and Atmospheric Administration.

**Table 2. Energy Prices**

U.S. Energy Information Administration | Short-Term Energy Outlook - November 2017

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
<b>Crude Oil</b> (dollars per barrel)															
West Texas Intermediate Spot Average .....	<b>33.35</b>	<b>45.46</b>	<b>44.85</b>	<b>49.18</b>	<b>51.64</b>	<b>48.15</b>	<b>48.16</b>	<i>50.89</i>	<i>48.82</i>	<i>50.00</i>	<i>51.30</i>	<i>53.95</i>	<b>43.33</b>	<i>49.70</i>	<i>51.04</i>
Brent Spot Average .....	<b>33.89</b>	<b>45.57</b>	<b>45.80</b>	<b>49.25</b>	<b>53.57</b>	<b>49.59</b>	<b>52.09</b>	<i>56.86</i>	<i>54.65</i>	<i>54.50</i>	<i>55.30</i>	<i>57.95</i>	<b>43.74</b>	<i>53.01</i>	<i>55.61</i>
U.S. Imported Average .....	<b>28.85</b>	<b>40.32</b>	<b>41.19</b>	<b>44.44</b>	<b>47.94</b>	<b>46.12</b>	<b>46.17</b>	<i>47.34</i>	<i>45.32</i>	<i>46.50</i>	<i>47.82</i>	<i>50.53</i>	<b>38.70</b>	<i>46.89</i>	<i>47.45</i>
U.S. Refiner Average Acquisition Cost .....	<b>30.84</b>	<b>42.23</b>	<b>42.90</b>	<b>46.56</b>	<b>49.91</b>	<b>47.66</b>	<b>47.72</b>	<i>49.85</i>	<i>47.83</i>	<i>49.01</i>	<i>50.32</i>	<i>53.02</i>	<b>40.69</b>	<i>48.75</i>	<i>50.05</i>
<b>U.S. Liquid Fuels</b> (cents per gallon)															
<b>Refiner Prices for Resale</b>															
Gasoline .....	<b>119</b>	<b>158</b>	<b>150</b>	<b>153</b>	<b>163</b>	<b>165</b>	<b>173</b>	<i>170</i>	<i>160</i>	<i>176</i>	<i>173</i>	<i>160</i>	<b>145</b>	<i>168</i>	<i>167</i>
Diesel Fuel .....	<b>109</b>	<b>141</b>	<b>145</b>	<b>156</b>	<b>162</b>	<b>155</b>	<b>169</b>	<i>184</i>	<i>175</i>	<i>174</i>	<i>179</i>	<i>183</i>	<b>138</b>	<i>167</i>	<i>178</i>
Heating Oil .....	<b>99</b>	<b>125</b>	<b>132</b>	<b>146</b>	<b>154</b>	<b>144</b>	<b>156</b>	<i>176</i>	<i>173</i>	<i>165</i>	<i>170</i>	<i>177</i>	<b>124</b>	<i>158</i>	<i>173</i>
<b>Refiner Prices to End Users</b>															
Jet Fuel .....	<b>107</b>	<b>134</b>	<b>137</b>	<b>149</b>	<b>158</b>	<b>150</b>	<b>165</b>	<i>179</i>	<i>172</i>	<i>169</i>	<i>174</i>	<i>179</i>	<b>132</b>	<i>163</i>	<i>173</i>
No. 6 Residual Fuel Oil (a) .....	<b>69</b>	<b>88</b>	<b>103</b>	<b>115</b>	<b>128</b>	<b>120</b>	<b>122</b>	<i>124</i>	<i>120</i>	<i>119</i>	<i>124</i>	<i>130</i>	<b>94</b>	<i>124</i>	<i>123</i>
<b>Retail Prices Including Taxes</b>															
Gasoline Regular Grade (b) .....	<b>190</b>	<b>225</b>	<b>221</b>	<b>223</b>	<b>233</b>	<b>238</b>	<b>244</b>	<i>246</i>	<i>235</i>	<i>253</i>	<i>252</i>	<i>239</i>	<b>215</b>	<i>240</i>	<i>245</i>
Gasoline All Grades (b) .....	<b>200</b>	<b>235</b>	<b>232</b>	<b>234</b>	<b>244</b>	<b>250</b>	<b>255</b>	<i>257</i>	<i>246</i>	<i>264</i>	<i>263</i>	<i>250</i>	<b>226</b>	<i>252</i>	<i>256</i>
On-highway Diesel Fuel .....	<b>208</b>	<b>230</b>	<b>238</b>	<b>247</b>	<b>257</b>	<b>255</b>	<b>262</b>	<i>285</i>	<i>281</i>	<i>279</i>	<i>284</i>	<i>290</i>	<b>231</b>	<i>265</i>	<i>283</i>
Heating Oil .....	<b>195</b>	<b>205</b>	<b>211</b>	<b>233</b>	<b>247</b>	<b>238</b>	<b>235</b>	<i>267</i>	<i>273</i>	<i>260</i>	<i>262</i>	<i>274</i>	<b>210</b>	<i>251</i>	<i>271</i>
<b>Natural Gas</b>															
Henry Hub Spot (dollars per thousand cubic feet) .....	<b>2.07</b>	<b>2.22</b>	<b>2.99</b>	<b>3.15</b>	<b>3.12</b>	<b>3.19</b>	<b>3.06</b>	<i>3.10</i>	<i>3.36</i>	<i>3.18</i>	<i>3.08</i>	<i>3.23</i>	<b>2.61</b>	<i>3.12</i>	<i>3.21</i>
Henry Hub Spot (dollars per million Btu) .....	<b>2.00</b>	<b>2.14</b>	<b>2.88</b>	<b>3.04</b>	<b>3.01</b>	<b>3.08</b>	<b>2.95</b>	<i>2.99</i>	<i>3.24</i>	<i>3.06</i>	<i>2.97</i>	<i>3.11</i>	<b>2.51</b>	<i>3.01</i>	<i>3.10</i>
<b>U.S. Retail Prices</b> (dollars per thousand cubic feet)															
Industrial Sector .....	<b>3.44</b>	<b>2.93</b>	<b>3.64</b>	<b>4.04</b>	<b>4.53</b>	<b>4.12</b>	<b>3.90</b>	<i>4.22</i>	<i>4.68</i>	<i>4.11</i>	<i>3.99</i>	<i>4.34</i>	<b>3.52</b>	<i>4.20</i>	<i>4.30</i>
Commercial Sector .....	<b>6.87</b>	<b>7.26</b>	<b>8.24</b>	<b>7.52</b>	<b>7.71</b>	<b>8.32</b>	<b>8.73</b>	<i>7.87</i>	<i>7.83</i>	<i>8.28</i>	<i>8.67</i>	<i>7.91</i>	<b>7.29</b>	<i>7.97</i>	<i>8.02</i>
Residential Sector .....	<b>8.51</b>	<b>11.15</b>	<b>16.96</b>	<b>10.18</b>	<b>9.73</b>	<b>12.90</b>	<b>17.53</b>	<i>10.75</i>	<i>9.81</i>	<i>12.35</i>	<i>16.65</i>	<i>10.70</i>	<b>10.04</b>	<i>11.07</i>	<i>10.92</i>
<b>U.S. Electricity</b>															
<b>Power Generation Fuel Costs</b> (dollars per million Btu)															
Coal .....	<b>2.13</b>	<b>2.13</b>	<b>2.11</b>	<b>2.08</b>	<b>2.08</b>	<b>2.12</b>	<b>2.12</b>	<i>2.19</i>	<i>2.19</i>	<i>2.20</i>	<i>2.21</i>	<i>2.21</i>	<b>2.11</b>	<i>2.13</i>	<i>2.20</i>
Natural Gas .....	<b>2.65</b>	<b>2.51</b>	<b>3.00</b>	<b>3.36</b>	<b>3.69</b>	<b>3.39</b>	<b>3.21</b>	<i>3.56</i>	<i>4.10</i>	<i>3.54</i>	<i>3.27</i>	<i>3.72</i>	<b>2.88</b>	<i>3.43</i>	<i>3.62</i>
Residual Fuel Oil (c) .....	<b>6.15</b>	<b>8.51</b>	<b>9.70</b>	<b>9.08</b>	<b>11.16</b>	<b>10.60</b>	<b>10.14</b>	<i>10.85</i>	<i>10.84</i>	<i>11.22</i>	<i>10.81</i>	<i>10.91</i>	<b>8.41</b>	<i>10.67</i>	<i>10.94</i>
Distillate Fuel Oil .....	<b>9.00</b>	<b>11.01</b>	<b>11.64</b>	<b>12.14</b>	<b>12.75</b>	<b>12.24</b>	<b>12.52</b>	<i>13.40</i>	<i>14.10</i>	<i>13.03</i>	<i>12.59</i>	<i>12.99</i>	<b>10.86</b>	<i>12.73</i>	<i>13.22</i>
<b>Retail Prices</b> (cents per kilowatthour)															
Industrial Sector .....	<b>6.42</b>	<b>6.67</b>	<b>7.20</b>	<b>6.67</b>	<b>6.65</b>	<b>6.88</b>	<b>7.30</b>	<i>6.87</i>	<i>6.87</i>	<i>7.06</i>	<i>7.49</i>	<i>7.00</i>	<b>6.75</b>	<i>6.93</i>	<i>7.11</i>
Commercial Sector .....	<b>10.12</b>	<b>10.34</b>	<b>10.68</b>	<b>10.27</b>	<b>10.38</b>	<b>10.67</b>	<b>11.01</b>	<i>10.54</i>	<i>10.66</i>	<i>11.00</i>	<i>11.38</i>	<i>10.88</i>	<b>10.37</b>	<i>10.67</i>	<i>11.00</i>
Residential Sector .....	<b>12.20</b>	<b>12.66</b>	<b>12.81</b>	<b>12.45</b>	<b>12.61</b>	<b>13.00</b>	<b>13.19</b>	<i>12.70</i>	<i>12.77</i>	<i>13.43</i>	<i>13.61</i>	<i>13.11</i>	<b>12.55</b>	<i>12.90</i>	<i>13.24</i>

- = no data available

Prices are not adjusted for inflation.

(a) Average for all sulfur contents.

(b) Average self-service cash price.

(c) Includes fuel oils No. 4, No. 5, No. 6, and topped crude.

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

Prices exclude taxes unless otherwise noted.

**Historical data:** Latest data available from Energy Information Administration databases supporting the following reports: *Petroleum Marketing Monthly*, DOE/EIA-0380;

*Weekly Petroleum Status Report*, DOE/EIA-0208; *Natural Gas Monthly*, DOE/EIA-0130; *Electric Power Monthly*, DOE/EIA-0226; and *Monthly Energy Review*, DOE/EIA-0035.

WTI and Brent crude oils, and Henry Hub natural gas spot prices from Reuter's News Service (<http://www.reuters.com>).

Minor discrepancies with published historical data are due to independent rounding.

**Projections:** EIA Regional Short-Term Energy Model.

**Table 3a. International Petroleum and Other Liquids Production, Consumption, and Inventories**

U.S. Energy Information Administration | Short-Term Energy Outlook - November 2017

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
<b>Supply (million barrels per day) (a)</b>															
OECD .....	<b>27.02</b>	<b>25.97</b>	<b>26.32</b>	<b>26.86</b>	<b>27.14</b>	<b>26.94</b>	<b>26.98</b>	<i>27.79</i>	<i>28.30</i>	<i>28.59</i>	<i>28.59</i>	<i>29.16</i>	<b>26.54</b>	<i>27.22</i>	<i>28.66</i>
U.S. (50 States) .....	<b>14.99</b>	<b>14.94</b>	<b>14.68</b>	<b>14.81</b>	<b>15.03</b>	<b>15.34</b>	<b>15.45</b>	<i>15.93</i>	<i>16.30</i>	<i>16.66</i>	<i>16.72</i>	<i>17.02</i>	<b>14.86</b>	<i>15.44</i>	<i>16.67</i>
Canada .....	<b>4.73</b>	<b>3.99</b>	<b>4.70</b>	<b>4.95</b>	<b>5.05</b>	<b>4.71</b>	<b>4.80</b>	<i>4.75</i>	<i>4.90</i>	<i>4.92</i>	<i>4.98</i>	<i>5.02</i>	<b>4.59</b>	<i>4.83</i>	<i>4.96</i>
Mexico .....	<b>2.57</b>	<b>2.52</b>	<b>2.48</b>	<b>2.39</b>	<b>2.36</b>	<b>2.34</b>	<b>2.28</b>	<i>2.26</i>	<i>2.25</i>	<i>2.24</i>	<i>2.30</i>	<i>2.33</i>	<b>2.49</b>	<i>2.31</i>	<i>2.28</i>
Other OECD .....	<b>4.74</b>	<b>4.52</b>	<b>4.45</b>	<b>4.70</b>	<b>4.71</b>	<b>4.55</b>	<b>4.45</b>	<i>4.84</i>	<i>4.85</i>	<i>4.77</i>	<i>4.59</i>	<i>4.79</i>	<b>4.60</b>	<i>4.64</i>	<i>4.75</i>
Non-OECD .....	<b>70.01</b>	<b>70.51</b>	<b>70.73</b>	<b>71.51</b>	<b>70.00</b>	<b>70.82</b>	<b>71.35</b>	<i>71.11</i>	<i>70.75</i>	<i>71.53</i>	<i>71.91</i>	<i>71.76</i>	<b>70.69</b>	<i>70.82</i>	<i>71.49</i>
OPEC .....	<b>38.77</b>	<b>39.00</b>	<b>39.35</b>	<b>39.81</b>	<b>38.84</b>	<b>39.28</b>	<b>39.68</b>	<i>39.56</i>	<i>39.66</i>	<i>39.87</i>	<i>40.14</i>	<i>40.13</i>	<b>39.23</b>	<i>39.35</i>	<i>39.95</i>
Crude Oil Portion .....	<b>32.24</b>	<b>32.47</b>	<b>32.76</b>	<b>33.25</b>	<b>32.08</b>	<b>32.28</b>	<b>32.89</b>	<i>32.74</i>	<i>32.75</i>	<i>32.93</i>	<i>33.16</i>	<i>33.11</i>	<b>32.68</b>	<i>32.50</i>	<i>32.99</i>
Other Liquids (b) .....	<b>6.52</b>	<b>6.53</b>	<b>6.59</b>	<b>6.56</b>	<b>6.77</b>	<b>7.00</b>	<b>6.79</b>	<i>6.82</i>	<i>6.90</i>	<i>6.94</i>	<i>6.98</i>	<i>7.02</i>	<b>6.55</b>	<i>6.85</i>	<i>6.96</i>
Eurasia .....	<b>14.34</b>	<b>14.10</b>	<b>13.92</b>	<b>14.52</b>	<b>14.43</b>	<b>14.31</b>	<b>14.25</b>	<i>14.31</i>	<i>14.37</i>	<i>14.39</i>	<i>14.31</i>	<i>14.45</i>	<b>14.22</b>	<i>14.33</i>	<i>14.38</i>
China .....	<b>5.02</b>	<b>4.90</b>	<b>4.79</b>	<b>4.77</b>	<b>4.82</b>	<b>4.82</b>	<b>4.73</b>	<i>4.82</i>	<i>4.71</i>	<i>4.74</i>	<i>4.74</i>	<i>4.78</i>	<b>4.87</b>	<i>4.80</i>	<i>4.74</i>
Other Non-OECD .....	<b>11.88</b>	<b>12.50</b>	<b>12.67</b>	<b>12.40</b>	<b>11.91</b>	<b>12.41</b>	<b>12.68</b>	<i>12.42</i>	<i>12.02</i>	<i>12.53</i>	<i>12.72</i>	<i>12.41</i>	<b>12.37</b>	<i>12.36</i>	<i>12.42</i>
Total World Supply .....	<b>97.03</b>	<b>96.47</b>	<b>97.04</b>	<b>98.36</b>	<b>97.14</b>	<b>97.77</b>	<b>98.33</b>	<i>98.90</i>	<i>99.05</i>	<i>100.12</i>	<i>100.50</i>	<i>100.93</i>	<b>97.23</b>	<i>98.04</i>	<i>100.16</i>
Non-OPEC Supply .....	<b>58.26</b>	<b>57.47</b>	<b>57.69</b>	<b>58.55</b>	<b>58.30</b>	<b>58.48</b>	<b>58.65</b>	<i>59.34</i>	<i>59.40</i>	<i>60.25</i>	<i>60.36</i>	<i>60.80</i>	<b>57.99</b>	<i>58.69</i>	<i>60.21</i>
<b>Consumption (million barrels per day) (c)</b>															
OECD .....	<b>46.58</b>	<b>45.94</b>	<b>47.17</b>	<b>47.23</b>	<b>46.72</b>	<b>46.83</b>	<b>47.26</b>	<i>47.35</i>	<i>47.24</i>	<i>46.67</i>	<i>47.85</i>	<i>48.00</i>	<b>46.73</b>	<i>47.04</i>	<i>47.44</i>
U.S. (50 States) .....	<b>19.54</b>	<b>19.50</b>	<b>19.94</b>	<b>19.77</b>	<b>19.49</b>	<b>20.03</b>	<b>19.93</b>	<i>19.94</i>	<i>19.80</i>	<i>20.12</i>	<i>20.62</i>	<i>20.49</i>	<b>19.69</b>	<i>19.85</i>	<i>20.26</i>
U.S. Territories .....	<b>0.13</b>	<b>0.13</b>	<b>0.13</b>	<b>0.13</b>	<b>0.13</b>	<b>0.13</b>	<b>0.11</b>	<i>0.07</i>	<i>0.07</i>	<i>0.08</i>	<i>0.10</i>	<i>0.12</i>	<b>0.13</b>	<i>0.11</i>	<i>0.09</i>
Canada .....	<b>2.33</b>	<b>2.32</b>	<b>2.46</b>	<b>2.40</b>	<b>2.35</b>	<b>2.34</b>	<b>2.48</b>	<i>2.44</i>	<i>2.41</i>	<i>2.35</i>	<i>2.46</i>	<i>2.44</i>	<b>2.38</b>	<i>2.40</i>	<i>2.41</i>
Europe .....	<b>13.62</b>	<b>13.93</b>	<b>14.45</b>	<b>14.19</b>	<b>13.89</b>	<b>14.25</b>	<b>14.60</b>	<i>14.24</i>	<i>14.08</i>	<i>14.14</i>	<i>14.54</i>	<i>14.28</i>	<b>14.05</b>	<i>14.25</i>	<i>14.26</i>
Japan .....	<b>4.44</b>	<b>3.70</b>	<b>3.79</b>	<b>4.18</b>	<b>4.33</b>	<b>3.64</b>	<b>3.67</b>	<i>4.05</i>	<i>4.24</i>	<i>3.47</i>	<i>3.58</i>	<i>3.96</i>	<b>4.03</b>	<i>3.92</i>	<i>3.81</i>
Other OECD .....	<b>6.52</b>	<b>6.36</b>	<b>6.40</b>	<b>6.57</b>	<b>6.52</b>	<b>6.44</b>	<b>6.47</b>	<i>6.62</i>	<i>6.64</i>	<i>6.51</i>	<i>6.55</i>	<i>6.71</i>	<b>6.46</b>	<i>6.51</i>	<i>6.60</i>
Non-OECD .....	<b>49.35</b>	<b>50.36</b>	<b>50.36</b>	<b>50.59</b>	<b>50.43</b>	<b>51.39</b>	<b>51.42</b>	<i>51.40</i>	<i>51.76</i>	<i>52.72</i>	<i>52.70</i>	<i>52.52</i>	<b>50.17</b>	<i>51.16</i>	<i>52.43</i>
Eurasia .....	<b>4.71</b>	<b>4.58</b>	<b>4.95</b>	<b>4.94</b>	<b>4.76</b>	<b>4.75</b>	<b>5.02</b>	<i>4.89</i>	<i>4.80</i>	<i>4.84</i>	<i>5.11</i>	<i>4.99</i>	<b>4.80</b>	<i>4.86</i>	<i>4.94</i>
Europe .....	<b>0.69</b>	<b>0.70</b>	<b>0.72</b>	<b>0.72</b>	<b>0.70</b>	<b>0.71</b>	<b>0.73</b>	<i>0.73</i>	<i>0.71</i>	<i>0.72</i>	<i>0.74</i>	<i>0.74</i>	<b>0.71</b>	<i>0.72</i>	<i>0.73</i>
China .....	<b>12.29</b>	<b>12.65</b>	<b>12.31</b>	<b>12.55</b>	<b>13.00</b>	<b>13.00</b>	<b>12.67</b>	<i>12.73</i>	<i>13.42</i>	<i>13.33</i>	<i>13.00</i>	<i>13.06</i>	<b>12.45</b>	<i>12.85</i>	<i>13.20</i>
Other Asia .....	<b>12.87</b>	<b>13.06</b>	<b>12.63</b>	<b>13.08</b>	<b>13.03</b>	<b>13.44</b>	<b>12.97</b>	<i>13.48</i>	<i>13.65</i>	<i>13.93</i>	<i>13.42</i>	<i>13.76</i>	<b>12.91</b>	<i>13.23</i>	<i>13.69</i>
Other Non-OECD .....	<b>18.79</b>	<b>19.38</b>	<b>19.75</b>	<b>19.31</b>	<b>18.93</b>	<b>19.50</b>	<b>20.03</b>	<i>19.57</i>	<i>19.18</i>	<i>19.90</i>	<i>20.43</i>	<i>19.97</i>	<b>19.31</b>	<i>19.51</i>	<i>19.87</i>
Total World Consumption .....	<b>95.93</b>	<b>96.30</b>	<b>97.52</b>	<b>97.82</b>	<b>97.14</b>	<b>98.22</b>	<b>98.68</b>	<i>98.76</i>	<i>99.00</i>	<i>99.39</i>	<i>100.55</i>	<i>100.51</i>	<b>96.90</b>	<i>98.21</i>	<i>99.87</i>
<b>Total Crude Oil and Other Liquids Inventory Net Withdrawals (million barrels per day)</b>															
U.S. (50 States) .....	<b>-0.47</b>	<b>-0.28</b>	<b>-0.02</b>	<b>0.24</b>	<b>0.00</b>	<b>0.22</b>	<b>0.44</b>	<i>0.47</i>	<i>-0.33</i>	<i>-0.49</i>	<i>-0.26</i>	<i>0.54</i>	<b>-0.13</b>	<i>0.29</i>	<i>-0.13</i>
Other OECD .....	<b>0.03</b>	<b>-0.13</b>	<b>-0.10</b>	<b>0.60</b>	<b>-0.47</b>	<b>0.04</b>	<b>-0.23</b>	<i>-0.21</i>	<i>0.10</i>	<i>-0.08</i>	<i>0.11</i>	<i>-0.33</i>	<b>0.10</b>	<i>-0.22</i>	<i>-0.05</i>
Other Stock Draws and Balance .....	<b>-0.67</b>	<b>0.24</b>	<b>0.60</b>	<b>-1.37</b>	<b>0.47</b>	<b>0.19</b>	<b>0.14</b>	<i>-0.40</i>	<i>0.18</i>	<i>-0.17</i>	<i>0.21</i>	<i>-0.63</i>	<b>-0.30</b>	<i>0.10</i>	<i>-0.10</i>
Total Stock Draw .....	<b>-1.10</b>	<b>-0.17</b>	<b>0.48</b>	<b>-0.54</b>	<b>0.00</b>	<b>0.45</b>	<b>0.35</b>	<i>-0.14</i>	<i>-0.05</i>	<i>-0.74</i>	<i>0.06</i>	<i>-0.41</i>	<b>-0.33</b>	<i>0.17</i>	<i>-0.29</i>
<b>End-of-period Commercial Crude Oil and Other Liquids Inventories</b>															
U.S. Commercial Inventory .....	<b>1,329</b>	<b>1,354</b>	<b>1,356</b>	<b>1,334</b>	<b>1,338</b>	<b>1,330</b>	<b>1,295</b>	<i>1,260</i>	<i>1,291</i>	<i>1,337</i>	<i>1,363</i>	<i>1,326</i>	<b>1,334</b>	<i>1,260</i>	<i>1,326</i>
OECD Commercial Inventory .....	<b>3,000</b>	<b>3,039</b>	<b>3,047</b>	<b>2,966</b>	<b>3,008</b>	<b>2,996</b>	<b>2,985</b>	<i>2,969</i>	<i>2,992</i>	<i>3,045</i>	<i>3,061</i>	<i>3,054</i>	<b>2,966</b>	<i>2,969</i>	<i>3,054</i>

- = no data available

OECD = Organization for Economic Cooperation and Development: Australia, Austria, Belgium, Canada, Chile, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Latvia, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Slovakia, Slovenia, South Korea, Spain, Sweden, Switzerland, Turkey, the United Kingdom, the United States.

OPEC = Organization of the Petroleum Exporting Countries: Algeria, Angola, Ecuador, Equatorial Guinea, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, Venezuela.

(a) Supply includes production of crude oil (including lease condensates), natural gas plant liquids, biofuels, other liquids, and refinery processing gains.

(b) Includes lease condensate, natural gas plant liquids, other liquids, and refinery processing gain. Includes other unaccounted-for liquids.

 (c) Consumption of petroleum by the OECD countries is synonymous with "petroleum product supplied," defined in the glossary of the *EIA Petroleum Supply Monthly*, DOE/EIA-0109.

Consumption of petroleum by the non-OECD countries is "apparent consumption," which includes internal consumption, refinery fuel and loss, and bunkering.

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

**Historical data:** Latest data available from Energy Information Administration international energy statistics.

Minor discrepancies with published historical data are due to independent rounding.

**Projections:** EIA Regional Short-Term Energy Model.

**Table 3b. Non-OPEC Petroleum and Other Liquids Supply (million barrels per day)**

U.S. Energy Information Administration | Short-Term Energy Outlook - November 2017

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
<b>North America</b> .....	<b>22.29</b>	<b>21.45</b>	<b>21.86</b>	<b>22.16</b>	<b>22.44</b>	<b>22.39</b>	<b>22.54</b>	<i>22.95</i>	<i>23.44</i>	<i>23.82</i>	<i>24.00</i>	<i>24.37</i>	<b>21.94</b>	<i>22.58</i>	<i>23.91</i>
Canada .....	<b>4.73</b>	<b>3.99</b>	<b>4.70</b>	<b>4.95</b>	<b>5.05</b>	<b>4.71</b>	<b>4.80</b>	<i>4.75</i>	<i>4.90</i>	<i>4.92</i>	<i>4.98</i>	<i>5.02</i>	<b>4.59</b>	<i>4.83</i>	<i>4.96</i>
Mexico .....	<b>2.57</b>	<b>2.52</b>	<b>2.48</b>	<b>2.39</b>	<b>2.36</b>	<b>2.34</b>	<b>2.28</b>	<i>2.26</i>	<i>2.25</i>	<i>2.24</i>	<i>2.30</i>	<i>2.33</i>	<b>2.49</b>	<i>2.31</i>	<i>2.28</i>
United States .....	<b>14.99</b>	<b>14.94</b>	<b>14.68</b>	<b>14.81</b>	<b>15.03</b>	<b>15.34</b>	<b>15.45</b>	<i>15.93</i>	<i>16.30</i>	<i>16.66</i>	<i>16.72</i>	<i>17.02</i>	<b>14.86</b>	<i>15.44</i>	<i>16.67</i>
<b>Central and South America</b> .....	<b>4.72</b>	<b>5.41</b>	<b>5.64</b>	<b>5.32</b>	<b>4.91</b>	<b>5.48</b>	<b>5.69</b>	<i>5.40</i>	<i>5.01</i>	<i>5.57</i>	<i>5.81</i>	<i>5.53</i>	<b>5.27</b>	<i>5.37</i>	<i>5.48</i>
Argentina .....	<b>0.70</b>	<b>0.71</b>	<b>0.73</b>	<b>0.71</b>	<b>0.67</b>	<b>0.67</b>	<b>0.70</b>	<i>0.69</i>	<i>0.66</i>	<i>0.66</i>	<i>0.69</i>	<i>0.68</i>	<b>0.71</b>	<i>0.68</i>	<i>0.67</i>
Brazil .....	<b>2.63</b>	<b>3.36</b>	<b>3.63</b>	<b>3.32</b>	<b>2.95</b>	<b>3.44</b>	<b>3.72</b>	<i>3.43</i>	<i>3.06</i>	<i>3.54</i>	<i>3.85</i>	<i>3.56</i>	<b>3.23</b>	<i>3.39</i>	<i>3.51</i>
Colombia .....	<b>0.98</b>	<b>0.93</b>	<b>0.87</b>	<b>0.87</b>	<b>0.87</b>	<b>0.88</b>	<b>0.86</b>	<i>0.86</i>	<i>0.86</i>	<i>0.88</i>	<i>0.85</i>	<i>0.86</i>	<b>0.91</b>	<i>0.87</i>	<i>0.86</i>
Other Central and S. America .....	<b>0.42</b>	<b>0.42</b>	<b>0.42</b>	<b>0.42</b>	<b>0.42</b>	<b>0.49</b>	<b>0.41</b>	<i>0.41</i>	<i>0.42</i>	<i>0.49</i>	<i>0.42</i>	<i>0.42</i>	<b>0.42</b>	<i>0.43</i>	<i>0.44</i>
<b>Europe</b> .....	<b>4.21</b>	<b>4.02</b>	<b>3.91</b>	<b>4.19</b>	<b>4.22</b>	<b>4.06</b>	<b>3.92</b>	<i>4.30</i>	<i>4.31</i>	<i>4.22</i>	<i>4.02</i>	<i>4.20</i>	<b>4.08</b>	<i>4.12</i>	<i>4.18</i>
Norway .....	<b>2.04</b>	<b>1.95</b>	<b>1.91</b>	<b>2.12</b>	<b>2.09</b>	<b>2.01</b>	<b>1.90</b>	<i>2.11</i>	<i>2.09</i>	<i>1.99</i>	<i>1.96</i>	<i>2.02</i>	<b>2.00</b>	<i>2.03</i>	<i>2.01</i>
United Kingdom .....	<b>1.13</b>	<b>1.09</b>	<b>1.01</b>	<b>1.03</b>	<b>1.10</b>	<b>1.07</b>	<b>1.02</b>	<i>1.17</i>	<i>1.20</i>	<i>1.22</i>	<i>1.07</i>	<i>1.17</i>	<b>1.06</b>	<i>1.09</i>	<i>1.17</i>
<b>Eurasia</b> .....	<b>14.34</b>	<b>14.10</b>	<b>13.92</b>	<b>14.52</b>	<b>14.43</b>	<b>14.31</b>	<b>14.25</b>	<i>14.31</i>	<i>14.37</i>	<i>14.39</i>	<i>14.31</i>	<i>14.45</i>	<b>14.22</b>	<i>14.33</i>	<i>14.38</i>
Azerbaijan .....	<b>0.87</b>	<b>0.87</b>	<b>0.84</b>	<b>0.80</b>	<b>0.79</b>	<b>0.80</b>	<b>0.79</b>	<i>0.80</i>	<i>0.80</i>	<i>0.79</i>	<i>0.77</i>	<i>0.76</i>	<b>0.84</b>	<i>0.80</i>	<i>0.78</i>
Kazakhstan .....	<b>1.76</b>	<b>1.63</b>	<b>1.57</b>	<b>1.83</b>	<b>1.87</b>	<b>1.87</b>	<b>1.86</b>	<i>1.91</i>	<i>1.96</i>	<i>1.97</i>	<i>1.97</i>	<i>2.04</i>	<b>1.70</b>	<i>1.88</i>	<i>1.98</i>
Russia .....	<b>11.27</b>	<b>11.17</b>	<b>11.08</b>	<b>11.45</b>	<b>11.32</b>	<b>11.18</b>	<b>11.14</b>	<i>11.13</i>	<i>11.15</i>	<i>11.17</i>	<i>11.10</i>	<i>11.19</i>	<b>11.24</b>	<i>11.19</i>	<i>11.15</i>
Turkmenistan .....	<b>0.27</b>	<b>0.26</b>	<b>0.26</b>	<b>0.28</b>	<b>0.28</b>	<b>0.28</b>	<b>0.29</b>	<i>0.29</i>	<i>0.29</i>	<i>0.29</i>	<i>0.29</i>	<i>0.29</i>	<b>0.27</b>	<i>0.28</i>	<i>0.29</i>
Other Eurasia .....	<b>0.17</b>	<b>0.17</b>	<b>0.17</b>	<b>0.17</b>	<b>0.16</b>	<b>0.17</b>	<b>0.17</b>	<i>0.18</i>	<i>0.18</i>	<i>0.18</i>	<i>0.18</i>	<i>0.17</i>	<b>0.17</b>	<i>0.17</i>	<i>0.17</i>
<b>Middle East</b> .....	<b>1.14</b>	<b>1.14</b>	<b>1.14</b>	<b>1.14</b>	<b>1.07</b>	<b>1.07</b>	<b>1.10</b>	<i>1.11</i>	<i>1.11</i>	<i>1.09</i>	<i>1.07</i>	<i>1.05</i>	<b>1.14</b>	<i>1.09</i>	<i>1.08</i>
Oman .....	<b>1.02</b>	<b>1.01</b>	<b>1.02</b>	<b>1.02</b>	<b>0.98</b>	<b>0.98</b>	<b>1.00</b>	<i>1.01</i>	<i>0.99</i>	<i>0.97</i>	<i>0.95</i>	<i>0.94</i>	<b>1.02</b>	<i>0.99</i>	<i>0.96</i>
<b>Asia and Oceania</b> .....	<b>9.73</b>	<b>9.53</b>	<b>9.41</b>	<b>9.37</b>	<b>9.37</b>	<b>9.30</b>	<b>9.26</b>	<i>9.35</i>	<i>9.26</i>	<i>9.28</i>	<i>9.28</i>	<i>9.34</i>	<b>9.51</b>	<i>9.32</i>	<i>9.29</i>
Australia .....	<b>0.39</b>	<b>0.37</b>	<b>0.41</b>	<b>0.37</b>	<b>0.35</b>	<b>0.36</b>	<b>0.37</b>	<i>0.37</i>	<i>0.38</i>	<i>0.39</i>	<i>0.40</i>	<i>0.42</i>	<b>0.39</b>	<i>0.36</i>	<i>0.40</i>
China .....	<b>5.02</b>	<b>4.90</b>	<b>4.79</b>	<b>4.77</b>	<b>4.82</b>	<b>4.82</b>	<b>4.73</b>	<i>4.82</i>	<i>4.71</i>	<i>4.74</i>	<i>4.74</i>	<i>4.78</i>	<b>4.87</b>	<i>4.80</i>	<i>4.74</i>
India .....	<b>1.00</b>	<b>0.99</b>	<b>0.99</b>	<b>0.99</b>	<b>1.01</b>	<b>1.00</b>	<b>1.00</b>	<i>1.00</i>	<i>1.00</i>	<i>0.99</i>	<i>0.98</i>	<i>0.99</i>	<b>0.99</b>	<i>1.00</i>	<i>0.99</i>
Indonesia .....	<b>0.96</b>	<b>0.96</b>	<b>0.96</b>	<b>0.95</b>	<b>0.92</b>	<b>0.92</b>	<b>0.91</b>	<i>0.90</i>	<i>0.90</i>	<i>0.90</i>	<i>0.90</i>	<i>0.90</i>	<b>0.96</b>	<i>0.91</i>	<i>0.90</i>
Malaysia .....	<b>0.76</b>	<b>0.75</b>	<b>0.74</b>	<b>0.75</b>	<b>0.75</b>	<b>0.72</b>	<b>0.74</b>	<i>0.74</i>	<i>0.74</i>	<i>0.74</i>	<i>0.73</i>	<i>0.73</i>	<b>0.75</b>	<i>0.74</i>	<i>0.74</i>
Vietnam .....	<b>0.33</b>	<b>0.33</b>	<b>0.31</b>	<b>0.31</b>	<b>0.30</b>	<b>0.30</b>	<b>0.28</b>	<i>0.28</i>	<i>0.28</i>	<i>0.27</i>	<i>0.27</i>	<i>0.27</i>	<b>0.32</b>	<i>0.29</i>	<i>0.27</i>
<b>Africa</b> .....	<b>1.83</b>	<b>1.83</b>	<b>1.81</b>	<b>1.85</b>	<b>1.85</b>	<b>1.88</b>	<b>1.89</b>	<i>1.91</i>	<i>1.90</i>	<i>1.89</i>	<i>1.88</i>	<i>1.86</i>	<b>1.83</b>	<i>1.88</i>	<i>1.88</i>
Egypt .....	<b>0.70</b>	<b>0.69</b>	<b>0.69</b>	<b>0.69</b>	<b>0.68</b>	<b>0.68</b>	<b>0.67</b>	<i>0.66</i>	<i>0.65</i>	<i>0.65</i>	<i>0.64</i>	<i>0.63</i>	<b>0.69</b>	<i>0.67</i>	<i>0.64</i>
South Sudan .....	<b>0.15</b>	<b>0.16</b>	<b>0.15</b>	<b>0.15</b>	<b>0.15</b>	<b>0.15</b>	<b>0.15</b>	<i>0.15</i>	<i>0.12</i>	<i>0.12</i>	<i>0.12</i>	<i>0.12</i>	<b>0.15</b>	<i>0.15</i>	<i>0.12</i>
<b>Total non-OPEC liquids</b> .....	<b>58.26</b>	<b>57.47</b>	<b>57.69</b>	<b>58.55</b>	<b>58.30</b>	<b>58.48</b>	<b>58.65</b>	<i>59.34</i>	<i>59.40</i>	<i>60.25</i>	<i>60.36</i>	<i>60.80</i>	<b>57.99</b>	<i>58.69</i>	<i>60.21</i>
<b>OPEC non-crude liquids</b> .....	<b>6.52</b>	<b>6.53</b>	<b>6.59</b>	<b>6.56</b>	<b>6.77</b>	<b>7.00</b>	<b>6.79</b>	<i>6.82</i>	<i>6.90</i>	<i>6.94</i>	<i>6.98</i>	<i>7.02</i>	<b>6.55</b>	<i>6.85</i>	<i>6.96</i>
<b>Non-OPEC + OPEC non-crude</b> .....	<b>64.79</b>	<b>64.00</b>	<b>64.29</b>	<b>65.11</b>	<b>65.07</b>	<b>65.48</b>	<b>65.44</b>	<i>66.16</i>	<i>66.30</i>	<i>67.19</i>	<i>67.34</i>	<i>67.82</i>	<b>64.55</b>	<i>65.54</i>	<i>67.17</i>
<b>Unplanned non-OPEC Production Outages</b> .....	<b>0.38</b>	<b>0.76</b>	<b>0.42</b>	<b>0.34</b>	<b>0.43</b>	<b>0.68</b>	<b>0.55</b>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<b>0.47</b>	<i>n/a</i>	<i>n/a</i>

- = no data available

OPEC = Organization of the Petroleum Exporting Countries: Algeria, Angola, Ecuador, Equatorial Guinea, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, Venezuela.

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

Supply includes production of crude oil (including lease condensates), natural gas plant liquids, biofuels, other liquids, and refinery processing gains.

Not all countries are shown in each region and sum of reported country volumes may not equal regional volumes.

**Historical data:** Latest data available from Energy Information Administration international energy statistics.

Minor discrepancies with published historical data are due to independent rounding.

**Projections:** EIA Regional Short-Term Energy Model.

**Table 3c. OPEC Crude Oil (excluding condensates) Supply (million barrels per day)**

U.S. Energy Information Administration | Short-Term Energy Outlook - November 2017

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
<b>Crude Oil</b>															
Algeria .....	1.05	1.04	1.05	1.05	1.04	1.03	1.03	-	-	-	-	-	1.05	-	-
Angola .....	1.78	1.79	1.79	1.64	1.64	1.66	1.66	-	-	-	-	-	1.75	-	-
Ecuador .....	0.54	0.55	0.55	0.55	0.53	0.53	0.53	-	-	-	-	-	0.55	-	-
Equatorial Guinea .....	0.16	0.16	0.16	0.16	0.14	0.14	0.13	-	-	-	-	-	0.16	-	-
Gabon .....	0.21	0.21	0.21	0.21	0.19	0.20	0.20	-	-	-	-	-	0.21	-	-
Iran .....	3.25	3.61	3.67	3.73	3.80	3.81	3.83	-	-	-	-	-	3.57	-	-
Iraq .....	4.29	4.39	4.43	4.61	4.46	4.44	4.50	-	-	-	-	-	4.43	-	-
Kuwait .....	2.88	2.79	2.91	2.92	2.74	2.71	2.72	-	-	-	-	-	2.87	-	-
Libya .....	0.35	0.31	0.29	0.58	0.65	0.72	0.94	-	-	-	-	-	0.38	-	-
Nigeria .....	1.73	1.44	1.27	1.42	1.38	1.49	1.68	-	-	-	-	-	1.46	-	-
Qatar .....	0.66	0.68	0.66	0.66	0.62	0.61	0.61	-	-	-	-	-	0.67	-	-
Saudi Arabia .....	10.20	10.33	10.60	10.55	9.98	10.06	10.18	-	-	-	-	-	10.42	-	-
United Arab Emirates .....	2.85	2.93	3.06	3.09	2.92	2.90	2.92	-	-	-	-	-	2.98	-	-
Venezuela .....	2.30	2.23	2.11	2.07	1.99	1.97	1.95	-	-	-	-	-	2.18	-	-
OPEC Total .....	32.24	32.47	32.76	33.25	32.08	32.28	32.89	32.74	32.75	32.93	33.16	33.11	32.68	32.50	32.99
<b>Other Liquids (a)</b> .....	6.52	6.53	6.59	6.56	6.77	7.00	6.79	6.82	6.90	6.94	6.98	7.02	6.55	6.85	6.96
<b>Total OPEC Supply</b> .....	38.77	39.00	39.35	39.81	38.84	39.28	39.68	39.56	39.66	39.87	40.14	40.13	39.23	39.35	39.95
<b>Crude Oil Production Capacity</b>															
Africa .....	5.28	4.96	4.78	5.07	5.04	5.24	5.65	5.64	5.56	5.53	5.52	5.53	5.02	5.39	5.54
Middle East .....	25.54	25.95	26.27	26.56	26.70	26.69	26.71	26.73	26.72	26.37	26.53	26.54	26.08	26.71	26.54
South America .....	2.84	2.78	2.66	2.62	2.53	2.51	2.49	2.46	2.40	2.35	2.32	2.25	2.73	2.49	2.33
OPEC Total .....	33.66	33.69	33.71	34.25	34.27	34.44	34.85	34.83	34.68	34.25	34.37	34.33	33.83	34.60	34.41
<b>Surplus Crude Oil Production Capacity</b>															
Africa .....	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Middle East .....	1.42	1.22	0.95	1.00	2.19	2.16	1.95	2.10	1.93	1.32	1.22	1.22	1.15	2.10	1.42
South America .....	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OPEC Total .....	1.42	1.22	0.95	1.00	2.19	2.16	1.95	2.10	1.93	1.32	1.22	1.22	1.15	2.10	1.42
<b>Unplanned OPEC Production Outages</b> .....	2.09	2.44	2.34	1.93	1.81	1.60	1.17	n/a	n/a	n/a	n/a	n/a	2.20	n/a	n/a

- = no data available

OPEC = Organization of the Petroleum Exporting Countries: Algeria, Angola, Equatorial, Guinea, Gabon, Libya, and Nigeria (Africa); Ecuador and Venezuela (South America); Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and the United Arab Emirates (Middle East).

(a) Includes lease condensate, natural gas plant liquids, other liquids, and refinery processing gain. Includes other unaccounted-for liquids.

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

**Historical data:** Latest data available from Energy Information Administration international energy statistics.

Minor discrepancies with published historical data are due to independent rounding.

**Projections:** EIA Regional Short-Term Energy Model.

**Table 3d. World Petroleum and Other Liquids Consumption (million barrels per day)**

U.S. Energy Information Administration | Short-Term Energy Outlook - November 2017

	2016				2017				2018				2016	2017	2018
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
<b>North America</b> .....	<b>23.94</b>	<b>23.85</b>	<b>24.42</b>	<b>24.20</b>	<b>23.81</b>	<b>24.36</b>	<b>24.37</b>	<i>24.38</i>	<i>24.19</i>	<i>24.47</i>	<i>25.06</i>	<i>24.91</i>	<b>24.10</b>	<i>24.23</i>	<i>24.66</i>
Canada .....	<b>2.33</b>	<b>2.32</b>	<b>2.46</b>	<b>2.40</b>	<b>2.35</b>	<b>2.34</b>	<b>2.48</b>	<i>2.44</i>	<i>2.41</i>	<i>2.35</i>	<i>2.46</i>	<i>2.44</i>	<b>2.38</b>	<i>2.40</i>	<i>2.41</i>
Mexico .....	<b>2.05</b>	<b>2.02</b>	<b>2.01</b>	<b>2.03</b>	<b>1.96</b>	<b>1.98</b>	<b>1.95</b>	<i>1.99</i>	<i>1.97</i>	<i>1.99</i>	<i>1.96</i>	<i>1.97</i>	<b>2.03</b>	<i>1.97</i>	<i>1.97</i>
United States .....	<b>19.54</b>	<b>19.50</b>	<b>19.94</b>	<b>19.77</b>	<b>19.49</b>	<b>20.03</b>	<b>19.93</b>	<i>19.94</i>	<i>19.80</i>	<i>20.12</i>	<i>20.62</i>	<i>20.49</i>	<b>19.69</b>	<i>19.85</i>	<i>20.26</i>
<b>Central and South America</b> .....	<b>6.96</b>	<b>7.12</b>	<b>7.21</b>	<b>7.14</b>	<b>7.06</b>	<b>7.08</b>	<b>7.19</b>	<i>7.13</i>	<i>6.91</i>	<i>7.10</i>	<i>7.24</i>	<i>7.24</i>	<b>7.11</b>	<i>7.11</i>	<i>7.12</i>
Brazil .....	<b>2.95</b>	<b>3.00</b>	<b>3.06</b>	<b>3.00</b>	<b>3.07</b>	<b>3.00</b>	<b>3.07</b>	<i>3.08</i>	<i>3.03</i>	<i>3.08</i>	<i>3.16</i>	<i>3.17</i>	<b>3.00</b>	<i>3.06</i>	<i>3.11</i>
<b>Europe</b> .....	<b>14.31</b>	<b>14.62</b>	<b>15.16</b>	<b>14.91</b>	<b>14.59</b>	<b>14.95</b>	<b>15.33</b>	<i>14.96</i>	<i>14.79</i>	<i>14.85</i>	<i>15.28</i>	<i>15.01</i>	<b>14.75</b>	<i>14.96</i>	<i>14.99</i>
<b>Eurasia</b> .....	<b>4.71</b>	<b>4.58</b>	<b>4.95</b>	<b>4.94</b>	<b>4.76</b>	<b>4.75</b>	<b>5.02</b>	<i>4.89</i>	<i>4.80</i>	<i>4.84</i>	<i>5.11</i>	<i>4.99</i>	<b>4.80</b>	<i>4.86</i>	<i>4.94</i>
Russia .....	<b>3.57</b>	<b>3.46</b>	<b>3.76</b>	<b>3.74</b>	<b>3.61</b>	<b>3.62</b>	<b>3.82</b>	<i>3.69</i>	<i>3.61</i>	<i>3.68</i>	<i>3.89</i>	<i>3.76</i>	<b>3.63</b>	<i>3.68</i>	<i>3.73</i>
<b>Middle East</b> .....	<b>8.33</b>	<b>8.74</b>	<b>9.10</b>	<b>8.59</b>	<b>8.24</b>	<b>8.79</b>	<b>9.28</b>	<i>8.71</i>	<i>8.46</i>	<i>9.02</i>	<i>9.50</i>	<i>8.90</i>	<b>8.69</b>	<i>8.76</i>	<i>8.97</i>
<b>Asia and Oceania</b> .....	<b>33.53</b>	<b>33.22</b>	<b>32.58</b>	<b>33.84</b>	<b>34.39</b>	<b>34.00</b>	<b>33.26</b>	<i>34.34</i>	<i>35.41</i>	<i>34.68</i>	<i>34.00</i>	<i>34.97</i>	<b>33.29</b>	<i>34.00</i>	<i>34.76</i>
China .....	<b>12.29</b>	<b>12.65</b>	<b>12.31</b>	<b>12.55</b>	<b>13.00</b>	<b>13.00</b>	<b>12.67</b>	<i>12.73</i>	<i>13.42</i>	<i>13.33</i>	<i>13.00</i>	<i>13.06</i>	<b>12.45</b>	<i>12.85</i>	<i>13.20</i>
Japan .....	<b>4.44</b>	<b>3.70</b>	<b>3.79</b>	<b>4.18</b>	<b>4.33</b>	<b>3.64</b>	<b>3.67</b>	<i>4.05</i>	<i>4.24</i>	<i>3.47</i>	<i>3.58</i>	<i>3.96</i>	<b>4.03</b>	<i>3.92</i>	<i>3.81</i>
India .....	<b>4.56</b>	<b>4.50</b>	<b>4.19</b>	<b>4.61</b>	<b>4.50</b>	<b>4.65</b>	<b>4.30</b>	<i>4.78</i>	<i>4.93</i>	<i>4.95</i>	<i>4.56</i>	<i>4.88</i>	<b>4.46</b>	<i>4.56</i>	<i>4.83</i>
<b>Africa</b> .....	<b>4.15</b>	<b>4.18</b>	<b>4.10</b>	<b>4.21</b>	<b>4.29</b>	<b>4.29</b>	<b>4.23</b>	<i>4.34</i>	<i>4.43</i>	<i>4.42</i>	<i>4.37</i>	<i>4.48</i>	<b>4.16</b>	<i>4.29</i>	<i>4.43</i>
<b>Total OECD Liquid Fuels Consumption</b> .....	<b>46.58</b>	<b>45.94</b>	<b>47.17</b>	<b>47.23</b>	<b>46.72</b>	<b>46.83</b>	<b>47.26</b>	<i>47.35</i>	<i>47.24</i>	<i>46.67</i>	<i>47.85</i>	<i>48.00</i>	<b>46.73</b>	<i>47.04</i>	<i>47.44</i>
<b>Total non-OECD Liquid Fuels Consumption</b> .....	<b>49.35</b>	<b>50.36</b>	<b>50.36</b>	<b>50.59</b>	<b>50.43</b>	<b>51.39</b>	<b>51.42</b>	<i>51.40</i>	<i>51.76</i>	<i>52.72</i>	<i>52.70</i>	<i>52.52</i>	<b>50.17</b>	<i>51.16</i>	<i>52.43</i>
<b>Total World Liquid Fuels Consumption</b> .....	<b>95.93</b>	<b>96.30</b>	<b>97.52</b>	<b>97.82</b>	<b>97.14</b>	<b>98.22</b>	<b>98.68</b>	<i>98.76</i>	<i>99.00</i>	<i>99.39</i>	<i>100.55</i>	<i>100.51</i>	<b>96.90</b>	<i>98.21</i>	<i>99.87</i>
<b>Oil-weighted Real Gross Domestic Product (a)</b>															
World Index, 2010 Q1 = 100 .....	<b>119.9</b>	<b>120.6</b>	<b>121.4</b>	<b>122.4</b>	<b>123.1</b>	<b>124.1</b>	<b>125.0</b>	<i>126.0</i>	<i>126.8</i>	<i>127.9</i>	<i>128.7</i>	<i>129.8</i>	<b>121.1</b>	<i>124.5</i>	<i>128.3</i>
Percent change from prior year .....	<b>2.3</b>	<b>2.4</b>	<b>2.4</b>	<b>2.6</b>	<b>2.7</b>	<b>2.9</b>	<b>2.9</b>	<i>3.0</i>	<i>3.0</i>	<i>3.0</i>	<i>3.0</i>	<i>3.0</i>	<b>2.4</b>	<i>2.9</i>	<i>3.0</i>
OECD Index, 2010 Q1 = 100 .....	<b>112.1</b>	<b>112.6</b>	<b>113.2</b>	<b>113.9</b>	<b>114.4</b>	<b>115.2</b>	<b>115.8</b>	<i>116.4</i>	<i>117.0</i>	<i>117.6</i>	<i>118.2</i>	<i>118.9</i>	<b>112.9</b>	<i>115.5</i>	<i>117.9</i>
Percent change from prior year .....	<b>1.6</b>	<b>1.6</b>	<b>1.6</b>	<b>1.9</b>	<b>2.1</b>	<b>2.3</b>	<b>2.3</b>	<i>2.3</i>	<i>2.3</i>	<i>2.1</i>	<i>2.1</i>	<i>2.1</i>	<b>1.7</b>	<i>2.2</i>	<i>2.1</i>
Non-OECD Index, 2010 Q1 = 100 .....	<b>129.4</b>	<b>130.4</b>	<b>131.5</b>	<b>132.8</b>	<b>133.8</b>	<b>135.1</b>	<b>136.3</b>	<i>137.8</i>	<i>139.0</i>	<i>140.7</i>	<i>141.9</i>	<i>143.5</i>	<b>131.0</b>	<i>135.8</i>	<i>141.3</i>
Percent change from prior year .....	<b>3.1</b>	<b>3.2</b>	<b>3.4</b>	<b>3.4</b>	<b>3.4</b>	<b>3.6</b>	<b>3.7</b>	<i>3.8</i>	<i>3.9</i>	<i>4.1</i>	<i>4.1</i>	<i>4.1</i>	<b>3.3</b>	<i>3.6</i>	<i>4.1</i>
<b>Real U.S. Dollar Exchange Rate (a)</b>															
Index, January 2010 = 100 .....	<b>128.59</b>	<b>127.88</b>	<b>128.40</b>	<b>131.58</b>	<b>132.28</b>	<b>131.11</b>	<b>130.30</b>	<i>131.35</i>	<i>132.19</i>	<i>132.75</i>	<i>132.93</i>	<i>133.17</i>	<b>129.11</b>	<i>131.26</i>	<i>132.76</i>
Percent change from prior year .....	<b>8.0</b>	<b>7.1</b>	<b>4.7</b>	<b>5.6</b>	<b>2.9</b>	<b>2.5</b>	<b>1.5</b>	<i>-0.2</i>	<i>-0.1</i>	<i>1.3</i>	<i>2.0</i>	<i>1.4</i>	<b>6.3</b>	<i>1.7</i>	<i>1.1</i>

- = no data available

OECD = Organization for Economic Cooperation and Development: Australia, Austria, Belgium, Canada, Chile, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Latvia, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Slovakia, Slovenia, South Korea, Spain, Sweden, Switzerland, Turkey, the United Kingdom, the United States.

(a) Weighted geometric mean of real indices for various countries with weights equal to each country's share of world oil consumption in the base period. Exchange rate is measured in foreign currency per U.S. dollar.

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

**Historical data:** Latest data available from Energy Information Administration international energy statistics.

Minor discrepancies with published historical data are due to independent rounding.

**Projections:** EIA Regional Short-Term Energy Model.



**Table 4a. U.S. Petroleum and Other Liquids Supply, Consumption, and Inventories**  
U.S. Energy Information Administration | Short-Term Energy Outlook - November 2017

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
<b>Supply (million barrels per day)</b>															
<b>Crude Oil Supply</b>															
Domestic Production (a) .....	9.14	8.82	8.65	8.81	9.02	9.13	9.26	9.53	9.85	9.99	9.87	10.07	8.86	9.23	9.95
Alaska .....	0.51	0.49	0.45	0.51	0.52	0.50	0.44	0.49	0.51	0.48	0.43	0.49	0.49	0.49	0.48
Federal Gulf of Mexico (b) .....	1.59	1.57	1.56	1.67	1.76	1.65	1.71	1.63	1.79	1.79	1.68	1.79	1.60	1.69	1.76
Lower 48 States (excl GOM) .....	7.05	6.76	6.64	6.63	6.74	6.98	7.11	7.41	7.56	7.71	7.77	7.80	6.77	7.06	7.71
Crude Oil Net Imports (c) .....	7.33	7.05	7.37	7.28	7.24	7.24	6.65	6.34	6.60	6.96	6.66	5.77	7.26	6.87	6.50
SPR Net Withdrawals .....	0.00	0.00	0.00	0.00	0.04	0.14	0.06	0.09	0.01	0.02	0.02	0.14	0.00	0.08	0.05
Commercial Inventory Net Withdrawals .....	-0.61	0.04	0.32	-0.14	-0.59	0.41	0.39	0.14	-0.53	-0.05	0.18	0.04	-0.10	0.09	-0.09
Crude Oil Adjustment (d) .....	0.10	0.28	0.17	0.12	0.21	0.21	0.22	0.21	0.19	0.19	0.21	0.15	0.17	0.21	0.19
<b>Total Crude Oil Input to Refineries .....</b>	<b>15.96</b>	<b>16.20</b>	<b>16.52</b>	<b>16.07</b>	<b>15.91</b>	<b>17.13</b>	<b>16.58</b>	<b>16.31</b>	<b>16.13</b>	<b>17.10</b>	<b>16.94</b>	<b>16.18</b>	<b>16.19</b>	<b>16.49</b>	<b>16.59</b>
<b>Other Supply</b>															
Refinery Processing Gain .....	1.08	1.12	1.15	1.11	1.09	1.13	1.05	1.10	1.06	1.11	1.12	1.09	1.12	1.09	1.09
Natural Gas Plant Liquids Production .....	3.42	3.64	3.48	3.50	3.54	3.70	3.73	3.89	3.99	4.14	4.29	4.42	3.51	3.72	4.21
Renewables and Oxygenate Production (e) .....	1.13	1.14	1.18	1.18	1.17	1.16	1.19	1.18	1.16	1.18	1.19	1.19	1.16	1.18	1.18
Fuel Ethanol Production .....	0.99	0.98	1.01	1.03	1.04	1.01	1.02	1.03	1.02	1.04	1.04	1.04	1.00	1.03	1.04
Petroleum Products Adjustment (f) .....	0.21	0.22	0.22	0.21	0.21	0.22	0.22	0.23	0.23	0.25	0.24	0.24	0.22	0.22	0.24
Product Net Imports (c) .....	-2.41	-2.49	-2.27	-2.68	-2.96	-2.99	-2.83	-3.02	-2.96	-3.19	-2.70	-2.99	-2.46	-2.95	-2.96
Hydrocarbon Gas Liquids .....	-0.98	-1.07	-0.95	-1.12	-1.20	-1.18	-1.27	-1.37	-1.35	-1.42	-1.42	-1.56	-1.03	-1.25	-1.44
Unfinished Oils .....	0.35	0.46	0.42	0.37	0.37	0.34	0.34	0.27	0.36	0.41	0.43	0.32	0.40	0.33	0.38
Other HC/Oxygenates .....	-0.11	-0.09	-0.06	-0.06	-0.13	-0.09	-0.07	-0.05	-0.11	-0.08	-0.07	-0.08	-0.08	-0.09	-0.09
Motor Gasoline Blend Comp. ....	0.34	0.64	0.58	0.52	0.43	0.68	0.64	0.48	0.49	0.66	0.49	0.45	0.52	0.56	0.52
Finished Motor Gasoline .....	-0.57	-0.49	-0.46	-0.78	-0.66	-0.62	-0.62	-0.64	-0.83	-0.66	-0.43	-0.60	-0.58	-0.64	-0.63
Jet Fuel .....	-0.02	-0.04	-0.02	-0.03	-0.04	-0.07	0.00	0.00	-0.01	0.04	0.05	-0.02	-0.03	-0.03	0.02
Distillate Fuel Oil .....	-0.82	-1.19	-1.11	-1.00	-1.01	-1.36	-1.32	-1.01	-0.93	-1.40	-1.14	-0.93	-1.03	-1.18	-1.10
Residual Fuel Oil .....	-0.09	-0.09	-0.10	-0.09	-0.10	-0.11	-0.12	-0.11	-0.06	-0.13	-0.09	-0.10	-0.09	-0.11	-0.09
Other Oils (g) .....	-0.51	-0.62	-0.58	-0.48	-0.61	-0.60	-0.40	-0.58	-0.51	-0.61	-0.53	-0.48	-0.55	-0.55	-0.53
Product Inventory Net Withdrawals .....	0.15	-0.32	-0.34	0.38	0.56	-0.33	-0.02	0.24	0.18	-0.46	-0.46	0.36	-0.03	0.11	-0.09
<b>Total Supply .....</b>	<b>19.54</b>	<b>19.50</b>	<b>19.94</b>	<b>19.77</b>	<b>19.52</b>	<b>20.03</b>	<b>19.93</b>	<b>19.94</b>	<b>19.80</b>	<b>20.12</b>	<b>20.62</b>	<b>20.49</b>	<b>19.69</b>	<b>19.86</b>	<b>20.26</b>
<b>Consumption (million barrels per day)</b>															
Hydrocarbon Gas Liquids .....	2.79	2.35	2.39	2.62	2.79	2.45	2.31	2.71	2.91	2.55	2.76	3.11	2.54	2.57	2.83
Unfinished Oils .....	0.03	-0.02	-0.01	0.02	0.02	0.02	0.01	0.00	0.00	-0.03	-0.03	0.01	0.00	0.01	-0.01
Motor Gasoline .....	9.08	9.40	9.58	9.20	8.95	9.54	9.55	9.26	8.94	9.52	9.61	9.30	9.32	9.33	9.35
Fuel Ethanol blended into Motor Gasoline .....	0.90	0.93	0.96	0.94	0.90	0.96	0.95	0.95	0.92	0.98	0.98	0.96	0.93	0.94	0.96
Jet Fuel .....	1.51	1.62	1.69	1.63	1.60	1.68	1.72	1.67	1.58	1.73	1.75	1.64	1.61	1.67	1.68
Distillate Fuel Oil .....	3.93	3.79	3.80	3.99	3.95	3.91	3.86	3.97	4.09	3.94	3.94	4.11	3.88	3.92	4.02
Residual Fuel Oil .....	0.29	0.37	0.33	0.32	0.37	0.37	0.29	0.33	0.35	0.32	0.33	0.30	0.33	0.34	0.33
Other Oils (g) .....	1.91	1.99	2.16	1.99	1.83	2.06	2.18	1.99	1.93	2.10	2.26	2.03	2.01	2.02	2.08
<b>Total Consumption .....</b>	<b>19.54</b>	<b>19.50</b>	<b>19.94</b>	<b>19.77</b>	<b>19.49</b>	<b>20.03</b>	<b>19.93</b>	<b>19.94</b>	<b>19.80</b>	<b>20.12</b>	<b>20.62</b>	<b>20.49</b>	<b>19.69</b>	<b>19.85</b>	<b>20.26</b>
<b>Total Petroleum and Other Liquids Net Imports .....</b>	<b>4.92</b>	<b>4.56</b>	<b>5.10</b>	<b>4.60</b>	<b>4.28</b>	<b>4.25</b>	<b>3.81</b>	<b>3.33</b>	<b>3.65</b>	<b>3.77</b>	<b>3.95</b>	<b>2.78</b>	<b>4.79</b>	<b>3.91</b>	<b>3.54</b>
<b>End-of-period Inventories (million barrels)</b>															
<b>Commercial Inventory</b>															
Crude Oil (excluding SPR) .....	504.8	500.9	471.5	484.6	537.9	500.4	464.2	451.5	499.1	503.5	486.9	483.1	484.6	451.5	483.1
Hydrocarbon Gas Liquids .....	152.5	209.9	250.8	200.2	148.1	190.6	228.4	189.8	160.7	212.3	249.7	203.5	200.2	189.8	203.5
Unfinished Oils .....	91.6	86.8	83.5	80.3	89.3	88.7	89.5	80.5	90.0	88.8	86.4	80.0	80.3	80.5	80.0
Other HC/Oxygenates .....	29.1	27.9	27.4	29.0	32.6	29.3	30.3	30.8	32.6	31.6	30.8	31.5	29.0	30.8	31.5
<b>Total Motor Gasoline .....</b>	<b>243.7</b>	<b>242.7</b>	<b>227.7</b>	<b>238.6</b>	<b>239.0</b>	<b>237.9</b>	<b>219.6</b>	<b>236.8</b>	<b>237.7</b>	<b>233.1</b>	<b>227.8</b>	<b>241.3</b>	<b>238.6</b>	<b>236.8</b>	<b>241.3</b>
Finished Motor Gasoline .....	26.3	24.7	24.8	28.4	21.7	22.5	21.8	27.5	24.7	23.4	24.0	25.3	28.4	27.5	25.3
Motor Gasoline Blend Comp. ....	217.5	218.0	202.9	210.2	217.2	215.5	197.8	209.4	213.0	209.7	203.9	216.0	210.2	209.4	216.0
Jet Fuel .....	44.3	40.7	44.9	43.0	42.3	41.0	43.3	40.2	40.0	41.4	42.8	40.5	43.0	40.2	40.5
Distillate Fuel Oil .....	160.1	149.8	161.1	166.1	151.1	151.6	135.0	145.2	136.6	132.9	151.6	155.8	166.1	145.2	155.8
Residual Fuel Oil .....	44.5	40.4	38.9	41.5	40.8	35.2	36.4	34.3	37.9	39.1	38.1	38.5	41.5	34.3	38.5
Other Oils (g) .....	58.6	55.5	50.3	51.2	56.6	55.2	48.6	51.1	56.7	54.8	49.0	51.5	51.2	51.1	51.5
<b>Total Commercial Inventory .....</b>	<b>1,329</b>	<b>1,354</b>	<b>1,356</b>	<b>1,334</b>	<b>1,338</b>	<b>1,330</b>	<b>1,295</b>	<b>1,260</b>	<b>1,291</b>	<b>1,337</b>	<b>1,363</b>	<b>1,326</b>	<b>1,334</b>	<b>1,260</b>	<b>1,326</b>
Crude Oil in SPR .....	695	695	695	695	692	679	673	665	664	662	660	648	695	665	648

- = no data available

(a) Includes lease condensate.

(b) Crude oil production from U.S. Federal leases in the Gulf of Mexico (GOM).

(c) Net imports equals gross imports minus gross exports.

(d) Crude oil adjustment balances supply and consumption and was previously referred to as "Unaccounted for Crude Oil."

(e) Renewables and oxygenate production includes pentanes plus, oxygenates (excluding fuel ethanol), and renewable fuels.

(f) Petroleum products adjustment includes hydrogen/oxygenates/renewables/other hydrocarbons, motor gasoline blend components, and finished motor gasoline.

(g) "Other Oils" includes aviation gasoline blend components, finished aviation gasoline, kerosene, petrochemical feedstocks, special naphthas, lubricants, waxes, petroleum coke, asphalt and road oil, still gas, and miscellaneous products.

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

SPR: Strategic Petroleum Reserve

HC: Hydrocarbons

**Historical data:** Latest data available from Energy Information Administration databases supporting the following reports: *Petroleum Supply Monthly*, DOE/EIA-0109; *Petroleum Supply Annual*, DOE/EIA-0340/2; and *Weekly Petroleum Status Report*, DOE/EIA-0208.

Minor discrepancies with published historical data are due to independent rounding.

**Projections:** EIA Regional Short-Term Energy Model.

**Table 4b. U.S. Hydrocarbon Gas Liquids (HGL) and Petroleum Refinery Balances (million barrels per day, except inventories and utilization factor)**

U.S. Energy Information Administration | Short-Term Energy Outlook - November 2017

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
<b>HGL Production</b>															
<b>Natural Gas Processing Plants</b>															
Ethane .....	1.22	1.38	1.20	1.29	1.33	1.39	1.38	1.49	1.56	1.62	1.72	1.83	1.27	1.40	1.68
Propane .....	1.16	1.18	1.17	1.15	1.16	1.21	1.22	1.26	1.29	1.31	1.33	1.36	1.17	1.21	1.32
Butanes .....	0.63	0.64	0.65	0.63	0.63	0.65	0.66	0.68	0.69	0.71	0.73	0.74	0.64	0.66	0.72
Natural Gasoline (Pentanes Plus) .....	0.41	0.43	0.47	0.43	0.41	0.45	0.48	0.46	0.45	0.49	0.51	0.49	0.43	0.45	0.48
<b>Refinery and Blender Net Production</b>															
Ethane/Ethylene .....	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00
Propane .....	0.29	0.32	0.31	0.30	0.29	0.32	0.29	0.31	0.31	0.33	0.33	0.31	0.31	0.30	0.32
Propylene (refinery-grade) .....	0.29	0.28	0.27	0.28	0.27	0.29	0.28	0.28	0.28	0.29	0.28	0.28	0.28	0.28	0.28
Butanes/Butylenes .....	-0.11	0.26	0.20	-0.20	-0.09	0.27	0.18	-0.17	-0.06	0.25	0.18	-0.18	0.04	0.05	0.05
<b>Renewable Fuels and Oxygenate Plant Net Production</b>															
Natural Gasoline (Pentanes Plus) .....	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
<b>HGL Net Imports</b>															
Ethane .....	-0.08	-0.09	-0.10	-0.11	-0.15	-0.16	-0.23	-0.23	-0.29	-0.30	-0.28	-0.30	-0.09	-0.19	-0.29
Propane/Propylene .....	-0.64	-0.66	-0.57	-0.76	-0.79	-0.71	-0.72	-0.77	-0.71	-0.72	-0.70	-0.87	-0.66	-0.75	-0.75
Butanes/Butylenes .....	-0.07	-0.12	-0.08	-0.10	-0.09	-0.12	-0.14	-0.13	-0.11	-0.17	-0.18	-0.14	-0.09	-0.12	-0.15
Natural Gasoline (Pentanes Plus) .....	-0.20	-0.20	-0.19	-0.16	-0.18	-0.18	-0.19	-0.23	-0.24	-0.23	-0.26	-0.25	-0.19	-0.19	-0.25
<b>HGL Refinery and Blender Net Inputs</b>															
Butanes/Butylenes .....	0.43	0.29	0.32	0.53	0.43	0.30	0.31	0.48	0.41	0.30	0.32	0.49	0.39	0.38	0.38
Natural Gasoline (Pentanes Plus) .....	0.14	0.15	0.15	0.14	0.16	0.18	0.17	0.15	0.15	0.16	0.16	0.16	0.15	0.16	0.16
<b>HGL Consumption</b>															
Ethane/Ethylene .....	1.13	1.12	1.11	1.15	1.19	1.23	1.16	1.23	1.24	1.31	1.46	1.53	1.13	1.20	1.39
Propane .....	1.12	0.62	0.68	0.91	1.05	0.60	0.60	0.91	1.11	0.62	0.70	0.97	0.83	0.79	0.85
Propylene (refinery-grade) .....	0.31	0.30	0.30	0.28	0.34	0.31	0.28	0.29	0.30	0.31	0.30	0.29	0.30	0.31	0.30
Butanes/Butylenes .....	0.18	0.26	0.24	0.17	0.12	0.23	0.20	0.21	0.20	0.25	0.24	0.25	0.21	0.19	0.24
Natural Gasoline (Pentanes Plus) .....	0.04	0.06	0.06	0.10	0.10	0.08	0.07	0.07	0.05	0.06	0.06	0.07	0.07	0.08	0.06
<b>HGL Inventories (million barrels)</b>															
Ethane .....	31.69	42.32	48.71	50.55	49.65	51.89	51.22	54.27	55.50	59.22	57.67	58.37	43.35	51.77	57.70
Propane .....	61.80	79.84	99.00	77.06	40.23	57.06	72.97	61.61	39.21	64.20	86.44	69.67	77.06	61.61	69.67
Propylene (refinery-grade) .....	5.16	5.57	5.34	7.02	3.75	4.01	5.30	5.53	4.95	5.60	5.62	5.97	7.02	5.53	5.97
Butanes/Butylenes .....	32.46	54.17	73.48	40.38	31.68	57.24	75.43	46.74	39.09	61.58	77.22	47.78	40.38	46.74	47.78
Natural Gasoline (Pentanes Plus) .....	20.43	21.25	25.31	25.05	21.49	20.55	22.92	21.65	20.31	21.84	22.84	22.63	25.05	21.65	22.63
<b>Refinery and Blender Net Inputs</b>															
Crude Oil .....	15.96	16.20	16.52	16.07	15.91	17.13	16.58	16.31	16.13	17.10	16.94	16.18	16.19	16.49	16.59
Hydrocarbon Gas Liquids .....	0.58	0.43	0.47	0.67	0.58	0.48	0.48	0.63	0.56	0.46	0.48	0.64	0.54	0.54	0.54
Other Hydrocarbons/Oxygenates .....	1.15	1.22	1.23	1.19	1.16	1.24	1.23	1.27	1.19	1.27	1.29	1.26	1.20	1.22	1.25
Unfinished Oils .....	0.22	0.53	0.47	0.38	0.25	0.33	0.32	0.36	0.25	0.45	0.48	0.38	0.40	0.32	0.39
Motor Gasoline Blend Components .....	0.34	0.83	0.90	0.47	0.39	0.65	0.72	0.49	0.56	0.82	0.67	0.47	0.64	0.56	0.63
Aviation Gasoline Blend Components .....	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Refinery and Blender Net Inputs .....	18.25	19.22	19.59	18.78	18.30	19.83	19.33	19.06	18.69	20.10	19.86	18.94	18.96	19.13	19.40
<b>Refinery Processing Gain</b>															
.....	1.08	1.12	1.15	1.11	1.09	1.13	1.05	1.10	1.06	1.11	1.12	1.09	1.12	1.09	1.09
<b>Refinery and Blender Net Production</b>															
Hydrocarbon Gas Liquids .....	0.48	0.87	0.79	0.39	0.48	0.89	0.76	0.42	0.53	0.88	0.79	0.41	0.63	0.64	0.65
Finished Motor Gasoline .....	9.71	10.07	10.18	10.01	9.57	10.10	10.04	10.07	9.84	10.27	10.14	10.05	10.00	9.95	10.08
Jet Fuel .....	1.58	1.62	1.76	1.64	1.63	1.74	1.74	1.63	1.59	1.71	1.72	1.63	1.65	1.69	1.66
Distillate Fuel .....	4.68	4.79	4.92	4.94	4.75	5.18	4.90	5.01	4.84	5.21	5.19	5.00	4.83	4.96	5.06
Residual Fuel .....	0.40	0.42	0.42	0.44	0.46	0.41	0.43	0.42	0.45	0.46	0.41	0.40	0.42	0.43	0.43
Other Oils (a) .....	2.47	2.57	2.68	2.48	2.50	2.64	2.51	2.60	2.50	2.69	2.73	2.54	2.55	2.56	2.61
Total Refinery and Blender Net Production .....	19.33	20.34	20.74	19.89	19.40	20.97	20.38	20.16	19.75	21.20	20.98	20.03	20.08	20.23	20.49
<b>Refinery Distillation Inputs</b>															
.....	16.26	16.50	16.89	16.41	16.23	17.42	16.88	16.59	16.38	17.25	17.18	16.46	16.51	16.78	16.82
<b>Refinery Operable Distillation Capacity</b>															
.....	18.32	18.36	18.44	18.49	18.62	18.58	18.57	18.57	18.57	18.61	18.61	18.61	18.40	18.59	18.60
<b>Refinery Distillation Utilization Factor</b>															
.....	0.89	0.90	0.92	0.89	0.87	0.94	0.91	0.89	0.88	0.93	0.92	0.88	0.90	0.90	0.90

- = no data available

(a) "Other Oils" includes aviation gasoline blend components, finished aviation gasoline, kerosene, petrochemical feedstocks, special naphthas, lubricants, waxes, petroleum coke, asphalt and road oil, still gas, and miscellaneous products.

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

**Historical data:** Latest data available from Energy Information Administration databases supporting the following reports: *Petroleum Supply Monthly*, DOE/EIA-0109;

*Petroleum Supply Annual*, DOE/EIA-0340/2; *Weekly Petroleum Status Report*, DOE/EIA-0208.

Minor discrepancies with published historical data are due to independent rounding.

**Projections:** EIA Regional Short-Term Energy Model.

**Table 4c. U.S. Regional Motor Gasoline Prices and Inventories**

U.S. Energy Information Administration | Short-Term Energy Outlook - November 2017

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
<b>Prices (cents per gallon)</b>															
<b>Refiner Wholesale Price</b> .....	<b>119</b>	<b>158</b>	<b>150</b>	<b>153</b>	<b>163</b>	<b>165</b>	<b>173</b>	<i>170</i>	<i>160</i>	<i>176</i>	<i>173</i>	<i>160</i>	<b>145</b>	<i>168</i>	<i>167</i>
<b>Gasoline Regular Grade Retail Prices Including Taxes</b>															
PADD 1 .....	<b>187</b>	<b>220</b>	<b>215</b>	<b>223</b>	<b>231</b>	<b>233</b>	<b>241</b>	<i>248</i>	<i>237</i>	<i>249</i>	<i>248</i>	<i>239</i>	<b>212</b>	<i>238</i>	<i>243</i>
PADD 2 .....	<b>176</b>	<b>221</b>	<b>215</b>	<b>212</b>	<b>223</b>	<b>228</b>	<b>232</b>	<i>234</i>	<i>223</i>	<i>245</i>	<i>244</i>	<i>229</i>	<b>207</b>	<i>229</i>	<i>236</i>
PADD 3 .....	<b>167</b>	<b>201</b>	<b>199</b>	<b>201</b>	<b>210</b>	<b>216</b>	<b>222</b>	<i>220</i>	<i>209</i>	<i>225</i>	<i>222</i>	<i>210</i>	<b>192</b>	<i>217</i>	<i>217</i>
PADD 4 .....	<b>184</b>	<b>220</b>	<b>226</b>	<b>220</b>	<b>227</b>	<b>239</b>	<b>245</b>	<i>244</i>	<i>220</i>	<i>241</i>	<i>250</i>	<i>235</i>	<b>213</b>	<i>239</i>	<i>237</i>
PADD 5 .....	<b>241</b>	<b>265</b>	<b>264</b>	<b>263</b>	<b>276</b>	<b>289</b>	<b>290</b>	<i>287</i>	<i>276</i>	<i>304</i>	<i>301</i>	<i>281</i>	<b>259</b>	<i>285</i>	<i>291</i>
U.S. Average .....	<b>190</b>	<b>225</b>	<b>221</b>	<b>223</b>	<b>233</b>	<b>238</b>	<b>244</b>	<i>246</i>	<i>235</i>	<i>253</i>	<i>252</i>	<i>239</i>	<b>215</b>	<i>240</i>	<i>245</i>
<b>Gasoline All Grades Including Taxes</b>	<b>200</b>	<b>235</b>	<b>232</b>	<b>234</b>	<b>244</b>	<b>250</b>	<b>255</b>	<i>257</i>	<i>246</i>	<i>264</i>	<i>263</i>	<i>250</i>	<b>226</b>	<i>252</i>	<i>256</i>
<b>End-of-period Inventories (million barrels)</b>															
<b>Total Gasoline Inventories</b>															
PADD 1 .....	<b>65.9</b>	<b>73.1</b>	<b>58.8</b>	<b>65.4</b>	<b>65.3</b>	<b>67.2</b>	<b>57.3</b>	<i>63.1</i>	<i>65.8</i>	<i>66.1</i>	<i>62.5</i>	<i>65.2</i>	<b>65.4</b>	<i>63.1</i>	<i>65.2</i>
PADD 2 .....	<b>57.1</b>	<b>53.9</b>	<b>51.1</b>	<b>53.2</b>	<b>57.0</b>	<b>53.6</b>	<b>50.2</b>	<i>51.5</i>	<i>53.3</i>	<i>50.9</i>	<i>49.6</i>	<i>52.0</i>	<b>53.2</b>	<i>51.5</i>	<i>52.0</i>
PADD 3 .....	<b>82.9</b>	<b>80.3</b>	<b>83.2</b>	<b>82.8</b>	<b>79.1</b>	<b>82.4</b>	<b>76.4</b>	<i>83.3</i>	<i>81.1</i>	<i>80.6</i>	<i>80.5</i>	<i>84.9</i>	<b>82.8</b>	<i>83.3</i>	<i>84.9</i>
PADD 4 .....	<b>8.4</b>	<b>7.4</b>	<b>6.9</b>	<b>7.9</b>	<b>7.9</b>	<b>7.0</b>	<b>6.9</b>	<i>7.8</i>	<i>7.4</i>	<i>7.4</i>	<i>7.3</i>	<i>8.0</i>	<b>7.9</b>	<i>7.8</i>	<i>8.0</i>
PADD 5 .....	<b>29.4</b>	<b>27.9</b>	<b>27.6</b>	<b>29.3</b>	<b>29.7</b>	<b>27.7</b>	<b>28.8</b>	<i>31.2</i>	<i>30.0</i>	<i>28.1</i>	<i>27.9</i>	<i>31.3</i>	<b>29.3</b>	<i>31.2</i>	<i>31.3</i>
U.S. Total .....	<b>243.7</b>	<b>242.7</b>	<b>227.7</b>	<b>238.6</b>	<b>239.0</b>	<b>237.9</b>	<b>219.6</b>	<i>236.8</i>	<i>237.7</i>	<i>233.1</i>	<i>227.8</i>	<i>241.3</i>	<b>238.6</b>	<i>236.8</i>	<i>241.3</i>
<b>Finished Gasoline Inventories</b>															
U.S. Total .....	<b>26.3</b>	<b>24.7</b>	<b>24.8</b>	<b>28.4</b>	<b>21.7</b>	<b>22.5</b>	<b>21.8</b>	<i>27.5</i>	<i>24.7</i>	<i>23.4</i>	<i>24.0</i>	<i>25.3</i>	<b>28.4</b>	<i>27.5</i>	<i>25.3</i>
<b>Gasoline Blending Components Inventories</b>															
U.S. Total .....	<b>217.5</b>	<b>218.0</b>	<b>202.9</b>	<b>210.2</b>	<b>217.2</b>	<b>215.5</b>	<b>197.8</b>	<i>209.4</i>	<i>213.0</i>	<i>209.7</i>	<i>203.9</i>	<i>216.0</i>	<b>210.2</b>	<i>209.4</i>	<i>216.0</i>

- = no data available

Prices are not adjusted for inflation.

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

Regions refer to Petroleum Administration for Defense Districts (PADD).

 See "Petroleum for Administration Defense District" in EIA's Energy Glossary (<http://www.eia.doe.gov/glossary/index.html>) for a list of States in each region.

**Historical data:** Latest data available from Energy Information Administration databases supporting the following reports *Petroleum Marketing Monthly*, DOE/EIA-0380;

*Petroleum Supply Monthly*, DOE/EIA-0109; *Petroleum Supply Annual*, DOE/EIA-0340/2; and *Weekly Petroleum Status Report*, DOE/EIA-0208.

Minor discrepancies with published historical data are due to independent rounding.

**Projections:** EIA Regional Short-Term Energy Model.

**Table 5a. U.S. Natural Gas Supply, Consumption, and Inventories**

U.S. Energy Information Administration | Short-Term Energy Outlook - November 2017

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
<b>Supply (billion cubic feet per day)</b>															
Total Marketed Production .....	<b>79.19</b>	<b>78.27</b>	<b>77.39</b>	<b>76.42</b>	<b>76.47</b>	<b>77.44</b>	<b>79.19</b>	<i>81.87</i>	<i>83.81</i>	<i>84.60</i>	<i>85.12</i>	<i>85.65</i>	<b>77.81</b>	<i>78.76</i>	<i>84.80</i>
Alaska .....	<b>0.98</b>	<b>0.86</b>	<b>0.81</b>	<b>1.04</b>	<b>1.01</b>	<b>0.97</b>	<b>0.80</b>	<i>0.93</i>	<i>1.00</i>	<i>0.85</i>	<i>0.77</i>	<i>0.93</i>	<b>0.92</b>	<i>0.93</i>	<i>0.89</i>
Federal GOM (a) .....	<b>3.40</b>	<b>3.28</b>	<b>3.21</b>	<b>3.30</b>	<b>3.35</b>	<b>3.07</b>	<b>3.02</b>	<i>3.07</i>	<i>3.35</i>	<i>3.33</i>	<i>3.21</i>	<i>3.22</i>	<b>3.30</b>	<i>3.12</i>	<i>3.28</i>
Lower 48 States (excl GOM) .....	<b>74.81</b>	<b>74.13</b>	<b>73.36</b>	<b>72.09</b>	<b>72.12</b>	<b>73.40</b>	<b>75.37</b>	<i>77.87</i>	<i>79.46</i>	<i>80.42</i>	<i>81.14</i>	<i>81.50</i>	<b>73.59</b>	<i>74.71</i>	<i>80.63</i>
Total Dry Gas Production .....	<b>74.14</b>	<b>73.28</b>	<b>72.45</b>	<b>71.55</b>	<b>71.44</b>	<b>72.16</b>	<b>73.85</b>	<i>76.29</i>	<i>78.06</i>	<i>78.74</i>	<i>79.17</i>	<i>79.62</i>	<b>72.85</b>	<i>73.45</i>	<i>78.90</i>
LNG Gross Imports .....	<b>0.33</b>	<b>0.19</b>	<b>0.18</b>	<b>0.26</b>	<b>0.29</b>	<b>0.18</b>	<b>0.20</b>	<i>0.22</i>	<i>0.29</i>	<i>0.16</i>	<i>0.18</i>	<i>0.22</i>	<b>0.24</b>	<i>0.22</i>	<i>0.21</i>
LNG Gross Exports .....	<b>0.15</b>	<b>0.40</b>	<b>0.64</b>	<b>0.85</b>	<b>1.63</b>	<b>1.80</b>	<b>1.68</b>	<i>2.65</i>	<i>3.08</i>	<i>2.83</i>	<i>2.96</i>	<i>3.26</i>	<b>0.51</b>	<i>1.94</i>	<i>3.03</i>
Pipeline Gross Imports .....	<b>8.08</b>	<b>7.84</b>	<b>8.14</b>	<b>7.82</b>	<b>8.89</b>	<b>7.76</b>	<b>7.73</b>	<i>7.52</i>	<i>8.93</i>	<i>7.88</i>	<i>7.91</i>	<i>7.84</i>	<b>7.97</b>	<i>7.97</i>	<i>8.14</i>
Pipeline Gross Exports .....	<b>5.63</b>	<b>5.64</b>	<b>5.93</b>	<b>6.28</b>	<b>7.24</b>	<b>6.49</b>	<b>6.48</b>	<i>6.94</i>	<i>7.81</i>	<i>7.10</i>	<i>6.95</i>	<i>7.64</i>	<b>5.87</b>	<i>6.78</i>	<i>7.37</i>
Supplemental Gaseous Fuels .....	<b>0.16</b>	<b>0.16</b>	<b>0.16</b>	<b>0.15</b>	<b>0.16</b>	<b>0.13</b>	<b>0.16</b>	<i>0.16</i>	<i>0.16</i>	<i>0.16</i>	<i>0.16</i>	<i>0.17</i>	<b>0.16</b>	<i>0.15</i>	<i>0.16</i>
Net Inventory Withdrawals .....	<b>13.09</b>	<b>-7.78</b>	<b>-5.64</b>	<b>4.32</b>	<b>13.72</b>	<b>-9.02</b>	<b>-7.10</b>	<i>3.78</i>	<i>16.21</i>	<i>-10.11</i>	<i>-9.19</i>	<i>3.79</i>	<b>0.99</b>	<i>0.30</i>	<i>0.12</i>
Total Supply .....	<b>90.03</b>	<b>67.66</b>	<b>68.71</b>	<b>76.98</b>	<b>85.63</b>	<b>62.92</b>	<b>66.67</b>	<i>78.38</i>	<i>92.76</i>	<i>66.90</i>	<i>68.33</i>	<i>80.74</i>	<b>75.83</b>	<i>73.36</i>	<i>77.13</i>
Balancing Item (b) .....	<b>-1.01</b>	<b>-1.00</b>	<b>0.43</b>	<b>-1.35</b>	<b>0.21</b>	<b>-0.38</b>	<b>-0.51</b>	<i>-0.51</i>	<i>0.87</i>	<i>-0.25</i>	<i>-0.62</i>	<i>-1.16</i>	<b>-0.73</b>	<i>-0.30</i>	<i>-0.29</i>
Total Primary Supply .....	<b>89.02</b>	<b>66.66</b>	<b>69.14</b>	<b>75.63</b>	<b>85.83</b>	<b>62.54</b>	<b>66.16</b>	<i>77.87</i>	<i>93.63</i>	<i>66.65</i>	<i>67.72</i>	<i>79.58</i>	<b>75.10</b>	<i>73.06</i>	<i>76.83</i>
<b>Consumption (billion cubic feet per day)</b>															
Residential .....	<b>22.23</b>	<b>7.08</b>	<b>3.44</b>	<b>14.79</b>	<b>22.17</b>	<b>6.65</b>	<b>3.43</b>	<i>15.51</i>	<i>25.06</i>	<i>7.15</i>	<i>3.59</i>	<i>15.95</i>	<b>11.87</b>	<i>11.90</i>	<i>12.89</i>
Commercial .....	<b>13.33</b>	<b>5.95</b>	<b>4.53</b>	<b>10.15</b>	<b>13.51</b>	<b>5.84</b>	<b>4.48</b>	<i>10.42</i>	<i>14.84</i>	<i>6.11</i>	<i>4.59</i>	<i>10.65</i>	<b>8.48</b>	<i>8.54</i>	<i>9.02</i>
Industrial .....	<b>22.47</b>	<b>20.02</b>	<b>20.07</b>	<b>21.84</b>	<b>22.96</b>	<b>20.45</b>	<b>20.17</b>	<i>21.94</i>	<i>23.37</i>	<i>21.05</i>	<i>20.78</i>	<i>22.58</i>	<b>21.10</b>	<i>21.37</i>	<i>21.94</i>
Electric Power (c) .....	<b>24.17</b>	<b>27.45</b>	<b>34.91</b>	<b>22.54</b>	<b>20.63</b>	<b>23.57</b>	<b>31.84</b>	<i>23.22</i>	<i>23.05</i>	<i>25.68</i>	<i>32.03</i>	<i>23.32</i>	<b>27.28</b>	<i>24.84</i>	<i>26.04</i>
Lease and Plant Fuel .....	<b>4.42</b>	<b>4.37</b>	<b>4.32</b>	<b>4.27</b>	<b>4.27</b>	<b>4.32</b>	<b>4.42</b>	<i>4.57</i>	<i>4.68</i>	<i>4.72</i>	<i>4.75</i>	<i>4.78</i>	<b>4.34</b>	<i>4.40</i>	<i>4.73</i>
Pipeline and Distribution Use .....	<b>2.28</b>	<b>1.68</b>	<b>1.75</b>	<b>1.92</b>	<b>2.18</b>	<b>1.59</b>	<b>1.69</b>	<i>2.08</i>	<i>2.51</i>	<i>1.82</i>	<i>1.85</i>	<i>2.18</i>	<b>1.91</b>	<i>1.88</i>	<i>2.09</i>
Vehicle Use .....	<b>0.11</b>	<b>0.11</b>	<b>0.12</b>	<b>0.12</b>	<b>0.12</b>	<b>0.12</b>	<b>0.12</b>	<i>0.12</i>	<i>0.12</i>	<i>0.12</i>	<i>0.12</i>	<i>0.12</i>	<b>0.11</b>	<i>0.12</i>	<i>0.12</i>
Total Consumption .....	<b>89.02</b>	<b>66.66</b>	<b>69.14</b>	<b>75.63</b>	<b>85.83</b>	<b>62.54</b>	<b>66.16</b>	<i>77.87</i>	<i>93.63</i>	<i>66.65</i>	<i>67.72</i>	<i>79.58</i>	<b>75.10</b>	<i>73.06</i>	<i>76.83</i>
<b>End-of-period Inventories (billion cubic feet)</b>															
Working Gas Inventory .....	<b>2,486</b>	<b>3,186</b>	<b>3,705</b>	<b>3,297</b>	<b>2,063</b>	<b>2,908</b>	<b>3,559</b>	<i>3,211</i>	<i>1,752</i>	<i>2,672</i>	<i>3,517</i>	<i>3,168</i>	<b>3,297</b>	<i>3,211</i>	<i>3,168</i>
East Region (d) .....	<b>436</b>	<b>654</b>	<b>898</b>	<b>721</b>	<b>260</b>	<b>563</b>	<b>864</b>	<i>742</i>	<i>272</i>	<i>557</i>	<i>820</i>	<i>683</i>	<b>721</b>	<i>742</i>	<i>683</i>
Midwest Region (d) .....	<b>543</b>	<b>763</b>	<b>1,042</b>	<b>906</b>	<b>478</b>	<b>702</b>	<b>994</b>	<i>881</i>	<i>354</i>	<i>606</i>	<i>966</i>	<i>839</i>	<b>906</b>	<i>881</i>	<i>839</i>
South Central Region (d) .....	<b>1,071</b>	<b>1,227</b>	<b>1,176</b>	<b>1,162</b>	<b>938</b>	<b>1,139</b>	<b>1,130</b>	<i>1,101</i>	<i>785</i>	<i>1,019</i>	<i>1,150</i>	<i>1,122</i>	<b>1,162</b>	<i>1,101</i>	<i>1,122</i>
Mountain Region (d) .....	<b>144</b>	<b>196</b>	<b>232</b>	<b>204</b>	<b>142</b>	<b>184</b>	<b>220</b>	<i>192</i>	<i>122</i>	<i>162</i>	<i>217</i>	<i>199</i>	<b>204</b>	<i>192</i>	<i>199</i>
Pacific Region (d) .....	<b>266</b>	<b>316</b>	<b>321</b>	<b>271</b>	<b>219</b>	<b>288</b>	<b>312</b>	<i>257</i>	<i>180</i>	<i>289</i>	<i>326</i>	<i>286</i>	<b>271</b>	<i>257</i>	<i>286</i>
Alaska .....	<b>25</b>	<b>30</b>	<b>36</b>	<b>33</b>	<b>27</b>	<b>32</b>	<b>38</b>	<i>38</i>	<i>38</i>	<i>38</i>	<i>38</i>	<i>38</i>	<b>33</b>	<i>38</i>	<i>38</i>

- = no data available

(a) Marketed production from U.S. Federal leases in the Gulf of Mexico.

(b) The balancing item represents the difference between the sum of the components of natural gas supply and the sum of components of natural gas demand.

(c) Natural gas used for electricity generation and (a limited amount of) useful thermal output by electric utilities and independent power producers.

 (d) For a list of States in each inventory region refer to *Weekly Natural Gas Storage Report, Notes and Definitions* (<http://ir.eia.gov/ngs/notes.html>) .

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

LNG: liquefied natural gas.

**Historical data:** Latest data available from Energy Information Administration databases supporting the following reports: *Natural Gas Monthly* , DOE/EIA-0130; and *Electric Power Monthly* , DOE/EIA-0226.

Minor discrepancies with published historical data are due to independent rounding.

**Projections:** EIA Regional Short-Term Energy Model.

**Table 5b. U.S. Regional Natural Gas Prices (dollars per thousand cubic feet)**  
 U.S. Energy Information Administration | Short-Term Energy Outlook - November 2017

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
<b>Wholesale/Spot</b>															
Henry Hub Spot Price .....	<b>2.07</b>	<b>2.22</b>	<b>2.99</b>	<b>3.15</b>	<b>3.12</b>	<b>3.19</b>	<b>3.06</b>	<b>3.10</b>	<i>3.36</i>	<i>3.18</i>	<i>3.08</i>	<i>3.23</i>	<b>2.61</b>	<i>3.12</i>	<i>3.21</i>
<b>Residential Retail</b>															
New England .....	<b>11.73</b>	<b>13.06</b>	<b>17.73</b>	<b>13.35</b>	<b>12.85</b>	<b>14.08</b>	<b>18.01</b>	<i>13.72</i>	<i>13.08</i>	<i>14.04</i>	<i>16.95</i>	<i>13.49</i>	<b>12.83</b>	<i>13.63</i>	<i>13.61</i>
Middle Atlantic .....	<b>8.84</b>	<b>10.69</b>	<b>16.15</b>	<b>10.23</b>	<b>9.92</b>	<b>12.18</b>	<b>17.23</b>	<i>11.29</i>	<i>10.15</i>	<i>12.16</i>	<i>16.50</i>	<i>11.00</i>	<b>10.05</b>	<i>11.16</i>	<i>11.13</i>
E. N. Central .....	<b>6.78</b>	<b>9.36</b>	<b>17.80</b>	<b>8.25</b>	<b>7.77</b>	<b>11.52</b>	<b>17.71</b>	<i>9.15</i>	<i>8.12</i>	<i>11.02</i>	<i>16.71</i>	<i>9.01</i>	<b>8.25</b>	<i>9.35</i>	<i>9.31</i>
W. N. Central .....	<b>7.38</b>	<b>10.51</b>	<b>17.80</b>	<b>9.11</b>	<b>8.32</b>	<b>11.85</b>	<b>18.50</b>	<i>9.93</i>	<i>8.91</i>	<i>11.71</i>	<i>17.59</i>	<i>9.77</i>	<b>8.96</b>	<i>9.93</i>	<i>10.09</i>
S. Atlantic .....	<b>10.05</b>	<b>15.16</b>	<b>23.15</b>	<b>12.90</b>	<b>12.27</b>	<b>18.79</b>	<b>24.52</b>	<i>13.34</i>	<i>11.53</i>	<i>16.44</i>	<i>22.25</i>	<i>12.73</i>	<b>12.45</b>	<i>14.39</i>	<i>13.23</i>
E. S. Central .....	<b>8.54</b>	<b>13.14</b>	<b>19.55</b>	<b>11.35</b>	<b>10.53</b>	<b>15.83</b>	<b>20.99</b>	<i>12.59</i>	<i>10.06</i>	<i>14.54</i>	<i>20.35</i>	<i>12.82</i>	<b>10.52</b>	<i>12.53</i>	<i>11.98</i>
W. S. Central .....	<b>8.29</b>	<b>14.15</b>	<b>21.03</b>	<b>13.26</b>	<b>10.33</b>	<b>16.49</b>	<b>21.97</b>	<i>12.45</i>	<i>9.56</i>	<i>14.42</i>	<i>19.90</i>	<i>12.22</i>	<b>11.61</b>	<i>12.97</i>	<i>11.96</i>
Mountain .....	<b>8.23</b>	<b>9.66</b>	<b>13.77</b>	<b>8.53</b>	<b>8.21</b>	<b>10.17</b>	<b>14.19</b>	<i>9.32</i>	<i>9.06</i>	<i>10.34</i>	<i>13.81</i>	<i>9.25</i>	<b>8.98</b>	<i>9.34</i>	<i>9.71</i>
Pacific .....	<b>10.95</b>	<b>11.32</b>	<b>13.01</b>	<b>12.19</b>	<b>12.02</b>	<b>12.64</b>	<b>12.88</b>	<i>11.22</i>	<i>12.00</i>	<i>12.26</i>	<i>12.77</i>	<i>11.52</i>	<b>11.68</b>	<i>11.98</i>	<i>11.99</i>
U.S. Average .....	<b>8.51</b>	<b>11.15</b>	<b>16.96</b>	<b>10.18</b>	<b>9.73</b>	<b>12.90</b>	<b>17.53</b>	<i>10.75</i>	<i>9.81</i>	<i>12.35</i>	<i>16.65</i>	<i>10.70</i>	<b>10.04</b>	<i>11.07</i>	<i>10.92</i>
<b>Commercial Retail</b>															
New England .....	<b>8.80</b>	<b>9.56</b>	<b>10.40</b>	<b>9.55</b>	<b>9.55</b>	<b>9.97</b>	<b>10.68</b>	<i>10.65</i>	<i>10.76</i>	<i>10.58</i>	<i>10.41</i>	<i>9.95</i>	<b>9.32</b>	<i>10.03</i>	<i>10.49</i>
Middle Atlantic .....	<b>6.93</b>	<b>6.45</b>	<b>6.06</b>	<b>6.78</b>	<b>7.66</b>	<b>7.42</b>	<b>7.00</b>	<i>7.55</i>	<i>7.83</i>	<i>7.79</i>	<i>7.15</i>	<i>7.64</i>	<b>6.68</b>	<i>7.51</i>	<i>7.68</i>
E. N. Central .....	<b>5.86</b>	<b>6.61</b>	<b>8.77</b>	<b>6.52</b>	<b>6.63</b>	<b>7.87</b>	<b>8.93</b>	<i>6.86</i>	<i>6.69</i>	<i>7.81</i>	<i>9.15</i>	<i>7.12</i>	<b>6.40</b>	<i>7.08</i>	<i>7.16</i>
W. N. Central .....	<b>6.22</b>	<b>6.71</b>	<b>8.48</b>	<b>6.79</b>	<b>6.96</b>	<b>7.79</b>	<b>9.08</b>	<i>7.31</i>	<i>7.54</i>	<i>8.05</i>	<i>9.04</i>	<i>7.43</i>	<b>6.66</b>	<i>7.37</i>	<i>7.70</i>
S. Atlantic .....	<b>7.54</b>	<b>8.33</b>	<b>9.32</b>	<b>8.54</b>	<b>8.86</b>	<b>10.03</b>	<b>9.80</b>	<i>8.96</i>	<i>8.78</i>	<i>9.46</i>	<i>9.94</i>	<i>8.89</i>	<b>8.18</b>	<i>9.21</i>	<i>9.07</i>
E. S. Central .....	<b>7.49</b>	<b>8.57</b>	<b>9.75</b>	<b>9.03</b>	<b>9.05</b>	<b>10.28</b>	<b>10.67</b>	<i>9.25</i>	<i>8.68</i>	<i>9.67</i>	<i>10.17</i>	<i>9.07</i>	<b>8.36</b>	<i>9.51</i>	<i>9.11</i>
W. S. Central .....	<b>6.27</b>	<b>6.88</b>	<b>8.27</b>	<b>8.11</b>	<b>7.63</b>	<b>8.20</b>	<b>8.77</b>	<i>7.77</i>	<i>7.29</i>	<i>7.63</i>	<i>8.20</i>	<i>7.70</i>	<b>7.18</b>	<i>7.96</i>	<i>7.60</i>
Mountain .....	<b>6.95</b>	<b>7.10</b>	<b>7.96</b>	<b>6.89</b>	<b>6.88</b>	<b>7.37</b>	<b>8.31</b>	<i>7.21</i>	<i>7.42</i>	<i>7.75</i>	<i>8.51</i>	<i>7.41</i>	<b>7.06</b>	<i>7.22</i>	<i>7.59</i>
Pacific .....	<b>8.44</b>	<b>8.15</b>	<b>9.22</b>	<b>9.19</b>	<b>9.04</b>	<b>8.99</b>	<b>9.03</b>	<i>8.59</i>	<i>8.54</i>	<i>8.34</i>	<i>8.78</i>	<i>8.56</i>	<b>8.75</b>	<i>8.90</i>	<i>8.55</i>
U.S. Average .....	<b>6.87</b>	<b>7.26</b>	<b>8.24</b>	<b>7.52</b>	<b>7.71</b>	<b>8.32</b>	<b>8.73</b>	<i>7.87</i>	<i>7.83</i>	<i>8.28</i>	<i>8.67</i>	<i>7.91</i>	<b>7.29</b>	<i>7.97</i>	<i>8.02</i>
<b>Industrial Retail</b>															
New England .....	<b>6.88</b>	<b>6.69</b>	<b>6.13</b>	<b>6.95</b>	<b>7.81</b>	<b>7.04</b>	<b>6.45</b>	<i>7.92</i>	<i>8.59</i>	<i>7.94</i>	<i>7.26</i>	<i>8.25</i>	<b>6.73</b>	<i>7.43</i>	<i>8.13</i>
Middle Atlantic .....	<b>6.51</b>	<b>5.99</b>	<b>6.27</b>	<b>6.76</b>	<b>7.69</b>	<b>7.59</b>	<b>7.72</b>	<i>7.53</i>	<i>7.98</i>	<i>7.52</i>	<i>7.49</i>	<i>7.76</i>	<b>6.45</b>	<i>7.63</i>	<i>7.79</i>
E. N. Central .....	<b>5.04</b>	<b>4.73</b>	<b>5.45</b>	<b>5.41</b>	<b>5.86</b>	<b>5.96</b>	<b>5.62</b>	<i>5.81</i>	<i>6.45</i>	<i>6.21</i>	<i>6.09</i>	<i>6.02</i>	<b>5.14</b>	<i>5.83</i>	<i>6.25</i>
W. N. Central .....	<b>4.42</b>	<b>3.56</b>	<b>4.06</b>	<b>4.50</b>	<b>5.05</b>	<b>4.30</b>	<b>4.25</b>	<i>4.98</i>	<i>5.55</i>	<i>4.85</i>	<i>4.62</i>	<i>5.18</i>	<b>4.18</b>	<i>4.69</i>	<i>5.09</i>
S. Atlantic .....	<b>4.40</b>	<b>3.78</b>	<b>4.43</b>	<b>4.82</b>	<b>5.35</b>	<b>5.01</b>	<b>4.89</b>	<i>5.23</i>	<i>5.51</i>	<i>5.04</i>	<i>4.93</i>	<i>5.28</i>	<b>4.37</b>	<i>5.13</i>	<i>5.20</i>
E. S. Central .....	<b>3.99</b>	<b>3.40</b>	<b>4.12</b>	<b>4.63</b>	<b>5.06</b>	<b>4.59</b>	<b>4.43</b>	<i>4.79</i>	<i>5.05</i>	<i>4.64</i>	<i>4.51</i>	<i>4.91</i>	<b>4.04</b>	<i>4.73</i>	<i>4.80</i>
W. S. Central .....	<b>2.29</b>	<b>2.16</b>	<b>3.07</b>	<b>3.21</b>	<b>3.47</b>	<b>3.42</b>	<b>3.31</b>	<i>3.34</i>	<i>3.58</i>	<i>3.37</i>	<i>3.36</i>	<i>3.46</i>	<b>2.69</b>	<i>3.38</i>	<i>3.44</i>
Mountain .....	<b>5.27</b>	<b>4.96</b>	<b>5.44</b>	<b>5.11</b>	<b>5.31</b>	<b>5.36</b>	<b>5.65</b>	<i>5.71</i>	<i>5.91</i>	<i>5.77</i>	<i>6.07</i>	<i>6.04</i>	<b>5.19</b>	<i>5.51</i>	<i>5.95</i>
Pacific .....	<b>6.64</b>	<b>6.01</b>	<b>6.67</b>	<b>7.11</b>	<b>7.45</b>	<b>6.89</b>	<b>6.49</b>	<i>6.57</i>	<i>6.93</i>	<i>6.51</i>	<i>6.59</i>	<i>6.70</i>	<b>6.64</b>	<i>6.87</i>	<i>6.70</i>
U.S. Average .....	<b>3.44</b>	<b>2.93</b>	<b>3.64</b>	<b>4.04</b>	<b>4.53</b>	<b>4.12</b>	<b>3.90</b>	<i>4.22</i>	<i>4.68</i>	<i>4.11</i>	<i>3.99</i>	<i>4.34</i>	<b>3.52</b>	<i>4.20</i>	<i>4.30</i>

- = no data available

Prices are not adjusted for inflation.

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

Regions refer to U.S. Census divisions.

See "Census division" in EIA's Energy Glossary (<http://www.eia.doe.gov/glossary/index.html>) for a list of States in each region.

**Historical data:** Latest data available from Energy Information Administration databases supporting the *Natural Gas Monthly*, DOE/EIA-0130.

Natural gas Henry Hub spot price from Reuter's News Service (<http://www.reuters.com>).

Minor discrepancies with published historical data are due to independent rounding.

**Projections:** EIA Regional Short-Term Energy Model.

**Table 6. U.S. Coal Supply, Consumption, and Inventories**

U.S. Energy Information Administration | Short-Term Energy Outlook - November 2017

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
<b>Supply (million short tons)</b>															
Production .....	173.2	160.9	195.1	199.2	197.0	187.1	206.5	199.3	198.9	174.9	202.1	211.9	728.4	789.9	787.9
Appalachia .....	44.4	43.4	45.1	47.5	50.7	51.2	50.1	47.9	48.5	44.9	42.1	44.8	180.3	199.9	180.3
Interior .....	36.9	34.5	35.8	37.0	38.5	36.4	38.4	37.5	40.1	34.2	40.1	43.7	144.1	150.9	158.1
Western .....	92.0	83.0	114.2	114.8	107.8	99.4	117.9	113.9	110.3	95.8	120.0	123.4	404.0	439.1	449.5
Primary Inventory Withdrawals .....	-1.4	0.2	3.6	-0.1	-1.0	0.5	3.0	-0.7	-0.1	-0.3	4.2	-3.0	2.2	1.7	0.9
Imports .....	2.7	2.3	2.7	2.1	1.9	2.2	2.6	2.1	1.4	2.3	2.9	2.6	9.8	8.7	9.3
Exports .....	14.2	14.2	12.6	19.3	22.3	21.8	22.8	15.5	19.5	18.2	17.6	17.3	60.3	82.4	72.7
Metallurgical Coal .....	10.2	10.1	9.1	11.6	12.2	13.5	13.9	10.3	11.1	12.9	12.4	11.8	40.9	49.9	48.1
Steam Coal .....	4.0	4.2	3.5	7.7	10.1	8.3	8.9	5.2	8.5	5.4	5.2	5.6	19.3	32.5	24.6
Total Primary Supply .....	160.3	149.1	188.8	181.8	175.6	168.0	189.2	185.1	180.7	158.7	191.7	194.2	680.1	717.9	725.3
Secondary Inventory Withdrawals .....	4.1	9.2	25.2	-5.6	0.8	3.1	18.4	-5.2	1.0	2.6	12.5	-17.4	32.9	17.1	-1.3
Waste Coal (a) .....	2.5	1.9	2.4	2.0	2.4	1.7	2.5	2.5	2.4	2.4	2.4	2.4	8.7	9.2	9.6
Total Supply .....	166.9	160.2	216.5	178.2	178.8	172.8	210.1	182.5	184.1	163.7	206.6	179.2	721.8	744.1	733.6
<b>Consumption (million short tons)</b>															
Coke Plants .....	4.1	4.1	4.2	4.1	4.2	4.3	4.7	5.4	3.9	3.4	4.2	5.1	16.5	18.7	16.6
Electric Power Sector (b) .....	152.2	147.2	210.3	167.6	160.5	154.6	193.0	167.4	171.4	151.9	193.9	165.2	677.3	675.4	682.4
Retail and Other Industry .....	9.6	8.6	8.6	9.0	8.8	8.3	7.9	8.3	8.8	8.3	8.5	8.9	35.8	33.4	34.5
Residential and Commercial .....	0.4	0.2	0.2	0.3	0.4	0.2	0.1	0.2	0.3	0.1	0.1	0.2	1.2	0.9	0.7
Other Industrial .....	9.1	8.4	8.4	8.7	8.4	8.1	7.8	8.1	8.5	8.2	8.4	8.7	34.7	32.5	33.8
Total Consumption .....	165.9	160.0	223.1	180.6	173.5	167.2	205.6	181.1	184.1	163.7	206.6	179.2	729.6	727.5	733.6
Discrepancy (c) .....	1.0	0.3	-6.6	-2.5	5.3	5.5	4.5	1.4	0.0	0.0	0.0	0.0	-7.8	16.7	0.0
<b>End-of-period Inventories (million short tons)</b>															
Primary Inventories (d) .....	37.3	37.1	33.6	33.7	34.7	34.2	31.3	32.0	32.1	32.4	28.2	31.2	33.7	32.0	31.2
Secondary Inventories .....	198.4	189.2	164.0	169.6	168.8	165.8	147.4	152.5	151.5	149.0	136.4	153.9	169.6	152.5	153.9
Electric Power Sector .....	192.3	183.2	158.2	163.9	163.9	160.5	142.1	147.7	147.0	144.2	131.4	148.9	163.9	147.7	148.9
Retail and General Industry .....	3.9	3.8	3.7	3.6	3.2	3.3	3.3	2.8	3.0	3.0	3.1	3.0	3.6	2.8	3.0
Coke Plants .....	1.9	1.8	1.7	1.7	1.4	1.6	1.7	1.8	1.3	1.6	1.7	1.7	1.7	1.8	1.7
<b>Coal Market Indicators</b>															
Coal Miner Productivity															
(Tons per hour) .....	6.23	6.23	6.23	6.23	6.19	6.19	6.19	6.19	6.10	6.10	6.10	6.10	6.23	6.19	6.10
Total Raw Steel Production															
(Million short tons per day) .....	0.238	0.247	0.238	0.230	0.248	0.247	0.250	0.235	0.269	0.259	0.237	0.207	0.239	0.245	0.243
Cost of Coal to Electric Utilities															
(Dollars per million Btu) .....	2.13	2.13	2.11	2.08	2.08	2.12	2.12	2.19	2.19	2.20	2.21	2.21	2.11	2.13	2.20

- = no data available

(a) Waste coal includes waste coal and coal slurry reprocessed into briquettes.

(b) Coal used for electricity generation and (a limited amount of) useful thermal output by electric utilities and independent power producers.

(c) The discrepancy reflects an unaccounted-for shipper and receiver reporting difference, assumed to be zero in the forecast period.

(d) Primary stocks are held at the mines and distribution points.

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.**Historical data:** Latest data available from Energy Information Administration databases supporting the following reports: *Quarterly Coal Report*, DOE/EIA-0121; and *Electric Power Monthly*, DOE/EIA-0226.

Minor discrepancies with published historical data are due to independent rounding.

**Projections:** EIA Regional Short-Term Energy Model.

**Table 7a. U.S. Electricity Industry Overview**

U.S. Energy Information Administration | Short-Term Energy Outlook - November 2017

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
<b>Electricity Supply (billion kilowatthours per day)</b>															
Electricity Generation .....	<b>10.67</b>	<b>10.75</b>	<b>12.76</b>	<b>10.39</b>	<b>10.53</b>	<b>10.67</b>	<b>12.18</b>	<i>10.52</i>	<i>10.99</i>	<i>10.81</i>	<i>12.29</i>	<i>10.56</i>	<b>11.15</b>	<i>10.98</i>	<i>11.16</i>
Electric Power Sector (a) .....	<b>10.23</b>	<b>10.32</b>	<b>12.32</b>	<b>9.96</b>	<b>10.10</b>	<b>10.25</b>	<b>11.75</b>	<i>10.11</i>	<i>10.56</i>	<i>10.38</i>	<i>11.83</i>	<i>10.14</i>	<b>10.71</b>	<i>10.55</i>	<i>10.73</i>
Comm. and Indus. Sectors (b) .....	<b>0.44</b>	<b>0.43</b>	<b>0.45</b>	<b>0.42</b>	<b>0.43</b>	<b>0.41</b>	<b>0.43</b>	<i>0.41</i>	<i>0.43</i>	<i>0.43</i>	<i>0.45</i>	<i>0.42</i>	<b>0.44</b>	<i>0.42</i>	<i>0.43</i>
Net Imports .....	<b>0.18</b>	<b>0.18</b>	<b>0.22</b>	<b>0.19</b>	<b>0.13</b>	<b>0.14</b>	<b>0.17</b>	<i>0.16</i>	<i>0.18</i>	<i>0.19</i>	<i>0.21</i>	<i>0.16</i>	<b>0.19</b>	<i>0.15</i>	<i>0.18</i>
Total Supply .....	<b>10.85</b>	<b>10.93</b>	<b>12.98</b>	<b>10.58</b>	<b>10.66</b>	<b>10.81</b>	<b>12.35</b>	<i>10.69</i>	<i>11.17</i>	<i>10.99</i>	<i>12.49</i>	<i>10.73</i>	<b>11.34</b>	<i>11.13</i>	<i>11.35</i>
Losses and Unaccounted for (c) .....	<b>0.66</b>	<b>0.97</b>	<b>0.90</b>	<b>0.73</b>	<b>0.55</b>	<b>0.76</b>	<b>0.65</b>	<i>0.67</i>	<i>0.58</i>	<i>0.81</i>	<i>0.71</i>	<i>0.67</i>	<b>0.82</b>	<i>0.66</i>	<i>0.69</i>
<b>Electricity Consumption (billion kilowatthours per day unless noted)</b>															
Retail Sales .....	<b>9.81</b>	<b>9.58</b>	<b>11.69</b>	<b>9.47</b>	<b>9.73</b>	<b>9.68</b>	<b>11.32</b>	<i>9.65</i>	<i>10.22</i>	<i>9.80</i>	<i>11.38</i>	<i>9.68</i>	<b>10.14</b>	<i>10.10</i>	<i>10.27</i>
Residential Sector .....	<b>3.81</b>	<b>3.37</b>	<b>4.77</b>	<b>3.42</b>	<b>3.70</b>	<b>3.42</b>	<b>4.47</b>	<i>3.45</i>	<i>4.06</i>	<i>3.48</i>	<i>4.50</i>	<i>3.49</i>	<b>3.85</b>	<i>3.76</i>	<i>3.88</i>
Commercial Sector .....	<b>3.49</b>	<b>3.62</b>	<b>4.20</b>	<b>3.55</b>	<b>3.51</b>	<b>3.63</b>	<b>4.10</b>	<i>3.58</i>	<i>3.56</i>	<i>3.65</i>	<i>4.08</i>	<i>3.55</i>	<b>3.71</b>	<i>3.71</i>	<i>3.71</i>
Industrial Sector .....	<b>2.48</b>	<b>2.57</b>	<b>2.70</b>	<b>2.48</b>	<b>2.49</b>	<b>2.61</b>	<b>2.73</b>	<i>2.60</i>	<i>2.57</i>	<i>2.65</i>	<i>2.77</i>	<i>2.62</i>	<b>2.56</b>	<i>2.61</i>	<i>2.65</i>
Transportation Sector .....	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<b>0.02</b>	<i>0.02</i>	<i>0.02</i>	<i>0.02</i>	<i>0.02</i>	<i>0.02</i>	<b>0.02</b>	<i>0.02</i>	<i>0.02</i>
Direct Use (d) .....	<b>0.39</b>	<b>0.38</b>	<b>0.40</b>	<b>0.38</b>	<b>0.38</b>	<b>0.37</b>	<b>0.38</b>	<i>0.37</i>	<i>0.38</i>	<i>0.38</i>	<i>0.40</i>	<i>0.37</i>	<b>0.38</b>	<i>0.37</i>	<i>0.38</i>
Total Consumption .....	<b>10.19</b>	<b>9.96</b>	<b>12.09</b>	<b>9.84</b>	<b>10.11</b>	<b>10.05</b>	<b>11.70</b>	<i>10.02</i>	<i>10.60</i>	<i>10.18</i>	<i>11.78</i>	<i>10.05</i>	<b>10.52</b>	<i>10.47</i>	<i>10.65</i>
Average residential electricity usage per customer (kWh) .....	<b>2,650</b>	<b>2,346</b>	<b>3,355</b>	<b>2,406</b>	<b>2,533</b>	<b>2,365</b>	<b>3,124</b>	<i>2,425</i>	<i>2,742</i>	<i>2,376</i>	<i>3,110</i>	<i>2,408</i>	<b>10,756</b>	<i>10,447</i>	<i>10,636</i>
<b>Prices</b>															
<b>Power Generation Fuel Costs (dollars per million Btu)</b>															
Coal .....	<b>2.13</b>	<b>2.13</b>	<b>2.11</b>	<b>2.08</b>	<b>2.08</b>	<b>2.12</b>	<b>2.12</b>	<i>2.19</i>	<i>2.19</i>	<i>2.20</i>	<i>2.21</i>	<i>2.21</i>	<b>2.11</b>	<i>2.13</i>	<i>2.20</i>
Natural Gas .....	<b>2.65</b>	<b>2.51</b>	<b>3.00</b>	<b>3.36</b>	<b>3.69</b>	<b>3.39</b>	<b>3.21</b>	<i>3.56</i>	<i>4.10</i>	<i>3.54</i>	<i>3.27</i>	<i>3.72</i>	<b>2.88</b>	<i>3.43</i>	<i>3.62</i>
Residual Fuel Oil .....	<b>6.15</b>	<b>8.51</b>	<b>9.70</b>	<b>9.08</b>	<b>11.16</b>	<b>10.60</b>	<b>10.14</b>	<i>10.85</i>	<i>10.84</i>	<i>11.22</i>	<i>10.81</i>	<i>10.91</i>	<b>8.41</b>	<i>10.67</i>	<i>10.94</i>
Distillate Fuel Oil .....	<b>9.00</b>	<b>11.01</b>	<b>11.64</b>	<b>12.14</b>	<b>12.75</b>	<b>12.24</b>	<b>12.52</b>	<i>13.40</i>	<i>14.10</i>	<i>13.03</i>	<i>12.59</i>	<i>12.99</i>	<b>10.86</b>	<i>12.73</i>	<i>13.22</i>
<b>Retail Prices (cents per kilowatthour)</b>															
Residential Sector .....	<b>12.20</b>	<b>12.66</b>	<b>12.81</b>	<b>12.45</b>	<b>12.61</b>	<b>13.00</b>	<b>13.19</b>	<i>12.70</i>	<i>12.77</i>	<i>13.43</i>	<i>13.61</i>	<i>13.11</i>	<b>12.55</b>	<i>12.90</i>	<i>13.24</i>
Commercial Sector .....	<b>10.12</b>	<b>10.34</b>	<b>10.68</b>	<b>10.27</b>	<b>10.38</b>	<b>10.67</b>	<b>11.01</b>	<i>10.54</i>	<i>10.66</i>	<i>11.00</i>	<i>11.38</i>	<i>10.88</i>	<b>10.37</b>	<i>10.67</i>	<i>11.00</i>
Industrial Sector .....	<b>6.42</b>	<b>6.67</b>	<b>7.20</b>	<b>6.67</b>	<b>6.65</b>	<b>6.88</b>	<b>7.30</b>	<i>6.87</i>	<i>6.87</i>	<i>7.06</i>	<i>7.49</i>	<i>7.00</i>	<b>6.75</b>	<i>6.93</i>	<i>7.11</i>

- = no data available. kWh = kilowatthours. Btu = British thermal units.

Prices are not adjusted for inflation.

(a) Generation supplied by electricity-only and combined-heat-and-power (CHP) plants operated by electric utilities and independent power producers.

(b) Generation supplied by CHP and electricity-only plants operated by businesses in the commercial and industrial sectors, primarily for onsite use.

(c) Includes transmission and distribution losses, data collection time-frame differences, and estimation error.

 (d) Direct Use represents commercial and industrial facility use of onsite net electricity generation; and electrical sales or transfers to adjacent or collocated facilities for which revenue information is not available. See Table 7.6 of the EIA *Monthly Energy Review*.

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

**Historical data:** Latest data available from Energy Information Administration databases supporting the following reports: *Electric Power Monthly*, DOE/EIA-0226; and *Electric Power Annual*, DOE/EIA-0348.

Minor discrepancies with published historical data are due to independent rounding.

**Projections:** EIA Regional Short-Term Energy Model.

**Table 7b. U.S. Regional Electricity Retail Sales (Million Kilowatthours per Day)**  
 U.S. Energy Information Administration | Short-Term Energy Outlook - November 2017

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
<b>Residential Sector</b>															
New England .....	133	109	152	114	135	112	139	113	140	112	144	116	127	125	128
Middle Atlantic .....	367	309	461	320	368	307	404	317	391	317	406	324	364	349	360
E. N. Central .....	522	447	619	459	507	435	541	459	553	443	549	464	512	485	502
W. N. Central .....	298	243	322	255	298	246	304	269	330	251	307	272	279	279	290
S. Atlantic .....	968	874	1,223	852	891	891	1,148	866	1,020	904	1,146	874	980	950	986
E. S. Central .....	337	274	412	279	305	277	371	278	357	286	378	284	326	308	326
W. S. Central .....	526	518	810	517	501	536	759	513	565	548	789	517	593	578	605
Mountain .....	240	251	337	232	245	259	346	234	253	255	350	237	265	271	274
Pacific contiguous .....	406	336	422	381	439	346	442	385	436	350	423	385	386	403	399
AK and HI .....	13	12	12	14	14	12	12	13	14	12	12	13	13	13	13
Total .....	3,810	3,373	4,771	3,421	3,704	3,421	4,466	3,448	4,059	3,479	4,504	3,488	3,845	3,761	3,883
<b>Commercial Sector</b>															
New England .....	141	137	160	135	140	136	152	133	137	132	145	126	143	140	135
Middle Atlantic .....	422	408	488	408	423	404	464	405	424	405	460	400	432	424	422
E. N. Central .....	488	493	567	483	490	488	536	479	499	490	537	476	508	498	501
W. N. Central .....	271	271	308	271	272	270	305	276	280	277	310	274	280	281	285
S. Atlantic .....	792	844	977	802	784	853	945	814	801	851	939	809	854	850	850
E. S. Central .....	231	242	295	234	227	241	282	237	240	245	283	235	251	247	251
W. S. Central .....	473	519	623	511	477	527	611	521	497	539	620	526	532	534	546
Mountain .....	240	258	290	250	246	265	300	250	246	268	305	253	260	265	268
Pacific contiguous .....	418	428	475	436	431	431	489	453	424	431	467	435	440	451	439
AK and HI .....	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
Total .....	3,494	3,616	4,199	3,547	3,508	3,630	4,100	3,584	3,564	3,654	4,082	3,550	3,715	3,707	3,713
<b>Industrial Sector</b>															
New England .....	45	47	49	45	44	44	48	47	43	43	46	46	47	46	44
Middle Atlantic .....	192	191	202	189	192	194	204	197	197	190	208	197	193	197	198
E. N. Central .....	502	504	528	485	493	502	525	511	515	509	526	510	505	508	515
W. N. Central .....	223	228	246	227	228	240	258	260	253	253	266	266	231	246	259
S. Atlantic .....	362	384	393	362	363	386	384	356	347	373	385	351	375	372	364
E. S. Central .....	258	269	274	261	264	275	285	276	282	280	281	273	265	275	279
W. S. Central .....	456	471	481	458	476	498	509	470	475	514	532	489	467	488	502
Mountain .....	214	232	247	215	210	228	248	221	219	238	255	226	227	227	235
Pacific contiguous .....	215	236	262	224	211	230	260	248	226	239	258	250	234	237	243
AK and HI .....	13	14	15	14	13	14	15	14	13	14	14	14	14	14	14
Total .....	2,480	2,575	2,697	2,480	2,493	2,610	2,735	2,599	2,569	2,651	2,771	2,622	2,558	2,610	2,654
<b>Total All Sectors (a)</b>															
New England .....	320	294	362	295	320	294	340	295	322	288	336	290	318	312	309
Middle Atlantic .....	993	918	1,162	927	994	915	1,083	931	1,024	923	1,086	932	1,000	981	991
E. N. Central .....	1,514	1,446	1,716	1,429	1,492	1,427	1,603	1,450	1,568	1,444	1,614	1,452	1,526	1,493	1,520
W. N. Central .....	792	742	877	753	798	755	867	804	863	781	883	812	791	806	835
S. Atlantic .....	2,126	2,106	2,596	2,020	2,042	2,134	2,482	2,039	2,171	2,131	2,474	2,037	2,213	2,175	2,204
E. S. Central .....	827	785	981	774	796	793	938	791	879	811	942	792	842	830	856
W. S. Central .....	1,455	1,509	1,914	1,487	1,455	1,562	1,880	1,505	1,537	1,601	1,941	1,533	1,592	1,601	1,654
Mountain .....	694	741	875	697	701	752	894	705	719	763	910	716	752	763	777
Pacific contiguous .....	1,042	1,002	1,162	1,043	1,083	1,010	1,192	1,089	1,089	1,022	1,150	1,073	1,062	1,094	1,084
AK and HI .....	42	41	43	44	43	41	43	44	43	41	43	44	43	43	43
Total .....	9,805	9,584	11,688	9,469	9,726	9,681	11,322	9,653	10,216	9,805	11,379	9,682	10,139	10,099	10,272

- = no data available

(a) Total retail sales to all sectors includes residential, commercial, industrial, and transportation sector sales.

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

Retail Sales represents total retail electricity sales by electric utilities and power marketers.

Regions refer to U.S. Census divisions.

See "Census division" in EIA's Energy Glossary (<http://www.eia.doe.gov/glossary/index.html>) for a list of States in each region.

**Historical data:** Latest data available from Energy Information Administration databases supporting the following reports: *Electric Power Monthly*, DOE/EIA-0226; and *Electric Power Annual*, DOE/EIA-0348.

Minor discrepancies with published historical data are due to independent rounding.

**Projections:** EIA Regional Short-Term Energy Model.



**Table 7c. U.S. Regional Retail Electricity Prices (Cents per Kilowatthour)**  
 U.S. Energy Information Administration | Short-Term Energy Outlook - November 2017

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
<b>Residential Sector</b>															
New England .....	19.08	19.30	18.47	18.68	19.08	19.52	19.52	19.58	19.97	20.60	20.46	20.57	18.85	19.42	20.38
Middle Atlantic .....	15.29	15.88	16.08	15.74	15.56	16.29	16.49	15.85	15.67	16.59	16.93	16.24	15.76	16.05	16.36
E. N. Central .....	12.51	13.25	12.91	13.04	12.90	13.58	13.25	13.47	13.34	14.21	13.88	14.04	12.91	13.29	13.84
W. N. Central .....	10.61	12.31	12.67	11.27	10.94	12.66	13.16	11.46	11.06	13.02	13.58	11.77	11.73	12.05	12.32
S. Atlantic .....	11.40	11.75	11.88	11.47	11.73	12.01	12.21	11.73	11.85	12.40	12.66	12.10	11.65	11.94	12.27
E. S. Central .....	10.35	10.94	10.90	11.14	11.10	11.44	11.34	11.42	11.30	11.98	11.82	11.72	10.82	11.32	11.69
W. S. Central .....	10.34	10.69	10.65	10.52	10.55	10.93	10.92	10.61	10.50	11.13	11.19	10.89	10.56	10.77	10.95
Mountain .....	11.05	11.91	12.12	11.45	11.28	12.15	12.31	11.65	11.51	12.46	12.68	11.98	11.68	11.90	12.21
Pacific .....	14.13	13.95	16.09	13.85	14.52	14.70	16.39	14.13	15.00	15.23	16.84	14.51	14.56	14.98	15.42
U.S. Average .....	12.20	12.66	12.81	12.45	12.61	13.00	13.19	12.70	12.77	13.43	13.61	13.11	12.55	12.90	13.24
<b>Commercial Sector</b>															
New England .....	15.33	15.01	15.19	14.89	15.12	15.08	15.73	15.35	15.66	15.67	16.52	16.17	15.11	15.33	16.01
Middle Atlantic .....	12.02	12.48	13.29	12.22	12.07	12.73	13.42	12.41	12.21	12.89	13.62	12.58	12.54	12.68	12.85
E. N. Central .....	9.65	9.87	9.91	9.98	10.02	10.24	10.09	10.20	10.32	10.57	10.36	10.39	9.86	10.13	10.41
W. N. Central .....	8.86	9.70	10.15	9.07	9.12	10.11	10.60	9.28	9.33	10.39	10.93	9.57	9.47	9.80	10.08
S. Atlantic .....	9.37	9.27	9.26	9.21	9.48	9.38	9.51	9.51	9.83	9.75	9.86	9.80	9.28	9.47	9.81
E. S. Central .....	9.93	9.99	10.12	10.35	10.53	10.56	10.61	10.84	11.11	11.20	11.13	11.19	10.10	10.63	11.15
W. S. Central .....	7.80	7.79	7.86	7.78	8.26	8.42	8.38	8.06	8.34	8.54	8.57	8.23	7.81	8.29	8.43
Mountain .....	9.02	9.75	10.03	9.34	9.14	9.92	10.14	9.56	9.40	10.20	10.43	9.84	9.56	9.72	10.00
Pacific .....	12.21	13.08	14.69	12.96	12.53	13.56	15.07	13.36	13.08	14.18	16.21	14.36	13.28	13.68	14.51
U.S. Average .....	10.12	10.34	10.68	10.27	10.38	10.67	11.01	10.54	10.66	11.00	11.38	10.88	10.37	10.67	11.00
<b>Industrial Sector</b>															
New England .....	12.22	11.86	12.25	12.03	12.42	12.25	12.60	12.37	12.78	12.57	12.92	12.67	12.09	12.42	12.74
Middle Atlantic .....	7.05	7.01	7.12	6.92	6.93	6.94	6.94	6.92	7.03	7.06	6.98	6.98	7.03	6.93	7.01
E. N. Central .....	6.74	6.88	7.04	6.96	7.02	7.05	7.04	7.10	7.22	7.24	7.24	7.25	6.91	7.06	7.24
W. N. Central .....	6.65	7.10	7.82	6.64	6.89	7.33	7.98	6.81	7.07	7.52	8.21	6.98	7.07	7.26	7.45
S. Atlantic .....	6.15	6.33	6.78	6.30	6.35	6.39	6.85	6.54	6.67	6.63	7.05	6.67	6.40	6.54	6.76
E. S. Central .....	5.45	5.72	6.14	5.99	5.91	5.96	6.23	6.17	6.10	6.13	6.44	6.29	5.83	6.07	6.24
W. S. Central .....	5.06	5.03	5.44	5.32	5.27	5.52	5.79	5.66	5.59	5.72	5.95	5.71	5.22	5.57	5.75
Mountain .....	5.83	6.29	7.01	6.08	6.08	6.54	7.14	6.23	6.24	6.70	7.31	6.37	6.33	6.52	6.68
Pacific .....	7.99	9.08	10.54	8.65	8.24	9.35	10.77	8.79	8.24	9.38	11.04	8.94	9.14	9.35	9.45
U.S. Average .....	6.42	6.67	7.20	6.67	6.65	6.88	7.30	6.87	6.87	7.06	7.49	7.00	6.75	6.93	7.11
<b>All Sectors (a)</b>															
New England .....	16.41	16.07	16.13	15.88	16.38	16.31	16.84	16.49	17.11	17.09	17.69	17.34	16.13	16.51	17.32
Middle Atlantic .....	12.25	12.47	13.31	12.34	12.35	12.68	13.34	12.44	12.52	12.94	13.57	12.65	12.63	12.73	12.94
E. N. Central .....	9.67	9.87	10.11	9.93	10.00	10.13	10.17	10.15	10.36	10.51	10.54	10.45	9.90	10.12	10.47
W. N. Central .....	8.90	9.75	10.42	9.08	9.16	10.06	10.74	9.22	9.33	10.31	11.03	9.46	9.57	9.81	10.04
S. Atlantic .....	9.74	9.76	10.12	9.64	9.90	9.93	10.33	9.93	10.27	10.33	10.72	10.24	9.84	10.04	10.41
E. S. Central .....	8.70	8.86	9.33	9.17	9.22	9.27	9.57	9.42	9.58	9.72	10.01	9.69	9.03	9.38	9.76
W. S. Central .....	7.86	7.92	8.43	7.97	8.07	8.36	8.70	8.20	8.29	8.52	8.92	8.33	8.07	8.36	8.54
Mountain .....	8.74	9.40	9.98	9.03	8.97	9.66	10.16	9.20	9.18	9.86	10.42	9.45	9.33	9.54	9.78
Pacific .....	12.08	12.42	14.25	12.35	12.49	12.98	14.63	12.59	12.83	13.41	15.27	13.14	12.82	13.21	13.69
U.S. Average .....	9.99	10.17	10.75	10.11	10.27	10.47	10.98	10.33	10.54	10.80	11.32	10.63	10.28	10.53	10.84

- = no data available

Prices are not adjusted for inflation.

(a) Volume-weighted average of retail prices to residential, commercial, industrial, and transportation sectors.

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

Regions refer to U.S. Census divisions.

See "Census division" in EIA's Energy Glossary (<http://www.eia.doe.gov/glossary/index.html>) for a list of States in each region.

**Historical data:** Latest data available from Energy Information Administration databases supporting the following reports: *Electric Power Monthly*, DOE/EIA-0226; and *Electric Power Annual*, DOE/EIA-0348.

Minor discrepancies with published historical data are due to independent rounding.

**Projections:** EIA Regional Short-Term Energy Model.

**Table 7d. U.S. Regional Electricity Generation, All Sectors (Thousand megawatthours per day)**

U.S. Energy Information Administration | Short-Term Energy Outlook - November 2017

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
<b>United States</b>															
Coal .....	<b>3,059</b>	<b>2,967</b>	<b>4,202</b>	<b>3,317</b>	<b>3,250</b>	<b>3,110</b>	<b>3,825</b>	<b>3,313</b>	<b>3,531</b>	<b>3,067</b>	<b>3,860</b>	<b>3,271</b>	<b>3,388</b>	<b>3,376</b>	<b>3,432</b>
Natural Gas .....	<b>3,426</b>	<b>3,762</b>	<b>4,702</b>	<b>3,191</b>	<b>2,917</b>	<b>3,262</b>	<b>4,347</b>	<b>3,281</b>	<b>3,256</b>	<b>3,530</b>	<b>4,330</b>	<b>3,281</b>	<b>3,771</b>	<b>3,455</b>	<b>3,601</b>
Petroleum (a) .....	68	63	72	59	61	56	58	59	73	66	73	63	<b>65</b>	<b>58</b>	<b>69</b>
Other Gases .....	40	35	35	32	39	37	40	33	41	39	41	34	<b>36</b>	<b>37</b>	<b>39</b>
Nuclear .....	<b>2,245</b>	<b>2,155</b>	<b>2,254</b>	<b>2,148</b>	<b>2,247</b>	<b>2,034</b>	<b>2,298</b>	<b>2,158</b>	<b>2,223</b>	<b>2,097</b>	<b>2,280</b>	<b>2,138</b>	<b>2,200</b>	<b>2,184</b>	<b>2,185</b>
Renewable Energy Sources:	<b>1,804</b>	<b>1,747</b>	<b>1,487</b>	<b>1,625</b>	<b>1,994</b>	<b>2,148</b>	<b>1,593</b>	<b>1,658</b>	<b>1,845</b>	<b>1,986</b>	<b>1,680</b>	<b>1,754</b>	<b>1,665</b>	<b>1,847</b>	<b>1,816</b>
Conventional Hydropower .....	<b>842</b>	<b>810</b>	<b>618</b>	<b>637</b>	<b>917</b>	<b>1,011</b>	<b>716</b>	<b>630</b>	<b>754</b>	<b>803</b>	<b>722</b>	<b>650</b>	<b>726</b>	<b>817</b>	<b>732</b>
Wind .....	<b>667</b>	<b>614</b>	<b>517</b>	<b>682</b>	<b>752</b>	<b>738</b>	<b>485</b>	<b>709</b>	<b>757</b>	<b>770</b>	<b>539</b>	<b>767</b>	<b>620</b>	<b>670</b>	<b>708</b>
Wood Biomass .....	114	104	116	108	114	110	117	109	113	105	117	110	111	112	111
Waste Biomass .....	60	61	61	59	59	56	57	58	59	60	60	60	<b>60</b>	<b>58</b>	<b>60</b>
Geothermal .....	47	46	47	50	49	47	48	47	48	47	47	47	<b>48</b>	<b>48</b>	<b>47</b>
Solar .....	73	112	127	89	103	186	171	104	115	201	194	120	<b>100</b>	<b>141</b>	<b>158</b>
Pumped Storage Hydropower .....	-12	-14	-26	-21	-16	-16	-22	-16	-14	-12	-16	-14	<b>-18</b>	<b>-17</b>	<b>-14</b>
Other Nonrenewable Fuels (b) .....	36	38	39	36	36	36	39	36	35	36	39	36	<b>37</b>	<b>37</b>	<b>37</b>
Total Generation .....	<b>10,667</b>	<b>10,754</b>	<b>12,764</b>	<b>10,386</b>	<b>10,527</b>	<b>10,667</b>	<b>12,178</b>	<b>10,522</b>	<b>10,991</b>	<b>10,809</b>	<b>12,286</b>	<b>10,563</b>	<b>11,145</b>	<b>10,977</b>	<b>11,164</b>
<b>Northeast Census Region</b>															
Coal .....	162	141	203	150	154	132	159	184	205	109	152	190	<b>164</b>	<b>157</b>	<b>164</b>
Natural Gas .....	512	599	795	521	474	468	632	517	468	502	639	521	<b>607</b>	<b>523</b>	<b>533</b>
Petroleum (a) .....	7	3	6	6	4	3	3	4	8	5	7	6	<b>5</b>	<b>3</b>	<b>7</b>
Other Gases .....	2	2	2	2	2	2	2	2	2	2	2	2	<b>2</b>	<b>2</b>	<b>2</b>
Nuclear .....	543	461	516	525	539	476	549	509	522	493	536	503	<b>511</b>	<b>518</b>	<b>514</b>
Hydropower (c) .....	111	94	78	82	103	108	97	88	82	89	88	87	<b>91</b>	<b>99</b>	<b>86</b>
Other Renewables (d) .....	77	63	61	73	71	76	68	75	79	71	64	76	<b>69</b>	<b>73</b>	<b>72</b>
Other Nonrenewable Fuels (b) .....	11	12	12	11	11	11	12	11	11	11	12	12	<b>12</b>	<b>12</b>	<b>11</b>
Total Generation .....	<b>1,426</b>	<b>1,375</b>	<b>1,674</b>	<b>1,371</b>	<b>1,359</b>	<b>1,276</b>	<b>1,522</b>	<b>1,390</b>	<b>1,378</b>	<b>1,282</b>	<b>1,500</b>	<b>1,396</b>	<b>1,462</b>	<b>1,387</b>	<b>1,389</b>
<b>South Census Region</b>															
Coal .....	<b>1,270</b>	<b>1,347</b>	<b>1,950</b>	<b>1,462</b>	<b>1,334</b>	<b>1,424</b>	<b>1,726</b>	<b>1,392</b>	<b>1,472</b>	<b>1,375</b>	<b>1,805</b>	<b>1,395</b>	<b>1,508</b>	<b>1,470</b>	<b>1,513</b>
Natural Gas .....	<b>2,013</b>	<b>2,235</b>	<b>2,645</b>	<b>1,825</b>	<b>1,721</b>	<b>2,064</b>	<b>2,544</b>	<b>1,877</b>	<b>1,875</b>	<b>2,127</b>	<b>2,492</b>	<b>1,859</b>	<b>2,180</b>	<b>2,053</b>	<b>2,089</b>
Petroleum (a) .....	29	30	35	23	26	23	24	22	30	27	30	23	<b>29</b>	<b>24</b>	<b>27</b>
Other Gases .....	15	13	14	13	14	14	15	13	15	15	15	13	<b>14</b>	<b>14</b>	<b>14</b>
Nuclear .....	951	998	994	936	979	888	1,001	971	996	939	1,021	958	<b>970</b>	<b>960</b>	<b>978</b>
Hydropower (c) .....	191	84	71	63	135	145	103	69	109	120	97	70	<b>102</b>	<b>113</b>	<b>99</b>
Other Renewables (d) .....	330	307	305	335	399	398	306	374	406	438	354	419	<b>320</b>	<b>369</b>	<b>404</b>
Other Nonrenewable Fuels (b) .....	16	18	18	16	15	15	17	15	15	16	18	15	<b>17</b>	<b>16</b>	<b>16</b>
Total Generation .....	<b>4,815</b>	<b>5,033</b>	<b>6,032</b>	<b>4,673</b>	<b>4,623</b>	<b>4,972</b>	<b>5,736</b>	<b>4,734</b>	<b>4,918</b>	<b>5,057</b>	<b>5,831</b>	<b>4,752</b>	<b>5,140</b>	<b>5,018</b>	<b>5,141</b>
<b>Midwest Census Region</b>															
Coal .....	<b>1,202</b>	<b>1,109</b>	<b>1,498</b>	<b>1,197</b>	<b>1,292</b>	<b>1,182</b>	<b>1,404</b>	<b>1,229</b>	<b>1,346</b>	<b>1,159</b>	<b>1,399</b>	<b>1,199</b>	<b>1,252</b>	<b>1,277</b>	<b>1,276</b>
Natural Gas .....	357	368	454	295	283	279	394	306	389	395	451	327	<b>368</b>	<b>316</b>	<b>391</b>
Petroleum (a) .....	10	9	8	7	7	8	8	10	11	11	12	10	<b>9</b>	<b>8</b>	<b>11</b>
Other Gases .....	16	13	14	11	17	15	17	13	19	16	18	13	<b>14</b>	<b>15</b>	<b>17</b>
Nuclear .....	573	543	572	523	555	543	576	520	542	511	556	521	<b>553</b>	<b>549</b>	<b>532</b>
Hydropower (c) .....	48	43	39	37	55	60	40	40	44	49	36	39	<b>42</b>	<b>49</b>	<b>42</b>
Other Renewables (d) .....	282	245	185	300	307	299	194	309	325	297	201	326	<b>253</b>	<b>277</b>	<b>287</b>
Other Nonrenewable Fuels (b) .....	4	4	4	3	4	4	4	4	4	4	4	4	<b>4</b>	<b>4</b>	<b>4</b>
Total Generation .....	<b>2,492</b>	<b>2,334</b>	<b>2,773</b>	<b>2,374</b>	<b>2,520</b>	<b>2,390</b>	<b>2,638</b>	<b>2,431</b>	<b>2,680</b>	<b>2,443</b>	<b>2,678</b>	<b>2,438</b>	<b>2,494</b>	<b>2,495</b>	<b>2,559</b>
<b>West Census Region</b>															
Coal .....	426	370	551	508	470	373	535	508	507	424	503	486	<b>464</b>	<b>472</b>	<b>480</b>
Natural Gas .....	543	560	809	549	440	451	776	581	523	506	747	575	<b>616</b>	<b>563</b>	<b>588</b>
Petroleum (a) .....	21	20	23	23	23	22	23	23	24	23	24	24	<b>22</b>	<b>23</b>	<b>24</b>
Other Gases .....	7	6	5	6	6	6	6	6	6	6	6	6	<b>6</b>	<b>6</b>	<b>6</b>
Nuclear .....	178	152	172	164	175	127	171	158	163	154	167	157	<b>166</b>	<b>158</b>	<b>161</b>
Hydropower (c) .....	480	575	404	434	607	682	454	417	504	533	485	440	<b>473</b>	<b>539</b>	<b>490</b>
Other Renewables (d) .....	273	322	317	280	299	363	311	269	282	376	339	283	<b>298</b>	<b>310</b>	<b>320</b>
Other Nonrenewable Fuels (b) .....	4	5	5	5	5	5	6	5	5	5	6	5	<b>5</b>	<b>5</b>	<b>5</b>
Total Generation .....	<b>1,933</b>	<b>2,011</b>	<b>2,285</b>	<b>1,968</b>	<b>2,025</b>	<b>2,030</b>	<b>2,282</b>	<b>1,968</b>	<b>2,015</b>	<b>2,027</b>	<b>2,278</b>	<b>1,976</b>	<b>2,050</b>	<b>2,076</b>	<b>2,074</b>

(a) Residual fuel oil, distillate fuel oil, petroleum coke, and other petroleum liquids.

(b) Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, nonrenewable waste, and miscellaneous technologies.

(c) Conventional hydroelectric and pumped storage generation.

(d) Wind, biomass, geothermal, and solar generation.

**Notes:** Data reflect generation supplied by electricity-only and combined-heat-and-power (CHP) plants operated by electric utilities, independent power producers, and the commercial and industrial sectors. The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.**Historical data:** Latest data available from U.S. Energy Information Administration *Electric Power Monthly* and *Electric Power Annual*.**Projections:** EIA Regional Short-Term Energy Model.

**Table 7e. U.S. Regional Fuel Consumption for Electricity Generation, All Sectors**  
U.S. Energy Information Administration | Short-Term Energy Outlook - November 2017

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
<b>Fuel Consumption for Electricity Generation, All Sectors</b>															
<b>United States</b>															
Coal (thousand st/d) .....	1,676	1,619	2,288	1,822	1,785	1,700	2,100	1,819	1,903	1,668	2,107	1,793	1,852	1,852	1,868
Natural Gas (million cf/d) .....	25,226	28,572	36,107	23,726	21,813	24,734	33,028	24,358	24,194	26,860	33,246	24,490	28,416	26,010	27,215
Petroleum (thousand b/d) .....	121	112	130	103	108	98	106	104	130	116	129	111	116	104	121
Residual Fuel Oil .....	29	22	35	25	24	25	25	24	31	28	33	28	28	25	30
Distillate Fuel Oil .....	30	23	24	25	29	25	22	23	30	25	25	23	26	25	25
Petroleum Coke (a) .....	57	63	66	48	50	45	52	52	62	59	66	56	58	50	61
Other Petroleum Liquids (b) ....	5	3	5	4	4	4	7	4	7	4	5	5	4	5	5
<b>Northeast Census Region</b>															
Coal (thousand st/d) .....	80	66	94	70	74	60	76	89	97	52	74	92	77	75	79
Natural Gas (million cf/d) .....	3,829	4,578	6,203	3,899	3,638	3,642	4,954	3,936	3,586	3,891	5,043	3,985	4,630	4,046	4,130
Petroleum (thousand b/d) .....	12	5	12	8	8	5	8	6	15	10	14	10	9	7	12
<b>South Census Region</b>															
Coal (thousand st/d) .....	671	718	1,035	789	717	765	923	747	766	727	961	747	804	788	801
Natural Gas (million cf/d) .....	14,754	16,920	20,179	13,502	12,676	15,505	19,125	13,757	13,733	16,021	18,883	13,686	16,342	15,279	15,590
Petroleum (thousand b/d) .....	55	56	66	43	48	43	45	42	56	49	55	43	55	44	51
<b>Midwest Census Region</b>															
Coal (thousand st/d) .....	680	626	848	675	725	663	797	695	753	652	790	678	708	720	718
Natural Gas (million cf/d) .....	2,692	2,910	3,743	2,283	2,189	2,154	3,117	2,337	2,966	3,078	3,642	2,516	2,908	2,451	3,051
Petroleum (thousand b/d) .....	19	19	18	16	15	16	17	20	21	20	21	20	18	17	21
<b>West Census Region</b>															
Coal (thousand st/d) .....	244	208	312	288	269	212	304	288	287	236	282	276	263	269	270
Natural Gas (million cf/d) .....	3,951	4,164	5,982	4,041	3,310	3,433	5,832	4,327	3,910	3,870	5,678	4,304	4,537	4,233	4,445
Petroleum (thousand b/d) .....	34	32	35	35	37	34	36	36	38	37	38	38	34	36	38
<b>End-of-period U.S. Fuel Inventories Held by Electric Power Sector</b>															
Coal (million short tons) .....	192.3	183.2	158.2	163.9	163.9	160.5	142.1	147.7	147.0	144.2	131.4	148.9	163.9	147.7	148.9
Residual Fuel Oil (mmb) .....	11.9	12.2	11.7	11.7	12.0	11.5	11.4	12.2	12.1	12.0	11.8	12.3	11.7	12.2	12.3
Distillate Fuel Oil (mmb) .....	17.3	17.4	21.0	17.1	15.6	15.2	15.4	16.0	16.3	16.3	16.3	16.8	17.1	16.0	16.8
Petroleum Coke (mmb) .....	6.2	4.5	3.8	4.4	4.4	4.3	4.5	4.4	4.3	4.3	4.3	4.2	4.4	4.4	4.2

(a) Petroleum coke consumption converted from short tons to barrels by multiplying by five.

(b) Other petroleum liquids include jet fuel, kerosene, and waste oil.

**Notes:** Data reflect generation supplied by electricity-only and combined-heat-and-power (CHP) plants operated by electric utilities, independent power producers, and the commercial and industrial sectors. Data include fuel consumed only for generation of electricity. Values do not include consumption by CHP plants for useful thermal output.

The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

Physical Units: st/d = short tons per day; b/d = barrels per day; cf/d = cubic feet per day; mmb = million barrels.

**Historical data:** Latest data available from U.S. Energy Information Administration *Electric Power Monthly* and *Electric Power Annual*.

**Projections:** EIA Regional Short-Term Energy Model.

**Table 8a. U.S. Renewable Energy Consumption (Quadrillion Btu)**

U.S. Energy Information Administration | Short-Term Energy Outlook - November 2017

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
<b>Electric Power Sector</b>															
Geothermal .....	<b>0.040</b>	<b>0.039</b>	<b>0.040</b>	<b>0.043</b>	<b>0.041</b>	<b>0.040</b>	<b>0.041</b>	<i>0.040</i>	<i>0.040</i>	<i>0.039</i>	<i>0.040</i>	<i>0.041</i>	<b>0.162</b>	<i>0.163</i>	<i>0.161</i>
Hydroelectric Power (a) .....	<b>0.710</b>	<b>0.684</b>	<b>0.528</b>	<b>0.543</b>	<b>0.765</b>	<b>0.853</b>	<b>0.611</b>	<i>0.538</i>	<i>0.628</i>	<i>0.677</i>	<i>0.616</i>	<i>0.555</i>	<b>2.465</b>	<i>2.767</i>	<i>2.476</i>
Solar (b) .....	<b>0.061</b>	<b>0.093</b>	<b>0.107</b>	<b>0.075</b>	<b>0.085</b>	<b>0.156</b>	<b>0.145</b>	<i>0.088</i>	<i>0.095</i>	<i>0.168</i>	<i>0.164</i>	<i>0.101</i>	<b>0.337</b>	<i>0.473</i>	<i>0.528</i>
Waste Biomass (c) .....	<b>0.070</b>	<b>0.072</b>	<b>0.072</b>	<b>0.072</b>	<b>0.071</b>	<b>0.067</b>	<b>0.068</b>	<i>0.071</i>	<i>0.069</i>	<i>0.072</i>	<i>0.074</i>	<i>0.073</i>	<b>0.287</b>	<i>0.277</i>	<i>0.288</i>
Wood Biomass .....	<b>0.061</b>	<b>0.049</b>	<b>0.060</b>	<b>0.052</b>	<b>0.057</b>	<b>0.055</b>	<b>0.059</b>	<i>0.053</i>	<i>0.054</i>	<i>0.049</i>	<i>0.061</i>	<i>0.055</i>	<b>0.222</b>	<i>0.225</i>	<i>0.219</i>
Wind .....	<b>0.565</b>	<b>0.520</b>	<b>0.443</b>	<b>0.584</b>	<b>0.630</b>	<b>0.625</b>	<b>0.415</b>	<i>0.607</i>	<i>0.634</i>	<i>0.652</i>	<i>0.462</i>	<i>0.657</i>	<b>2.112</b>	<i>2.278</i>	<i>2.405</i>
Subtotal .....	<b>1.508</b>	<b>1.457</b>	<b>1.250</b>	<b>1.370</b>	<b>1.650</b>	<b>1.797</b>	<b>1.340</b>	<i>1.397</i>	<i>1.521</i>	<i>1.658</i>	<i>1.417</i>	<i>1.481</i>	<b>5.585</b>	<i>6.184</i>	<i>6.076</i>
<b>Industrial Sector</b>															
Biofuel Losses and Co-products (d) .....	<b>0.197</b>	<b>0.194</b>	<b>0.204</b>	<b>0.206</b>	<b>0.203</b>	<b>0.199</b>	<b>0.204</b>	<i>0.206</i>	<i>0.200</i>	<i>0.205</i>	<i>0.208</i>	<i>0.209</i>	<b>0.801</b>	<i>0.812</i>	<i>0.822</i>
Geothermal .....	<b>0.001</b>	<b>0.001</b>	<b>0.001</b>	<b>0.001</b>	<b>0.001</b>	<b>0.001</b>	<b>0.001</b>	<i>0.001</i>	<i>0.001</i>	<i>0.001</i>	<i>0.001</i>	<i>0.001</i>	<b>0.004</b>	<i>0.004</i>	<i>0.004</i>
Hydroelectric Power (a) .....	<b>0.004</b>	<b>0.003</b>	<b>0.002</b>	<b>0.003</b>	<b>0.004</b>	<b>0.004</b>	<b>0.003</b>	<i>0.003</i>	<i>0.004</i>	<i>0.004</i>	<i>0.003</i>	<i>0.003</i>	<b>0.012</b>	<i>0.013</i>	<i>0.013</i>
Solar (b) .....	<b>0.003</b>	<b>0.005</b>	<b>0.005</b>	<b>0.004</b>	<b>0.004</b>	<b>0.007</b>	<b>0.007</b>	<i>0.005</i>	<i>0.006</i>	<i>0.008</i>	<i>0.008</i>	<i>0.006</i>	<b>0.017</b>	<i>0.024</i>	<i>0.028</i>
Waste Biomass (c) .....	<b>0.046</b>	<b>0.047</b>	<b>0.047</b>	<b>0.046</b>	<b>0.050</b>	<b>0.044</b>	<b>0.042</b>	<i>0.047</i>	<i>0.046</i>	<i>0.044</i>	<i>0.044</i>	<i>0.047</i>	<b>0.186</b>	<i>0.184</i>	<i>0.181</i>
Wood Biomass .....	<b>0.321</b>	<b>0.315</b>	<b>0.320</b>	<b>0.326</b>	<b>0.322</b>	<b>0.313</b>	<b>0.327</b>	<i>0.317</i>	<i>0.306</i>	<i>0.302</i>	<i>0.312</i>	<i>0.313</i>	<b>1.283</b>	<i>1.279</i>	<i>1.234</i>
Subtotal .....	<b>0.574</b>	<b>0.565</b>	<b>0.579</b>	<b>0.586</b>	<b>0.584</b>	<b>0.566</b>	<b>0.579</b>	<i>0.579</i>	<i>0.562</i>	<i>0.560</i>	<i>0.573</i>	<i>0.577</i>	<b>2.304</b>	<i>2.308</i>	<i>2.272</i>
<b>Commercial Sector</b>															
Geothermal .....	<b>0.005</b>	<b>0.005</b>	<b>0.005</b>	<b>0.005</b>	<b>0.005</b>	<b>0.005</b>	<b>0.005</b>	<i>0.005</i>	<i>0.005</i>	<i>0.005</i>	<i>0.005</i>	<i>0.005</i>	<b>0.020</b>	<i>0.020</i>	<i>0.020</i>
Solar (b) .....	<b>0.015</b>	<b>0.021</b>	<b>0.021</b>	<b>0.015</b>	<b>0.017</b>	<b>0.024</b>	<b>0.025</b>	<i>0.018</i>	<i>0.021</i>	<i>0.030</i>	<i>0.031</i>	<i>0.022</i>	<b>0.072</b>	<i>0.084</i>	<i>0.104</i>
Waste Biomass (c) .....	<b>0.013</b>	<b>0.012</b>	<b>0.012</b>	<b>0.013</b>	<b>0.012</b>	<b>0.012</b>	<b>0.012</b>	<i>0.012</i>	<i>0.012</i>	<i>0.012</i>	<i>0.012</i>	<i>0.011</i>	<b>0.049</b>	<i>0.047</i>	<i>0.047</i>
Wood Biomass .....	<b>0.020</b>	<b>0.020</b>	<b>0.021</b>	<b>0.021</b>	<b>0.020</b>	<b>0.020</b>	<b>0.020</b>	<i>0.018</i>	<i>0.020</i>	<i>0.020</i>	<i>0.020</i>	<i>0.018</i>	<b>0.082</b>	<i>0.079</i>	<i>0.079</i>
Subtotal .....	<b>0.060</b>	<b>0.065</b>	<b>0.066</b>	<b>0.060</b>	<b>0.061</b>	<b>0.068</b>	<b>0.069</b>	<i>0.060</i>	<i>0.065</i>	<i>0.075</i>	<i>0.075</i>	<i>0.064</i>	<b>0.250</b>	<i>0.257</i>	<i>0.278</i>
<b>Residential Sector</b>															
Geothermal .....	<b>0.010</b>	<b>0.010</b>	<b>0.010</b>	<b>0.010</b>	<b>0.010</b>	<b>0.010</b>	<b>0.011</b>	<i>0.012</i>	<i>0.013</i>	<i>0.013</i>	<i>0.013</i>	<i>0.013</i>	<b>0.040</b>	<i>0.042</i>	<i>0.052</i>
Solar (e) .....	<b>0.030</b>	<b>0.047</b>	<b>0.049</b>	<b>0.034</b>	<b>0.037</b>	<b>0.057</b>	<b>0.058</b>	<i>0.042</i>	<i>0.043</i>	<i>0.066</i>	<i>0.069</i>	<i>0.049</i>	<b>0.161</b>	<i>0.193</i>	<i>0.227</i>
Wood Biomass .....	<b>0.093</b>	<b>0.093</b>	<b>0.094</b>	<b>0.094</b>	<b>0.094</b>	<b>0.095</b>	<b>0.097</b>	<i>0.099</i>	<i>0.103</i>	<i>0.103</i>	<i>0.104</i>	<i>0.104</i>	<b>0.373</b>	<i>0.385</i>	<i>0.413</i>
Subtotal .....	<b>0.133</b>	<b>0.150</b>	<b>0.153</b>	<b>0.138</b>	<b>0.140</b>	<b>0.162</b>	<b>0.166</b>	<i>0.153</i>	<i>0.159</i>	<i>0.182</i>	<i>0.186</i>	<i>0.166</i>	<b>0.573</b>	<i>0.621</i>	<i>0.692</i>
<b>Transportation Sector</b>															
Biomass-based Diesel (f) .....	<b>0.050</b>	<b>0.069</b>	<b>0.088</b>	<b>0.084</b>	<b>0.054</b>	<b>0.079</b>	<b>0.084</b>	<i>0.096</i>	<i>0.066</i>	<i>0.072</i>	<i>0.081</i>	<i>0.080</i>	<b>0.291</b>	<i>0.314</i>	<i>0.298</i>
Ethanol (f) .....	<b>0.273</b>	<b>0.282</b>	<b>0.293</b>	<b>0.288</b>	<b>0.270</b>	<b>0.290</b>	<b>0.293</b>	<i>0.289</i>	<i>0.275</i>	<i>0.297</i>	<i>0.301</i>	<i>0.294</i>	<b>1.137</b>	<i>1.142</i>	<i>1.167</i>
Subtotal .....	<b>0.323</b>	<b>0.351</b>	<b>0.381</b>	<b>0.372</b>	<b>0.324</b>	<b>0.369</b>	<b>0.381</b>	<i>0.385</i>	<i>0.340</i>	<i>0.368</i>	<i>0.382</i>	<i>0.374</i>	<b>1.428</b>	<i>1.459</i>	<i>1.465</i>
<b>All Sectors Total</b>															
Biomass-based Diesel (f) .....	<b>0.050</b>	<b>0.069</b>	<b>0.088</b>	<b>0.084</b>	<b>0.054</b>	<b>0.079</b>	<b>0.084</b>	<i>0.096</i>	<i>0.066</i>	<i>0.072</i>	<i>0.081</i>	<i>0.080</i>	<b>0.291</b>	<i>0.314</i>	<i>0.298</i>
Biofuel Losses and Co-products (d) .....	<b>0.197</b>	<b>0.194</b>	<b>0.204</b>	<b>0.206</b>	<b>0.203</b>	<b>0.199</b>	<b>0.204</b>	<i>0.206</i>	<i>0.200</i>	<i>0.205</i>	<i>0.208</i>	<i>0.209</i>	<b>0.801</b>	<i>0.812</i>	<i>0.822</i>
Ethanol (f) .....	<b>0.284</b>	<b>0.293</b>	<b>0.305</b>	<b>0.300</b>	<b>0.281</b>	<b>0.301</b>	<b>0.301</b>	<i>0.302</i>	<i>0.286</i>	<i>0.308</i>	<i>0.313</i>	<i>0.306</i>	<b>1.182</b>	<i>1.185</i>	<i>1.213</i>
Geothermal .....	<b>0.056</b>	<b>0.055</b>	<b>0.056</b>	<b>0.059</b>	<b>0.057</b>	<b>0.056</b>	<b>0.058</b>	<i>0.058</i>	<i>0.059</i>	<i>0.058</i>	<i>0.059</i>	<i>0.060</i>	<b>0.226</b>	<i>0.229</i>	<i>0.236</i>
Hydroelectric Power (a) .....	<b>0.714</b>	<b>0.687</b>	<b>0.530</b>	<b>0.546</b>	<b>0.769</b>	<b>0.858</b>	<b>0.614</b>	<i>0.540</i>	<i>0.632</i>	<i>0.681</i>	<i>0.619</i>	<i>0.558</i>	<b>2.477</b>	<i>2.781</i>	<i>2.490</i>
Solar (b)(e) .....	<b>0.110</b>	<b>0.166</b>	<b>0.183</b>	<b>0.128</b>	<b>0.143</b>	<b>0.243</b>	<b>0.236</b>	<i>0.153</i>	<i>0.165</i>	<i>0.273</i>	<i>0.272</i>	<i>0.178</i>	<b>0.587</b>	<i>0.775</i>	<i>0.887</i>
Waste Biomass (c) .....	<b>0.129</b>	<b>0.131</b>	<b>0.130</b>	<b>0.131</b>	<b>0.133</b>	<b>0.122</b>	<b>0.122</b>	<i>0.130</i>	<i>0.127</i>	<i>0.127</i>	<i>0.130</i>	<i>0.131</i>	<b>0.522</b>	<i>0.508</i>	<i>0.516</i>
Wood Biomass .....	<b>0.496</b>	<b>0.477</b>	<b>0.495</b>	<b>0.492</b>	<b>0.493</b>	<b>0.484</b>	<b>0.503</b>	<i>0.488</i>	<i>0.484</i>	<i>0.474</i>	<i>0.497</i>	<i>0.489</i>	<b>1.959</b>	<i>1.969</i>	<i>1.944</i>
Wind .....	<b>0.565</b>	<b>0.520</b>	<b>0.443</b>	<b>0.584</b>	<b>0.630</b>	<b>0.625</b>	<b>0.415</b>	<i>0.607</i>	<i>0.634</i>	<i>0.652</i>	<i>0.462</i>	<i>0.657</i>	<b>2.112</b>	<i>2.278</i>	<i>2.405</i>
<b>Total Consumption</b> .....	<b>2.597</b>	<b>2.588</b>	<b>2.429</b>	<b>2.526</b>	<b>2.758</b>	<b>2.961</b>	<b>2.551</b>	<i>2.574</i>	<i>2.647</i>	<i>2.843</i>	<i>2.633</i>	<i>2.661</i>	<b>10.140</b>	<i>10.844</i>	<i>10.784</i>

- = no data available

(a) Conventional hydroelectric power only. Hydroelectricity generated by pumped storage is not included in renewable energy.

(b) Solar consumption in the electric power, commercial, and industrial sectors includes energy produced from large scale (>1 MW) solar thermal and photovoltaic generators and small-scale (<1 MW) distributed solar photovoltaic systems.

(c) Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass.

(d) Losses and co-products from the production of fuel ethanol and biomass-based diesel

(e) Solar consumption in the residential sector includes energy from small-scale (<1 MW) solar photovoltaic systems. Also includes solar heating consumption in all sectors.

(f) Fuel ethanol and biomass-based diesel consumption in the transportation sector includes production, stock change, and imports less exports. Some biomass-based diesel may be consumed in the residential sector in heating oil.

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

**Historical data:** Latest data available from EIA databases supporting the following reports: *Electric Power Monthly*, DOE/EIA-0226 and *Renewable Energy Annual*, DOE/EIA-0603; *Petroleum Supply Monthly*, DOE/EIA-0109.

Minor discrepancies with published historical data are due to independent rounding.

**Projections:** EIA Regional Short-Term Energy Model.

**Table 8b. U.S. Renewable Electricity Generation and Capacity**  
 U.S. Energy Information Administration | Short-Term Energy Outlook - November 2017

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
<b>Renewable Energy Electric Generating Capacity (megawatts, end of period)</b>															
<b>Electric Power Sector (a)</b>															
Biomass .....	7,425	7,448	7,424	7,455	7,299	7,337	7,391	7,390	7,444	7,538	7,538	7,572	7,455	7,390	7,572
Waste .....	4,157	4,180	4,175	4,198	4,205	4,244	4,247	4,247	4,301	4,301	4,301	4,336	4,198	4,247	4,336
Wood .....	3,268	3,268	3,250	3,257	3,093	3,093	3,143	3,143	3,143	3,237	3,237	3,237	3,257	3,143	3,237
Conventional Hydroelectric .....	79,463	79,530	79,551	79,558	79,557	79,565	79,659	79,718	79,729	79,761	79,887	80,055	79,558	79,718	80,055
Geothermal .....	2,529	2,529	2,529	2,529	2,457	2,457	2,457	2,457	2,494	2,494	2,494	2,500	2,529	2,457	2,500
Large-Scale Solar (b) .....	14,305	15,109	17,544	21,639	22,476	23,476	24,029	26,817	27,403	28,156	28,503	30,674	21,639	26,817	30,674
Wind .....	73,624	74,481	75,016	81,871	83,064	83,527	84,546	88,102	88,420	89,150	90,109	96,343	81,871	88,102	96,343
<b>Other Sectors (c)</b>															
Biomass .....	6,827	6,823	6,821	6,766	6,822	6,841	6,842	6,842	6,842	6,843	6,843	6,845	6,766	6,842	6,845
Waste .....	944	944	942	887	884	888	889	889	889	889	889	891	887	889	891
Wood .....	5,882	5,879	5,879	5,879	5,938	5,953	5,953	5,953	5,953	5,954	5,954	5,954	5,879	5,953	5,954
Conventional Hydroelectric .....	361	362	363	363	357	357	357	357	357	357	357	357	363	357	357
Large-Scale Solar (b) .....	306	310	312	317	320	337	337	339	339	339	339	338	317	339	338
Small-Scale Solar (d) .....	10,810	11,569	12,305	13,183	14,107	14,691	15,703	16,510	17,359	18,185	19,077	20,022	13,183	16,510	20,022
Residential Sector .....	5,775	6,352	6,874	7,421	8,070	8,565	9,020	9,506	10,019	10,540	11,082	11,647	7,421	9,506	11,647
Commercial Sector .....	4,104	4,239	4,405	4,681	4,727	4,755	5,249	5,521	5,807	6,063	6,361	6,690	4,681	5,521	6,690
Industrial Sector .....	930	978	1,027	1,081	1,311	1,370	1,433	1,483	1,533	1,582	1,633	1,685	1,081	1,483	1,685
Wind .....	89	89	89	89	89	87	87	93	96	96	96	96	89	93	96
<b>Renewable Electricity Generation (thousand megawatthours per day)</b>															
<b>Electric Power Sector (a)</b>															
Biomass .....	89	84	92	84	87	84	87	84	85	83	92	87	87	86	87
Waste .....	49	52	51	50	49	47	48	49	49	50	52	51	51	48	50
Wood .....	39	32	41	34	38	37	39	35	37	33	40	36	37	37	36
Conventional Hydroelectric .....	837	806	615	634	912	1,006	712	627	749	798	718	647	723	813	728
Geothermal .....	47	46	47	50	49	47	48	47	48	47	47	47	48	48	47
Large-Scale Solar (b) .....	72	110	125	88	102	184	169	102	113	199	191	118	99	139	155
Wind .....	667	613	517	681	751	737	485	708	756	769	539	766	619	670	707
<b>Other Sectors (c)</b>															
Biomass .....	85	82	85	83	86	81	86	83	86	81	86	83	84	84	84
Waste .....	75	72	75	74	76	72	77	74	76	72	77	74	74	75	75
Wood .....	11	10	9	9	10	9	9	10	9	9	9	9	10	9	9
Conventional Hydroelectric .....	5	4	3	3	5	5	4	3	5	5	4	3	4	4	4
Large-Scale Solar (b) .....	1	2	2	1	1	2	2	2	2	3	3	2	2	2	2
Small-Scale Solar (d) .....	42	63	64	45	53	80	81	58	66	98	100	71	53	68	84
Residential Sector .....	21	34	35	24	29	46	46	32	36	56	57	40	29	38	47
Commercial Sector .....	16	23	23	16	19	26	27	19	23	33	33	24	20	23	28
Industrial Sector .....	4	6	6	4	5	8	8	6	7	9	9	7	5	7	8
Wind .....	1	1	0	1	1	1	0	1	1	1	1	1	1	1	1

-- = no data available

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

(a) Power plants larger than or equal to one megawatt in size that are operated by electric utilities or independent power producers.

(b) Solar thermal and photovoltaic generating units at power plants larger than or equal to one megawatt.

(c) Businesses or individual households not primarily engaged in electric power production for sale to the public, whose generating capacity is at least one megawatt (except for small-scale solar photovoltaic data, which consists of systems smaller than one megawatt).

(d) Solar photovoltaic systems smaller than one megawatt, as measured in alternating current.

**Historical data:** Latest data available from EIA databases supporting the Electric Power Monthly, DOE/EIA-0226.

Minor discrepancies with published historical data are due to independent rounding.

**Projections:** EIA-860M database, EIA-826 Solar PV database, and EIA Regional Short-Term Energy Model.

**Table 9a. U.S. Macroeconomic Indicators and CO<sub>2</sub> Emissions**

U.S. Energy Information Administration | Short-Term Energy Outlook - November 2017

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
<b>Macroeconomic</b>															
Real Gross Domestic Product (billion chained 2009 dollars - SAAR) .....	16,572	16,664	16,778	16,851	16,903	17,031	17,128	17,246	17,329	17,411	17,507	17,628	16,716	17,077	17,468
Real Personal Consumption Expend. (billion chained 2009 dollars - SAAR) .....	11,431	11,538	11,618	11,702	11,758	11,853	11,907	11,993	12,056	12,122	12,184	12,260	11,572	11,878	12,155
Real Fixed Investment (billion chained 2009 dollars - SAAR) .....	2,788	2,797	2,808	2,820	2,876	2,898	2,898	2,925	2,946	2,967	2,999	3,042	2,803	2,899	2,989
Business Inventory Change (billion chained 2009 dollars - SAAR) .....	42	12	17	70	0	5	33	53	47	43	53	61	35	23	51
Real Government Expenditures (billion chained 2009 dollars - SAAR) .....	2,903	2,896	2,900	2,901	2,897	2,895	2,894	2,895	2,893	2,893	2,893	2,896	2,900	2,895	2,894
Real Exports of Goods & Services (billion chained 2009 dollars - SAAR) .....	2,098	2,113	2,145	2,124	2,162	2,181	2,190	2,211	2,244	2,270	2,295	2,320	2,120	2,186	2,282
Real Imports of Goods & Services (billion chained 2009 dollars - SAAR) .....	2,682	2,685	2,703	2,756	2,785	2,795	2,787	2,818	2,843	2,871	2,904	2,936	2,706	2,796	2,889
Real Disposable Personal Income (billion chained 2009 dollars - SAAR) .....	12,568	12,627	12,649	12,591	12,680	12,783	12,808	12,849	12,955	13,031	13,114	13,220	12,609	12,780	13,080
Non-Farm Employment (millions) .....	143.4	144.0	144.7	145.2	145.7	146.2	146.6	147.3	147.6	148.1	148.5	148.9	144.3	146.4	148.3
Civilian Unemployment Rate (percent) .....	4.9	4.9	4.9	4.7	4.7	4.4	4.3	4.3	4.3	4.3	4.3	4.3	4.9	4.4	4.3
Housing Starts (millions - SAAR) .....	1.15	1.16	1.15	1.25	1.24	1.17	1.18	1.21	1.25	1.27	1.32	1.35	1.18	1.20	1.30
<b>Industrial Production Indices (Index, 2012=100)</b>															
Total Industrial Production .....	103.1	102.9	103.1	103.3	103.7	105.1	105.2	105.9	106.7	107.3	107.8	108.6	103.1	105.0	107.6
Manufacturing .....	102.9	102.6	102.7	103.1	103.7	104.4	104.2	105.0	105.5	106.1	106.6	107.4	102.8	104.3	106.4
Food .....	107.0	107.7	108.3	107.5	110.1	111.5	112.7	112.9	113.2	113.6	114.2	114.8	107.6	111.8	113.9
Paper .....	96.1	95.3	95.0	96.7	96.3	95.5	94.7	94.4	94.2	94.0	94.2	94.5	95.8	95.2	94.2
Petroleum and Coal Products .....	100.0	100.9	101.4	101.4	102.5	106.1	105.0	107.8	110.6	112.1	113.1	113.9	100.9	105.3	112.4
Chemicals .....	98.8	98.0	97.1	98.1	97.6	98.8	100.0	100.6	101.5	102.3	103.4	104.6	98.0	99.3	102.9
Nonmetallic Mineral Products .....	113.6	112.2	111.0	112.3	116.7	115.2	115.4	116.7	118.0	119.3	120.8	122.2	112.3	116.0	120.1
Primary Metals .....	94.8	95.0	92.1	92.8	96.8	95.4	94.6	95.0	94.8	95.2	95.9	97.0	93.7	95.4	95.7
Coal-weighted Manufacturing (a) .....	100.8	100.3	99.4	100.2	102.6	102.8	102.2	102.9	103.5	104.2	105.1	106.2	100.2	102.6	104.7
Distillate-weighted Manufacturing (a) .....	105.6	105.5	105.1	106.2	108.5	108.8	108.9	109.9	111.0	112.1	113.2	114.2	105.6	109.0	112.6
Electricity-weighted Manufacturing (a) .....	101.5	101.2	100.9	101.6	103.1	103.6	103.1	103.9	104.6	105.3	106.3	107.5	101.3	103.4	105.9
Natural Gas-weighted Manufacturing (a) ...	100.8	100.5	100.5	101.4	103.0	104.2	103.6	104.5	105.5	106.5	107.7	109.1	100.8	103.8	107.2
<b>Price Indexes</b>															
Consumer Price Index (all urban consumers) (index, 1982-1984=1.00) .....	2.38	2.39	2.40	2.42	2.44	2.44	2.45	2.47	2.48	2.49	2.50	2.51	2.40	2.45	2.49
Producer Price Index: All Commodities (index, 1982=1.00) .....	1.84	1.85	1.85	1.88	1.93	1.92	1.94	1.95	1.96	1.97	1.97	1.98	1.85	1.94	1.97
Producer Price Index: Petroleum (index, 1982=1.00) .....	1.21	1.46	1.53	1.56	1.66	1.67	1.75	1.79	1.71	1.78	1.79	1.76	1.44	1.72	1.76
GDP Implicit Price Deflator (index, 2009=100) .....	110.6	111.3	111.6	112.2	112.8	113.0	113.4	114.0	114.6	115.3	116.0	116.7	111.4	113.3	115.6
<b>Miscellaneous</b>															
Vehicle Miles Traveled (b) (million miles/day) .....	8,079	9,024	8,932	8,566	8,301	9,163	8,991	8,629	8,267	9,281	9,133	8,786	8,651	8,772	8,869
Air Travel Capacity (Available ton-miles/day, thousands) .....	548	603	609	590	567	619	622	554	556	637	619	556	588	591	592
Aircraft Utilization (Revenue ton-miles/day, thousands) .....	326	366	375	357	344	390	385	341	341	397	386	343	356	365	367
Airline Ticket Price Index (index, 1982-1984=100) .....	281.8	305.0	273.0	270.4	277.8	297.0	264.7	281.8	303.5	337.2	292.9	298.3	282.6	280.3	308.0
Raw Steel Production (million short tons per day) .....	0.238	0.247	0.238	0.230	0.248	0.247	0.250	0.235	0.269	0.259	0.237	0.207	0.239	0.245	0.243
<b>Carbon Dioxide (CO<sub>2</sub>) Emissions (million metric tons)</b>															
Petroleum .....	573	572	590	588	564	587	594	586	571	586	602	595	2,323	2,331	2,355
Natural Gas .....	438	327	343	376	418	307	328	387	456	327	336	395	1,485	1,439	1,514
Coal .....	309	298	413	335	322	311	381	338	342	302	382	334	1,354	1,351	1,360
Total Energy (c) .....	1,323	1,200	1,349	1,301	1,307	1,207	1,305	1,314	1,371	1,218	1,324	1,327	5,174	5,133	5,240

- = no data available

SAAR = Seasonally-adjusted annual rate

 (a) Fuel share weights of individual sector indices based on EIA *Manufacturing Energy Consumption Survey*.

(b) Total highway travel includes gasoline and diesel fuel vehicles.

(c) Includes electric power sector use of geothermal energy and non-biomass waste.

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

**Historical data:** Latest data available from U.S. Department of Commerce, Bureau of Economic Analysis; Federal Reserve System, Statistical release G17; Federal Highway Administration; and Federal Aviation Administration. Minor discrepancies with published historical data are due to independent rounding.

**Projections:** EIA Regional Short-Term Energy Model. Macroeconomic projections are based on Global Insight Model of the U.S. Economy.

**Table 9b. U.S. Regional Macroeconomic Data**

U.S. Energy Information Administration | Short-Term Energy Outlook - November 2017

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
<b>Real Gross State Product (Billion \$2009)</b>															
New England .....	884	888	894	898	900	906	913	917	919	922	926	931	891	909	925
Middle Atlantic .....	2,468	2,480	2,480	2,485	2,489	2,502	2,525	2,535	2,542	2,550	2,560	2,573	2,478	2,513	2,556
E. N. Central .....	2,269	2,282	2,296	2,304	2,312	2,326	2,342	2,351	2,360	2,368	2,379	2,392	2,288	2,333	2,375
W. N. Central .....	1,053	1,060	1,068	1,071	1,068	1,076	1,085	1,090	1,093	1,097	1,102	1,109	1,063	1,080	1,100
S. Atlantic .....	2,935	2,952	2,978	2,992	3,004	3,028	3,028	3,064	3,082	3,097	3,115	3,138	2,964	3,031	3,108
E. S. Central .....	742	748	753	756	759	765	770	774	777	780	784	788	750	767	782
W. S. Central .....	2,016	2,015	2,020	2,034	2,051	2,072	2,070	2,095	2,114	2,131	2,148	2,169	2,021	2,072	2,140
Mountain .....	1,052	1,056	1,071	1,075	1,078	1,090	1,100	1,108	1,114	1,119	1,126	1,136	1,064	1,094	1,124
Pacific .....	3,051	3,080	3,114	3,132	3,137	3,162	3,189	3,207	3,221	3,239	3,258	3,283	3,094	3,173	3,250
<b>Industrial Output, Manufacturing (Index, Year 2012=100)</b>															
New England .....	98.2	97.8	97.8	97.9	98.0	98.7	98.2	98.8	99.1	99.4	99.6	100.3	97.9	98.4	99.6
Middle Atlantic .....	98.8	98.4	98.2	97.9	98.2	97.9	97.4	98.0	98.4	98.8	99.2	99.9	98.3	97.9	99.1
E. N. Central .....	105.0	104.9	105.0	105.7	106.2	106.9	106.4	107.3	107.9	108.7	109.3	110.1	105.1	106.7	109.0
W. N. Central .....	102.4	102.0	102.0	102.2	102.3	103.3	103.6	104.4	104.9	105.4	105.9	106.7	102.1	103.4	105.7
S. Atlantic .....	105.5	105.5	105.9	106.9	107.2	108.0	108.1	108.8	109.2	109.6	110.1	110.8	106.0	108.0	109.9
E. S. Central .....	107.3	107.7	108.5	108.9	110.1	110.6	109.9	110.7	111.2	111.7	112.2	113.1	108.1	110.3	112.0
W. S. Central .....	97.8	96.7	96.1	96.4	98.1	99.7	99.7	100.6	101.3	102.0	102.9	104.0	96.7	99.5	102.5
Mountain .....	106.1	106.0	106.3	107.2	108.3	109.0	109.0	109.8	110.4	111.0	111.6	112.5	106.4	109.0	111.4
Pacific .....	104.0	103.7	103.3	103.7	103.7	104.2	104.4	105.2	105.8	106.4	107.0	107.9	103.7	104.4	106.8
<b>Real Personal Income (Billion \$2009)</b>															
New England .....	769	774	777	766	774	779	782	784	790	794	798	804	771	780	796
Middle Atlantic .....	1,957	1,963	1,966	1,955	1,963	1,976	1,985	1,988	2,001	2,010	2,021	2,034	1,960	1,978	2,017
E. N. Central .....	2,092	2,103	2,109	2,096	2,109	2,122	2,129	2,132	2,149	2,160	2,172	2,188	2,100	2,123	2,167
W. N. Central .....	989	994	995	987	992	996	999	1,001	1,010	1,015	1,021	1,029	991	997	1,019
S. Atlantic .....	2,724	2,738	2,751	2,743	2,773	2,796	2,804	2,817	2,844	2,862	2,883	2,908	2,739	2,797	2,874
E. S. Central .....	771	774	777	773	778	784	786	788	795	799	804	810	774	784	802
W. S. Central .....	1,695	1,698	1,697	1,682	1,703	1,713	1,719	1,727	1,745	1,759	1,773	1,791	1,693	1,716	1,767
Mountain .....	958	964	971	964	976	984	988	992	1,002	1,009	1,017	1,026	964	985	1,013
Pacific .....	2,351	2,368	2,377	2,381	2,396	2,410	2,421	2,429	2,450	2,464	2,481	2,502	2,369	2,414	2,474
<b>Households (Thousands)</b>															
New England .....	5,846	5,848	5,843	5,839	5,835	5,837	5,856	5,864	5,874	5,882	5,891	5,901	5,839	5,864	5,901
Middle Atlantic .....	15,955	15,937	15,922	15,907	15,890	15,891	15,938	15,956	15,979	16,000	16,023	16,048	15,907	15,956	16,048
E. N. Central .....	18,832	18,846	18,830	18,815	18,801	18,801	18,859	18,881	18,911	18,941	18,971	19,002	18,815	18,881	19,002
W. N. Central .....	8,503	8,498	8,501	8,504	8,510	8,521	8,557	8,579	8,604	8,629	8,652	8,676	8,504	8,579	8,676
S. Atlantic .....	24,978	25,020	25,075	25,128	25,180	25,255	25,406	25,511	25,620	25,727	25,829	25,936	25,128	25,511	25,936
E. S. Central .....	7,588	7,589	7,592	7,593	7,595	7,604	7,635	7,652	7,672	7,692	7,712	7,732	7,593	7,652	7,732
W. S. Central .....	14,490	14,507	14,536	14,563	14,590	14,632	14,716	14,771	14,831	14,890	14,950	15,013	14,563	14,771	15,013
Mountain .....	8,935	8,962	8,987	9,013	9,037	9,069	9,128	9,170	9,215	9,260	9,305	9,349	9,013	9,170	9,349
Pacific .....	18,610	18,629	18,652	18,678	18,703	18,752	18,849	18,906	18,967	19,026	19,087	19,147	18,678	18,906	19,147
<b>Total Non-farm Employment (Millions)</b>															
New England .....	7.3	7.3	7.3	7.3	7.4	7.4	7.4	7.4	7.4	7.4	7.5	7.5	7.3	7.4	7.4
Middle Atlantic .....	19.2	19.2	19.3	19.4	19.4	19.5	19.5	19.6	19.6	19.6	19.7	19.7	19.3	19.5	19.6
E. N. Central .....	21.7	21.7	21.8	21.8	21.9	21.9	21.9	22.0	22.0	22.1	22.2	22.2	21.7	21.9	22.1
W. N. Central .....	10.5	10.5	10.6	10.6	10.6	10.7	10.7	10.7	10.7	10.8	10.8	10.8	10.6	10.7	10.8
S. Atlantic .....	27.4	27.6	27.8	27.9	28.0	28.1	28.2	28.4	28.5	28.6	28.7	28.8	27.7	28.2	28.6
E. S. Central .....	7.9	7.9	8.0	8.0	8.0	8.1	8.1	8.1	8.1	8.2	8.2	8.2	8.0	8.1	8.2
W. S. Central .....	16.8	16.8	16.8	16.9	17.0	17.1	17.1	17.2	17.3	17.4	17.5	17.6	16.8	17.1	17.4
Mountain .....	10.2	10.2	10.3	10.4	10.4	10.4	10.5	10.5	10.6	10.6	10.7	10.7	10.3	10.5	10.6
Pacific .....	22.2	22.4	22.5	22.6	22.7	22.8	22.9	23.0	23.0	23.1	23.2	23.2	22.4	22.8	23.1

- = no data available

**Notes:** The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

Regions refer to U.S. Census divisions.

 See "Census division" in EIA's Energy Glossary (<http://www.eia.doe.gov/glossary/index.html>) for a list of States in each region.

**Historical data:** Latest data available from U.S. Department of Commerce, Bureau of Economic Analysis; Federal Reserve System, Statistical release G17.

Minor discrepancies with published historical data are due to independent rounding.

**Projections:** Macroeconomic projections are based on the Global Insight Model of the U.S. Economy.

**Table 9c. U.S. Regional Weather Data**

U.S. Energy Information Administration | Short-Term Energy Outlook - November 2017

	2016				2017				2018				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2016	2017	2018
<b>Heating Degree Days</b>															
New England .....	2,839	902	76	2,116	2,987	809	90	1,987	3,173	875	131	2,166	5,934	5,873	6,345
Middle Atlantic .....	2,667	751	40	1,905	2,662	607	71	1,829	2,943	705	93	1,987	5,363	5,169	5,728
E. N. Central .....	2,868	754	48	2,033	2,691	629	104	2,139	3,170	739	134	2,208	5,703	5,563	6,251
W. N. Central .....	2,893	659	103	2,132	2,811	662	137	2,390	3,260	710	162	2,368	5,787	6,001	6,500
South Atlantic .....	1,381	210	2	858	1,147	124	14	937	1,424	195	16	982	2,452	2,223	2,617
E. S. Central .....	1,754	234	5	1,100	1,373	153	25	1,269	1,822	248	23	1,307	3,093	2,820	3,399
W. S. Central .....	1,051	79	1	620	774	66	4	781	1,124	81	4	791	1,752	1,625	2,000
Mountain .....	2,076	677	159	1,702	2,054	695	153	1,834	2,187	683	147	1,835	4,615	4,736	4,853
Pacific .....	1,306	469	98	1,161	1,562	534	70	1,183	1,545	605	98	1,224	3,033	3,348	3,472
U.S. Average .....	1,948	481	51	1,399	1,858	429	65	1,473	2,129	494	80	1,527	3,880	3,824	4,229
<b>Heating Degree Days, Prior 10-year Average</b>															
New England .....	3,212	824	133	2,105	3,201	831	122	2,125	3,172	819	119	2,103	6,275	6,279	6,213
Middle Atlantic .....	2,983	651	90	1,927	2,983	661	81	1,941	2,948	647	81	1,932	5,651	5,666	5,608
E. N. Central .....	3,247	690	125	2,206	3,255	701	114	2,198	3,209	693	116	2,198	6,267	6,267	6,216
W. N. Central .....	3,298	693	150	2,393	3,302	707	142	2,380	3,264	705	144	2,380	6,535	6,531	6,493
South Atlantic .....	1,499	184	14	972	1,502	188	12	966	1,476	176	12	973	2,669	2,667	2,637
E. S. Central .....	1,899	225	19	1,308	1,906	231	16	1,287	1,868	217	18	1,300	3,451	3,439	3,403
W. S. Central .....	1,221	83	5	815	1,227	88	4	799	1,181	80	4	805	2,124	2,119	2,071
Mountain .....	2,231	725	147	1,880	2,216	734	142	1,862	2,194	737	144	1,858	4,983	4,953	4,933
Pacific .....	1,496	610	88	1,212	1,462	598	89	1,206	1,465	593	84	1,196	3,407	3,354	3,338
U.S. Average .....	2,199	483	76	1,535	2,192	487	71	1,527	2,160	478	71	1,524	4,293	4,277	4,233
<b>Cooling Degree Days</b>															
New England .....	0	80	540	0	0	73	366	14	0	81	400	1	620	453	483
Middle Atlantic .....	0	145	731	6	0	137	502	28	0	148	514	4	882	667	666
E. N. Central .....	4	230	704	19	1	209	481	20	0	210	514	6	957	711	731
W. N. Central .....	10	319	712	30	9	265	624	20	3	259	654	10	1,071	918	926
South Atlantic .....	139	653	1,346	280	158	670	1,155	279	119	643	1,132	225	2,418	2,263	2,119
E. S. Central .....	42	533	1,253	129	65	481	965	106	27	504	1,017	63	1,957	1,618	1,611
W. S. Central .....	122	836	1,596	330	213	823	1,456	264	91	860	1,500	201	2,883	2,757	2,652
Mountain .....	34	464	886	113	36	466	922	80	19	431	925	76	1,498	1,504	1,451
Pacific .....	35	229	586	71	30	220	695	83	29	166	564	58	922	1,029	817
U.S. Average .....	54	411	963	129	70	401	838	122	43	393	832	91	1,557	1,431	1,358
<b>Cooling Degree Days, Prior 10-year Average</b>															
New England .....	0	81	419	1	0	81	433	1	0	80	433	2	501	514	515
Middle Atlantic .....	0	168	548	5	0	169	566	6	0	166	566	6	722	741	738
E. N. Central .....	3	229	528	6	3	234	542	8	3	228	533	7	765	788	771
W. N. Central .....	7	279	674	9	7	281	672	12	7	277	659	12	969	972	954
South Atlantic .....	114	661	1,147	222	117	666	1,167	230	119	675	1,160	229	2,143	2,180	2,184
E. S. Central .....	32	541	1,037	56	33	544	1,056	65	34	539	1,031	66	1,667	1,698	1,670
W. S. Central .....	90	890	1,517	191	90	876	1,527	205	100	886	1,531	208	2,688	2,698	2,726
Mountain .....	21	429	930	76	23	424	930	81	24	426	922	80	1,455	1,458	1,453
Pacific .....	29	180	611	72	30	180	607	74	30	185	620	76	891	891	911
U.S. Average .....	42	404	845	88	43	405	857	94	45	408	855	95	1,379	1,399	1,403

- = no data available

**Notes:** Regional degree days for each period are calculated by EIA as contemporaneous period population-weighted averages of state degree day data published by the National Oceanic and Atmospheric Administration (NOAA).

See *Change in Regional and U.S. Degree-Day Calculations* ([http://www.eia.gov/forecasts/steo/special/pdf/2012\\_sp\\_04.pdf](http://www.eia.gov/forecasts/steo/special/pdf/2012_sp_04.pdf)) for more information.

The approximate break between historical and forecast values is shown with historical data printed in bold; estimates and forecasts in italics.

Regions refer to U.S. Census divisions. See "Census division" in EIA's Energy Glossary (<http://www.eia.gov/tools/glossary/>) for a list of states in each region.

**Historical data:** Latest data available from U.S. Department of Commerce, National Oceanic and Atmospheric Association (NOAA).

**Projections:** Based on forecasts by the NOAA Climate Prediction Center (<http://www.cpc.ncep.noaa.gov/pacdir/DDdir/NHOME3.shtml>).