



Independent Statistics & Analysis

U.S. Energy Information
Administration

March 2017

Short-Term Energy Outlook (STEO)

Forecast highlights

Global liquid fuels

- U.S. crude oil production averaged an estimated 8.9 million barrels per day (b/d) in 2016. U.S. crude oil production is forecast to average 9.2 million b/d in 2017 and 9.7 million b/d in 2018.
- Benchmark North Sea Brent crude oil spot prices averaged \$55 per barrel (b) in February, largely unchanged from the average in January.
- EIA forecasts Brent crude oil prices to average \$55/b in 2017 and \$57/b in 2018. West Texas Intermediate (WTI) crude oil prices are expected to average about \$1/b less than Brent prices in the forecast. NYMEX contract values for May 2017 delivery traded during the five-day period ending March 2 suggest that a range of \$46/b to \$63/b encompasses the market expectation for WTI prices in May 2017 at the 95% confidence level.
- Implied global petroleum and liquid fuels inventories increased by an estimated 0.5 million b/d in 2016. EIA expects a relatively balanced oil market in the next two years, with inventory builds averaging 0.1 million b/d in 2017 and 0.2 million b/d in 2018.
- U.S. monthly average regular gasoline retail prices are expected to increase from \$2.30/gallon (gal) in February 2017 to \$2.51/gal in July before falling to \$2.24/gal by December. U.S. regular gasoline retail prices are forecast to average \$2.40/gal in 2017 and \$2.44/gal in 2018.

Natural gas

- U.S. dry natural gas production is forecast to average 73.7 billion cubic feet per day (Bcf/d) in 2017, a 1.4 Bcf/d increase from the 2016 level. This increase reverses a 2016 production decline, the first annual decline since 2005. Natural gas production in 2018 is forecast to rise by an average of 4.1 Bcf/d from the 2017 level.
- In February, the average Henry Hub natural gas spot price fell by 45 cents per million British thermal units (MMBtu) from the January levels to \$2.85/MMBtu. Unseasonably warm temperatures in the Lower 48 states contributed to lower prices.
- New natural gas export capabilities and growing domestic natural gas consumption contribute to the forecast Henry Hub natural gas spot price rising from an average of

\$3.03/MMBtu in 2017 to \$3.45/MMBtu in 2018. NYMEX contract values for May 2017 delivery traded during the five-day period ending March 2 suggest that a range of \$2.15/MMBtu to \$3.82/MMBtu encompasses the market expectation for Henry Hub natural gas prices in May 2017 at the 95% confidence level.

Electricity, coal, renewables, and emissions

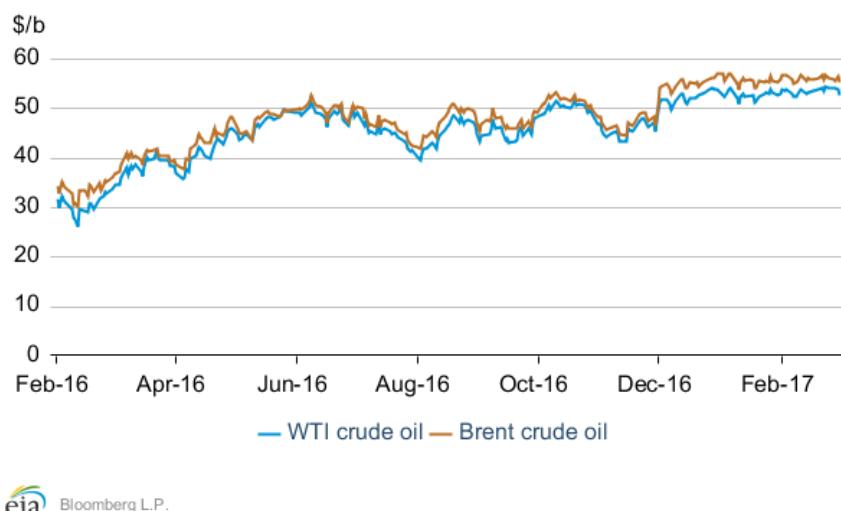
- Total U.S. electricity generation from utility-scale plants averaged 11,140 gigawatthours per day in 2016. Forecast generation declines by 0.7% in 2017 and then grows by 1.9% in 2018.
- EIA expects the share of U.S. total utility-scale electricity generation from natural gas to fall from an average of 34% in 2016 to 32% in 2017 as a result of higher expected natural gas prices. The natural gas share of generation is then expected to rise slightly to 33% in 2018. Coal's forecast generation share rises from 30% in 2016 to average 31% in 2017 before falling back to 30% in 2018. Nonhydropower renewables are forecast to provide 9% of electricity generation in 2017 and 10% in 2018. The generation share of hydropower is forecast to be relatively unchanged from 2017 to 2018 at 7%, and the nuclear share of electricity generation declines slightly from almost 20% in 2017 to 19% in 2018.
- EIA expects growth in coal-fired electricity generation to contribute to a 4% increase in coal production in 2017. Coal production is expected to be unchanged in 2018. EIA estimates the delivered coal price averaged \$2.11/MMBtu in 2016, a 5% decline from the 2015 price. Coal prices are forecast to increase in 2017 and 2018 to \$2.17/MMBtu and \$2.21/MMBtu, respectively.
- Wind energy capacity at the end of 2016 was 81 gigawatts (GW). EIA expects capacity additions in the forecast will bring total wind capacity to 95 GW by the end of 2018.
- On a percentage basis, solar power is expected to be the fastest growing renewable energy source in the forecast period, with total utility-scale capacity increasing by 44% from the end of 2016 to 31 GW at the end of 2018. With that level of growth, solar is expected to account for 1.4% of total utility-scale electricity generation in 2018.
- After declining by 1.9% in 2016, energy-related carbon dioxide (CO₂) emissions are projected to decrease by 0.2% in 2017 and then increase by 1.6% in 2018. Energy-related CO₂ emissions are sensitive to changes in weather, economic growth, and energy prices.

Petroleum and natural gas markets review

Crude oil

Prices: Crude oil prices continued trading in a narrow range in February. Brent crude oil front-month futures prices decreased by \$1.72 per barrel (b), and West Texas Intermediate (WTI) prices decreased by \$1.27/b between February 1 and March 2, settling at \$55.08/b and \$52.61/b, respectively, on March 2 (**Figure 1**). Brent and WTI average spot prices in February were higher by 37 cents/b and 94 cents/b, respectively, compared with January averages.

Figure 1. Crude oil front-month futures prices



Source: eia Bloomberg L.P.

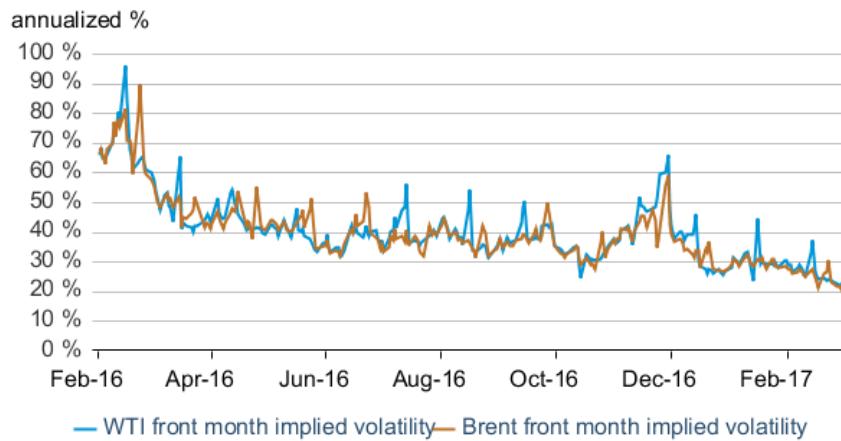
The oil market is showing signs of closer balance between supply and demand in early 2017. Although estimates of January and February crude oil production will remain unconfirmed for another month or two, voluntary oil supply reductions by members of the Organization of the Petroleum Exporting Countries (OPEC) and some non-OPEC producers (following [agreements in late 2016](#)) appear to be achieving a high degree of compliance.

EIA estimates that global oil inventories fell at a rate of almost 1.0 million barrels per day (b/d) in February, which would be [the third-largest monthly decline rate](#) since the beginning of 2014. Global economic activity continues to remain robust and is supporting oil consumption growth. However, the outlook for the oil market remains uncertain because of supply developments. While supply from non-OPEC countries in the second quarter of 2017 is expected to be close to its level from the fourth quarter of 2016, OPEC supply is forecast to decline during the same period. Lower OPEC market share could complicate whether its members will renegotiate voluntary supply reductions for the second half of 2017. EIA expects increases in non-OPEC supply, particularly in the United States, to limit upward oil price pressure through much of 2017.

EIA forecasts Brent crude oil spot prices to average \$55/b in 2017 and \$57/b for 2018, which is unchanged from the February STEO.

Oil prices traded in a narrow range in February with a \$4/b difference between the highest and lowest prices of the month. Crude oil price implied volatility declined to one-year lows in February. Brent implied volatility decreased to 22.7% on March 2, a decline of five percentage points since February 1. WTI implied volatility declined six percentage points over the same period (**Figure 2**). Implied volatility in February 2017 was significantly lower than February 2016, when fears about global economic growth and falling commodity prices contributed to heightened volatility across most traded securities.

Figure 2. Crude oil implied volatility

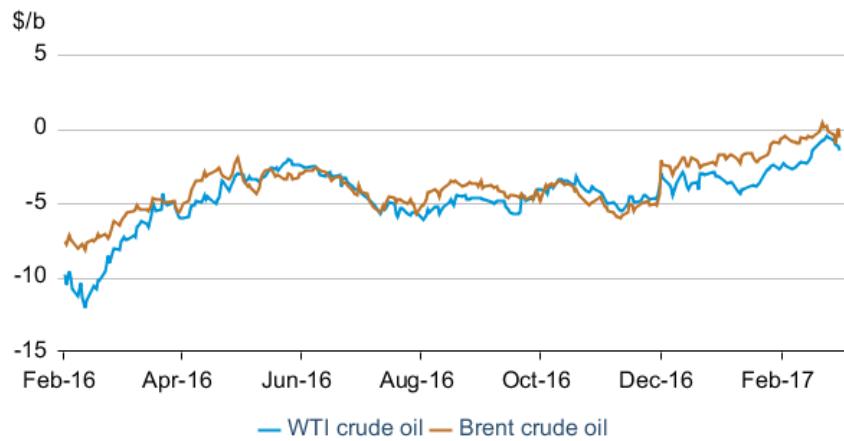


Source: eia Bloomberg L.P.

Crude oil price spreads: In contrast to the narrow trading range in front-month prices, the difference between the price of the front-month Brent contract and a contract for delivery 13 months in the future (1st-13th spread) trended higher in February. After briefly reaching backwardation (when near-term prices are higher than longer-dated ones) in late February for the first time since 2014, the Brent 1st-13th spread settled at -57 cents/b on March 2 (**Figure 3**). Backwardation can occur during supply disruptions, but it can also occur when demand is higher than expected, pulling available supply out of inventory. Global oil inventories are estimated to have fallen at a rate of almost 1.0 million b/d in February.

In the United States, total commercial petroleum inventories [decreased by 7 million barrels](#) in February, the first February decline since 2013, driven by declines in petroleum products. The comparatively large draws in petroleum inventories likely contributed to the WTI 1st-13th spread increasing by 85 cents/b from February 1 to settle at -\$1.50/b on March 2. As refineries return from maintenance in the second quarter, crude oil inventories could decline, which could put further upward pressure on the 1st-13th spread.

Figure 3. Crude oil front-month - 13th month futures price spread

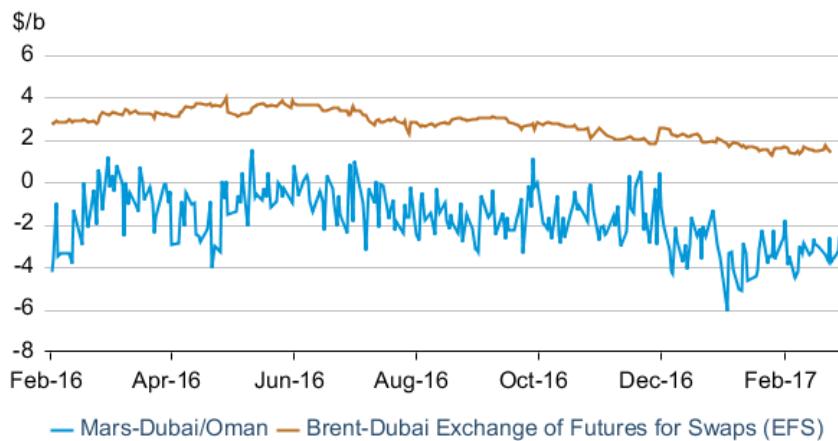


Source: eia Bloomberg L.P.

Recent changes in price spreads between crude oil grades are consistent with changing trade flows. Voluntary supply reductions from some OPEC and non-OPEC countries disproportionately reduced the supply of medium-sour crude oils. This supply reduction is contributing to higher prices for medium-sour Dubai and Oman crude oils—the [Middle Eastern crude oil benchmarks](#)—making those crudes less attractive to refineries in Asia. The Brent-Dubai Exchange of Futures for Swaps (EFS) is an instrument that allows trade between the Brent futures market and the Dubai swaps market and represents the price premium of Brent over Dubai crude oil. The EFS continues to trade below \$2/b and is at the lowest level for this time of year since 2010, settling at \$1.50/b on March 2 ([Figure 4](#)). A low premium of Brent crude oil over Dubai opens up opportunities for Asian refiners to import more North Sea and West African grades, and trade press is reporting an increase in Atlantic basin cargoes headed to Asia.

Similarly, the price differential of U.S.-produced [Mars crude oil and Dubai/Oman oil](#) also declined over the past few months and contributed to an increase in U.S. crude oil exports to Asia. The Mars-Dubai/Oman differential averaged -\$3.25/b in February, less than the February 2016 average of -\$1.78/b and settled at -\$4.40/b on March 2. Not only are supply reductions increasing the price of the Dubai/Oman benchmark, but recent increases in U.S. Federal Offshore Gulf of Mexico production could also be contributing to a relative decrease in the Mars price. Lower U.S. refinery runs during maintenance season are also reducing domestic crude oil demand in the first quarter of 2017 and freeing up more oil for export. The wide price differential is opening up opportunities for U.S. crude oil producers to export to Asia. Initial weekly estimates based on EIA's [Weekly Petroleum Status Report](#) indicate that U.S. crude oil exports reached a [record high of 0.9 million b/d](#) for the four weeks ending February 24.

Figure 4. Crude oil price spreads



Source: eia 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 6 cents per gallon (gal) from February 1 to settle at \$1.64/gal on March 2 (**Figure 5**). The increase largely reflected the rollover of the front-month RBOB futures contract from March to April delivery, which represents a change from winter grade gasoline to the more expensive summer grade gasoline. The RBOB-Brent crack spread (the difference between the price of RBOB and the price of Brent crude oil) rose by 11 cents/gal over the same period. Prior to the contract roll, both gasoline prices and the RBOB-Brent crack spread declined in the month of February because of high gasoline inventory levels.

Gasoline inventories hit a record high in February in the Petroleum Administration for Defense District (PADD) 1B, which includes the New York Harbor delivery hub of the RBOB futures contract. High inventories in PADD 1B contributed to gasoline prices in New York Harbor trading at near parity to gasoline prices on the U.S. Gulf Coast in February. New York Harbor has typically traded at a higher premium to the U.S. Gulf Coast in prior years during February. Trade press reported that more gasoline was scheduled to be exported out of New York Harbor in February than is typical for that time of year.

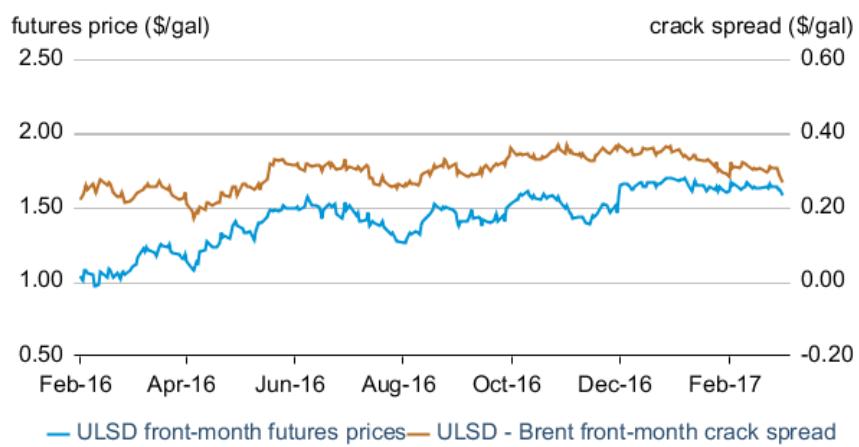
Figure 5. Historical RBOB futures prices and crack spread



Ultra-low sulfur diesel prices: The front-month futures price for the New York Harbor ultra-low sulfur diesel (ULSD) contract declined by 9 cents/gal from February 1 to settle at \$1.58/gal on March 2. The ULSD-Brent crack spread declined by 5 cents/gal over the same period (**Figure 6**).

EIA estimates that distillate consumption increased by 140,000 barrels per day (b/d) in February compared with January. This increase is more than double the five-year month-over-month average increase from January to February. The increase in consumption occurred despite initial data indicating February 2017 was the warmest February on record. Distillate consumption was likely supported by increased manufacturing, industrial, and freight transportation activity in the United States. Manufacturing activity indexes, both in [national level surveys](#) and in the regional Federal Reserve Bank surveys, continue to show expanding manufacturing sectors. Also, estimates of [weekly U.S. rail traffic](#) indicate that rail traffic in February was higher than in the previous three years.

Figure 6. Historical ULSD futures price and crack spread

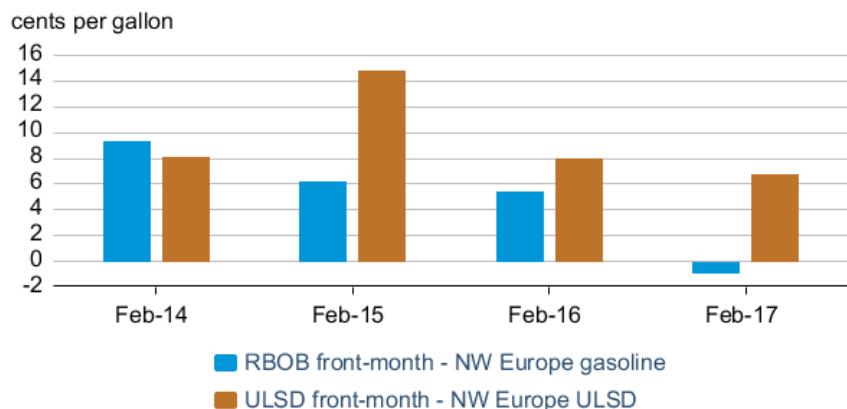


Northwest Europe petroleum products market: Gasoline and ULSD spot prices in the Northwest Europe market have strengthened against U.S. RBOB and ULSD futures prices since the beginning of 2017. In February, the Northwest Europe gasoline spot price was at a premium compared to the RBOB front-month price (**Figure 7**), the first premium for that month since at least 2010. The price spread between ULSD front-month and Northwest Europe ULSD was the smallest for the month of February since 2013, when the heating oil futures contract [changed sulfur specifications](#).

The gasoline price premium in Northwest Europe likely reflects differences between inventory growth in Europe and the U.S. East Coast. Unlike in PADD 1B, where gasoline stocks were at a record high in February, gasoline stocks in the trading hub of Amsterdam-Rotterdam-Antwerp (ARA) in Northwest Europe were down year-over-year. Gasoline exports from Europe likely lowered ARA gasoline inventories.

Similarly, distillate stocks in ARA have been below the previous year's level for several months, while distillate stocks in PADD 1B are higher year-over-year because of warmer temperatures and less demand for home heating oil in that area. In Europe, [colder-than-normal temperatures](#), distillate exports from the region, and an accelerated expansion of the [manufacturing sector in the Eurozone area](#) could have led to lower distillate inventories than last year and comparatively stronger ULSD prices than in recent years.

Figure 7. Gasoline and ULSD futures prices minus Northwest Europe spot prices



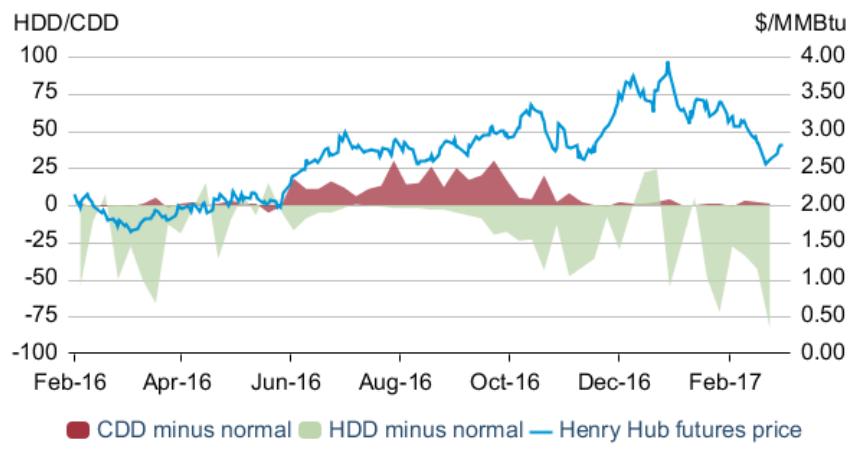
Source: eia Bloomberg L.P.

Natural gas

Prices: The front month natural gas futures contract for delivery at Henry Hub settled at \$2.80 per million British thermal units (MMBtu) on March 2, a decrease of 36 cents/MMBtu from February 1 (**Figure 8**). Mild weather prevailed across much of the Lower 48 states in February, and initial data indicate that heating degree days (HDD) were the lowest on record for the month. The warm temperatures contributed to downward pressure on natural gas prices. Although February 2016 and 2017 were both unseasonably warm, February 2017 natural gas

prices were higher compared with last year because [exports were higher](#) and U.S. natural gas production was lower, leading to lower levels of inventories. However, inventory levels remain above the previous five-year average.

Figure 8. Actual minus historical average HDD and CDD



 Bloomberg L.P., U.S. EIA

Warmer weather contributed to below-average draws in U.S. working natural gas inventories for the weeks ending February 3 through February 17. The week ending February 24 posted an injection of 7 billion cubic feet (Bcf), the first February injection on record. The five-year average inventory change for the last week in February is a 132 Bcf withdrawal. For the weeks ending February 3 through February 24, U.S. working natural gas inventories declined by an average of 87 Bcf, 40% lower than the five-year average February decline of 144 Bcf.

Low inventory withdrawals and a counter-seasonal injection have put downward pressure on front-month natural gas prices. The natural gas 1st-13th spread, the discount of front month natural gas prices to prices for delivery further in the future, declined by 31 cents/MMBtu from February 1 to a monthly low of -62 cents/MMBtu on February 21. With the expiration of the March contract, marking the informal end of the withdrawal season, the 1st-13th spread narrowed and settled at -6 cents/MMBtu on March 2 ([Figure 9](#)).

Figure 9. Natural gas 1st-13th futures price spread



Source: eia CME Group

Notable forecast changes

- EIA forecasts U.S. crude oil production to average 9.2 million b/d in 2017 and 9.7 million b/d in 2018, which are 0.2 million b/d higher both years than in the previous forecast. The higher forecast reflects improvements to forecasting methodology for rig efficiencies and an expectation of a more rapid near-term increase in drilling and completion activity, particularly in the Permian region. Additionally, a faster expected ramp-up in projects that started in 2016 (such as the Thunder Horse South Expansion) contributes to higher forecast production in the Federal Offshore Gulf of Mexico.
- EIA forecasts liquefied natural gas (LNG) exports to average 1.8 Bcf/d in 2017 and 2.8 Bcf/d in 2018. This forecast is 0.4 Bcf/d and 0.2 Bcf/d higher for those years, respectively, than previously forecast. This revision is based on updates to commercial in-service dates and ramp-up periods of LNG facilities currently under construction.
- EIA forecasts the Henry Hub natural gas spot price to average \$3.03/MMBtu in 2017 and \$3.45/MMBtu in 2018. These forecasts are 40 cents/MMBtu and 25 cents/MMBtu lower, respectively, than expected in last month's STEO. The lower price forecast reflects mild winter temperatures that have reduced natural gas use for space heating, which has contributed to natural gas inventory levels being higher than previously expected for the end of February.
- For more information, see the [detailed STEO table of forecast changes](#).

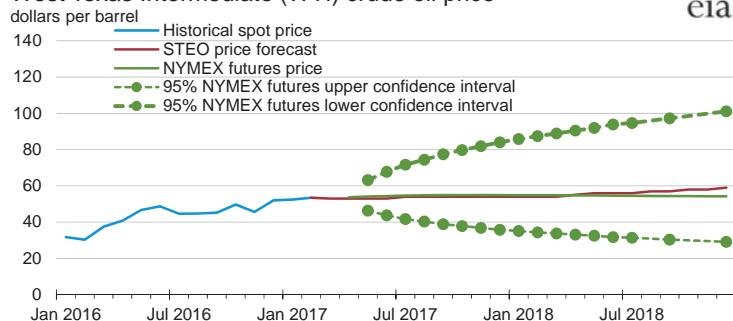
This report was prepared by the U.S. Energy Information Administration (EIA), the statistical and analytical agency within the U.S. Department of Energy. By law, EIA's data, analyses, and forecasts are independent of approval by any other officer or employee of the United States Government. The views 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 March 2017

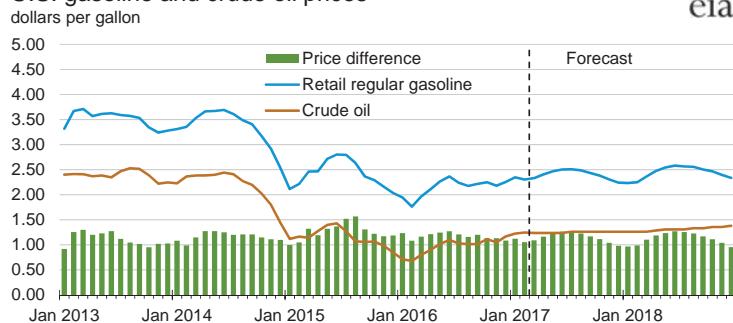
West Texas Intermediate (WTI) crude oil price



Note: Confidence interval derived from options market information for the 5 trading days ending Mar 2, 2017. Intervals not calculated for months with sparse trading in near-the-money options contracts.

Source: Short-Term Energy Outlook, March 2017.

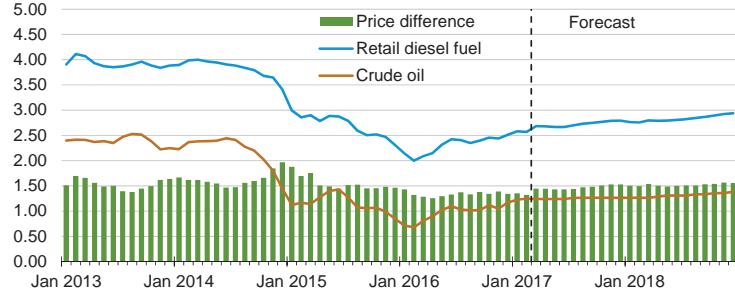
U.S. gasoline and crude oil prices



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

Source: Short-Term Energy Outlook, March 2017.

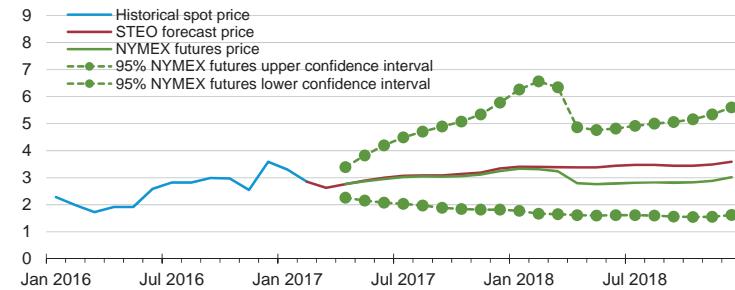
U.S. diesel fuel and crude oil prices dollars per gallon



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

Source: Short-Term Energy Outlook, March 2017.

Henry Hub natural gas price dollars per million Btu



Note: Confidence interval derived from options market information for the 5 trading days ending Mar 2, 2017. Intervals not calculated for months with sparse trading in near-the-money options contracts.

Source: Short-Term Energy Outlook, March 2017.

U.S. natural gas prices dollars per thousand cubic feet

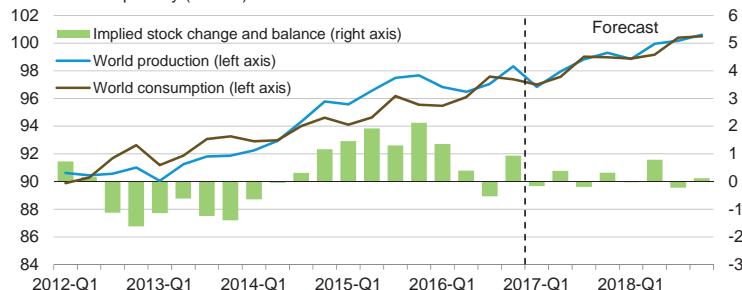


Source: Short-Term Energy Outlook, March 2017.

World liquid fuels production and consumption balance
million barrels per day (MMb/d)

eia

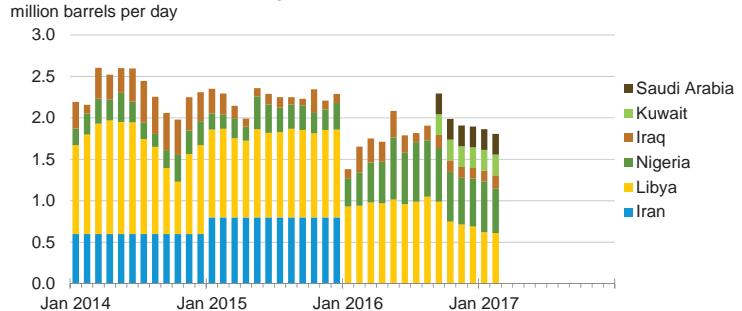
MMb/d



Source: Short-Term Energy Outlook, March 2017.

Estimated historical unplanned OPEC crude oil production outages
million barrels per day

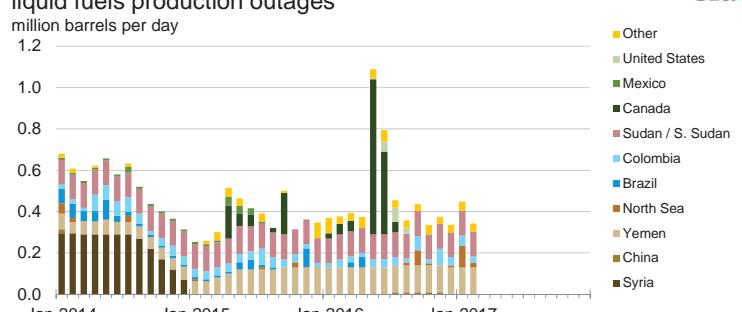
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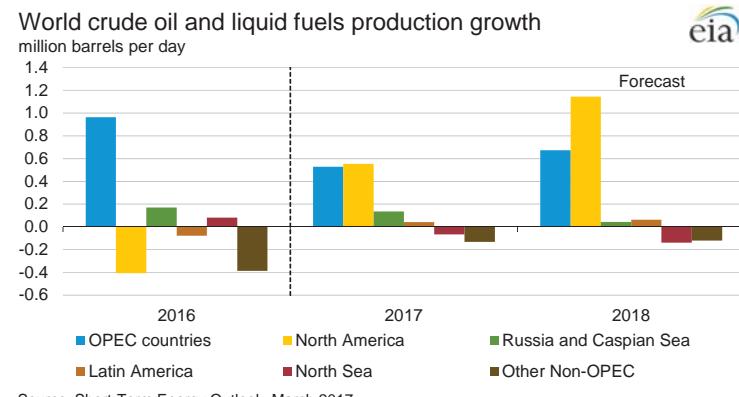
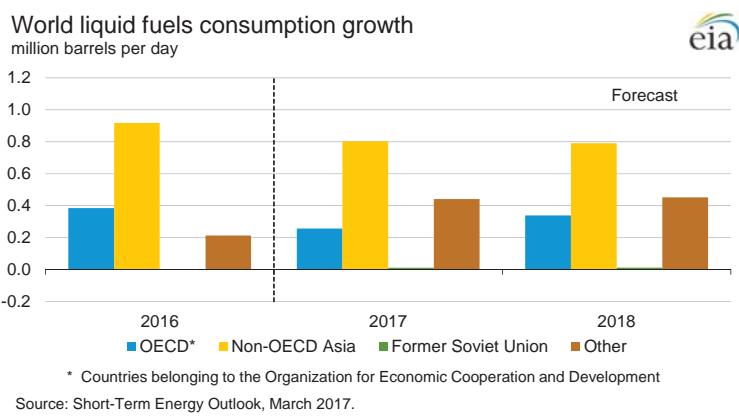
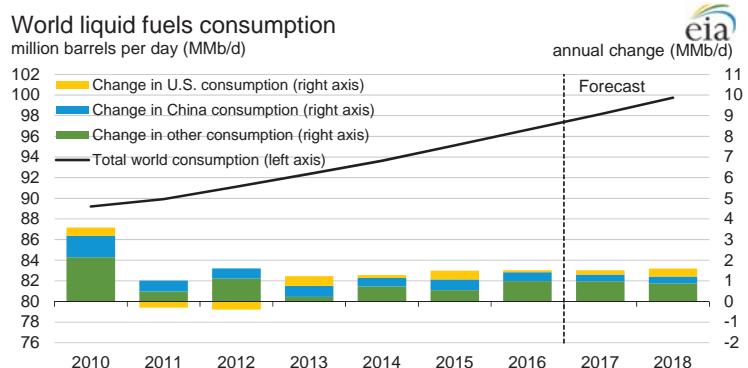
Source: Short-Term Energy Outlook, March 2017.

Estimated historical unplanned non-OPEC liquid fuels production outages
million barrels per day

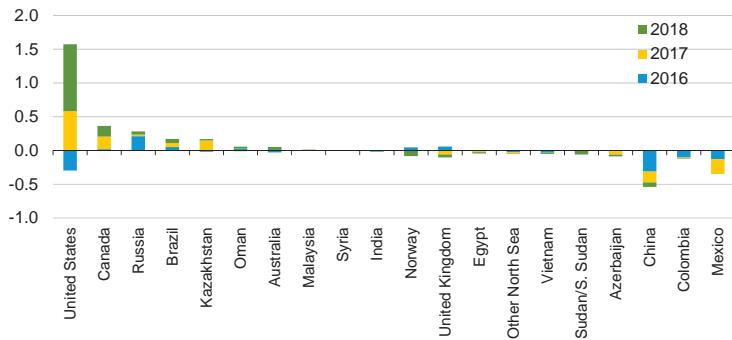
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Source: Short-Term Energy Outlook, March 2017.

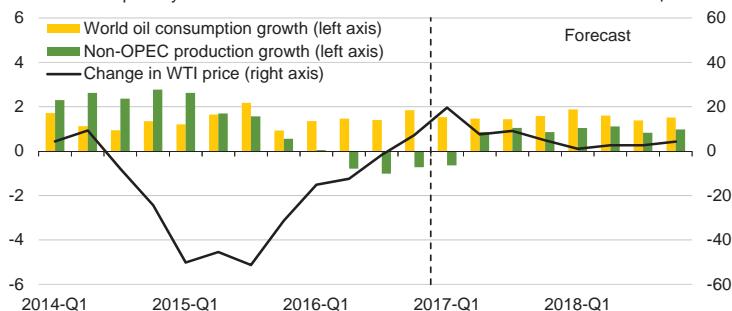


Non-OPEC crude oil and liquid fuels production growth million barrels per day



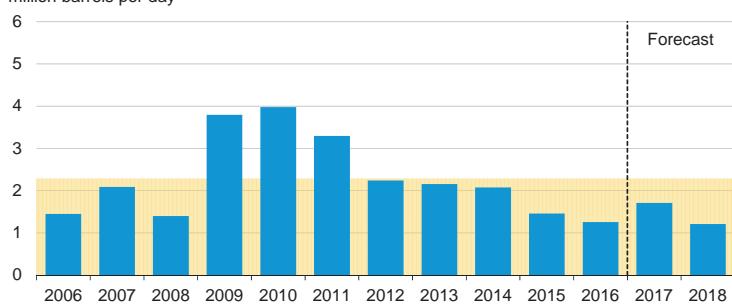
Source: Short-Term Energy Outlook, March 2017.

World consumption and non-OPEC production growth million barrels per day



Source: Short-Term Energy Outlook, March 2017.

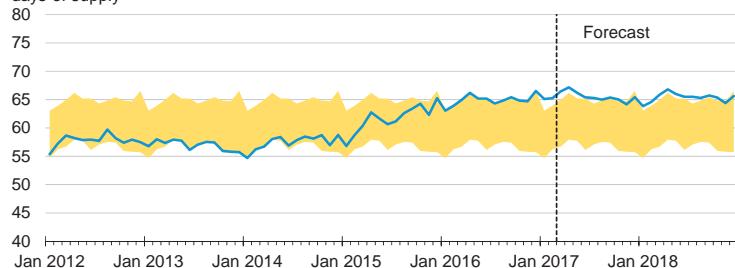
OPEC surplus crude oil production capacity million barrels per day



Note: Shaded area represents 2006-2016 average (2.3 million barrels per day).

Source: Short-Term Energy Outlook, March 2017.

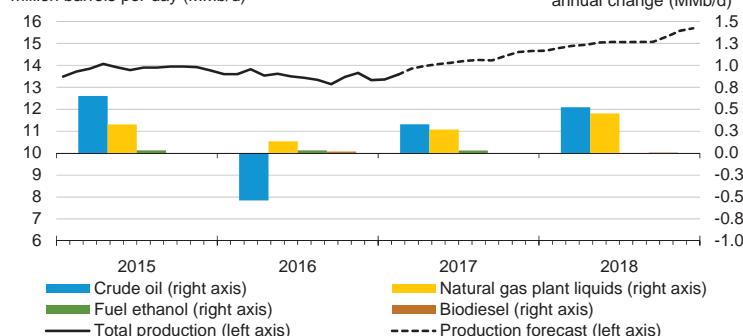
OECD commercial stocks of crude oil and other liquids
days of supply



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.

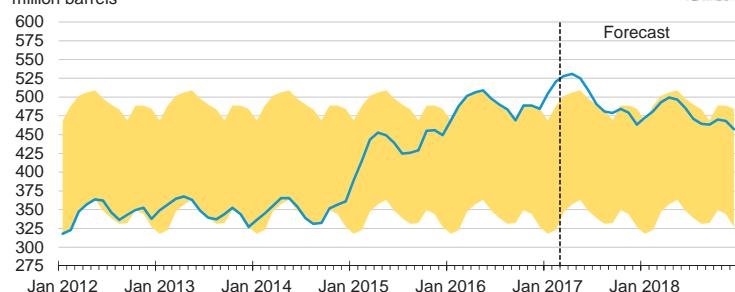
Source: Short-Term Energy Outlook, March 2017.

U.S. crude oil and liquid fuels production
million barrels per day (MMb/d)



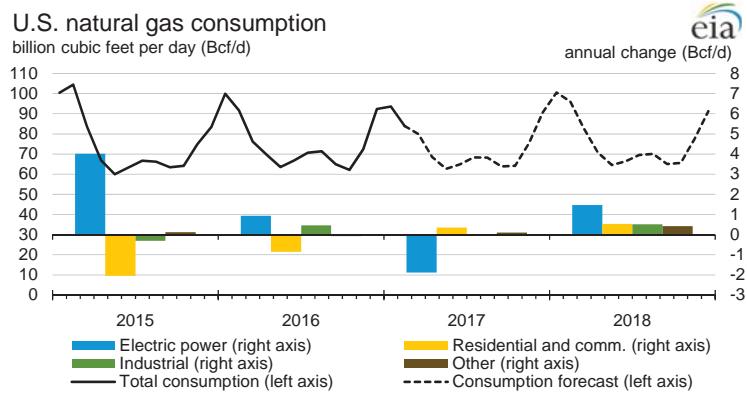
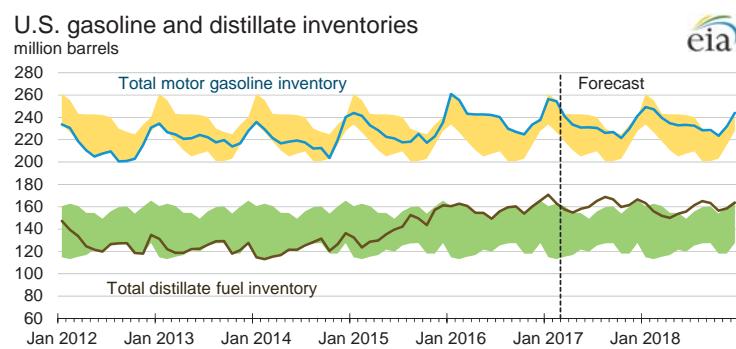
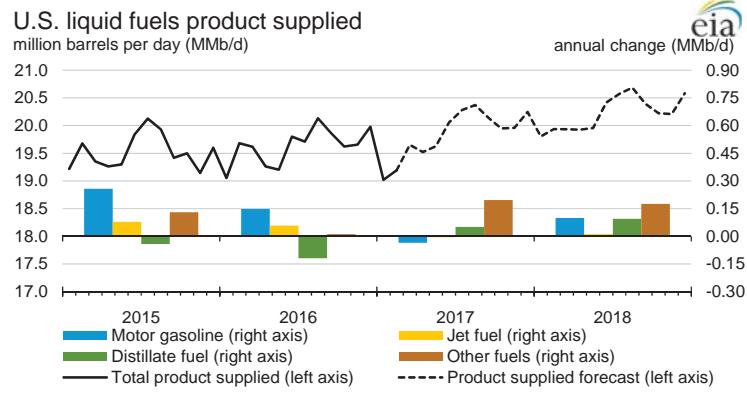
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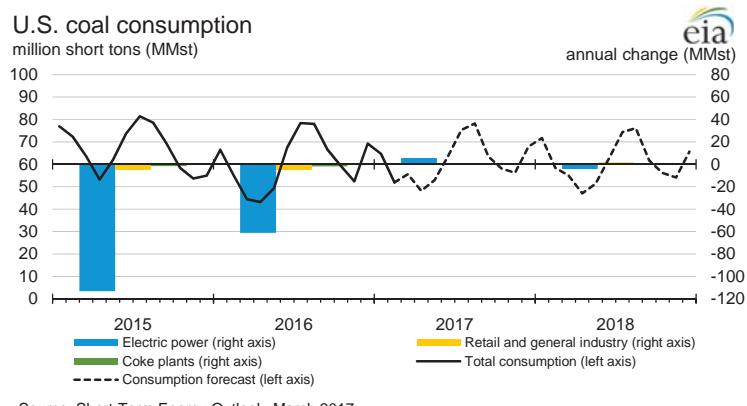
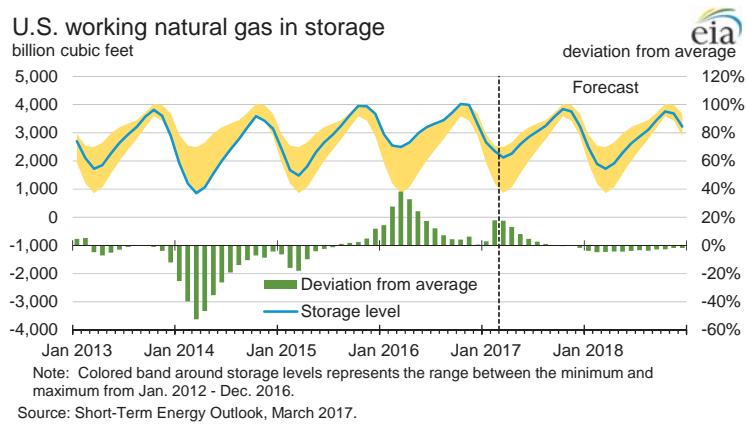
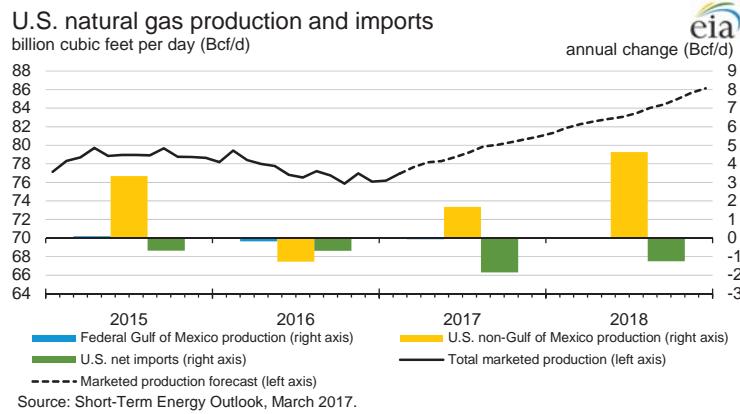
U.S. commercial crude oil stocks
million barrels

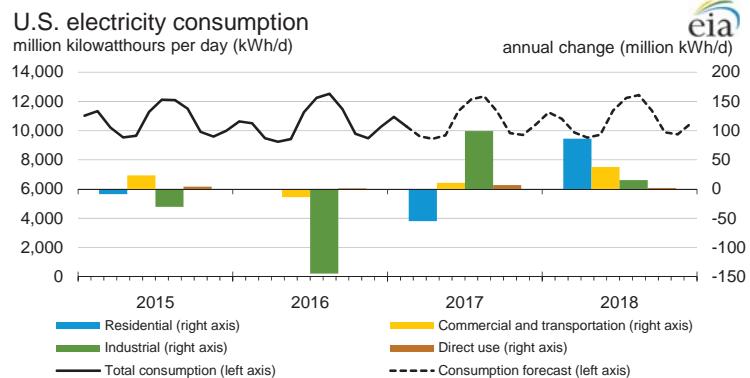
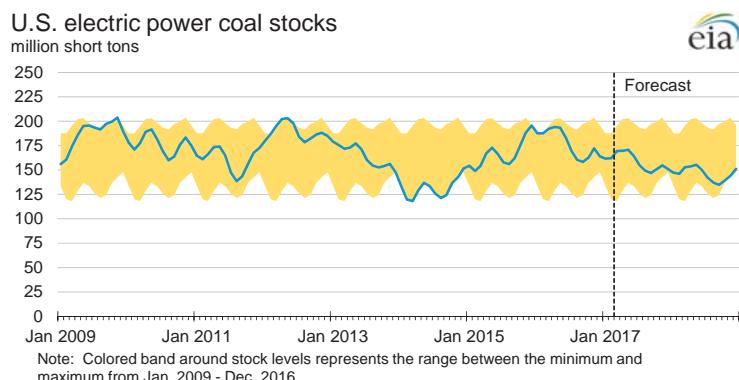
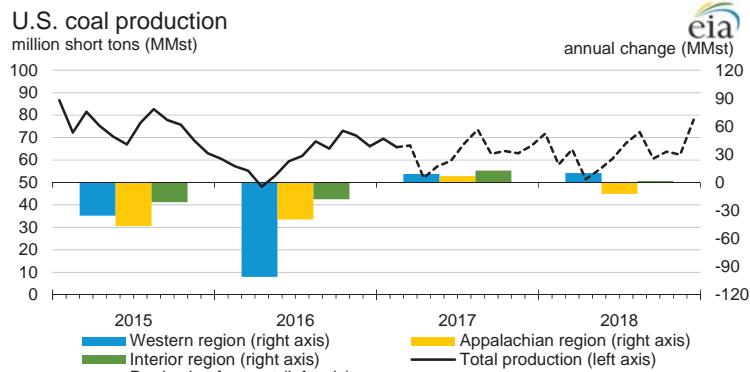


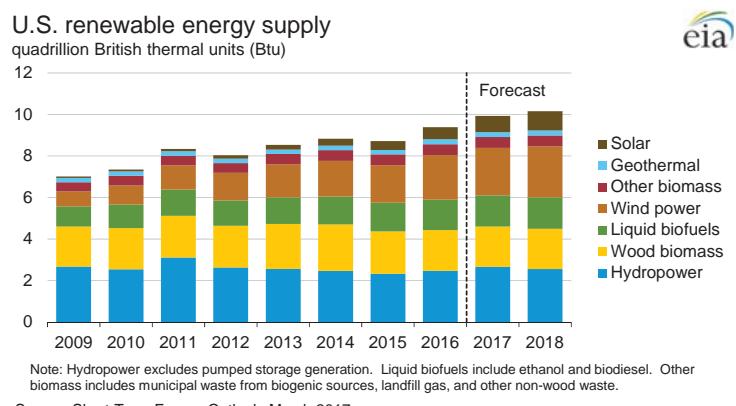
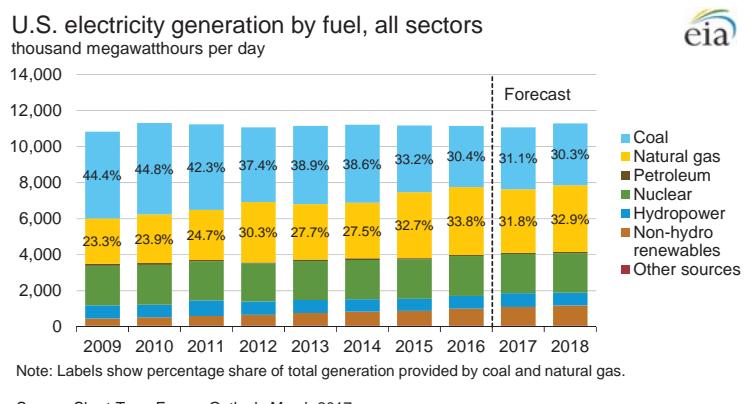
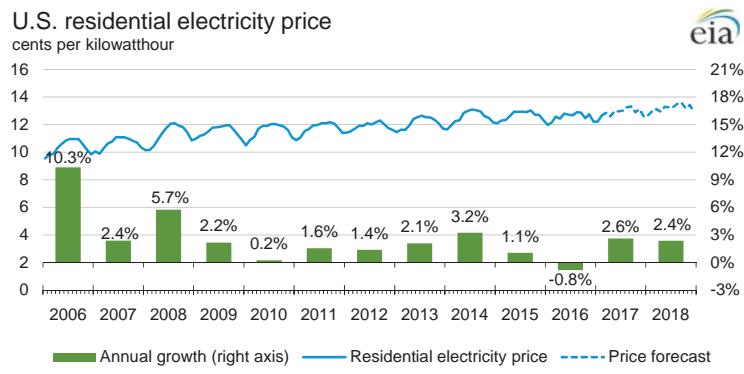
Note: Colored band around storage levels represents the range between the minimum and maximum from Jan. 2012 - Dec. 2016.

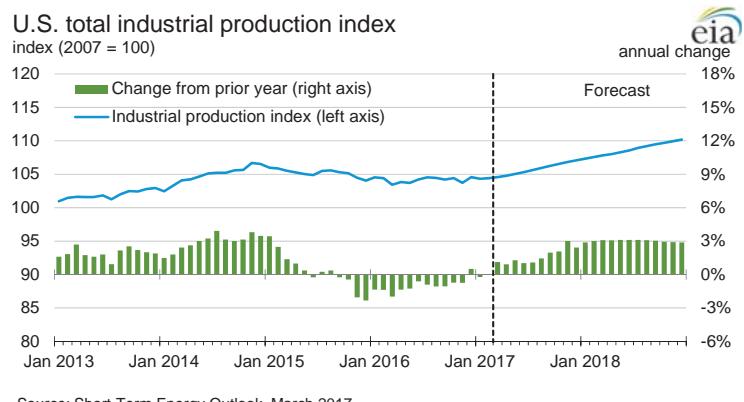
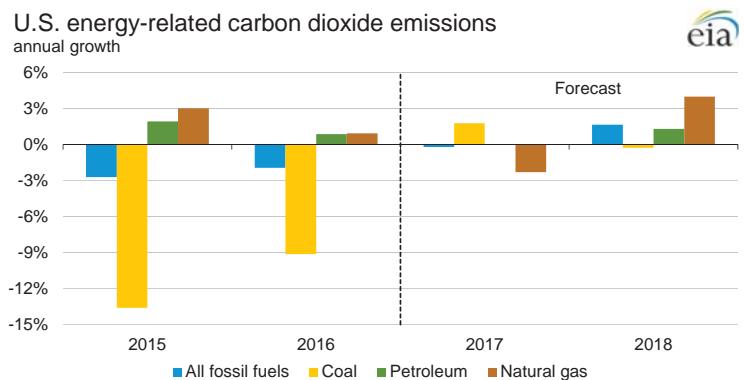
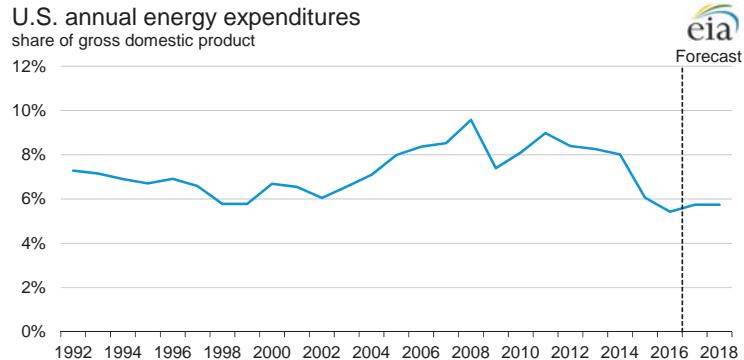
Source: Short-Term Energy Outlook, March 2017.

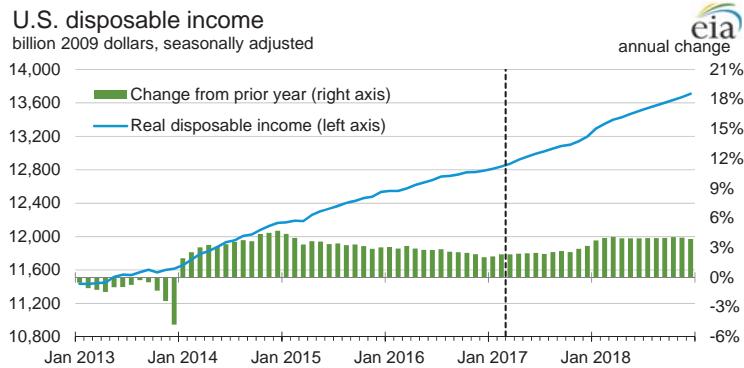




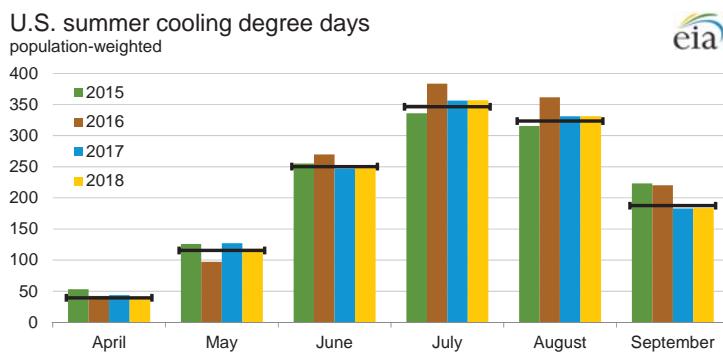






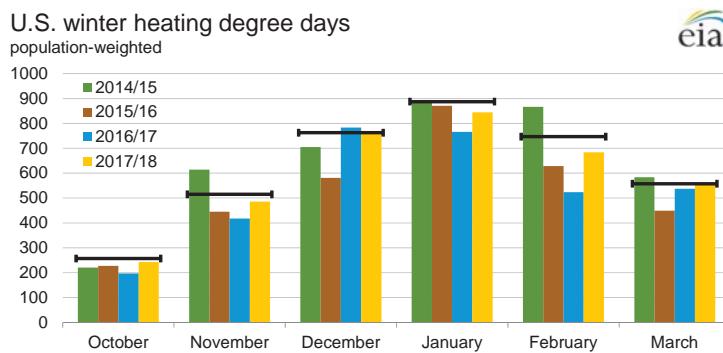


Source: Short-Term Energy Outlook, March 2017.



Note: EIA calculations based on from the National Oceanic and Atmospheric Administration data. Horizontal lines indicate each month's prior 10-year average (2007-2016). Projections reflect NOAA's 14-16 month outlook.

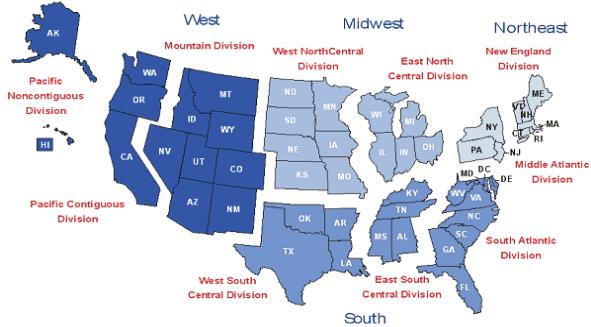
Source: Short-Term Energy Outlook, March 2017.



Note: EIA calculations based on National Oceanic and Atmospheric Administration (NOAA) data. Horizontal lines indicate each month's prior 10-year average (Oct 2006 - Mar 2016). Projections reflect NOAA's 14-16 month outlook.

Source: Short-Term Energy Outlook, March 2017.

U.S. census regions and divisions



Source: Short-Term Energy Outlook, March 2017.

Table WF01. Average Consumer Prices and Expenditures for Heating Fuels During the Winter
 U.S. Energy Information Administration | Short-Term Energy Outlook - March 2017

Fuel / Region	Winter of							Forecast	
	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	% Change
Natural Gas									
Northeast									
Consumption (Mcf**)	75.7	80.7	66.4	76.1	84.0	84.7	67.8	70.6	4.1
Price (\$/mcf)	13.31	12.66	12.21	11.71	11.53	10.82	10.20	11.06	8.4
Expenditures (\$)	1,007	1,022	812	891	969	916	691	780	12.8
Midwest									
Consumption (Mcf)	78.6	80.2	65.4	77.6	88.1	83.0	67.7	68.7	1.4
Price (\$/mcf)	9.44	9.23	8.99	8.36	8.69	8.56	7.58	8.46	11.6
Expenditures (\$)	742	740	587	648	766	711	513	581	13.3
South									
Consumption (Mcf)	53.2	49.3	40.8	46.5	52.1	50.4	40.7	38.8	-4.7
Price (\$/mcf)	11.52	11.02	11.45	10.71	10.77	10.82	10.85	12.21	12.6
Expenditures (\$)	613	543	468	497	561	546	442	474	7.3
West									
Consumption (Mcf)	49.9	49.4	49.1	48.6	46.4	41.5	45.9	46.7	1.8
Price (\$/mcf)	9.91	9.67	9.35	9.13	9.96	10.72	9.93	10.67	7.4
Expenditures (\$)	494	478	459	444	462	444	456	498	9.3
U.S. Average									
Consumption (Mcf)	64.4	65.0	55.7	62.5	68.0	64.8	55.8	56.4	1.2
Price (\$/mcf)	10.83	10.46	10.25	9.72	9.97	9.91	9.31	10.23	9.9
Expenditures (\$)	698	679	570	607	677	642	519	577	11.2
Heating Oil									
U.S. Average									
Consumption (gallons)	544.7	580.7	471.1	545.4	607.1	608.1	481.7	503.4	4.5
Price (\$/gallon)	2.85	3.38	3.73	3.87	3.88	3.04	2.06	2.44	18.2
Expenditures (\$)	1,552	1,965	1,757	2,113	2,353	1,849	993	1,227	23.6
Electricity									
Northeast									
Consumption (kWh***)	6,847	7,076	6,436	6,862	7,221	7,252	6,496	6,623	1.9
Price (\$/kwh)	0.152	0.154	0.154	0.152	0.163	0.168	0.164	0.165	0.1
Expenditures (\$)	1,039	1,091	993	1,046	1,177	1,219	1,069	1,090	2.0
Midwest									
Consumption (kWh)	8,660	8,733	7,897	8,588	9,168	8,857	8,031	8,086	0.7
Price (\$/kwh)	0.099	0.105	0.111	0.112	0.112	0.118	0.121	0.122	0.9
Expenditures (\$)	856	914	875	958	1,031	1,045	974	989	1.6
South									
Consumption (kWh)	8,482	8,220	7,466	7,972	8,381	8,280	7,459	7,318	-1.9
Price (\$/kwh)	0.103	0.104	0.107	0.107	0.109	0.111	0.111	0.111	0.8
Expenditures (\$)	873	855	797	851	913	919	825	816	-1.1
West									
Consumption (kWh)	7,239	7,216	7,190	7,151	6,982	6,602	6,952	7,016	0.9
Price (\$/kwh)	0.110	0.112	0.115	0.119	0.123	0.127	0.130	0.132	2.0
Expenditures (\$)	799	809	825	848	860	836	901	928	3.0
U.S. Average									
Consumption (kWh)	7,935	7,842	7,251	7,670	7,980	7,801	7,240	7,212	-0.4
Price (\$/kwh)	0.110	0.113	0.116	0.117	0.120	0.123	0.124	0.125	1.1
Expenditures (\$)	873	884	842	895	955	960	895	902	0.7

Table WF01. Average Consumer Prices and Expenditures for Heating Fuels During the Winter
 U.S. Energy Information Administration | Short-Term Energy Outlook - March 2017

Fuel / Region	Winter of							Forecast	
	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	% Change
Propane									
Northeast									
Consumption (gallons)	672.0	717.5	595.6	675.8	745.2	751.3	607.6	633.6	4.3
Price* (\$/gallon)	2.98	3.24	3.34	3.00	3.56	3.00	2.71	3.06	12.9
Expenditures (\$)	2,004	2,321	1,990	2,031	2,653	2,254	1,647	1,939	17.7
Midwest									
Consumption (gallons)	779.6	791.9	644.3	766.4	868.6	813.1	667.8	677.5	1.5
Price* (\$/gallon)	1.99	2.11	2.23	1.74	2.61	1.91	1.47	1.74	18.4
Expenditures (\$)	1,548	1,674	1,437	1,333	2,267	1,553	982	1,179	20.1
Number of households by primary space heating fuel (thousands)									
Northeast									
Natural gas	10,992	11,118	11,236	11,345	11,522	11,724	11,842	11,959	1.0
Heating oil	6,016	5,858	5,701	5,458	5,241	5,101	4,971	4,827	-2.9
Propane	733	744	761	813	845	860	873	878	0.6
Electricity	2,645	2,776	2,894	3,011	3,036	3,104	3,222	3,307	2.6
Wood	501	512	548	582	585	566	541	536	-0.9
Other/None	311	315	324	377	436	438	434	452	4.2
Midwest									
Natural gas	18,050	17,977	18,019	18,054	18,072	18,167	18,092	18,046	-0.3
Heating oil	451	419	393	360	336	318	299	280	-6.5
Propane	2,098	2,073	2,037	2,063	2,088	2,079	2,076	2,061	-0.7
Electricity	4,715	4,922	5,119	5,333	5,422	5,500	5,722	5,924	3.5
Wood	616	618	631	640	632	612	602	612	1.7
Other/None	283	289	282	319	353	350	350	362	3.3
South									
Natural gas	13,731	13,657	13,636	13,681	13,793	13,906	13,914	13,962	0.3
Heating oil	906	853	790	738	698	680	656	623	-5.1
Propane	2,165	2,098	2,024	1,982	1,943	1,924	1,888	1,828	-3.2
Electricity	25,791	26,555	27,283	27,857	28,230	28,802	29,483	30,158	2.3
Wood	586	599	609	612	616	587	581	601	3.4
Other/None	314	309	304	367	419	408	405	410	1.3
West									
Natural gas	14,939	15,020	15,021	15,009	15,059	15,216	15,318	15,434	0.8
Heating oil	289	279	261	247	234	225	218	209	-4.0
Propane	940	914	885	909	930	917	910	899	-1.2
Electricity	7,877	8,126	8,439	8,671	8,754	8,919	9,221	9,489	2.9
Wood	721	725	736	728	744	747	724	731	1.0
Other/None	850	850	829	903	1,015	1,076	1,074	1,076	0.2
U.S. Totals									
Natural gas	57,713	57,771	57,912	58,088	58,446	59,014	59,166	59,401	0.4
Heating oil	7,662	7,408	7,145	6,803	6,509	6,324	6,144	5,938	-3.3
Propane	5,936	5,829	5,707	5,766	5,806	5,780	5,746	5,667	-1.4
Electricity	41,029	42,380	43,734	44,873	45,442	46,325	47,649	48,878	2.6
Wood	2,424	2,454	2,524	2,563	2,576	2,512	2,448	2,480	1.3
Other/None	1,758	1,763	1,739	1,965	2,222	2,272	2,263	2,300	1.7

Heating degree days

Northeast	4,933	5,337	4,217	4,964	5,594	5,646	4,321	4,546	5.2
Midwest	5,639	5,773	4,484	5,544	6,451	6,001	4,688	4,773	1.8
South	2,867	2,629	2,020	2,427	2,783	2,689	2,012	1,889	-6.1
West	3,285	3,259	3,230	3,182	2,990	2,568	2,953	3,029	2.6
U.S. Average	3,936	3,938	3,223	3,720	4,109	3,880	3,201	3,225	0.7

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 - March 2017

	2016				2017				2018				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2016	2017	2018
Energy Supply															
Crude Oil Production (a) (million barrels per day)	9.17	8.85	8.67	8.81	8.96	9.21	9.20	9.44	9.62	9.70	9.65	9.95	8.88	9.21	9.73
Dry Natural Gas Production (billion cubic feet per day)	73.77	72.38	71.84	71.26	71.94	73.20	74.39	75.20	76.26	77.14	78.14	79.62	72.31	73.69	77.80
Coal Production (million short tons)	173	161	195	210	202	169	204	193	194	168	201	204	739	768	767
Energy Consumption															
Liquid Fuels (million barrels per day)	19.45	19.42	19.90	19.75	19.29	19.73	20.27	20.05	19.89	20.10	20.55	20.34	19.63	19.84	20.22
Natural Gas (billion cubic feet per day)	89.21	66.65	69.08	75.66	85.92	65.33	66.83	76.70	92.95	67.20	68.29	75.13	73.65	76.58
Coal (b) (million short tons)	166	160	223	181	172	165	217	182	185	161	212	176	730	736	734
Electricity (billion kilowatt hours per day)	10.19	9.96	12.09	9.84	10.27	10.14	11.93	9.98	10.64	10.21	12.02	10.04	10.52	10.59	10.73
Renewables (c) (quadrillion Btu)	2.61	2.60	2.44	2.51	2.62	2.87	2.63	2.60	2.67	2.94	2.69	2.66	10.16	10.71	10.97
Total Energy Consumption (d) (quadrillion Btu)	25.24	22.95	24.77	24.17	24.35	22.86	24.34	24.27	25.51	23.15	24.56	24.47	97.13	95.82	97.69
Energy Prices															
Crude Oil West Texas Intermediate Spot (dollars per barrel)	33.35	45.46	44.85	49.18	52.97	53.00	54.00	54.00	55.67	56.67	58.31	43.33	53.49	56.18
Natural Gas Henry Hub Spot (dollars per million Btu)	2.00	2.14	2.88	3.04	2.93	2.89	3.09	3.22	3.40	3.41	3.47	3.51	2.51	3.03	3.45
Coal (dollars per million Btu)	2.13	2.13	2.11	2.08	2.16	2.15	2.20	2.17	2.19	2.18	2.22	2.22	2.11	2.17	2.21
Macroeconomic															
Real Gross Domestic Product (billion chained 2009 dollars - SAAR)	16,525	16,583	16,727	16,805	16,887	16,976	17,090	17,190	17,304	17,415	17,533	17,639	16,660	17,036	17,473
Percent change from prior year	1.6	1.3	1.7	1.9	2.2	2.4	2.2	2.3	2.5	2.6	2.6	2.6	1.6	2.3	2.6
GDP Implicit Price Deflator (Index, 2009=100)	110.6	111.3	111.7	112.2	113.0	113.5	114.1	114.7	115.4	115.9	116.5	117.1	111.5	113.8	116.2
Percent change from prior year	1.2	1.2	1.3	1.6	2.1	2.0	2.2	2.2	2.1	2.1	2.1	2.0	1.3	2.1	2.1
Real Disposable Personal Income (billion chained 2009 dollars - SAAR)	12,556	12,647	12,729	12,778	12,840	12,955	13,052	13,146	13,347	13,467	13,572	13,671	12,678	12,998	13,514
Percent change from prior year	3.1	2.8	2.7	2.3	2.3	2.4	2.5	2.9	3.9	3.9	4.0	4.0	2.7	2.5	4.0
Manufacturing Production Index (Index, 2012=100)	103.9	103.6	103.8	104.0	104.1	104.4	105.2	106.1	106.8	107.4	108.3	109.0	103.8	105.0	107.9
Percent change from prior year	0.6	0.2	-0.1	0.2	0.2	0.8	1.4	2.1	2.5	2.9	2.9	2.7	0.2	1.1	2.8
Weather															
U.S. Heating Degree-Days	1,948	481	51	1,398	1,827	450	68	1,496	2,085	472	68	1,494	3,877	3,841	4,119
U.S. Cooling Degree-Days	54	409	965	129	57	418	870	97	42	406	872	97	1,558	1,442	1,417

- = 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 - March 2017

	2016				2017				2018				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2016	2017	2018
Crude Oil (dollars per barrel)															
West Texas Intermediate Spot Average	33.35	45.46	44.85	49.18	52.97	53.00	54.00	54.00	54.00	55.67	56.67	58.31	43.33	53.49	56.18
Brent Spot Average	33.89	45.57	45.80	49.25	54.48	54.00	55.00	55.00	55.00	56.67	57.67	59.31	43.74	54.62	57.18
U.S. Imported Average	28.83	40.35	41.19	44.82	49.44	49.50	50.50	50.50	50.50	52.17	53.17	54.84	38.78	49.97	52.67
U.S. Refiner Average Acquisition Cost	30.84	42.23	42.90	46.69	51.96	52.00	53.00	53.00	53.00	54.68	55.66	57.35	40.72	52.50	55.20
U.S. Liquid Fuels (cents per gallon)															
Refiner Prices for Resale															
Gasoline	119	158	150	153	162	173	172	155	156	179	178	164	145	166	169
Diesel Fuel	109	141	145	156	166	168	173	176	174	177	181	187	138	171	180
Heating Oil	99	125	132	146	158	158	163	170	172	167	172	181	124	162	174
Refiner Prices to End Users															
Jet Fuel	107	134	137	149	161	162	168	172	171	171	176	183	132	166	175
No. 6 Residual Fuel Oil (a)	69	89	103	115	127	127	131	131	132	133	137	141	94	129	136
Retail Prices Including Taxes															
Gasoline Regular Grade (b)	190	225	221	223	233	246	248	231	229	253	254	240	215	240	244
Gasoline All Grades (b)	200	235	232	234	244	256	258	242	240	264	265	252	226	250	256
On-highway Diesel Fuel	208	230	238	247	261	267	273	278	277	280	284	292	231	270	283
Heating Oil	195	205	211	233	252	254	260	270	275	265	268	279	210	259	274
Natural Gas															
Henry Hub Spot (dollars per thousand cubic feet)	2.06	2.21	2.97	3.14	3.02	2.98	3.18	3.33	3.51	3.52	3.58	3.62	2.60	3.13	3.56
Henry Hub Spot (dollars per million Btu)	2.00	2.14	2.88	3.04	2.93	2.89	3.09	3.22	3.40	3.41	3.47	3.51	2.51	3.03	3.45
U.S. Retail Prices (dollars per thousand cubic feet)															
Industrial Sector	3.44	2.93	3.62	4.03	4.62	3.85	4.12	4.51	4.94	4.45	4.59	4.86	3.52	4.29	4.72
Commercial Sector	6.84	7.25	8.21	7.47	7.89	8.13	8.65	8.02	8.01	8.51	9.05	8.34	7.26	8.06	8.31
Residential Sector	8.53	11.16	16.99	10.18	9.93	12.19	16.48	10.71	9.81	12.40	16.92	11.10	10.05	11.07	11.09
U.S. Electricity															
Power Generation Fuel Costs (dollars per million Btu)															
Coal	2.13	2.13	2.11	2.08	2.16	2.15	2.20	2.17	2.19	2.18	2.22	2.22	2.11	2.17	2.21
Natural Gas	2.65	2.51	3.00	3.36	3.75	3.37	3.38	3.81	4.27	3.90	3.79	4.14	2.88	3.55	4.00
Residual Fuel Oil (c)	6.15	8.51	9.70	9.08	10.02	10.81	10.49	10.38	10.27	11.03	10.85	10.90	8.41	10.42	10.76
Distillate Fuel Oil	9.00	11.01	11.64	12.14	12.88	13.13	13.47	14.13	14.33	14.29	14.56	15.40	10.86	13.41	14.62
Retail Prices (cents per kilowatthour)															
Industrial Sector	6.42	6.67	7.20	6.67	6.56	6.80	7.36	6.84	6.63	6.93	7.50	6.97	6.75	6.90	7.02
Commercial Sector	10.12	10.34	10.68	10.27	10.09	10.37	10.88	10.54	10.31	10.51	10.99	10.71	10.37	10.49	10.64
Residential Sector	12.20	12.66	12.81	12.45	12.54	12.86	13.19	12.84	12.90	13.18	13.44	13.15	12.55	12.88	13.18

- = 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 - March 2017

	2016				2017				2018				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2016	2017	2018
Supply (million barrels per day) (a)															
OECD	26.97	25.88	26.27	26.59	26.54	26.88	26.95	27.49	27.69	27.92	27.94	28.58	26.43	26.97	28.03
U.S. (50 States)	14.96	14.88	14.67	14.80	14.87	15.34	15.55	15.87	16.03	16.32	16.40	16.84	14.83	15.41	16.40
Canada	4.73	3.98	4.69	4.70	4.71	4.68	4.70	4.75	4.79	4.82	4.89	4.97	4.53	4.71	4.87
Mexico	2.57	2.52	2.49	2.41	2.25	2.24	2.33	2.31	2.29	2.28	2.27	2.26	2.49	2.28	2.28
North Sea (b)	3.24	3.12	2.98	3.23	3.23	3.14	2.87	3.06	3.05	2.97	2.82	2.92	3.14	3.08	2.94
Other OECD	1.47	1.38	1.44	1.46	1.47	1.48	1.50	1.50	1.52	1.53	1.56	1.58	1.44	1.49	1.55
Non-OECD	69.86	70.61	70.77	71.73	70.30	71.07	71.88	71.81	71.16	72.03	72.25	72.03	70.75	71.27	71.87
OPEC	38.32	38.78	39.06	39.82	38.97	39.38	39.80	39.94	39.94	40.27	40.32	40.27	39.00	39.53	40.20
Crude Oil Portion	31.91	32.39	32.58	33.19	32.22	32.57	32.95	33.03	33.02	33.30	33.29	33.19	32.52	32.70	33.20
Other Liquids (c)	6.41	6.39	6.48	6.63	6.75	6.81	6.85	6.91	6.92	6.96	7.03	7.07	6.48	6.83	7.00
Eurasia	14.37	14.16	13.97	14.55	14.50	14.27	14.39	14.46	14.49	14.41	14.37	14.49	14.26	14.40	14.44
China	5.02	4.91	4.79	4.70	4.70	4.68	4.68	4.71	4.60	4.63	4.62	4.66	4.86	4.70	4.63
Other Non-OECD	12.15	12.77	12.95	12.66	12.12	12.74	13.01	12.70	12.13	12.73	12.93	12.62	12.63	12.65	12.60
Total World Supply	96.82	96.49	97.04	98.33	96.84	97.95	98.83	99.30	98.85	99.95	100.18	100.61	97.17	98.24	99.91
Non-OPEC Supply	58.51	57.71	57.98	58.50	57.87	58.57	59.03	59.36	58.91	59.69	59.86	60.34	58.18	58.71	59.70
Consumption (million barrels per day) (d)															
OECD	46.69	46.02	47.28	47.13	46.89	46.30	47.41	47.54	47.44	46.63	47.65	47.79	46.78	47.04	47.38
U.S. (50 States)	19.45	19.42	19.90	19.75	19.29	19.73	20.27	20.05	19.89	20.10	20.55	20.34	19.63	19.84	20.22
U.S. Territories	0.28	0.28	0.28	0.28	0.29	0.29	0.29	0.29	0.31	0.31	0.31	0.31	0.28	0.29	0.31
Canada	2.39	2.37	2.52	2.39	2.40	2.34	2.46	2.44	2.38	2.32	2.44	2.42	2.42	2.41	2.39
Europe	13.68	13.98	14.48	14.01	13.89	13.98	14.39	14.11	13.95	13.98	14.38	14.11	14.04	14.09	14.11
Japan	4.43	3.66	3.75	4.19	4.34	3.54	3.66	4.04	4.25	3.47	3.58	3.96	4.01	3.89	3.81
Other OECD	6.47	6.31	6.35	6.52	6.67	6.41	6.35	6.61	6.66	6.45	6.39	6.65	6.41	6.51	6.54
Non-OECD	48.78	50.08	50.30	50.26	50.11	51.27	51.61	51.44	51.44	52.54	52.76	52.70	49.86	51.11	52.37
Eurasia	4.74	4.67	4.94	4.93	4.75	4.67	4.94	4.93	4.75	4.67	4.95	4.93	4.82	4.82	4.83
Europe	0.69	0.70	0.72	0.72	0.70	0.70	0.73	0.72	0.71	0.71	0.74	0.73	0.71	0.71	0.72
China	12.26	12.47	12.38	12.65	12.68	12.81	12.73	12.86	13.00	13.14	13.01	13.25	12.44	12.77	13.10
Other Asia	12.74	12.95	12.46	12.84	13.20	13.44	12.93	13.31	13.67	13.91	13.37	13.77	12.75	13.22	13.68
Other Non-OECD	18.34	19.29	19.80	19.12	18.78	19.65	20.27	19.61	19.31	20.10	20.70	20.02	19.14	19.58	20.03
Total World Consumption	95.47	96.10	97.58	97.39	97.00	97.57	99.02	98.98	98.88	99.17	100.41	100.49	96.64	98.15	99.74
Total Crude Oil and Other Liquids Inventory Net Withdrawals (million barrels per day)															
U.S. (50 States)	-0.41	-0.28	-0.01	0.18	-0.03	-0.03	0.07	0.60	0.09	-0.33	0.00	0.44	-0.13	0.15	0.05
Other OECD	0.02	-0.10	-0.21	-0.39	0.07	-0.12	0.04	-0.32	-0.02	-0.15	0.07	-0.19	-0.17	-0.08	-0.07
Other Stock Draws and Balance	-0.97	-0.01	0.75	-0.72	0.13	-0.23	0.08	-0.60	-0.04	-0.30	0.15	-0.37	-0.24	-0.16	-0.14
Total Stock Draw	-1.35	-0.39	0.53	-0.93	0.17	-0.39	0.19	-0.32	0.03	-0.79	0.22	-0.12	-0.53	-0.09	-0.16
End-of-period Commercial Crude Oil and Other Liquids Inventories															
U.S. Commercial Inventory	1,326	1,352	1,353	1,336	1,342	1,358	1,351	1,302	1,300	1,337	1,343	1,308	1,336	1,302	1,308
OECD Commercial Inventory	2,997	3,034	3,050	3,070	3,069	3,096	3,086	3,067	3,067	3,117	3,116	3,099	3,070	3,067	3,099

- = 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, 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 offshore supply from Denmark, Germany, the Netherlands, Norway, and the United Kingdom.

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

(d) 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 - March 2017

	2016				2017				2018				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2016	2017	2018
North America	22.25	21.37	21.85	21.91	21.83	22.26	22.58	22.93	23.12	23.42	23.56	24.07	21.85	22.40	23.55
Canada	4.73	3.98	4.69	4.70	4.71	4.68	4.70	4.75	4.79	4.82	4.89	4.97	4.53	4.71	4.87
Mexico	2.57	2.52	2.49	2.41	2.25	2.24	2.33	2.31	2.29	2.28	2.27	2.26	2.49	2.28	2.28
United States	14.96	14.88	14.67	14.80	14.87	15.34	15.55	15.87	16.03	16.32	16.40	16.84	14.83	15.41	16.40
Central and South America	4.73	5.40	5.63	5.34	4.82	5.43	5.66	5.35	4.86	5.49	5.73	5.43	5.27	5.32	5.38
Argentina	0.70	0.69	0.70	0.69	0.71	0.69	0.70	0.69	0.71	0.69	0.70	0.69	0.69	0.70	0.70
Brazil	2.63	3.36	3.63	3.32	2.76	3.39	3.67	3.35	2.80	3.46	3.74	3.41	3.23	3.30	3.36
Colombia	0.98	0.93	0.87	0.92	0.94	0.92	0.86	0.91	0.93	0.92	0.85	0.91	0.92	0.91	0.90
Other Central and S. America	0.42	0.43	0.42	0.41	0.41	0.42	0.42	0.41	0.41	0.42	0.43	0.43	0.42	0.41	0.42
Europe	4.21	4.02	3.90	4.16	4.18	4.09	3.83	4.01	4.00	3.92	3.77	3.88	4.07	4.03	3.89
Norway	2.04	1.95	1.91	2.12	2.08	2.01	1.93	2.02	1.99	1.90	1.88	1.93	2.00	2.01	1.92
United Kingdom (offshore)	1.05	1.01	0.93	0.95	1.01	0.99	0.81	0.90	0.92	0.93	0.81	0.87	0.98	0.93	0.88
Other North Sea	0.15	0.16	0.15	0.15	0.15	0.15	0.13	0.14	0.14	0.13	0.12	0.13	0.15	0.14	0.13
Eurasia	14.37	14.16	13.97	14.55	14.50	14.27	14.39	14.45	14.49	14.41	14.36	14.49	14.26	14.40	14.44
Azerbaijan	0.87	0.87	0.85	0.80	0.81	0.81	0.79	0.77	0.79	0.78	0.77	0.75	0.85	0.80	0.77
Kazakhstan	1.79	1.69	1.61	1.83	1.90	1.84	1.88	1.91	1.92	1.84	1.88	1.95	1.73	1.88	1.90
Russia	11.27	11.17	11.08	11.45	11.33	11.16	11.26	11.31	11.32	11.33	11.26	11.33	11.24	11.26	11.31
Turkmenistan	0.27	0.26	0.26	0.28	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.27	0.29	0.29
Other Eurasia	0.17	0.17	0.17	0.19	0.18	0.18	0.18	0.18	0.17	0.17	0.17	0.17	0.17	0.18	0.17
Middle East	1.14	1.14	1.14	1.14	1.10	1.10	1.15	1.14	1.15	1.15	1.15	1.15	1.14	1.12	1.15
Oman	1.02	1.01	1.02	1.02	0.98	0.98	1.03	1.02	1.03	1.03	1.04	1.04	1.02	1.00	1.03
Syria	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Yemen	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.01
Asia and Oceania	9.71	9.53	9.42	9.30	9.35	9.31	9.29	9.32	9.24	9.24	9.23	9.27	9.49	9.32	9.25
Australia	0.39	0.37	0.40	0.39	0.39	0.39	0.39	0.40	0.42	0.43	0.45	0.47	0.39	0.39	0.44
China	5.02	4.91	4.79	4.70	4.70	4.68	4.68	4.71	4.60	4.63	4.62	4.66	4.86	4.70	4.63
India	1.00	0.99	1.00	0.99	1.01	1.00	1.00	1.00	1.01	1.00	0.99	1.00	0.99	1.00	1.00
Indonesia	0.94	0.96	0.95	0.93	0.93	0.92	0.91	0.89	0.88	0.87	0.85	0.83	0.94	0.91	0.86
Malaysia	0.76	0.74	0.73	0.74	0.74	0.74	0.75	0.75	0.76	0.75	0.75	0.74	0.74	0.75	0.75
Vietnam	0.33	0.33	0.31	0.31	0.32	0.32	0.31	0.31	0.31	0.30	0.30	0.30	0.32	0.32	0.30
Africa	2.10	2.09	2.08	2.11	2.09	2.12	2.14	2.15	2.05	2.06	2.05	2.05	2.09	2.13	2.05
Egypt	0.70	0.69	0.69	0.69	0.68	0.68	0.68	0.67	0.67	0.66	0.66	0.65	0.69	0.68	0.66
Equatorial Guinea	0.24	0.24	0.24	0.25	0.22	0.22	0.22	0.22	0.20	0.20	0.20	0.20	0.24	0.22	0.20
Sudan and South Sudan	0.26	0.26	0.26	0.26	0.25	0.25	0.25	0.25	0.20	0.20	0.20	0.20	0.26	0.25	0.20
Total non-OPEC liquids	58.51	57.71	57.98	58.50	57.87	58.57	59.03	59.36	58.91	59.69	59.86	60.34	58.18	58.71	59.70
OPEC non-crude liquids	6.41	6.39	6.48	6.63	6.75	6.81	6.85	6.91	6.92	6.96	7.03	7.07	6.48	6.83	7.00
Non-OPEC + OPEC non-crude	64.92	64.10	64.46	65.13	64.62	65.38	65.88	66.27	65.83	66.65	66.89	67.41	64.65	65.54	66.70
Unplanned non-OPEC Production Outages	0.38	0.76	0.42	0.34	n/a	0.47	n/a	n/a							

- = no data available

OPEC = Organization of the Petroleum Exporting Countries: Algeria, Angola, Ecuador, 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 - March 2017

	2016				2017				2018				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2016	2017	2018
Crude Oil															
Algeria	1.05	1.04	1.05	1.05	-	-	-	-	-	-	-	-	1.05	-	-
Angola	1.78	1.79	1.79	1.64	-	-	-	-	-	-	-	-	1.75	-	-
Ecuador	0.54	0.55	0.55	0.55	-	-	-	-	-	-	-	-	0.55	-	-
Gabon	0.21	0.21	0.21	0.21	-	-	-	-	-	-	-	-	0.21	-	-
Iran	3.03	3.57	3.65	3.70	-	-	-	-	-	-	-	-	3.49	-	-
Iraq	4.29	4.39	4.42	4.61	-	-	-	-	-	-	-	-	4.43	-	-
Kuwait	2.88	2.79	2.91	2.92	-	-	-	-	-	-	-	-	2.87	-	-
Libya	0.35	0.31	0.29	0.58	-	-	-	-	-	-	-	-	0.38	-	-
Nigeria	1.77	1.56	1.50	1.55	-	-	-	-	-	-	-	-	1.59	-	-
Qatar	0.66	0.68	0.66	0.66	-	-	-	-	-	-	-	-	0.67	-	-
Saudi Arabia	10.20	10.33	10.60	10.55	-	-	-	-	-	-	-	-	10.42	-	-
United Arab Emirates	2.85	2.93	2.84	3.09	-	-	-	-	-	-	-	-	2.93	-	-
Venezuela	2.30	2.23	2.11	2.07	-	-	-	-	-	-	-	-	2.18	-	-
OPEC Total	31.91	32.39	32.58	33.19	32.22	32.57	32.95	33.03	33.02	33.30	33.29	33.19	32.52	32.70	33.20
Other Liquids (a)	6.41	6.39	6.48	6.63	6.75	6.81	6.85	6.91	6.92	6.96	7.03	7.07	6.48	6.83	7.00
Total OPEC Supply	38.32	38.78	39.06	39.82	38.97	39.38	39.80	39.94	39.94	40.27	40.32	40.27	39.00	39.53	40.20
Crude Oil Production Capacity															
Africa	5.16	4.92	4.84	5.04	5.16	5.29	5.43	5.52	5.53	5.53	5.53	5.54	4.99	5.35	5.54
Middle East	25.52	25.94	26.25	26.53	26.69	26.65	26.46	26.40	26.47	26.49	26.53	26.55	26.06	26.55	26.51
South America	2.84	2.78	2.66	2.62	2.51	2.52	2.50	2.50	2.43	2.40	2.32	2.30	2.73	2.51	2.36
OPEC Total	33.52	33.64	33.75	34.19	34.36	34.46	34.39	34.42	34.43	34.42	34.39	34.39	33.78	34.41	34.41
Surplus Crude Oil Production Capacity															
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	1.62	1.25	1.17	1.00	2.14	1.89	1.44	1.39	1.42	1.12	1.10	1.20	1.26	1.71	1.21
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	1.62	1.25	1.17	1.00	2.14	1.89	1.44	1.39	1.42	1.12	1.10	1.20	1.26	1.71	1.21
Unplanned OPEC Production Outages	2.09	2.44	2.34	1.93	n/a	2.20	n/a	n/a							

- = no data available

OPEC = Organization of the Petroleum Exporting Countries: Algeria, Angola, 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 - March 2017

	2016				2017				2018				2016	2017	2018
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
North America	23.82	23.75	24.36	24.10	23.64	24.04	24.66	24.43	24.22	24.38	24.92	24.70	24.01	24.19	24.56
Canada	2.39	2.37	2.52	2.39	2.40	2.34	2.46	2.44	2.38	2.32	2.44	2.42	2.42	2.41	2.39
Mexico	1.98	1.94	1.93	1.94	1.93	1.95	1.92	1.93	1.93	1.95	1.92	1.93	1.95	1.93	1.93
United States	19.45	19.42	19.90	19.75	19.29	19.73	20.27	20.05	19.89	20.10	20.55	20.34	19.63	19.84	20.22
Central and South America	6.96	7.12	7.23	7.22	6.91	7.09	7.24	7.23	6.90	7.09	7.22	7.22	7.13	7.12	7.11
Brazil	2.97	3.02	3.09	3.10	2.88	2.96	3.05	3.08	2.84	2.91	3.00	3.02	3.04	2.99	2.94
Europe	14.37	14.68	15.20	14.72	14.60	14.68	15.12	14.83	14.66	14.70	15.12	14.85	14.74	14.81	14.83
Eurasia	4.74	4.67	4.94	4.93	4.75	4.67	4.94	4.93	4.75	4.67	4.95	4.93	4.82	4.82	4.83
Russia	3.49	3.44	3.65	3.63	3.48	3.43	3.64	3.62	3.47	3.42	3.63	3.61	3.55	3.54	3.53
Middle East	7.95	8.70	9.19	8.40	8.30	8.99	9.53	8.74	8.65	9.26	9.80	8.98	8.56	8.89	9.17
Asia and Oceania	33.33	32.85	32.40	33.65	34.31	33.60	33.08	34.25	35.00	34.36	33.75	35.05	33.05	33.81	34.54
China	12.26	12.47	12.38	12.65	12.68	12.81	12.73	12.86	13.00	13.14	13.01	13.25	12.44	12.77	13.10
Japan	4.43	3.66	3.75	4.19	4.34	3.54	3.66	4.04	4.25	3.47	3.58	3.96	4.01	3.89	3.81
India	4.48	4.44	4.07	4.42	4.75	4.73	4.34	4.69	5.01	4.99	4.57	4.94	4.35	4.62	4.88
Africa	4.27	4.30	4.23	4.34	4.48	4.47	4.42	4.53	4.68	4.67	4.62	4.73	4.29	4.48	4.68
Total OECD Liquid Fuels Consumption	46.69	46.02	47.28	47.13	46.89	46.30	47.41	47.54	47.44	46.63	47.65	47.79	46.78	47.04	47.38
Total non-OECD Liquid Fuels Consumption	48.78	50.08	50.30	50.26	50.11	51.27	51.61	51.44	51.44	52.54	52.76	52.70	49.86	51.11	52.37
Total World Liquid Fuels Consumption	95.47	96.10	97.58	97.39	97.00	97.57	99.02	98.98	98.88	99.17	100.41	100.49	96.64	98.15	99.74
Oil-weighted Real Gross Domestic Product (a)															
World Index, 2010 Q1 = 100	119.6	120.3	121.1	122.0	122.8	123.5	124.4	125.4	126.3	127.3	128.3	129.3	120.8	124.0	127.8
Percent change from prior year	2.2	2.3	2.3	2.5	2.6	2.7	2.7	2.8	2.9	3.0	3.1	3.1	2.3	2.7	3.0
OECD Index, 2010 Q1 = 100	111.6	112.0	112.6	113.2	113.7	114.2	114.8	115.3	116.0	116.6	117.3	117.9	112.3	114.5	116.9
Percent change from prior year	1.7	1.6	1.7	1.9	1.9	2.0	1.9	1.9	2.0	2.1	2.2	2.2	1.7	1.9	2.1
Non-OECD Index, 2010 Q1 = 100	129.6	130.7	131.6	132.8	134.1	135.2	136.4	137.9	139.3	140.8	142.2	143.7	131.2	135.9	141.5
Percent change from prior year	2.8	3.0	3.0	3.2	3.4	3.4	3.7	3.8	3.9	4.1	4.2	4.2	3.0	3.6	4.1
Real U.S. Dollar Exchange Rate (a)															
Index, January 2010 = 100	128.67	127.92	128.39	131.53	134.78	135.64	136.59	137.34	137.71	137.45	137.13	136.91	129.13	136.09	137.30
Percent change from prior year	8.0	7.1	4.6	5.6	4.7	6.0	6.4	4.4	2.2	1.3	0.4	-0.3	6.3	5.4	0.9

- = 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 - March 2017

	2016				2017				2018				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2016	2017	2018
Supply (million barrels per day)															
Crude Oil Supply															
Domestic Production (a)	9.17	8.85	8.67	8.81	8.96	9.21	9.20	9.44	9.62	9.70	9.65	9.95	8.88	9.21	9.73
Alaska	0.51	0.49	0.45	0.51	0.49	0.47	0.44	0.50	0.50	0.48	0.43	0.49	0.49	0.47	0.47
Federal Gulf of Mexico (b)	1.61	1.58	1.57	1.67	1.69	1.70	1.60	1.71	1.82	1.85	1.75	1.88	1.61	1.67	1.83
Lower 48 States (excl GOM)	7.05	6.78	6.65	6.64	6.78	7.04	7.17	7.24	7.29	7.38	7.46	7.58	6.78	7.06	7.43
Crude Oil Net Imports (c)	7.46	7.19	7.45	7.33	7.20	6.46	6.70	6.20	6.09	6.23	6.42	5.94	7.36	6.64	6.17
SPR Net Withdrawals	0.00	0.00	0.00	0.00	0.03	0.14	0.00	0.07	0.07	0.07	0.07	0.07	0.00	0.06	0.07
Commercial Inventory Net Withdrawals	-0.57	0.04	0.31	-0.17	-0.48	0.21	0.33	0.17	-0.33	0.09	0.24	0.06	-0.10	0.06	0.02
Crude Oil Adjustment (d)	-0.06	0.14	0.09	0.08	0.20	0.19	0.21	0.15	0.19	0.19	0.21	0.15	0.06	0.19	0.19
Total Crude Oil Input to Refineries	16.00	16.22	16.53	16.06	15.91	16.20	16.44	16.03	15.64	16.27	16.59	16.18	16.20	16.15	16.17
Other Supply															
Refinery Processing Gain	1.07	1.10	1.15	1.11	1.06	1.06	1.10	1.07	1.03	1.07	1.10	1.08	1.11	1.07	1.07
Natural Gas Plant Liquids Production	3.38	3.57	3.46	3.49	3.48	3.70	3.84	3.96	4.00	4.15	4.24	4.41	3.48	3.75	4.20
Renewables and Oxygenate Production (e)	1.12	1.13	1.17	1.18	1.15	1.15	1.18	1.16	1.16	1.17	1.18	1.16	1.15	1.16	1.17
Fuel Ethanol Production	0.99	0.97	1.01	1.02	1.04	1.02	1.03	1.02	1.02	1.03	1.03	1.02	1.00	1.03	1.03
Petroleum Products Adjustment (f)	0.21	0.22	0.22	0.21	0.22	0.23	0.23	0.23	0.23	0.24	0.24	0.24	0.22	0.23	0.24
Product Net Imports (g)	-2.48	-2.51	-2.31	-2.65	-2.95	-2.23	-2.26	-2.76	-2.52	-2.31	-2.49	-3.04	-2.49	-2.55	-2.59
Hydrocarbon Gas Liquids	-1.00	-1.10	-0.93	-1.12	-1.25	-1.19	-1.23	-1.32	-1.33	-1.35	-1.40	-1.56	-1.04	-1.25	-1.41
Unfinished Oils	0.30	0.41	0.37	0.33	0.29	0.37	0.40	0.32	0.31	0.39	0.38	0.32	0.36	0.34	0.35
Other HC/Oxygenates	-0.10	-0.08	-0.05	-0.05	-0.10	-0.08	-0.06	-0.06	-0.10	-0.07	-0.05	-0.05	-0.07	-0.07	-0.07
Motor Gasoline Blend Comp.	0.34	0.65	0.59	0.51	0.22	0.59	0.49	0.45	0.46	0.64	0.49	0.46	0.52	0.44	0.51
Finished Motor Gasoline	-0.56	-0.47	-0.49	-0.76	-0.59	-0.37	-0.30	-0.60	-0.57	-0.36	-0.31	-0.63	-0.57	-0.46	-0.47
Jet Fuel	-0.03	-0.04	-0.02	-0.03	-0.08	0.03	0.00	0.03	0.05	0.05	0.01	0.02	-0.03	0.00	0.03
Distillate Fuel Oil	-0.85	-1.21	-1.13	-0.99	-0.90	-0.97	-1.01	-0.94	-0.79	-0.95	-1.03	-0.94	-1.04	-0.96	-0.93
Residual Fuel Oil	-0.06	-0.06	-0.07	-0.06	-0.07	-0.11	-0.08	-0.09	-0.10	-0.13	-0.10	-0.09	-0.06	-0.09	-0.11
Other Oils (h)	-0.52	-0.62	-0.58	-0.48	-0.47	-0.51	-0.48	-0.55	-0.46	-0.51	-0.47	-0.55	-0.55	-0.50	-0.50
Product Inventory Net Withdrawals	0.17	-0.32	-0.32	0.35	0.42	-0.38	-0.26	0.36	0.35	-0.49	-0.30	0.31	-0.03	0.03	-0.03
Total Supply	19.47	19.42	19.90	19.75	19.29	19.73	20.27	20.05	19.89	20.10	20.55	20.34	19.64	19.84	20.22
Consumption (million barrels per day)															
Hydrocarbon Gas Liquids	2.73	2.25	2.40	2.59	2.73	2.41	2.57	2.87	3.00	2.65	2.75	3.01	2.49	2.65	2.85
Unfinished Oils	0.01	-0.06	-0.05	-0.03	0.00	-0.01	-0.02	0.03	0.00	-0.01	-0.02	0.03	-0.03	0.00	0.00
Motor Gasoline	9.09	9.44	9.56	9.22	8.81	9.48	9.62	9.24	9.05	9.56	9.66	9.28	9.33	9.29	9.39
Fuel Ethanol blended into Motor Gasoline	0.91	0.94	0.96	0.94	0.90	0.96	0.97	0.93	0.91	0.96	0.97	0.94	0.94	0.94	0.94
Jet Fuel	1.50	1.61	1.68	1.63	1.51	1.62	1.65	1.63	1.55	1.62	1.65	1.63	1.61	1.60	1.61
Distillate Fuel Oil	3.90	3.80	3.79	4.02	3.93	3.87	3.89	4.03	4.10	3.93	3.96	4.11	3.88	3.93	4.02
Residual Fuel Oil	0.31	0.40	0.36	0.35	0.43	0.32	0.33	0.30	0.31	0.30	0.32	0.30	0.36	0.34	0.31
Other Oils (g)	1.89	1.98	2.16	1.99	1.88	2.05	2.22	1.95	1.88	2.05	2.23	1.96	2.00	2.03	2.03
Total Consumption	19.45	19.42	19.90	19.75	19.29	19.73	20.27	20.05	19.89	20.10	20.55	20.34	19.63	19.84	20.22
Total Petroleum and Other Liquids Net Imports	4.97	4.68	5.15	4.68	4.25	4.24	4.43	3.43	3.57	3.93	3.94	2.90	4.87	4.09	3.58
End-of-period Inventories (million barrels)															
Commercial Inventory															
Crude Oil (excluding SPR)	501.5	498.0	469.1	484.3	528.0	509.3	479.0	463.4	493.2	485.4	463.3	457.4	484.3	463.4	457.4
Hydrocarbon Gas Liquids	154.4	211.8	251.6	203.5	153.2	198.3	228.7	186.5	152.4	202.2	236.0	197.1	203.5	186.5	197.1
Unfinished Oils	91.4	86.7	83.3	80.6	89.7	88.2	85.3	79.0	89.2	88.2	85.8	79.4	80.6	79.0	79.4
Other HC/Oxygenates	28.2	27.7	27.1	28.4	32.7	31.6	30.8	31.5	33.2	32.2	31.5	32.1	28.4	31.5	32.1
Total Motor Gasoline	243.3	242.1	227.0	237.7	241.0	231.0	226.9	241.4	239.6	233.3	228.8	243.9	237.7	241.4	243.9
Finished Motor Gasoline	26.5	24.9	25.1	28.6	27.7	25.7	26.2	28.1	25.3	23.7	24.3	26.0	28.6	28.1	26.0
Motor Gasoline Blend Comp.	216.9	217.2	201.9	209.1	213.3	205.3	200.8	213.3	214.3	209.6	204.5	217.9	209.1	213.3	217.9
Jet Fuel	43.8	40.4	44.7	42.8	43.5	44.1	45.2	42.4	41.9	43.1	44.4	42.1	42.8	42.4	42.1
Distillate Fuel Oil	160.6	149.2	160.4	165.5	157.6	159.9	166.6	166.6	151.9	155.8	163.3	163.6	165.5	166.6	163.6
Residual Fuel Oil	44.5	40.3	38.8	41.5	39.3	40.4	39.5	39.9	41.8	41.8	40.6	41.0	41.5	39.9	41.0
Other Oils (g)	58.4	55.6	50.5	51.3	56.7	54.8	49.0	51.4	57.0	55.1	49.2	51.8	51.3	51.4	51.8
Total Commercial Inventory	1,326	1,352	1,353	1,336	1,342	1,358	1,351	1,302	1,300	1,337	1,343	1,308	1,336	1,302	1,308
Crude Oil in SPR	695	695	695	695	692	679	679	673	667	660	654	648	695	673	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 - March 2017													Year		
	2016				2017				2018							
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2016	2017	2018	
HGL Production																
Natural Gas Processing Plants																
Ethane	1.20	1.34	1.19	1.29	1.31	1.41	1.50	1.62	1.68	1.71	1.73	1.81	1.25	1.46	1.73	
Propane	1.15	1.17	1.17	1.15	1.15	1.18	1.20	1.22	1.22	1.27	1.29	1.36	1.16	1.19	1.29	
Butanes	0.63	0.63	0.64	0.63	0.62	0.66	0.67	0.68	0.67	0.70	0.72	0.75	0.63	0.66	0.71	
Natural Gasoline (Pentanes Plus)	0.41	0.43	0.46	0.43	0.40	0.45	0.47	0.45	0.43	0.47	0.50	0.50	0.43	0.44	0.48	
Refinery and Blender Net Production																
Ethane/Ethylene	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Propane/Propylene	0.58	0.60	0.58	0.58	0.57	0.60	0.59	0.58	0.58	0.61	0.60	0.59	0.58	0.59	0.59	
Butanes/Butylenes	-0.11	0.26	0.20	-0.20	-0.06	0.25	0.19	-0.17	-0.06	0.25	0.18	-0.18	0.04	0.05	0.05	
Renewable Fuels and Oxygenate Plant Net Production																
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	
HGL Net Imports																
Ethane	-0.08	-0.09	-0.10	-0.11	-0.18	-0.24	-0.26	-0.28	-0.30	-0.30	-0.30	-0.33	-0.09	-0.24	-0.31	
Propane/Propylene	-0.65	-0.68	-0.56	-0.77	-0.78	-0.64	-0.61	-0.71	-0.69	-0.69	-0.69	-0.83	-0.67	-0.69	-0.73	
Butanes/Butylenes	-0.07	-0.12	-0.08	-0.10	-0.07	-0.10	-0.12	-0.10	-0.11	-0.14	-0.16	-0.16	-0.09	-0.10	-0.14	
Natural Gasoline (Pentanes Plus)	-0.20	-0.21	-0.19	-0.15	-0.21	-0.24	-0.22	-0.23	-0.22	-0.25	-0.25	-0.25	-0.19	-0.22	-0.24	
HGL Refinery and Blender Net Inputs																
Butanes/Butylenes	0.43	0.28	0.32	0.52	0.40	0.29	0.31	0.47	0.41	0.29	0.32	0.49	0.39	0.37	0.37	
Natural Gasoline (Pentanes Plus)	0.14	0.15	0.14	0.14	0.14	0.15	0.16	0.16	0.15	0.16	0.16	0.16	0.15	0.15	0.16	
HGL Consumption																
Ethane/Ethylene	1.10	1.08	1.11	1.13	1.15	1.18	1.27	1.36	1.36	1.39	1.45	1.50	1.11	1.24	1.43	
Propane/Propylene	1.41	0.88	0.98	1.18	1.35	0.93	1.00	1.21	1.39	0.95	1.01	1.23	1.11	1.12	1.14	
Butanes/Butylenes	0.18	0.25	0.24	0.17	0.18	0.25	0.24	0.23	0.19	0.25	0.23	0.22	0.21	0.22	0.22	
Natural Gasoline (Pentanes Plus)	0.04	0.04	0.07	0.11	0.05	0.06	0.06	0.07	0.05	0.06	0.06	0.07	0.07	0.06	0.06	
HGL Inventories (million barrels)																
Ethane/Ethylene	33.76	45.19	50.71	53.65	52.35	52.75	49.98	49.42	48.34	51.23	49.36	49.02	45.86	51.11	49.49	
Propane/Propylene	66.38	85.18	103.83	84.10	46.35	65.67	82.23	70.77	45.62	66.89	84.71	75.16	84.10	70.77	75.16	
Butanes/Butylenes	32.39	54.10	73.35	40.33	31.58	56.38	73.41	45.95	36.78	61.51	78.82	51.46	40.33	45.95	51.46	
Natural Gasoline (Pentanes Plus)	20.40	20.94	24.86	25.03	22.95	23.58	23.40	21.89	20.53	22.23	23.20	22.83	25.03	21.89	22.83	
Refinery and Blender Net Inputs																
Crude Oil	16.00	16.22	16.53	16.06	15.91	16.20	16.44	16.03	15.64	16.27	16.59	16.18	16.20	16.15	16.17	
Hydrocarbon Gas Liquids	0.57	0.43	0.46	0.66	0.54	0.44	0.47	0.63	0.56	0.45	0.48	0.64	0.53	0.52	0.53	
Other Hydrocarbons/Oxygenates	1.15	1.22	1.23	1.20	1.13	1.22	1.27	1.23	1.18	1.25	1.28	1.25	1.20	1.21	1.24	
Unfinished Oils	0.19	0.53	0.46	0.39	0.19	0.39	0.45	0.36	0.20	0.41	0.43	0.36	0.39	0.35	0.35	
Motor Gasoline Blend Components	0.31	0.82	0.91	0.47	0.32	0.90	0.74	0.51	0.67	0.91	0.74	0.51	0.63	0.62	0.71	
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	18.22	19.22	19.60	18.78	18.10	19.17	19.36	18.76	18.24	19.30	19.51	18.94	18.96	18.85	19.00	
Refinery Processing Gain	1.07	1.10	1.15	1.11	1.06	1.06	1.10	1.07	1.03	1.07	1.10	1.08	1.11	1.07	1.07	
Refinery and Blender Net Production																
Hydrocarbon Gas Liquids	0.47	0.86	0.78	0.38	0.52	0.86	0.78	0.41	0.52	0.87	0.78	0.41	0.62	0.64	0.65	
Finished Motor Gasoline	9.68	10.06	10.19	10.02	9.51	10.03	10.10	10.05	9.79	10.12	10.16	10.12	9.99	9.93	10.05	
Jet Fuel	1.57	1.61	1.75	1.64	1.60	1.59	1.66	1.57	1.49	1.59	1.66	1.59	1.64	1.60	1.58	
Distillate Fuel	4.70	4.80	4.93	4.95	4.65	4.77	4.88	4.87	4.63	4.82	4.97	4.96	4.84	4.79	4.85	
Residual Fuel	0.40	0.42	0.42	0.44	0.47	0.43	0.40	0.40	0.43	0.43	0.40	0.40	0.42	0.43	0.42	
Other Oils (a)	2.47	2.57	2.68	2.47	2.41	2.53	2.63	2.53	2.40	2.54	2.64	2.54	2.55	2.53	2.53	
Total Refinery and Blender Net Production	19.29	20.32	20.75	19.89	19.16	20.23	20.46	19.83	19.26	20.36	20.62	20.02	20.07	19.92	20.07	
Refinery Distillation Inputs	16.27	16.50	16.89	16.41	16.17	16.45	16.74	16.33	15.94	16.52	16.87	16.46	16.52	16.42	16.45	
Refinery Operable Distillation Capacity	18.31	18.36	18.44	18.49	18.47	18.47	18.47	18.47	18.49	18.51	18.51	18.51	18.40	18.47	18.50	
Refinery Distillation Utilization Factor	0.89	0.90	0.92	0.89	0.88	0.89	0.91	0.88	0.86	0.89	0.91	0.89	0.90	0.89	0.89	

- = 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 - March 2017

	2016				2017				2018				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2016	2017	2018
Prices (cents per gallon)															
Refiner Wholesale Price	119	158	150	153	162	173	172	155	156	179	178	164	145	166	169
Gasoline Regular Grade Retail Prices Including Taxes															
PADD 1	187	220	215	223	232	243	245	233	232	251	253	243	212	239	245
PADD 2	176	221	215	212	224	239	241	223	220	248	248	233	207	232	238
PADD 3	167	201	199	201	211	222	221	206	205	228	227	214	192	215	219
PADD 4	184	221	226	220	225	236	248	230	214	242	254	238	213	235	238
PADD 5	241	265	264	263	273	287	288	262	259	293	294	272	259	278	280
U.S. Average	190	225	221	223	233	246	248	231	229	253	254	240	215	240	244
Gasoline All Grades Including Taxes	200	235	232	234	244	256	258	242	240	264	265	252	226	250	256
End-of-period Inventories (million barrels)															
Total Gasoline Inventories															
PADD 1	65.9	73.0	58.6	65.0	67.9	65.2	61.7	65.0	66.4	65.7	62.6	66.0	65.0	65.0	66.0
PADD 2	56.7	53.3	50.6	52.8	55.4	50.5	49.0	52.5	53.6	50.5	49.4	52.5	52.8	52.5	52.5
PADD 3	83.0	80.4	83.3	82.7	80.5	80.3	80.8	84.5	82.2	81.7	81.4	86.1	82.7	84.5	86.1
PADD 4	8.4	7.5	6.9	7.9	7.8	7.2	7.3	7.9	7.4	7.4	7.4	8.0	7.9	7.9	8.0
PADD 5	29.4	27.9	27.6	29.3	29.4	27.7	28.0	31.5	30.0	28.0	27.9	31.3	29.3	31.5	31.3
U.S. Total	243.3	242.1	227.0	237.7	241.0	231.0	226.9	241.4	239.6	233.3	228.8	243.9	237.7	241.4	243.9
Finished Gasoline Inventories	26.5	24.9	25.1	28.6	27.7	25.7	26.2	28.1	25.3	23.7	24.3	26.0	28.6	28.1	26.0
Gasoline Blending Components Inventories															
U.S. Total	216.9	217.2	201.9	209.1	213.3	205.3	200.8	213.3	214.3	209.6	204.5	217.9	209.1	213.3	217.9

- = 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 - March 2017

	2016				2017				2018				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2016	2017	2018
Supply (billion cubic feet per day)															
Total Marketed Production	78.66	77.52	76.83	76.30	76.94	78.39	79.72	80.64	81.83	82.83	83.95	85.60	77.32	78.93	83.56
Alaska	0.98	0.86	0.87	1.04	0.99	0.83	0.77	0.94	1.00	0.84	0.77	0.93	0.94	0.88	0.88
Federal GOM (a)	3.48	3.34	3.24	3.33	3.35	3.33	3.21	3.22	3.35	3.33	3.21	3.22	3.35	3.28	3.28
Lower 48 States (excl GOM)	74.20	73.32	72.72	71.92	72.59	74.23	75.73	76.48	77.48	78.65	79.97	81.44	73.04	74.77	79.40
Total Dry Gas Production	73.77	72.38	71.84	71.26	71.94	73.20	74.39	75.20	76.26	77.14	78.14	79.62	72.31	73.69	77.80
LNG Gross Imports	0.33	0.19	0.18	0.26	0.27	0.17	0.18	0.22	0.27	0.17	0.18	0.22	0.24	0.21	0.21
LNG Gross Exports	0.15	0.40	0.64	0.85	1.69	1.54	1.75	2.18	2.49	2.28	2.89	3.46	0.51	1.79	2.78
Pipeline Gross Imports	8.08	7.84	8.11	7.78	8.26	7.75	7.93	7.61	8.63	7.94	8.17	7.69	7.96	7.88	8.11
Pipeline Gross Exports	5.63	5.56	5.86	6.20	6.52	5.94	6.04	6.59	6.90	6.54	6.53	7.08	5.81	6.27	6.76
Supplemental Gaseous Fuels	0.17	0.13	0.17	0.17	0.16	0.16	0.17	0.17	0.17	0.17	0.17	0.18	0.16	0.16	0.17
Net Inventory Withdrawals	13.09	-7.78	-5.64	4.35	13.17	-8.02	-7.75	3.63	16.77	-9.85	-9.12	2.51	0.99	0.21	0.02
Total Supply	89.67	66.81	68.16	76.77	85.57	65.77	67.11	78.06	92.71	66.76	68.12	79.68	75.34	74.09	76.76
Balancing Item (b)	-0.46	-0.16	0.92	-1.11	0.35	-0.44	-0.28	-1.36	0.24	0.44	0.17	-1.53	-0.20	-0.44	-0.17
Total Primary Supply	89.21	66.65	69.08	75.66	85.92	65.33	66.83	76.70	92.95	67.20	68.29	78.15	75.13	73.65	76.58
Consumption (billion cubic feet per day)															
Residential	22.49	7.14	3.48	14.92	22.52	7.76	4.09	15.14	24.61	7.58	3.52	14.30	11.99	12.33	12.45
Commercial	13.44	5.98	4.58	10.22	13.08	6.03	4.57	10.63	14.58	6.15	4.60	10.65	8.55	8.56	8.97
Industrial	22.49	20.06	20.06	21.81	22.43	20.24	20.01	21.52	23.26	20.67	20.27	22.03	21.11	21.05	21.55
Electric Power (c)	24.17	27.45	34.91	22.54	21.40	25.24	31.98	22.89	23.50	26.37	33.33	24.22	27.28	25.40	26.87
Lease and Plant Fuel	4.34	4.28	4.24	4.21	4.25	4.33	4.40	4.45	4.52	4.57	4.63	4.72	4.27	4.36	4.61
Pipeline and Distribution Use	2.18	1.63	1.69	1.85	2.13	1.62	1.67	1.95	2.37	1.73	1.81	2.10	1.83	1.84	2.00
Vehicle Use	0.11	0.11	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.11	0.12	0.12
Total Consumption	89.21	66.65	69.08	75.66	85.92	65.33	66.83	76.70	92.95	67.20	68.29	78.15	75.13	73.65	76.58
End-of-period Inventories (billion cubic feet)															
Working Gas Inventory	2,495	3,195	3,715	3,306	2,121	2,851	3,564	3,230	1,721	2,617	3,456	3,225	3,306	3,230	3,225
East Region (d)	436	655	899	721	327	591	834	709	250	535	797	696	721	709	696
Midwest Region (d)	543	763	1,042	906	478	660	988	846	336	594	954	859	906	846	859
South Central Region (d)	1,080	1,236	1,185	1,170	941	1,093	1,152	1,135	745	975	1,130	1,154	1,170	1,135	1,154
Mountain Region (d)	144	196	232	204	138	176	231	211	140	172	221	203	204	211	203
Pacific Region (d)	266	316	321	271	203	298	326	296	217	307	321	279	271	296	279
Alaska	25	30	36	33	33	33	33	33	33	33	33	33	33	33	33

- = 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 - March 2017

	2016				2017				2018				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2016	2017	2018
Wholesale/Spot															
Henry Hub Spot Price	2.06	2.21	2.97	3.14	3.02	2.98	3.18	3.33	3.51	3.52	3.58	3.62	2.60	3.13	3.56
Residential Retail															
New England	11.79	13.13	17.81	13.42	13.28	13.90	16.81	13.47	13.13	14.17	17.14	13.77	12.90	13.68	13.75
Middle Atlantic	8.84	10.70	16.17	10.15	10.58	12.32	16.60	11.18	10.21	12.19	16.83	11.41	10.03	11.47	11.29
E. N. Central	6.78	9.31	17.80	8.26	7.98	10.58	16.51	9.04	8.18	11.04	16.78	9.36	8.25	9.23	9.43
W. N. Central	7.38	10.65	17.93	9.13	8.71	11.15	17.09	9.61	8.97	11.77	18.05	10.36	8.99	9.91	10.33
S. Atlantic	10.22	15.30	23.46	13.16	12.09	16.42	22.06	12.87	11.45	16.33	22.37	13.09	12.65	13.66	13.24
E. S. Central	8.52	13.12	19.54	11.34	10.19	14.67	20.14	12.59	10.23	14.40	20.39	13.09	10.51	12.13	12.07
W. S. Central	8.27	14.10	20.95	13.37	10.18	14.62	19.85	12.06	9.49	14.24	20.12	12.54	11.61	12.33	11.86
Mountain	8.22	9.66	13.76	8.52	8.89	10.43	13.90	9.51	9.39	10.76	14.27	9.80	8.97	9.73	10.14
Pacific	10.97	11.26	13.02	12.17	11.84	11.82	12.46	11.37	11.62	12.32	13.10	12.01	11.67	11.77	12.06
U.S. Average	8.53	11.16	16.99	10.18	9.93	12.19	16.48	10.71	9.81	12.40	16.92	11.10	10.05	11.07	11.09
Commercial Retail															
New England	8.76	9.58	10.49	9.52	10.42	10.28	10.13	10.42	10.87	10.88	10.91	10.64	9.30	10.37	10.81
Middle Atlantic	6.84	6.41	6.02	6.68	7.62	7.62	7.13	7.80	8.03	7.99	7.44	7.99	6.61	7.61	7.94
E. N. Central	5.86	6.58	8.77	6.52	6.69	7.46	9.01	7.13	6.87	7.93	9.46	7.50	6.40	7.13	7.40
W. N. Central	6.28	6.97	8.70	6.80	7.51	7.65	8.90	7.42	7.73	8.26	9.43	7.83	6.75	7.63	7.98
S. Atlantic	7.54	8.32	9.27	8.55	8.98	9.35	9.79	8.99	8.81	9.52	10.20	9.28	8.17	9.16	9.23
E. S. Central	7.49	8.57	9.73	9.03	9.04	9.54	10.00	9.05	8.68	9.76	10.48	9.49	8.36	9.24	9.27
W. S. Central	6.29	6.89	8.27	8.12	7.87	7.36	8.10	7.76	7.40	7.80	8.58	8.15	7.19	7.78	7.83
Mountain	6.96	7.11	8.00	6.89	7.47	8.02	8.69	7.60	7.80	8.14	8.95	7.90	7.07	7.74	8.02
Pacific	8.38	8.13	9.14	9.12	9.10	8.57	8.91	8.81	9.01	8.85	9.27	9.15	8.69	8.88	9.07
U.S. Average	6.84	7.25	8.21	7.47	7.89	8.13	8.65	8.02	8.01	8.51	9.05	8.34	7.26	8.06	8.31
Industrial Retail															
New England	7.07	6.88	6.27	7.10	7.80	7.43	7.29	8.47	8.64	7.93	7.52	8.66	6.90	7.82	8.30
Middle Atlantic	6.73	6.17	5.91	6.99	7.66	7.02	7.47	7.98	8.22	7.58	7.89	8.32	6.59	7.60	8.09
E. N. Central	5.05	4.73	5.33	5.40	6.46	6.04	6.11	6.10	6.72	6.51	6.66	6.52	5.13	6.25	6.62
W. N. Central	4.30	3.57	3.99	4.40	5.49	4.57	4.68	5.26	5.88	5.26	5.23	5.66	4.11	5.05	5.54
S. Atlantic	4.40	3.84	4.44	4.83	5.39	4.81	5.15	5.41	5.64	5.33	5.53	5.71	4.39	5.21	5.56
E. S. Central	3.96	3.38	4.09	4.60	5.07	4.45	4.66	5.02	5.22	4.88	5.09	5.33	4.01	4.82	5.14
W. S. Central	2.28	2.15	3.07	3.21	3.45	3.06	3.46	3.54	3.72	3.68	3.92	3.87	2.68	3.38	3.80
Mountain	5.26	4.96	5.38	5.21	5.58	5.46	5.95	5.95	6.09	5.95	6.40	6.43	5.20	5.73	6.21
Pacific	6.65	6.04	6.68	7.10	7.24	6.27	6.52	6.66	7.21	6.67	6.94	7.02	6.65	6.71	6.98
U.S. Average	3.44	2.93	3.62	4.03	4.62	3.85	4.12	4.51	4.94	4.45	4.59	4.86	3.52	4.29	4.72

- = 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 - March 2017

	2016				2017				2018				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2016	2017	2018
Supply (million short tons)															
Production	173.0	160.5	195.1	210.0	201.7	168.8	203.5	193.5	194.5	167.8	200.6	204.1	738.7	767.5	766.9
Appalachia	44.3	43.2	44.8	50.2	51.4	43.7	48.5	45.9	45.4	40.9	45.3	45.7	182.6	189.5	177.2
Interior	36.9	34.4	35.7	42.6	44.0	35.9	41.6	40.9	41.2	36.5	41.8	44.5	149.6	162.4	164.0
Western	91.8	82.8	114.6	117.2	106.3	89.2	113.4	106.7	107.9	90.4	113.5	113.9	406.5	415.6	425.7
Primary Inventory Withdrawals	-1.4	0.2	3.6	-0.1	-1.0	0.5	2.9	-0.8	-1.1	-0.3	3.2	-3.0	2.2	1.6	-1.2
Imports	2.7	2.3	2.7	2.1	1.5	2.2	3.2	2.8	1.5	2.2	3.2	2.8	9.8	9.7	9.7
Exports	14.2	14.2	12.6	19.3	15.8	13.7	11.8	11.8	11.5	13.3	12.4	13.8	60.3	53.1	50.9
Metallurgical Coal	10.2	10.1	9.1	11.6	9.6	8.4	6.2	7.0	6.7	8.3	7.4	8.8	40.9	31.1	31.2
Steam Coal	4.0	4.2	3.5	7.7	6.2	5.4	5.6	4.8	4.8	5.0	5.0	5.0	19.3	21.9	19.8
Total Primary Supply	160.1	148.8	188.9	192.6	186.4	157.7	197.8	183.7	183.4	156.3	194.6	190.0	690.4	725.7	724.4
Secondary Inventory Withdrawals	4.1	9.2	25.2	-8.3	-4.4	4.5	16.8	-4.2	-0.9	2.0	14.9	-16.8	30.3	12.7	-0.7
Waste Coal (a)	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	9.8	10.2	10.3
Total Supply	166.7	160.4	216.6	186.8	184.5	164.8	217.1	182.1	185.1	160.9	212.2	175.8	730.5	748.6	734.1
Consumption (million short tons)															
Coke Plants	4.3	4.2	4.3	5.0	4.3	4.2	5.3	5.0	4.5	4.5	5.4	5.0	17.8	19.0	19.3
Electric Power Sector (b)	152.2	147.2	210.3	167.6	159.0	152.3	203.3	168.3	171.3	147.8	198.0	161.6	677.2	682.9	678.7
Retail and Other Industry	9.4	8.5	8.4	8.4	8.9	8.3	8.4	8.8	9.3	8.7	8.8	9.2	34.8	34.4	36.0
Residential and Commercial	0.4	0.2	0.2	0.2	0.3	0.1	0.1	0.2	0.4	0.1	0.1	0.2	1.0	0.8	0.8
Other Industrial	9.0	8.3	8.2	8.2	8.6	8.2	8.3	8.6	9.0	8.6	8.7	9.0	33.7	33.6	35.3
Total Consumption	165.9	159.9	223.0	180.9	172.3	164.8	217.1	182.1	185.1	160.9	212.2	175.8	729.8	736.3	734.1
Discrepancy (c)	0.8	0.5	-6.5	5.9	12.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	12.3	0.0
End-of-period Inventories (million short tons)															
Primary Inventories (d)	37.3	37.1	33.6	33.7	34.7	34.2	31.3	32.1	33.2	33.5	30.3	33.3	33.7	32.1	33.3
Secondary Inventories	198.4	189.2	164.0	172.3	176.7	172.2	155.4	159.6	160.5	158.5	143.5	160.3	172.3	159.6	160.3
Electric Power Sector	192.3	183.2	158.2	163.9	169.4	164.3	147.0	150.9	152.8	150.2	134.8	151.3	163.9	150.9	151.3
Retail and General Industry	3.9	3.8	3.7	6.0	5.3	5.5	6.1	6.4	5.6	5.8	6.4	6.6	6.0	6.4	6.6
Coke Plants	2.0	1.8	1.7	1.8	1.5	1.9	1.8	1.8	1.5	1.9	1.9	1.9	1.8	1.8	1.9
Coal Market Indicators															
Coal Miner Productivity															
(Tons per hour)	6.11	6.11	6.11	6.11	5.96	5.96	5.96	5.96	5.86	5.86	5.86	5.86	6.11	5.96	5.86
Total Raw Steel Production															
(Million short tons per day)	0.238	0.247	0.238	0.230	0.250	0.250	0.216	0.179	0.228	0.232	0.213	0.174	0.239	0.224	0.212
Cost of Coal to Electric Utilities															
(Dollars per million Btu)	2.13	2.13	2.11	2.08	2.16	2.15	2.20	2.17	2.19	2.18	2.22	2.22	2.11	2.17	2.21

- = 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 - March 2017

	2016				2017				2018				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2016	2017	2018
Electricity Supply (billion kilowatthours per day)															
Electricity Generation	10.66	10.75	12.76	10.39	10.48	10.80	12.47	10.49	11.05	10.89	12.57	10.58	11.14	11.06	11.28
Electric Power Sector (a)	10.23	10.32	12.32	9.96	10.04	10.37	12.01	10.06	10.60	10.45	12.11	10.14	10.71	10.62	10.83
Comm. and Indus. Sectors (b)	0.44	0.43	0.45	0.42	0.44	0.44	0.46	0.43	0.45	0.44	0.46	0.44	0.44	0.44	0.44
Net Imports	0.18	0.18	0.22	0.19	0.19	0.17	0.18	0.15	0.16	0.15	0.17	0.13	0.19	0.17	0.15
Total Supply	10.85	10.93	12.98	10.58	10.67	10.97	12.65	10.64	11.21	11.04	12.75	10.71	11.34	11.24	11.43
Losses and Unaccounted for (c)	0.66	0.97	0.90	0.73	0.40	0.83	0.72	0.66	0.57	0.83	0.73	0.67	0.81	0.65	0.70
Electricity Consumption (billion kilowatthours per day unless noted)															
Retail Sales	9.81	9.58	11.69	9.47	9.88	9.76	11.53	9.60	10.24	9.82	11.61	9.65	10.14	10.19	10.33
Residential Sector	3.81	3.37	4.77	3.42	3.72	3.42	4.57	3.45	3.99	3.44	4.61	3.47	3.85	3.79	3.88
Commercial Sector	3.49	3.62	4.20	3.55	3.53	3.65	4.15	3.56	3.60	3.68	4.18	3.58	3.71	3.72	3.76
Industrial Sector	2.48	2.57	2.70	2.48	2.61	2.66	2.79	2.57	2.63	2.68	2.80	2.58	2.56	2.66	2.67
Transportation Sector	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
Direct Use (d)	0.39	0.38	0.40	0.38	0.39	0.39	0.41	0.38	0.40	0.39	0.41	0.39	0.38	0.39	0.39
Total Consumption	10.19	9.96	12.09	9.84	10.27	10.14	11.93	9.98	10.64	10.21	12.02	10.04	10.52	10.59	10.73
Average residential electricity usage per customer (kWh)	2,645	2,342	3,348	2,401	2,523	2,353	3,178	2,398	2,681	2,339	3,165	2,384	10,736	10,451	10,569
Prices															
Power Generation Fuel Costs (dollars per million Btu)															
Coal	2.13	2.13	2.11	2.08	2.16	2.15	2.20	2.17	2.19	2.18	2.22	2.22	2.11	2.17	2.21
Natural Gas	2.65	2.51	3.00	3.36	3.75	3.37	3.38	3.81	4.27	3.90	3.79	4.14	2.88	3.55	4.00
Residual Fuel Oil	6.15	8.51	9.70	9.08	10.02	10.81	10.49	10.38	10.27	11.03	10.85	10.90	8.41	10.42	10.76
Distillate Fuel Oil	9.00	11.01	11.64	12.14	12.88	13.13	13.47	14.13	14.33	14.29	14.56	15.40	10.86	13.41	14.62
Retail Prices (cents per kilowatthour)															
Residential Sector	12.20	12.66	12.81	12.45	12.54	12.86	13.19	12.84	12.90	13.18	13.44	13.15	12.55	12.88	13.18
Commercial Sector	10.12	10.34	10.68	10.27	10.09	10.37	10.88	10.54	10.31	10.51	10.99	10.71	10.37	10.49	10.64
Industrial Sector	6.42	6.67	7.20	6.67	6.56	6.80	7.36	6.84	6.63	6.93	7.50	6.97	6.75	6.90	7.02

- = 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 colocated 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 - March 2017

	2016				2017				2018				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2016	2017	2018
Residential Sector															
New England	133	109	152	114	135	111	145	116	141	114	146	117	127	127	129
Middle Atlantic	367	309	461	320	358	310	421	319	379	311	420	318	364	352	357
E. N. Central	522	447	619	459	504	445	573	463	532	445	572	462	512	496	503
W. N. Central	298	243	322	255	304	245	329	265	325	249	335	269	279	286	294
S. Atlantic	968	874	1,223	852	903	882	1,129	858	1,007	888	1,137	864	980	943	974
E. S. Central	337	274	412	279	310	278	381	282	356	279	382	282	326	313	325
W. S. Central	526	518	810	517	517	544	804	516	571	546	818	523	593	596	615
Mountain	240	251	337	232	244	255	357	235	247	259	363	239	265	273	277
Pacific contiguous	406	336	422	381	429	339	419	381	417	339	421	384	386	392	390
AK and HI	13	12	12	14	13	11	12	13	13	11	12	13	13	13	12
Total	3,810	3,373	4,771	3,421	3,717	3,420	4,570	3,448	3,987	3,441	4,606	3,470	3,845	3,790	3,877
Commercial Sector															
New England	141	137	160	135	138	137	154	134	137	137	152	131	143	141	139
Middle Atlantic	422	408	488	408	421	409	471	408	424	408	471	408	432	428	428
E. N. Central	488	493	567	483	489	494	553	485	497	495	554	486	508	505	508
W. N. Central	271	271	308	271	276	272	311	274	281	274	313	276	280	283	286
S. Atlantic	792	844	977	802	793	844	945	803	809	845	948	805	854	846	852
E. S. Central	231	242	295	234	243	251	291	236	253	255	296	239	251	255	261
W. S. Central	473	519	623	511	490	543	632	516	516	557	648	524	532	545	562
Mountain	240	258	290	250	241	260	299	251	244	262	302	254	260	263	266
Pacific contiguous	418	428	475	436	418	429	476	440	422	431	478	443	440	441	444
AK and HI	16	16	16	16	16	16	16	16	16	15	16	16	16	16	16
Total	3,494	3,616	4,199	3,547	3,525	3,655	4,148	3,563	3,601	3,679	4,179	3,584	3,715	3,724	3,761
Industrial Sector															
New England	45	47	49	45	45	46	49	45	45	46	50	45	47	46	47
Middle Atlantic	192	191	202	189	201	197	209	195	200	199	213	198	193	200	203
E. N. Central	502	504	528	485	527	522	538	500	519	518	539	500	505	522	519
W. N. Central	223	228	246	227	235	231	248	230	237	235	252	234	231	236	239
S. Atlantic	362	384	393	362	364	384	395	365	367	390	402	371	375	377	383
E. S. Central	258	269	274	261	286	282	281	262	285	281	279	260	265	278	276
W. S. Central	456	471	481	458	484	497	523	500	499	503	519	492	467	501	503
Mountain	214	232	247	215	221	239	255	224	225	243	260	228	227	235	239
Pacific contiguous	215	236	262	224	239	249	272	233	239	250	274	235	234	248	250
AK and HI	13	14	15	14	13	14	14	14	13	14	15	14	14	14	14
Total	2,480	2,575	2,697	2,480	2,614	2,662	2,785	2,568	2,631	2,679	2,803	2,577	2,558	2,657	2,673
Total All Sectors (a)															
New England	320	294	362	295	319	297	350	296	325	298	349	295	318	315	317
Middle Atlantic	993	918	1,162	927	992	927	1,114	933	1,015	930	1,116	936	1,000	992	999
E. N. Central	1,514	1,446	1,716	1,429	1,522	1,462	1,665	1,450	1,551	1,459	1,667	1,450	1,526	1,525	1,532
W. N. Central	792	742	877	753	815	748	888	769	843	758	901	778	791	805	820
S. Atlantic	2,126	2,106	2,596	2,020	2,064	2,114	2,472	2,030	2,187	2,127	2,490	2,044	2,213	2,171	2,213
E. S. Central	827	785	981	774	839	812	953	780	894	815	957	782	842	846	862
W. S. Central	1,455	1,509	1,914	1,487	1,491	1,586	1,960	1,532	1,587	1,607	1,986	1,539	1,592	1,643	1,680
Mountain	694	741	875	697	706	754	912	711	717	764	926	720	752	771	782
Pacific contiguous	1,042	1,002	1,162	1,043	1,089	1,020	1,169	1,056	1,080	1,022	1,175	1,064	1,062	1,084	1,086
AK and HI	42	41	43	44	42	41	43	43	42	40	43	43	43	42	42
Total	9,805	9,584	11,688	9,469	9,879	9,759	11,526	9,600	10,242	9,820	11,610	9,652	10,139	10,194	10,333

- = 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 - March 2017

	2016				2017				2018				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2016	2017	2018
Residential Sector															
New England	19.08	19.30	18.47	18.68	18.76	18.90	18.67	18.98	19.71	19.08	18.57	18.97	18.85	18.81	19.08
Middle Atlantic	15.29	15.88	16.08	15.74	15.54	16.32	16.81	16.42	15.96	16.73	17.35	17.13	15.76	16.30	16.80
E. N. Central	12.51	13.25	12.91	13.04	12.84	13.72	13.53	13.71	13.41	14.28	14.01	14.28	12.91	13.44	13.98
W. N. Central	10.61	12.31	12.67	11.27	10.74	12.56	12.93	11.56	10.92	12.82	13.16	11.86	11.73	11.96	12.18
S. Atlantic	11.40	11.75	11.88	11.47	11.88	11.97	12.24	11.78	12.35	12.33	12.49	12.00	11.65	11.99	12.31
E. S. Central	10.35	10.94	10.90	11.14	10.50	11.00	11.37	11.60	10.56	11.15	11.41	11.78	10.82	11.13	11.21
W. S. Central	10.34	10.69	10.65	10.52	10.35	10.70	10.98	10.96	10.47	10.70	11.04	11.22	10.56	10.78	10.88
Mountain	11.05	11.91	12.12	11.45	11.15	12.07	12.38	11.73	11.38	12.31	12.64	12.01	11.68	11.89	12.15
Pacific	14.13	13.95	16.09	13.85	14.76	14.11	16.09	13.91	15.70	14.75	16.62	14.11	14.56	14.77	15.35
U.S. Average	12.20	12.66	12.81	12.45	12.54	12.86	13.19	12.84	12.90	13.18	13.44	13.15	12.55	12.88	13.18
Commercial Sector															
New England	15.33	15.01	15.19	14.89	14.57	14.23	15.07	14.89	14.81	13.98	14.89	14.96	15.11	14.70	14.66
Middle Atlantic	12.02	12.48	13.29	12.22	11.83	12.53	13.52	12.53	11.91	12.57	13.67	12.82	12.54	12.63	12.77
E. N. Central	9.65	9.87	9.91	9.98	9.71	10.02	10.14	10.26	9.92	10.20	10.27	10.39	9.86	10.04	10.20
W. N. Central	8.86	9.70	10.15	9.07	8.93	9.89	10.43	9.35	9.05	10.07	10.66	9.62	9.47	9.68	9.88
S. Atlantic	9.37	9.27	9.26	9.21	9.46	9.38	9.47	9.54	9.98	9.69	9.67	9.73	9.28	9.46	9.76
E. S. Central	9.93	9.99	10.12	10.35	9.64	9.94	10.48	10.82	9.75	10.05	10.48	10.92	10.10	10.23	10.30
W. S. Central	7.80	7.79	7.86	7.78	7.48	7.51	7.90	7.96	7.26	7.23	7.75	8.06	7.81	7.72	7.59
Mountain	9.02	9.75	10.03	9.34	8.90	9.74	10.12	9.49	8.99	9.82	10.22	9.63	9.56	9.60	9.70
Pacific	12.21	13.08	14.69	12.96	12.65	13.49	15.10	13.27	13.37	14.07	15.55	13.48	13.28	13.68	14.16
U.S. Average	10.12	10.34	10.68	10.27	10.09	10.37	10.88	10.54	10.31	10.51	10.99	10.71	10.37	10.49	10.64
Industrial Sector															
New England	12.22	11.86	12.25	12.03	12.80	12.42	12.64	12.30	13.43	12.85	12.97	12.53	12.09	12.54	12.94
Middle Atlantic	7.05	7.01	7.12	6.92	6.95	7.06	7.19	7.02	6.95	7.12	7.28	7.10	7.03	7.06	7.12
E. N. Central	6.74	6.88	7.04	6.96	6.77	6.90	7.16	7.10	6.84	7.00	7.25	7.21	6.91	6.98	7.08
W. N. Central	6.65	7.10	7.82	6.64	6.72	7.18	7.96	6.76	6.84	7.29	8.08	6.87	7.07	7.17	7.29
S. Atlantic	6.15	6.33	6.78	6.30	6.23	6.49	6.99	6.50	6.25	6.59	7.09	6.60	6.40	6.56	6.64
E. S. Central	5.45	5.72	6.14	5.99	5.87	5.97	6.43	6.26	6.00	6.16	6.60	6.45	5.83	6.13	6.30
W. S. Central	5.06	5.03	5.44	5.32	5.21	5.19	5.69	5.63	5.17	5.30	5.83	5.82	5.22	5.44	5.54
Mountain	5.83	6.29	7.01	6.08	6.09	6.56	7.28	6.29	6.30	6.78	7.51	6.49	6.33	6.59	6.80
Pacific	7.99	9.08	10.54	8.65	8.10	9.11	10.49	8.53	8.25	9.20	10.53	8.54	9.14	9.12	9.19
U.S. Average	6.42	6.67	7.20	6.67	6.56	6.80	7.36	6.84	6.63	6.93	7.50	6.97	6.75	6.90	7.02
All Sectors (a)															
New England	16.41	16.07	16.13	15.88	16.06	15.67	16.19	16.06	16.72	15.72	16.14	16.14	16.13	16.00	16.19
Middle Atlantic	12.25	12.47	13.31	12.34	12.19	12.62	13.55	12.69	12.43	12.78	13.81	13.05	12.63	12.79	13.04
E. N. Central	9.67	9.87	10.11	9.93	9.76	10.03	10.34	10.27	10.08	10.31	10.57	10.53	9.90	10.11	10.38
W. N. Central	8.90	9.75	10.42	9.08	8.99	9.92	10.67	9.34	9.15	10.11	10.86	9.57	9.57	9.76	9.95
S. Atlantic	9.74	9.76	10.12	9.64	9.96	9.94	10.34	9.94	10.44	10.22	10.54	10.12	9.84	10.06	10.34
E. S. Central	8.70	8.86	9.33	9.17	8.71	8.93	9.64	9.57	8.87	9.08	9.72	9.75	9.03	9.22	9.36
W. S. Central	7.86	7.92	8.43	7.97	7.75	7.88	8.57	8.21	7.76	7.81	8.60	8.42	8.07	8.14	8.17
Mountain	8.74	9.40	9.98	9.03	8.81	9.52	10.21	9.22	8.97	9.70	10.41	9.43	9.33	9.50	9.68
Pacific	12.08	12.42	14.25	12.35	12.50	12.62	14.37	12.45	13.12	13.09	14.74	12.60	12.82	13.02	13.43
U.S. Average	9.99	10.17	10.75	10.11	10.10	10.27	10.95	10.37	10.37	10.47	11.12	10.58	10.28	10.45	10.66

- = 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 - March 2017

	2016				2017				2018				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2016	2017	2018
United States															
Coal	3,059	2,967	4,202	3,317	3,263	3,090	4,065	3,338	3,533	2,992	3,949	3,194	3,388	3,441	3,418
Natural Gas	3,426	3,762	4,702	3,191	3,034	3,475	4,331	3,227	3,310	3,611	4,493	3,397	3,771	3,520	3,705
Petroleum (a)	68	63	72	59	66	65	74	63	76	67	77	64	65	67	71
Other Gases	40	35	35	32	41	36	35	32	42	36	36	33	36	36	37
Nuclear	2,245	2,155	2,254	2,148	2,233	2,089	2,271	2,130	2,223	2,097	2,280	2,138	2,200	2,181	2,185
Renewable Energy Sources:	1,801	1,745	1,487	1,625	1,820	2,022	1,672	1,681	1,843	2,060	1,717	1,729	1,664	1,798	1,837
Conventional Hydropower	842	810	618	637	771	904	762	637	732	856	734	617	726	768	734
Wind	665	612	517	682	712	719	502	709	760	774	543	761	619	660	709
Wood Biomass	114	104	116	108	114	106	116	110	112	106	116	111	111	111	111
Waste Biomass	60	61	61	59	60	60	61	59	60	61	62	60	60	60	61
Geothermal	47	46	47	50	50	47	48	47	48	46	47	47	48	48	47
Solar	73	112	127	89	100	172	168	104	117	205	198	119	100	136	160
Pumped Storage Hydropower	-12	-14	-26	-21	-15	-12	-17	-15	-14	-12	-16	-14	-18	-15	-14
Other Nonrenewable Fuels (b)	36	38	39	36	35	38	40	36	36	38	40	36	37	37	37
Total Generation	10,664	10,752	12,764	10,386	10,478	10,803	12,472	10,492	11,050	10,890	12,575	10,577	11,144	11,065	11,275
Northeast Census Region															
Coal	162	141	203	150	150	112	170	171	219	111	174	156	164	151	165
Natural Gas	512	599	795	521	498	539	724	529	484	555	725	560	607	573	582
Petroleum (a)	7	3	6	6	7	4	6	5	9	6	9	6	5	6	7
Other Gases	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Nuclear	543	461	516	525	531	493	535	502	522	493	536	503	511	515	514
Hydropower (c)	111	94	78	82	98	106	89	89	98	103	87	87	91	95	94
Other Renewables (d)	77	63	61	73	82	73	67	78	83	74	68	82	69	75	77
Other Nonrenewable Fuels (b)	11	12	12	11	11	12	11	11	12	12	12	12	12	11	11
Total Generation	1,426	1,375	1,674	1,371	1,379	1,340	1,606	1,388	1,428	1,356	1,613	1,407	1,462	1,428	1,451
South Census Region															
Coal	1,270	1,347	1,950	1,462	1,320	1,480	1,886	1,413	1,487	1,441	1,851	1,366	1,508	1,526	1,537
Natural Gas	2,013	2,235	2,645	1,825	1,761	2,121	2,483	1,859	1,922	2,152	2,537	1,908	2,180	2,057	2,131
Petroleum (a)	29	30	35	23	26	28	31	23	31	27	31	24	29	27	28
Other Gases	15	13	14	13	14	13	14	13	14	13	14	13	14	13	14
Nuclear	951	998	994	936	982	932	1,013	950	996	939	1,021	958	970	969	978
Hydropower (c)	191	84	71	63	158	93	84	71	160	91	82	70	102	101	101
Other Renewables (d)	328	306	305	335	371	396	319	379	406	436	352	406	318	366	400
Other Nonrenewable Fuels (b)	16	18	18	16	16	17	18	15	16	17	18	15	17	17	17
Total Generation	4,813	5,031	6,032	4,673	4,648	5,079	5,847	4,724	5,033	5,117	5,905	4,761	5,139	5,077	5,205
Midwest Census Region															
Coal	1,202	1,108	1,498	1,197	1,302	1,161	1,504	1,231	1,291	1,099	1,453	1,193	1,252	1,300	1,259
Natural Gas	357	368	454	295	262	319	385	278	368	386	448	316	368	311	380
Petroleum (a)	10	9	8	7	10	11	12	10	12	11	12	10	9	11	11
Other Gases	16	13	14	11	17	14	14	12	18	15	15	12	14	14	15
Nuclear	573	543	572	523	550	511	555	521	542	511	556	521	553	534	532
Hydropower (c)	48	43	39	37	37	44	42	40	37	43	41	39	42	41	40
Other Renewables (d)	282	245	185	300	313	282	194	311	331	301	207	329	253	275	292
Other Nonrenewable Fuels (b)	4	4	4	3	4	4	5	4	4	4	5	4	4	4	4
Total Generation	2,492	2,334	2,773	2,374	2,497	2,346	2,711	2,406	2,603	2,370	2,736	2,424	2,494	2,490	2,533
West Census Region															
Coal	426	370	551	508	491	337	505	523	537	341	471	479	464	464	457
Natural Gas	543	560	809	549	513	496	740	560	536	518	784	612	616	578	613
Petroleum (a)	21	20	23	23	23	23	24	25	25	23	25	25	22	24	24
Other Gases	7	6	5	6	7	6	5	6	7	6	5	6	6	6	6
Nuclear	178	152	172	164	171	154	167	157	163	154	167	157	166	162	161
Hydropower (c)	480	575	404	434	462	649	531	422	423	606	507	407	473	516	486
Other Renewables (d)	273	322	317	280	282	368	330	276	291	393	356	294	298	314	334
Other Nonrenewable Fuels (b)	4	5	5	5	5	5	6	5	5	5	6	5	5	5	5
Total Generation	1,933	2,011	2,285	1,968	1,954	2,037	2,308	1,974	1,987	2,047	2,321	1,986	2,050	2,069	2,086

(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 - March 2017

	2016				2017				2018				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2016	2017	2018
Fuel Consumption for Electricity Generation, All Sectors															
United States															
Coal (thousand st/d)	1,675	1,619	2,288	1,822	1,767	1,674	2,211	1,828	1,901	1,623	2,151	1,754	1,852	1,871	1,858
Natural Gas (million cf/d)	25,226	28,573	36,107	23,726	22,484	26,380	33,167	24,021	24,617	27,512	34,521	25,364	28,416	26,535	28,023
Petroleum (thousand b/d)	121	112	130	103	117	115	129	111	135	118	135	114	116	118	126
Residual Fuel Oil	29	22	35	25	30	28	31	26	32	28	34	27	28	29	30
Distillate Fuel Oil	30	23	24	25	23	24	27	24	32	26	28	25	26	25	28
Petroleum Coke (a)	57	63	66	48	56	58	66	56	64	60	69	57	58	59	62
Other Petroleum Liquids (b)	5	3	5	4	7	4	5	5	7	4	5	5	4	5	5
Northeast Census Region															
Coal (thousand st/d)	80	66	94	70	71	53	83	83	102	53	85	76	77	73	79
Natural Gas (million cf/d)	3,829	4,578	6,203	3,899	3,769	4,128	5,644	4,003	3,670	4,253	5,656	4,242	4,630	4,390	4,460
Petroleum (thousand b/d)	12	5	12	8	13	8	12	9	16	11	17	11	9	10	13
South Census Region															
Coal (thousand st/d)	671	718	1,035	789	691	779	997	753	773	760	982	732	804	806	812
Natural Gas (million cf/d)	14,754	16,920	20,179	13,502	12,934	16,023	18,867	13,723	14,168	16,307	19,338	14,132	16,342	15,398	15,995
Petroleum (thousand b/d)	55	56	66	43	48	52	57	44	59	51	57	44	55	50	53
Midwest Census Region															
Coal (thousand st/d)	680	626	848	675	727	653	847	695	723	619	820	674	708	731	709
Natural Gas (million cf/d)	2,692	2,910	3,743	2,283	2,008	2,497	3,122	2,160	2,833	3,043	3,657	2,468	2,908	2,449	3,001
Petroleum (thousand b/d)	19	19	18	16	19	20	22	20	21	20	22	19	18	20	21
West Census Region															
Coal (thousand st/d)	244	208	312	288	278	189	284	296	303	191	265	272	263	262	258
Natural Gas (million cf/d)	3,951	4,164	5,982	4,041	3,774	3,732	5,534	4,134	3,946	3,909	5,869	4,522	4,537	4,298	4,567
Petroleum (thousand b/d)	34	32	35	35	37	35	39	39	40	37	40	40	34	37	39
End-of-period U.S. Fuel Inventories Held by Electric Power Sector															
Coal (million short tons)	192.3	183.2	158.2	163.9	169.4	164.3	147.0	150.9	152.8	150.2	134.8	151.3	163.9	150.9	151.3
Residual Fuel Oil (mmb)	11.9	12.2	11.7	11.7	13.3	12.9	12.5	12.9	12.9	12.8	12.6	13.2	11.7	12.9	13.2
Distillate Fuel Oil (mmb)	17.2	17.3	20.9	17.0	17.3	17.2	17.2	17.6	17.8	17.7	17.6	18.0	17.0	17.6	18.0
Petroleum Coke (mmb)	6.2	4.5	3.8	4.4	4.3	4.3	4.2	4.2	4.1	4.1	4.1	4.0	4.4	4.2	4.0

(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 8. U.S. Renewable Energy Consumption (Quadrillion Btu)

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

	2016				2017				2018				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2016	2017	2018
Electric Power Sector															
Hydroelectric Power (a)	0.710	0.684	0.528	0.543	0.656	0.779	0.664	0.554	0.622	0.737	0.639	0.538	2.465	2.653	2.536
Wood Biomass (b)	0.061	0.049	0.060	0.052	0.058	0.051	0.061	0.055	0.056	0.050	0.062	0.056	0.222	0.224	0.223
Waste Biomass (c)	0.070	0.072	0.072	0.072	0.069	0.071	0.073	0.072	0.069	0.072	0.074	0.073	0.287	0.285	0.288
Wind	0.575	0.529	0.452	0.596	0.609	0.622	0.439	0.619	0.650	0.669	0.475	0.665	2.152	2.289	2.458
Geothermal	0.040	0.039	0.040	0.043	0.042	0.040	0.041	0.041	0.040	0.039	0.040	0.041	0.162	0.164	0.160
Solar	0.062	0.095	0.110	0.077	0.084	0.147	0.145	0.089	0.098	0.175	0.171	0.102	0.344	0.466	0.546
Subtotal	1.519	1.468	1.261	1.384	1.518	1.710	1.422	1.430	1.535	1.742	1.462	1.473	5.632	6.080	6.212
Industrial Sector															
Hydroelectric Power (a)	0.004	0.003	0.002	0.003	0.004	0.003	0.002	0.003	0.004	0.003	0.002	0.003	0.012	0.012	0.012
Wood Biomass (b)	0.319	0.312	0.318	0.323	0.312	0.303	0.313	0.314	0.305	0.301	0.312	0.314	1.272	1.242	1.232
Waste Biomass (c)	0.047	0.048	0.048	0.047	0.049	0.048	0.047	0.047	0.050	0.048	0.047	0.047	0.190	0.191	0.192
Geothermal	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.004	0.004	0.004
Biofuel Losses and Co-products (f)	0.196	0.193	0.203	0.207	0.196	0.202	0.208	0.205	0.202	0.204	0.207	0.205	0.798	0.811	0.818
Subtotal	0.571	0.563	0.576	0.584	0.567	0.563	0.575	0.574	0.565	0.562	0.574	0.575	2.294	2.278	2.276
Commercial Sector															
Wood Biomass (b)	0.018	0.018	0.019	0.018	0.018	0.018	0.019	0.018	0.018	0.018	0.019	0.018	0.074	0.073	0.073
Waste Biomass (c)	0.013	0.012	0.012	0.013	0.013	0.012	0.012	0.012	0.013	0.012	0.012	0.012	0.049	0.049	0.049
Geothermal	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.020	0.020	0.020
Subtotal	0.058	0.063	0.064	0.058	0.060	0.068	0.070	0.061	0.065	0.074	0.076	0.065	0.243	0.260	0.281
Residential Sector															
Wood Biomass (b)	0.096	0.096	0.097	0.097	0.098	0.098	0.099	0.099	0.103	0.103	0.104	0.104	0.386	0.395	0.413
Geothermal	0.011	0.011	0.011	0.011	0.012	0.012	0.012	0.012	0.013	0.013	0.013	0.013	0.044	0.047	0.052
Solar (d)	0.031	0.047	0.049	0.035	0.037	0.058	0.062	0.045	0.047	0.073	0.077	0.056	0.162	0.201	0.254
Subtotal	0.137	0.154	0.157	0.143	0.147	0.168	0.173	0.156	0.163	0.189	0.194	0.173	0.592	0.643	0.719
Transportation Sector															
Ethanol (e)	0.277	0.283	0.293	0.288	0.264	0.290	0.299	0.286	0.273	0.292	0.297	0.287	1.141	1.139	1.149
Biomass-based Diesel (e)	0.051	0.066	0.088	0.084	0.062	0.071	0.086	0.087	0.072	0.078	0.089	0.091	0.289	0.307	0.330
Subtotal	0.328	0.349	0.381	0.373	0.326	0.361	0.385	0.373	0.344	0.370	0.387	0.378	1.431	1.445	1.478
All Sectors Total															
Hydroelectric Power (a)	0.714	0.687	0.530	0.546	0.660	0.783	0.666	0.557	0.626	0.741	0.642	0.540	2.477	2.665	2.549
Wood Biomass (b)	0.494	0.476	0.493	0.491	0.486	0.470	0.492	0.486	0.481	0.472	0.497	0.492	1.953	1.934	1.942
Waste Biomass (c)	0.130	0.132	0.131	0.132	0.131	0.131	0.132	0.130	0.131	0.132	0.134	0.132	0.526	0.525	0.529
Wind	0.575	0.529	0.452	0.596	0.609	0.622	0.439	0.619	0.650	0.669	0.475	0.665	2.152	2.289	2.458
Geothermal	0.057	0.056	0.057	0.060	0.060	0.058	0.059	0.059	0.059	0.058	0.059	0.060	0.230	0.235	0.236
Solar	0.110	0.166	0.183	0.129	0.143	0.237	0.239	0.159	0.173	0.287	0.289	0.187	0.588	0.778	0.936
Ethanol (e)	0.287	0.295	0.305	0.299	0.280	0.302	0.311	0.297	0.283	0.304	0.309	0.298	1.186	1.190	1.194
Biomass-based Diesel (e)	0.051	0.066	0.088	0.084	0.062	0.071	0.086	0.087	0.072	0.078	0.089	0.091	0.289	0.307	0.330
Biofuel Losses and Co-products (f)	0.196	0.193	0.203	0.207	0.196	0.202	0.208	0.205	0.202	0.204	0.207	0.205	0.798	0.811	0.818
Total Consumption	2.613	2.597	2.440	2.510	2.617	2.869	2.626	2.595	2.672	2.937	2.693	2.664	10.160	10.706	10.967

- = no data available

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

(b) Wood and wood-derived fuels.

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

(d) Includes small-scale solar thermal and photovoltaic energy used in the commercial, industrial, and electric power sectors.

(e) 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.

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

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 9a. U.S. Macroeconomic Indicators and CO₂ Emissions

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

	2016				2017				2018				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2016	2017	2018
Macroeconomic															
Real Gross Domestic Product (billion chained 2009 dollars - SAAR)	16,525	16,583	16,727	16,805	16,887	16,976	17,090	17,190	17,304	17,415	17,533	17,639	16,660	17,036	17,473
Real Personal Consumption Expend. (billion chained 2009 dollars - SAAR)	11,365	11,485	11,569	11,640	11,716	11,791	11,871	11,948	12,050	12,151	12,247	12,340	11,515	11,831	12,197
Real Fixed Investment (billion chained 2009 dollars - SAAR)	2,787	2,779	2,779	2,808	2,847	2,884	2,921	2,959	2,991	3,020	3,056	3,085	2,788	2,903	3,038
Business Inventory Change (billion chained 2009 dollars - SAAR)	42	-15	4	51	11	-4	15	28	33	43	51	56	21	13	46
Real Government Expenditures (billion chained 2009 dollars - SAAR)	2,913	2,901	2,906	2,915	2,918	2,923	2,928	2,928	2,933	2,939	2,947	2,949	2,909	2,924	2,942
Real Exports of Goods & Services (billion chained 2009 dollars - SAAR)	2,102	2,111	2,162	2,138	2,150	2,161	2,177	2,190	2,201	2,213	2,228	2,245	2,128	2,169	2,222
Real Imports of Goods & Services (billion chained 2009 dollars - SAAR)	2,668	2,670	2,684	2,738	2,745	2,771	2,812	2,854	2,898	2,947	2,995	3,037	2,690	2,796	2,969
Real Disposable Personal Income (billion chained 2009 dollars - SAAR)	12,556	12,647	12,729	12,778	12,840	12,955	13,052	13,146	13,347	13,467	13,572	13,671	12,678	12,998	13,514
Non-Farm Employment (millions)	143.4	144.0	144.7	145.2	145.7	146.1	146.7	147.1	147.7	148.1	148.6	149.0	144.3	146.4	148.3
Civilian Unemployment Rate (percent)	4.9	4.9	4.9	4.7	4.8	4.6	4.6	4.5	4.4	4.3	4.2	4.2	4.9	4.6	4.3
Housing Starts (millions - SAAR)	1.15	1.16	1.14	1.22	1.21	1.22	1.24	1.26	1.28	1.30	1.32	1.33	1.17	1.23	1.31
Industrial Production Indices (Index, 2012=100)															
Total Industrial Production	104.1	103.9	104.4	104.2	104.4	105.0	105.9	106.8	107.6	108.3	109.2	109.9	104.2	105.6	108.7
Manufacturing	103.9	103.6	103.8	104.0	104.1	104.4	105.2	106.1	106.8	107.4	108.3	109.0	103.8	105.0	107.9
Food	104.4	104.8	105.4	104.7	105.3	105.8	106.4	107.1	107.7	108.3	109.0	109.6	104.8	106.1	108.7
Paper	96.4	95.6	95.5	97.7	96.2	95.5	95.2	95.3	95.3	95.3	95.4	95.6	96.3	95.6	95.4
Petroleum and Coal Products	106.5	105.5	104.8	106.8	107.0	107.3	107.8	108.4	109.0	109.7	110.5	111.3	105.9	107.6	110.1
Chemicals	99.1	98.3	97.1	97.0	97.2	97.5	98.1	99.0	99.8	100.6	101.7	102.9	97.9	98.0	101.3
Nonmetallic Mineral Products	117.1	115.6	113.9	116.1	117.1	118.2	119.4	120.7	122.0	123.3	124.5	125.7	115.7	118.8	123.9
Primary Metals	94.8	95.7	92.7	93.1	93.4	93.1	93.2	93.7	94.0	94.4	95.1	96.1	94.1	93.3	94.9
Coal-weighted Manufacturing (a)	102.8	102.2	101.0	101.9	102.0	102.2	102.6	103.3	104.0	104.7	105.5	106.6	102.0	102.5	105.2
Distillate-weighted Manufacturing (a)	106.2	105.7	105.1	106.3	106.7	107.1	107.8	108.6	109.3	110.1	110.9	111.7	105.8	107.6	110.5
Electricity-weighted Manufacturing (a)	103.5	103.0	102.6	103.1	103.0	103.2	103.7	104.6	105.4	106.2	107.2	108.3	103.0	103.6	106.8
Natural Gas-weighted Manufacturing (a)	104.4	103.5	103.3	103.8	103.9	104.2	104.9	105.9	106.8	107.8	109.0	110.4	103.8	104.7	108.5
Price Indexes															
Consumer Price Index (all urban consumers) (index, 1982-1984=1.00)	2.38	2.39	2.40	2.42	2.44	2.45	2.47	2.48	2.49	2.50	2.52	2.53	2.40	2.46	2.51
Producer Price Index: All Commodities (index, 1982=1.00)	1.84	1.85	1.85	1.88	1.91	1.92	1.92	1.93	1.95	1.96	1.96	1.98	1.85	1.92	1.96
Producer Price Index: Petroleum (index, 1982=1.00)	1.21	1.46	1.53	1.63	1.71	1.77	1.79	1.73	1.72	1.83	1.85	1.82	1.45	1.75	1.81
GDP Implicit Price Deflator (index, 2009=100)	110.6	111.3	111.7	112.2	113.0	113.5	114.1	114.7	115.4	115.9	116.5	117.1	111.5	113.8	116.2
Miscellaneous															
Vehicle Miles Traveled (b) (million miles/day)	8,222	9,157	9,075	8,713	8,067	9,287	9,189	8,841	8,408	9,432	9,325	8,986	8,792	8,849	9,040
Air Travel Capacity (Available ton-miles/day, thousands)	548	603	609	583	567	593	595	580	570	597	600	588	586	584	589
Aircraft Utilization (Revenue ton-miles/day, thousands)	326	366	375	355	342	361	369	360	344	366	372	363	356	358	362
Airline Ticket Price Index (index, 1982-1984=100)	281.8	305.0	273.0	270.4	276.3	306.0	288.6	299.5	298.2	322.8	301.1	310.1	282.6	292.6	308.1
Raw Steel Production (million short tons per day)	0.238	0.247	0.238	0.230	0.250	0.250	0.216	0.179	0.228	0.232	0.213	0.174	0.239	0.224	0.212
Carbon Dioxide (CO₂) Emissions (million metric tons)															
Petroleum	571	572	589	583	557	578	594	586	572	583	599	592	2,314	2,315	2,345
Natural Gas	439	327	343	376	419	321	332	381	453	330	339	388	1,486	1,452	1,510
Coal	308	297	412	327	321	307	403	338	344	300	394	327	1,345	1,369	1,365
Total Energy (c)	1,322	1,199	1,347	1,290	1,299	1,208	1,332	1,308	1,371	1,216	1,335	1,309	5,157	5,147	5,231

- = 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 - March 2017

	2016				2017				2018				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2016	2017	2018
Real Gross State Product (Billion \$2009)															
New England	872	876	883	884	886	889	894	899	904	909	914	918	879	892	911
Middle Atlantic	2,456	2,461	2,484	2,492	2,499	2,511	2,524	2,536	2,550	2,564	2,577	2,588	2,473	2,517	2,570
E. N. Central	2,273	2,284	2,302	2,310	2,318	2,327	2,338	2,349	2,363	2,375	2,388	2,400	2,292	2,333	2,382
W. N. Central	1,042	1,046	1,054	1,059	1,064	1,069	1,076	1,081	1,087	1,093	1,099	1,105	1,050	1,072	1,096
S. Atlantic	2,932	2,943	2,970	2,986	3,003	3,019	3,040	3,059	3,081	3,104	3,126	3,146	2,958	3,030	3,114
E. S. Central	742	745	751	754	757	761	765	769	774	778	783	787	748	763	781
W. S. Central	2,021	2,019	2,033	2,043	2,059	2,074	2,093	2,111	2,124	2,140	2,161	2,178	2,029	2,084	2,151
Mountain	1,044	1,049	1,060	1,066	1,072	1,079	1,088	1,097	1,106	1,114	1,123	1,132	1,055	1,084	1,119
Pacific	3,039	3,057	3,088	3,106	3,125	3,142	3,164	3,184	3,208	3,231	3,254	3,275	3,073	3,154	3,242
Industrial Output, Manufacturing (Index, Year 2012=100)															
New England	99.7	100.0	100.0	100.3	100.3	100.5	101.1	101.9	102.4	102.8	103.4	103.9	100.0	101.0	103.1
Middle Atlantic	100.0	99.9	100.2	99.4	99.5	99.7	100.4	101.2	101.7	102.3	103.0	103.6	99.9	100.2	102.6
E. N. Central	106.3	106.1	106.1	106.2	106.3	106.6	107.4	108.3	109.1	109.7	110.6	111.5	106.2	107.2	110.2
W. N. Central	102.9	102.4	102.7	102.7	102.8	103.1	103.9	104.8	105.4	106.0	106.9	107.6	102.7	103.6	106.5
S. Atlantic	106.5	106.4	107.1	108.0	108.3	108.4	109.1	109.8	110.2	110.7	111.5	112.2	107.0	108.9	111.2
E. S. Central	108.3	108.6	108.9	109.5	109.7	109.9	110.6	111.4	112.0	112.7	113.5	114.3	108.8	110.4	113.1
W. S. Central	99.0	97.6	97.3	97.5	97.7	98.0	98.9	100.0	100.9	101.8	102.9	103.8	97.8	98.7	102.4
Mountain	107.5	107.3	107.5	107.7	108.1	108.7	109.8	110.8	111.6	112.3	113.1	113.8	107.5	109.3	112.7
Pacific	104.1	103.7	103.6	103.7	103.8	104.2	105.1	106.1	106.8	107.5	108.4	109.1	103.8	104.8	108.0
Real Personal Income (Billion \$2009)															
New England	774	782	788	792	794	801	808	814	820	827	833	838	784	804	829
Middle Atlantic	1,956	1,968	1,986	1,989	1,997	2,011	2,026	2,039	2,053	2,069	2,083	2,095	1,975	2,018	2,075
E. N. Central	2,082	2,097	2,112	2,119	2,127	2,144	2,159	2,173	2,190	2,207	2,222	2,237	2,103	2,151	2,214
W. N. Central	991	997	1,004	1,005	1,009	1,017	1,023	1,030	1,038	1,046	1,054	1,061	999	1,020	1,050
S. Atlantic	2,704	2,723	2,743	2,758	2,774	2,801	2,824	2,847	2,876	2,903	2,930	2,955	2,732	2,811	2,916
E. S. Central	771	773	778	781	785	791	797	803	810	816	822	828	776	794	819
W. S. Central	1,731	1,738	1,749	1,758	1,770	1,789	1,806	1,824	1,844	1,863	1,881	1,898	1,744	1,797	1,871
Mountain	951	959	965	970	977	987	997	1,006	1,017	1,028	1,038	1,048	961	992	1,033
Pacific	2,337	2,359	2,375	2,387	2,399	2,422	2,441	2,463	2,485	2,508	2,530	2,551	2,365	2,431	2,519
Households (Thousands)															
New England	5,827	5,832	5,834	5,838	5,841	5,847	5,855	5,866	5,877	5,888	5,898	5,909	5,838	5,866	5,909
Middle Atlantic	15,961	15,971	15,977	15,981	15,984	15,993	16,010	16,031	16,054	16,078	16,101	16,125	15,981	16,031	16,125
E. N. Central	18,744	18,760	18,769	18,776	18,787	18,800	18,823	18,850	18,882	18,915	18,949	18,981	18,776	18,850	18,981
W. N. Central	8,523	8,540	8,554	8,567	8,584	8,601	8,620	8,643	8,669	8,695	8,718	8,742	8,567	8,643	8,742
S. Atlantic	25,028	25,127	25,216	25,301	25,387	25,479	25,578	25,686	25,795	25,905	26,012	26,120	25,301	25,686	26,120
E. S. Central	7,585	7,599	7,611	7,622	7,634	7,647	7,664	7,683	7,703	7,724	7,744	7,764	7,622	7,683	7,764
W. S. Central	14,512	14,564	14,613	14,657	14,703	14,753	14,808	14,867	14,929	14,992	15,053	15,114	14,657	14,867	15,114
Mountain	8,934	8,973	9,010	9,048	9,085	9,125	9,169	9,215	9,264	9,313	9,362	9,410	9,048	9,215	9,410
Pacific	18,622	18,677	18,725	18,775	18,826	18,882	18,942	19,007	19,074	19,142	19,207	19,268	18,775	19,007	19,268
Total Non-farm Employment (Millions)															
New England	7.3	7.3	7.3	7.3	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.5	7.3	7.4	7.4
Middle Atlantic	19.2	19.2	19.3	19.3	19.4	19.4	19.4	19.5	19.5	19.6	19.6	19.6	19.3	19.4	19.6
E. N. Central	21.7	21.7	21.8	21.9	21.9	21.9	22.0	22.0	22.1	22.1	22.2	22.2	21.8	22.0	22.2
W. N. Central	10.5	10.5	10.6	10.6	10.6	10.6	10.7	10.7	10.7	10.7	10.8	10.8	10.5	10.7	10.8
S. Atlantic	27.4	27.6	27.7	27.9	28.0	28.1	28.2	28.3	28.4	28.6	28.7	28.8	27.6	28.2	28.6
E. S. Central	7.9	7.9	8.0	8.0	8.0	8.0	8.1	8.1	8.1	8.1	8.2	8.2	8.0	8.1	8.2
W. S. Central	16.8	16.8	16.9	16.9	17.0	17.1	17.2	17.2	17.3	17.4	17.5	17.6	16.8	17.1	17.4
Mountain	10.2	10.2	10.3	10.3	10.4	10.4	10.5	10.5	10.6	10.6	10.7	10.7	10.2	10.5	10.7
Pacific	22.2	22.4	22.5	22.7	22.8	22.8	22.9	23.0	23.1	23.2	23.3	23.3	22.5	22.9	23.2

- = 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 - March 2017

	2016				2017				2018				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2016	2017	2018
Heating Degree Days															
New England	2,843	905	77	2,122	2,820	816	126	2,160	3,167	873	126	2,160	5,947	5,921	6,325
Middle Atlantic	2,663	750	40	1,902	2,503	633	79	1,957	2,905	690	79	1,957	5,356	5,173	5,631
E. N. Central	2,869	754	48	2,031	2,666	692	117	2,208	3,125	732	117	2,208	5,701	5,684	6,182
W. N. Central	2,893	659	103	2,131	2,810	662	143	2,381	3,194	685	143	2,382	5,787	5,997	6,403
South Atlantic	1,382	210	2	857	1,123	187	14	966	1,439	209	13	964	2,451	2,289	2,625
E. S. Central	1,754	233	5	1,098	1,388	237	19	1,297	1,843	265	19	1,297	3,090	2,942	3,425
W. S. Central	1,052	78	1	621	836	71	4	793	1,168	87	4	792	1,752	1,704	2,051
Mountain	2,077	677	160	1,706	2,136	622	130	1,808	2,138	632	130	1,807	4,619	4,695	4,707
Pacific	1,302	466	96	1,154	1,507	510	75	1,080	1,338	492	76	1,081	3,018	3,171	2,987
U.S. Average	1,948	481	51	1,398	1,827	450	68	1,496	2,085	472	68	1,494	3,877	3,841	4,119
Heating Degree Days, Prior 10-year Average															
New England	3,212	824	133	2,105	3,201	831	122	2,125	3,155	819	123	2,120	6,273	6,279	6,218
Middle Atlantic	2,983	651	90	1,927	2,982	661	81	1,941	2,931	649	82	1,944	5,650	5,664	5,606
E. N. Central	3,246	689	125	2,205	3,254	701	114	2,197	3,206	699	118	2,204	6,266	6,266	6,227
W. N. Central	3,298	693	150	2,393	3,302	707	142	2,379	3,263	705	144	2,379	6,534	6,530	6,491
South Atlantic	1,498	184	14	972	1,502	188	12	965	1,473	183	12	975	2,668	2,666	2,643
E. S. Central	1,898	225	19	1,308	1,905	231	16	1,286	1,869	225	17	1,302	3,450	3,438	3,414
W. S. Central	1,221	83	5	815	1,227	88	4	799	1,187	81	4	806	2,123	2,118	2,078
Mountain	2,231	725	147	1,880	2,215	734	142	1,862	2,202	729	142	1,856	4,982	4,953	4,928
Pacific	1,495	610	88	1,212	1,462	597	88	1,205	1,459	590	84	1,185	3,406	3,352	3,318
U.S. Average	2,199	483	76	1,534	2,192	487	71	1,526	2,157	480	71	1,526	4,292	4,276	4,233
Cooling Degree Days															
New England	0	79	538	0	0	95	431	1	0	92	431	1	617	527	524
Middle Atlantic	0	146	735	6	0	176	573	6	0	170	574	6	886	755	750
E. N. Central	4	230	705	19	0	228	560	9	0	220	560	9	957	797	789
W. N. Central	10	319	713	30	3	283	701	12	3	277	701	12	1,072	999	992
South Atlantic	136	651	1,346	281	147	650	1,159	232	117	633	1,160	232	2,413	2,188	2,143
E. S. Central	42	533	1,255	130	44	526	1,065	70	27	505	1,064	70	1,959	1,705	1,666
W. S. Central	122	831	1,597	329	154	915	1,538	206	82	866	1,538	206	2,879	2,812	2,692
Mountain	34	467	889	115	18	471	984	84	22	467	985	84	1,505	1,557	1,558
Pacific	35	226	594	73	28	200	590	75	31	200	589	75	928	893	896
U.S. Average	54	409	965	129	57	418	870	97	42	406	872	97	1,558	1,442	1,417
Cooling Degree Days, Prior 10-year Average															
New England	0	81	419	1	0	81	433	1	0	83	440	0	501	514	522
Middle Atlantic	0	168	549	5	0	169	567	6	0	170	574	4	722	741	748
E. N. Central	3	229	528	6	3	234	543	8	3	230	541	6	766	788	780
W. N. Central	7	279	674	9	7	281	673	12	6	279	667	11	969	973	963
South Atlantic	114	661	1,147	222	117	666	1,167	230	118	673	1,161	224	2,144	2,180	2,176
E. S. Central	32	541	1,038	56	33	544	1,056	66	32	543	1,042	63	1,668	1,699	1,680
W. S. Central	90	890	1,518	191	90	876	1,528	205	94	895	1,540	203	2,689	2,698	2,732
Mountain	21	429	930	76	23	425	931	81	22	427	929	81	1,456	1,460	1,459
Pacific	29	180	611	72	30	180	608	74	30	183	610	76	892	892	899
U.S. Average	42	404	845	89	43	405	857	94	44	410	859	92	1,380	1,399	1,404

- = 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) 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>).