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# Short-Term Energy Outlook (STEO)

## Highlights

- Benchmark North Sea Brent crude oil spot prices averaged $47/barrel (b) in May, a $5/b increase from April and the fourth consecutive monthly increase since reaching a 12-year low of $31/b in January. Growing global oil supply disruptions, rising oil demand, and falling U.S. crude oil production contributed to the price increase.

- Brent crude oil prices are forecast to average $43/b in 2016 and $52/b in 2017, $3/b and $1/b higher than forecast in last month's STEO, respectively. West Texas Intermediate (WTI) crude oil prices are forecast to be slightly lower than Brent in 2016 and to be the same as Brent in 2017. However, the current values of futures and options contracts suggest high uncertainty in the price outlook. For example, EIA's forecast for the average WTI price in September 2016 of $46/b should be considered in the context of Nymex contract values for September 2016 delivery. These contracts traded during the five-day period ending June 2 (*Market Prices and Uncertainty Report*) suggest the market expects WTI prices could range from $36/b to $69/b (at the 95% confidence interval) in September 2016.

- During the April-through-September summer driving season of 2016, U.S. regular gasoline retail prices are forecast to average $2.27/gallon (gal), 6 cents/gal higher than forecast in last month's STEO but 36 cents/gal lower than last summer. U.S. regular gasoline retail prices are forecast to average $2.13/gal in 2016 and $2.27/gal in 2017, which are 5 cents/gal higher and 3 cents/gal higher than forecast in last month's STEO, respectively.

- U.S. crude oil production averaged 9.4 million barrels per day (b/d) in 2015. Production is forecast to average 8.6 million b/d in 2016 and 8.2 million b/d in 2017, both unchanged from last month's STEO. EIA estimates that crude oil production for May 2016 averaged 8.7 million b/d, which is more than 0.2 million b/d below the April 2016 level, and approximately 1 million b/d below the 9.7 million b/d level reached in April 2015.

- Natural gas working inventories were 2,907 billion cubic feet (Bcf) on May 27. This level is 32% higher than a year earlier, and 35% higher than the previous five-year (2011–15) average for that week. The natural gas storage injection season typically runs from April through October. EIA projects that natural gas inventories will be 4,161 Bcf at the end of October 2016, which would be the highest end-of-October level on record. Henry Hub spot prices are forecast to average $2.22/million British thermal units (MMBtu) in 2016 and $2.96/MMBtu in 2017, compared with an average of $2.63/MMBtu in 2015.

## Global Petroleum and Other Liquid Fuels

EIA estimates that global petroleum and other liquid fuels inventory builds will average 1.0 million b/d in 2016. Inventory builds are expected to continue into 2017, but at a generally decreasing rate, averaging 0.3 million b/d for the year.

**Global Petroleum and Other Liquid Fuels Consumption**. Global consumption of petroleum and other liquid fuels is estimated to have grown by 1.4 million b/d in 2015. EIA expects global consumption of petroleum and other liquid fuels to increase by 1.5 million b/d in both 2016 and 2017, mostly driven by growth in countries outside of the Organization for Economic Cooperation and Development (OECD). Non-OECD consumption growth was an estimated 0.9 million b/d in 2015, and it is expected to be 1.3 million b/d in 2016 and 1.4 million b/d in 2017.

China's consumption of petroleum and other liquid fuels is forecast to grow by 0.4 million b/d in both 2016 and 2017. EIA expects that China's demand for hydrocarbon gas liquids (HGL) will continue to grow at a fairly steady pace as additional propane dehydrogenation (PDH) plants come online, including Oriental Energy's plant in Zhejiang province and Haiwei's plant in Hebei province. PDH plants use propane as an input to produce propylene, a key raw material for petrochemicals and plastics. Gasoline and jet fuel consumption in China is also expected to grow in 2016. Similarly, EIA projects continued strong growth in India's consumption of petroleum and other liquid fuels, particularly for transportation use. Consumption growth in India is expected to be between 0.3 million b/d and 0.4 million b/d in both 2016 and 2017.

OECD petroleum and other liquid fuels consumption rose by 0.5 million b/d in 2015. OECD consumption is expected to increase by 0.2 million b/d in 2016 and by less than 0.1 million b/d in 2017. Consumption growth in the United States and South Korea more than offsets decreases in consumption in OECD Europe and Japan in 2016 and 2017.

**Non-OPEC Petroleum and Other Liquid Fuels Supply.** EIA estimates that petroleum and other liquid fuels production in countries outside of the Organization of the Petroleum Exporting Countries (OPEC) grew by 1.5 million b/d in 2015, with more than half of the growth occurring in North America. EIA expects non-OPEC production to decline by 0.6 million b/d in 2016 and by 0.2 million b/d in 2017.

Changes in non-OPEC production are largely driven by changes in U.S. tight oil production, which has high production decline rates and relatively short investment horizons, making it among the most price-sensitive oil production globally. Forecast total U.S. production of liquid fuels declines by 0.5 million b/d in 2016 and by 0.1 million b/d in 2017, as declining onshore crude oil production is partially offset by expected growth in HGL production, Gulf of Mexico crude oil production, and liquid biofuels production. Outside of the United States, forecast non-OPEC production declines by less than 0.1 million b/d in 2016 and by 0.1 million b/d in 2017.

Non-OPEC petroleum and other liquids production, with the exception of U.S. tight oil plays, does not decline much through 2017 because of investments that were committed to projects

when oil prices were higher. Although oil companies have reduced investments, most of the cuts have been to capital budgets that largely affect production beyond 2017.

Among non-OPEC producers outside of the United States, the largest declines are forecast to be in Asia and in the North Sea. After increasing between 2014 and 2016, production in the North Sea is expected to return to its long-term declining trend in 2017, as the planned starts of several projects are not enough to offset the region's natural decline rates. Production is expected to fall in China during 2016 and 2017 by nearly 0.2 million b/d as the three largest state-owned oil companies have announced capital expenditure cuts and output reductions, mainly at mature fields that require high investment levels to maintain production. Also, fewer new offshore developments in China are expected to come online in 2016 compared with 2015.

Non-OPEC unplanned supply outages in May were 1.1 million b/d, an increase of 0.7 million b/d from April. Most of the increase was in Canada, where wildfires caused disruptions that averaged about 0.8 million b/d in May, with a daily peak of more than 1.0 million b/d. Although the fires have subsided and projects are slowly restarting, it may take weeks for production to return to predisruption levels. EIA expects disrupted volumes in Canada to average 400,000 b/d in June.

**OPEC Petroleum and Other Liquid Fuels Supply**. OPEC crude oil production averaged 31.5 million b/d in 2015, an increase of 0.8 million b/d from 2014, led by rising production in Iraq and Saudi Arabia. Forecast OPEC crude oil production rises by 0.8 million b/d in 2016, with Iran accounting for most of the increase. Forecast OPEC production rises by an additional 0.7 million b/d in 2017. The forecast does not assume a collaborative production cut among OPEC members and other producers in the forecast period, as major OPEC producers are expected to continue their strategy of maintaining market share.

OPEC noncrude liquids production averaged 6.6 million b/d in 2015, and it is forecast to increase by 0.3 million b/d in both 2016 and 2017, led by increases in Iran and Qatar.

OPEC unplanned crude oil supply disruptions averaged nearly 2.6 million b/d in May, 0.1 million b/d higher than in April, as increased outages in Nigeria, Iraq, and Libya offset fewer outages in Kuwait. The 0.2 million b/d of shut-in production from Kuwait's oil worker labor strike in April returned to the market in May, while disruptions from the Neutral Zone persisted.

In May, disruptions in Nigeria increased to an average of nearly 0.8 million b/d, up from an average of 0.5 million b/d in April and an average of 0.3 million b/d in 2015. With the increasing disruptions, Nigeria's crude oil production fell to 1.4 million b/d in May, its lowest monthly average since the late 1980s. Disruptions in Nigeria increased as militants escalated attacks on oil and natural gas infrastructure in the Niger Delta. EIA expects Nigeria's disruptions to remain relatively high through 2017 compared with recent years.

In southern Iraq, power outages at some oil fields and inclement weather in the Basra Gulf contributed to a 50,000 b/d increase in average disruptions. In Libya, exports from Marsa al-Hariga, currently Libya's largest operating oil terminal, were temporarily halted from late April

to mid-May, increasing the country's disruptions by an average 50,000 b/d for May. Exports from the terminal resumed after rival state oil companies signed a deal to restart exports.

OPEC surplus crude oil production capacity, which averaged 1.6 million b/d in 2015, is expected to be 1.5 million b/d in 2016 and 1.3 million b/d in 2017. Surplus capacity is typically an indicator of market conditions, and surplus capacity below 2.5 million b/d indicates a relatively tight oil market. However, high current and forecast levels of global oil inventories make the forecast low surplus capacity less significant.

**OECD Petroleum Inventories**. EIA estimates that OECD commercial crude oil and other liquid fuels inventories were 3.00 billion barrels at the end of 2015, equivalent to roughly 66 days of consumption. Forecast OECD inventories rise to 3.10 billion barrels at the end of 2016 and to 3.11 billion barrels at the end of 2017.

**Crude Oil Prices.** The monthly average spot price of Brent crude oil increased by $5/b in May to $47/b, which was the highest monthly average for Brent since October 2015. This was the fourth consecutive increase in the monthly average Brent price, the longest such stretch since May through September 2013. Increasing global oil supply outages were the main contributor to higher oil prices in May. Improving economic data and related indications that global oil demand growth is accelerating, plus ongoing declines in the U.S. rig count and in crude oil production, also contributed to rising prices.

Despite the recent increase in oil prices, EIA expects global oil inventory builds to average 0.8 million b/d during the second and third quarters of 2016, limiting upward price pressures in the coming months. Brent prices are forecast to average $46/b in the third quarter of 2016, before rising to $47/b in the fourth quarter as a result of expected slower growth in global oil inventories.

EIA expects global oil inventory draws to begin in the third quarter of 2017. The expected inventory draws contribute to forecast rising prices in the first half of 2017, with price increases expected to accelerate later in 2017. Brent prices are forecast to average $52/b in 2017, $1/b higher than forecast in last month's STEO. Forecast Brent prices reach an average of $58/b in the fourth quarter of 2017, reflecting the potential for more significant inventory draws beyond the forecast period.

In addition, a recent increase in global oil supply outages has taken pressure off storage capacity in the near term. These supply reductions were reflected in a narrowing differential for oil prices for near-term delivery compared with prices for delivery further in the future. Increased outages have reduced the possibility that inventory growth will cause storage costs to quickly rise and put downward pressure on oil prices.

Forecast West Texas Intermediate (WTI) crude oil prices average slightly less than Brent crude oil prices in 2016 and the same as the Brent price in 2017. The relative price parity of WTI with Brent in the forecast period is based on the assumption of competition between the two crudes

in the U.S. Gulf Coast refinery market, as transportation price differentials to move the crudes from their respective pricing points to that market are similar.

The current values of futures and options contracts highlight the heightened volatility and high uncertainty in the oil price outlook (*Market Prices and Uncertainty Report*). WTI futures contracts for September 2016 delivery that were traded during the five-day period ending June 2 averaged $50/b, and implied volatility averaged 35%. These levels established the lower and upper limits of the 95% confidence interval for the market's expectations of monthly average WTI prices in September 2016 at $36/b and $69/b, respectively. The 95% confidence interval for market expectations widens over time, with lower and upper limits of $31/b and $83/b for prices in December 2016. At this time in 2015, WTI for September 2015 delivery averaged $60/b, and implied volatility averaged 33%, with the corresponding lower and upper limits of the 95% confidence interval at $45/b and $81/b.

## U.S. Petroleum and Other Liquid Fuels

Growing domestic and global consumption of gasoline has contributed to high refinery wholesale gasoline margins (the difference between the wholesale price of gasoline and the price of Brent crude oil) for much of the past year. Margins averaged 49 cents/gal in May, higher than the five-year average of 45 cents/gal but lower than the 55 cents/gal average in May 2015.

The U.S. average regular gasoline retail price increased to $2.27/gal in May, 16 cents/gal higher than in April, reflecting higher crude oil prices. Monthly average retail gasoline prices for May 2016 ranged from a low of $2.02/gal in the Gulf Coast—Petroleum Administration for Defense District (PADD) 3—to a high of $2.65/gal in the West Coast (PADD 5). EIA expects the monthly average price of U.S. regular gasoline to reach an annual peak in June of $2.36/gal, followed by lower prices in the second half of 2016.

**Consumption.** Total U.S. liquid fuels consumption increased by an estimated 290,000 b/d (1.5%) in 2015. Liquid fuels consumption is forecast to increase by 230,000 b/d (1.2%) in 2016 and by an additional 60,000 b/d (0.3%) in 2017.

Motor gasoline consumption increased by an estimated 240,000 b/d (2.7%) in 2015 to an average of 9.16 million b/d. Gasoline consumption is forecast to increase by 170,000 b/d (1.8%) to 9.33 million b/d in 2016, which would be the highest annual average gasoline consumption on record. The previous annual average high was 9.29 million b/d in 2007. The increase in consumption reflects a forecast 2.5% increase in highway travel (because of employment growth and low retail gasoline prices) that is partially offset by increases in vehicle fleet fuel economy. EIA forecasts gasoline consumption in 2017 will be close to its 2016 level.

In 2015, jet fuel consumption increased by an estimated 70,000 b/d (4.7%). Forecast jet fuel consumption is mostly unchanged through the forecast period, with improvements in average airline fleet fuel economy offset by growth in freight and passenger travel.

Consumption of distillate fuel, which includes diesel fuel and heating oil, fell by 60,000 b/d (1.5%) in 2015, and it is expected to fall by an additional 60,000 b/d (1.5%) in 2016. Falling distillate consumption in 2016 is the result of relatively warm winter temperatures, reduced oil and natural gas drilling, and falling coal production, which has reduced diesel use in rail shipments of coal. Stronger expected economic growth in 2017 contributes to forecast distillate fuel consumption growth of 70,000 b/d (1.9%).

Hydrocarbon gas liquids (HGL) consumption is forecast to increase by 40,000 b/d in both 2016 and 2017, as increased ethane consumption more than offsets reduced consumption of other HGL. U.S. ethane consumption is forecast to increase by 70,000 b/d (6.5%) in 2016, as expansion projects at ethylene-producing petrochemical plants increase feedstock demand for ethane. In 2017, forecast ethane consumption increases by an additional 80,000 b/d (7.0%), as capacity begins to ramp up at five new petrochemical plants and at a previously deactivated plant.

**Supply.** U.S. crude oil production is projected to decrease from an average of 9.4 million b/d in 2015 to 8.6 million b/d in 2016 and to 8.2 million b/d in 2017. The forecast reflects a decline in Lower 48 onshore production that is partially offset by growing production in the federal Gulf of Mexico.

EIA estimates that total U.S. crude oil production has fallen by more than 0.9 million b/d since April 2015 to an average of 8.7 million b/d in May 2016. Almost all of the production decline was in the Lower 48 onshore.

Based on the current oil price forecast, EIA expects oil production to continue declining in most Lower 48 onshore oil production regions through mid-2017. The expectation of reduced cash flows in 2016 and 2017 has prompted many companies to scale back investment programs, deferring major new undertakings until a sustained price recovery occurs. The prospect of higher interest rates and tighter lending conditions will likely limit the availability of capital for many smaller producers, giving rise to distressed asset sales and consolidation of acreage holdings by firms that are more financially sound. Lower onshore investment is expected to reduce the count of oil-directed rigs and well completions in 2016 and 2017.

The current price outlook is expected to limit onshore drilling activity and well completions, despite continued increases in rig and well productivity and falling drilling and completion costs. Rig counts reported by Baker Hughes continue to decline, with an average of 407 total rigs in operation during May, down from more than 600 in January. In EIA's forecast, the decline in rig counts continues to limit production through 2017.

EIA expects U.S. crude oil production to decline from 9.2 million b/d in the first quarter of 2016 to an average of 8.1 million b/d in the third quarter of 2017. Production of 8.1 million b/d would be 1.6 million b/d below the April 2015 level, which was the highest monthly production since April 1971. Production is expected to fall most rapidly from April through September 2016, declining by an average of 170,000 b/d each month. Production is then expected to be relatively flat from October 2016 through July 2017, averaging 8.2 million b/d. EIA's assumption of hurricane-related outages lowers the forecast third-quarter 2017 average to 8.1 million b/d,

after which production is expected to begin to rise. Increases in production in late 2017 reflect productivity improvements, lower breakeven costs, and forecast oil price increases. The forecast remains sensitive to actual wellhead prices and rapidly changing drilling economics that vary across regions and operators.

Projected crude oil production during the forecast period rises in the Gulf of Mexico and falls in Alaska. Production in these areas is less sensitive to short-term price movements than onshore production in the Lower 48 states. These changes reflect anticipated growth from new projects in the Gulf of Mexico and declines from legacy fields in Alaska. Although production in Alaska is expected to decrease in response to BP's recent reduction in drilling rigs in the Alaskan North Slope, ConocoPhillips brought two projects online and ExxonMobil brought another project online in the region that could moderate Alaska's production declines. In the Gulf of Mexico, the April 2016 start of the Julia oil field, along with several other projects in the region that began operations in 2014–15 or that will begin operations later in 2016, are expected to help increase the region's production from an average of 1.5 million b/d in 2015 to 1.9 million b/d in the fourth quarter of 2017. Some projects may start production later than expected, potentially shifting some of the anticipated production gains from late 2017 into early 2018.

EIA projects HGL production at natural gas processing plants will increase by 0.2 million b/d (6.3%) in 2016 and by 0.3 million b/d (8.3%) in 2017. EIA expects higher ethane recovery rates in 2016 and 2017, following planned increases in demand for petrochemical plant feedstock in the United States and abroad. Planned terminal builds and expansions and a growing ship fleet allow more U.S. ethane, propane, and butanes to reach international markets, with forecast net HGL exports averaging 1.1 million b/d in 2016 and 1.4 million b/d in 2017.

**Product Prices.** EIA expects the retail price of regular gasoline will average $2.27/gal during the 2016 summer driving season (April through September), 6 cents/gal higher than forecast in last month's STEO, but 36 cents/gal lower than the price in summer 2015. Higher forecast prices compared with the May STEO reflect higher forecast crude oil prices. The projected monthly average retail price of gasoline increases from $2.11/gal in April to a peak of $2.36/gal in June and then falls to $2.21/gal in September.

The U.S. regular gasoline retail price, which averaged $2.43/gal in 2015, is projected to average $2.13/gal in 2016, which is 5 cents/gal higher than projected in last month's STEO. U.S. regular gasoline retail prices are forecast to average $2.27/gal in 2017, 3 cents/gal higher than in last month's STEO.

In 2015, higher gasoline demand in the United States and abroad contributed to wholesale gasoline margins significantly above five-year average levels. Strong gasoline demand, along with changes in the U.S. vehicle fleet in response to fuel economy standards, contributed to higher prices for high-octane gasoline blending components and the above-average gasoline margins for most of 2015. Continuing demand growth and many of the same conditions that tightened octane markets and led to high wholesale gasoline margins in 2015 still exist. EIA expects refinery runs and gasoline production to be higher in summer 2016 compared with

summer 2015, which should contribute to wholesale gasoline margins that are lower than last summer. However, EIA forecasts gasoline margins will still be higher than the five-year average level. Any unplanned refinery outages or unexpected growth in demand could result in margins above forecast levels.

The diesel fuel retail price averaged $2.71/gal in 2015. Diesel prices are forecast to average $2.34/gal in 2016 and $2.69/gal in 2017, which are 7 cents/gal and 5 cents/gal higher than in last month's STEO, respectively, reflecting higher forecast crude oil prices.

## Natural Gas

Marketed natural gas production was 79.1 billion cubic feet per day (Bcf/d) in March 2016, a 1.0 Bcf/d decline from its record high in February, according to the latest *Natural Gas Monthly*. Average daily production in Texas, the largest natural gas-producing state, declined, and Marcellus Shale production declined in Pennsylvania, Ohio, and West Virginia. One of the factors contributing to the decline in production was low prices, which fell to an average of $1.73/million British thermal units (MMBtu) in March before rising slightly in April and May. Preliminary data indicate production has risen slightly since March, but it remains lower than previous record highs.

**Natural Gas Consumption.** EIA's forecast of U.S. total natural gas consumption averages 76.6 Bcf/d in 2016 and 77.8 Bcf/d in 2017, compared with 75.3 Bcf/d in 2015. In 2016, increases in total natural gas consumption are mainly attributable to increases in electric power sector use. Forecast electric power sector use of natural gas increases by 5.1% in 2016, then declines by 1.5% in 2017, as natural gas prices rise and contribute to increasing coal generation. Forecast industrial sector consumption of natural gas increases by 2.7% in 2016 and by 1.7% in 2017, as new fertilizer and chemical projects come online.

**Natural Gas Production and Trade.** EIA's most recent survey data indicate a decline in natural gas production in March. EIA expects production to rise only slightly through the rest of 2016 because of low natural gas prices and declining rig activity. In 2017, production is expected to rise in response to forecast price increases and increases in liquefied natural gas (LNG) exports. Overall, EIA expects production to rise by 1.0% in 2016 and by 2.3% in 2017.

EIA expects natural gas exports by pipeline to Mexico will increase because of growing demand from Mexico's electric power sector and flat natural gas production in Mexico. EIA projects LNG gross exports will rise to an average of 0.5 Bcf/d in 2016, with the startup of Cheniere's Sabine Pass LNG liquefaction plant in Louisiana, which sent out its first cargo in February 2016. EIA projects gross LNG exports will average 1.3 Bcf/d in 2017, as Sabine Pass ramps up its capacity.

**Natural Gas Inventories.** Natural gas inventories in March ended at 2,492 Bcf, the highest end-of-withdrawal-season level on record. The first significant inventory increase of the injection season occurred the week ending April 22, with a 73 Bcf build. For the past several weeks, injections have been somewhat lower than the previous five-year (2011–15) average. Looking to the start of next winter, EIA forecasts natural gas inventories to be 4,161 Bcf at the end of

October 2016, which would be the highest level on record to begin the heating season. Although EIA projects lower-than-average injections, the record-high starting point of the injection season allows for a projected end-of-October record high.

**Natural Gas Prices.** The Henry Hub natural gas spot price averaged $1.92/MMBtu in May, unchanged from the average price in April. Through the 2015–16 winter, prices remained relatively low because of lower demand as a result of warmer-than-normal temperatures, record inventory levels, and production growth. EIA expects natural gas prices will gradually rise through the summer, as demand from the electric power sector increases, but forecast prices remain lower than they were last summer. Monthly average Henry Hub spot prices are forecast to remain lower than $3.00/MMBtu through the end of 2016. Forecast Henry Hub natural gas prices average $2.22/MMBtu in 2016 and $2.96/MMBtu in 2017.

Natural gas futures contracts for September 2016 delivery that were traded during the five-day period ending June 2 averaged $2.42/MMBtu. Current options and futures prices imply that market participants place the lower and upper bounds for the 95% confidence interval for September 2016 contracts at $1.64/MMBtu and $3.58/MMBtu, respectively. In early June 2015, the natural gas futures contract for September 2015 delivery averaged $2.69/MMBtu, and the corresponding lower and upper limits of the 95% confidence interval were $1.79/MMBtu and $4.03/MMBtu.

## Coal

**Coal Supply.** U.S. coal production in May was 50 million short tons (MMst), a 4 MMst (10%) increase from the previous month but 19 MMst (28%) lower than in May 2015. Forecast coal production is expected to decrease by 155 MMst (17%) in 2016, which would be the largest decline in terms of both tons and percentage since data collection began in 1949. In 2016, forecast coal production in the Appalachian region and in the Western region declines by 18% and by 19%, respectively, while Interior region production declines by 11%. In 2017, total U.S. coal production is expected to increase by 27 MMst (4%).

According to the most recent data, electric power sector coal stockpiles were 194 MMst in March, a 5 MMst (3%) increase from February. This March stock build deviates from the normal seasonal pattern where stocks decrease during the winter months, and end-of-March coal stocks were at high levels. Warmer-than-normal temperatures experienced throughout the United States in March 2016 (and the winter as a whole) and coal's continuing loss of market share to natural gas for electric power generation contributed to the increase in coal stockpiles. March stocks were 25% (39 MMst) higher than the March 2015 level.

**Coal Consumption.** Coal consumption in the electric power sector, which accounts for more than 90% of total U.S. coal consumption, is forecast to decline by 72 MMst (10%) in 2016. The decline is a result of competition with low-priced natural gas and from warmer-than-normal winter weather in the first quarter of the year that reduced overall electricity generation. Coal consumption in the electric power sector is forecast to increase by 27 MMst (4%) in 2017, mostly because of rising natural gas prices coupled with increases in electricity generation.

Retirements of coal-fired power plants reduce coal-fired generation capacity in the forecast period, primarily in 2016. The retirements are the result of increased competition with natural gas generation and the industry response to the implementation of the U.S. Environmental Protection Agency's (EPA) Mercury and Air Toxics Standards (MATS).

**Coal Trade.** Slower growth in global coal demand and lower international coal prices have contributed to a decline in U.S. coal exports. Lower mining costs, cheaper transportation costs, and favorable exchange rates are expected to continue to provide an advantage to mines in other major coal-exporting countries compared with U.S. producers.

Coal exports in March were 5 MMst, up 15% from February but 32% lower than the amount exported in March 2015. EIA forecasts U.S. coal exports to decline by 8 MMst (10%) in 2016 and by 8 MMst (12%) in 2017.

Atlantic and Gulf Coast power generators are forecast to maintain their current levels of coal imports, which are primarily from Latin America. Imports are projected to be 12 MMst in 2016 and 11 MMst in 2017.

**Coal Prices.** EIA estimates the delivered coal price averaged $2.23/MMBtu in 2015. Forecast prices are $2.18/MMBtu in 2016 and $2.20/MMBtu in 2017.

## Electricity

Natural gas continues to be the leading fuel for power generation in recent months. For the first quarter of 2016, natural gas supplied 32.1% of total U.S. electricity at utility-scale power plants, and coal supplied 28.7%. These fuel shares compare with first-quarter 2015 shares of 28.6% and 36.0% for natural gas and coal, respectively. Generation by renewable energy sources (other than hydropower) have also grown. In the first quarter of 2016, renewables supplied 9.0% of total U.S. utility-scale generation, up from 6.9% in the same period in 2015.

**Electricity Consumption**. The National Oceanic and Atmospheric Administration projects U.S. cooling degree days from April 2016 through September 2016 to be 2.3% lower than the same period last year. Cooler temperatures should lead to lower use of electricity for air conditioning. EIA forecasts U.S. retail sales of electricity to the residential sector in summer 2016 will average 0.1% less than last summer. Forecast daily average U.S. residential electricity sales during 2016 are 1.6% below the 2015 level. EIA expects U.S. retail sales of electricity to the commercial and industrial sectors to grow by 0.5% and 0.2%, respectively, during 2016.

**Electricity Generation.** Total U.S. generation of electricity is forecast to average 11,140 gigawatthours per day (GWh/d) in 2016, which is 0.5% lower than total generation in 2015. Sustained low natural gas prices have led power generators to significantly expand the share of electricity produced by that fuel. EIA expects natural gas to supply 34.4% of total generation in 2016, up from 32.7% last year. This increase is displacing coal generation, whose share of generation is expected to fall from 33.2% last year to 29.9% in 2016. The forecast increase in

natural gas prices in 2017 contributes to the forecast electricity generation share for natural gas falling slightly to 33.3% in 2017 and the coal share rising to 30.9%.

**Electricity Retail Prices.** EIA expects the U.S. retail price of electricity for the residential sector in June to average 13.0 cents per kilowatthour (kWh), with the highest price at 18.4 cents/kWh in New England, and the lowest price at 11.0 cents/kWh in the East South Central. The U.S. residential electricity price averaged 12.7 cents/kWh in 2015 and is expected to stay about the same in 2016 and then rise 2.5% to an annual average of 13.0 cents/kWh in 2017.

## Renewables and Carbon Dioxide Emissions

**Electricity and Heat Generation from Renewables**. EIA expects total renewables used in the electric power sector to increase by 13.0% in 2016 and by 3.3% in 2017. Forecast hydropower generation in the electric power sector increases by 11.2% in 2016 and then falls by 3.4% in 2017. Generation from renewables other than hydropower is forecast to grow by 14.5% in 2016 and by 8.9% in 2017.

EIA expects that from 2015 to 2017, utility-scale solar photovoltaic (PV) capacity will grow by about 14 gigawatts (GW). States leading in utility-scale solar capacity additions are California, Nevada, North Carolina, Texas, and Georgia. According to EIA's Electric Power Monthly, electricity generation from utility-scale PV in 2015 exceeded generation from wind in California for the first time. Forecast utility-scale solar power generation averages 1.2% of total U.S. electricity generation in 2017.

Wind capacity, which starts from a significantly larger installed capacity base than solar, grew by 13% in 2015, and it is forecast to increase by 10% in both 2016 and 2017. In 2017, wind generation accounts for almost 6% of total electricity generation.

**Liquid Biofuels.** On November 30, 2015, EPA finalized a rule setting Renewable Fuel Standard (RFS) volumes for 2014 through 2016, and on May 18, 2016, EPA released the proposed RFS volumes for 2017 along with finalized biomass-based diesel volumes for 2017. EIA used both the final and proposed volumes to develop the current STEO forecast through 2017. Ethanol production averaged almost 970,000 b/d in 2015, and it is forecast to average about 980,000 b/d in 2016 and 2017. Ethanol consumption averaged about 910,000 b/d in 2015, and it is forecast to average about 930,000 b/d in both 2016 and 2017. This level of consumption results in the ethanol share of the total gasoline pool averaging 10.0% in both 2016 and 2017. EIA does not expect significant increases in E15 or E85 consumption over the forecast period.

EIA expects the largest effect of the RFS targets will be on biomass-based diesel consumption, which includes both biodiesel and renewable diesel and helps to meet the RFS targets for use of biomass-based diesel, advanced biofuel, and total renewable fuel. Biodiesel production averaged 82,000 b/d in 2015 and is forecast to average 100,000 b/d in 2016 and 106,000 b/d in 2017. Net imports of biomass-based diesel are expected to rise from 29,000 b/d in 2015 to 41,000 b/d in 2016 and to 47,000 b/d in 2017. EIA assumes 10,000 b/d of domestic renewable

diesel consumption will be used to help meet the biomass-based diesel and advanced biofuels RFS targets in both 2016 and 2017.

**Energy-Related Carbon Dioxide Emissions.** EIA estimates that energy-related emissions of carbon dioxide decreased by 2.8% in 2015. Emissions are forecast to decrease by 1.7% in 2016 and then to increase by 1.4% in 2017. These forecasts are sensitive to assumptions about weather and economic growth.

## U.S. Economic Assumptions

**Recent Economic Indicators.** The Bureau of Economic Analysis reported that real gross domestic product (GDP) increased at an annual rate of 0.8% in the first quarter of 2016, up from the initial estimate of 0.5%. The increase in real GDP in the first quarter reflected contributions from personal consumption expenditures and residential fixed investment.

EIA used the May 2016 version of the IHS macroeconomic model with EIA's energy price forecasts as model inputs to develop the economic projections in the STEO.

**Production, Income, and Employment.** Forecast real GDP growth reaches 1.7% in 2016—below the 2.0% forecast in last month's STEO—and 3.0% in 2017. Real disposable income grows by 2.8% in 2016 and by 3.3% in 2017. Total industrial production falls by 0.9% in 2016, but rises by 3.5% in 2017. Forecast growth in nonfarm employment is 1.9% in 2016 and 1.5% in 2017.

**Expenditures.** Forecast private real fixed investment growth averages 1.9% and 5.8% in 2016 and 2017, respectively. Real consumption expenditures grow faster than real GDP in 2016, at 2.7%, and 2017, at 3.2%. Export growth is 0.0% and 3.6% over the same two years, while import growth is 1.9% in 2016 and 6.2% in 2017. Total government expenditures rise 1.3% in 2016 and 1.1% in 2017.

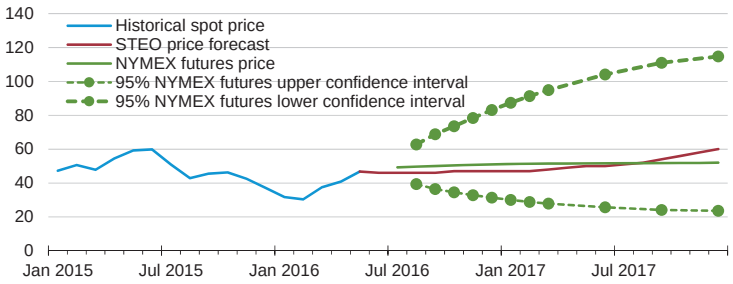
U.S. Energy Information Administration
*Independent Statistics & Analysis*

# Short-Term Energy Outlook

Chart Gallery for June 2016

## West Texas Intermediate (WTI) Crude Oil Price

dollars per barrel

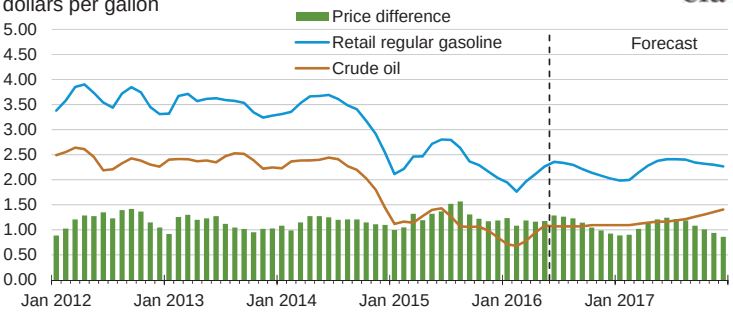



Note: Confidence interval derived from options market information for the 5 trading days ending Jun 2, 2016. Intervals not calculated for months with sparse trading in near-the-money options contracts.

Source: Short-Term Energy Outlook, June 2016.

## U.S. Gasoline and Crude Oil Prices

dollars per gallon

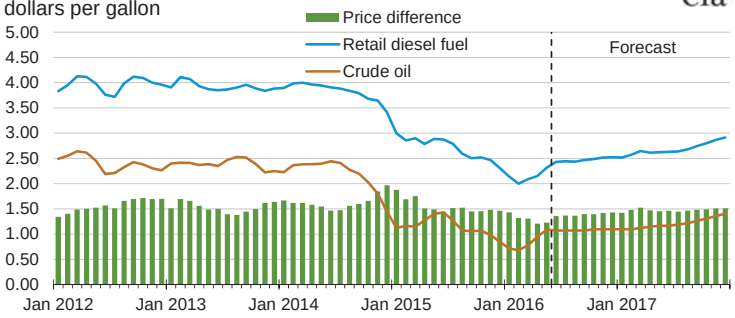



Crude oil price is composite refiner acquisition cost. Retail prices include state and federal taxes.

Source: Short-Term Energy Outlook, June 2016.

## U.S. Diesel Fuel and Crude Oil Prices

dollars per gallon

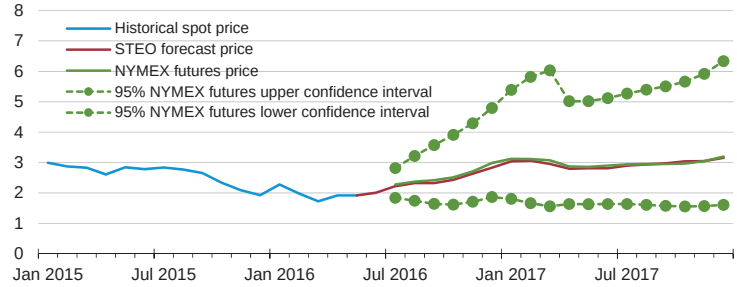



Crude oil price is composite refiner acquisition cost. Retail prices include state and federal taxes.

Source: Short-Term Energy Outlook, June 2016.

## Henry Hub Natural Gas Price

dollars per million Btu

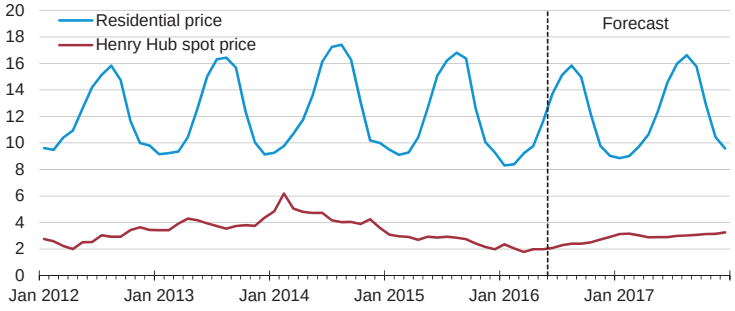



Note: Confidence interval derived from options market information for the 5 trading days ending Jun 2, 2016. Intervals not calculated for months with sparse trading in near-the-money options contracts.

Source: Short-Term Energy Outlook, June 2016.

## U.S. Natural Gas Prices

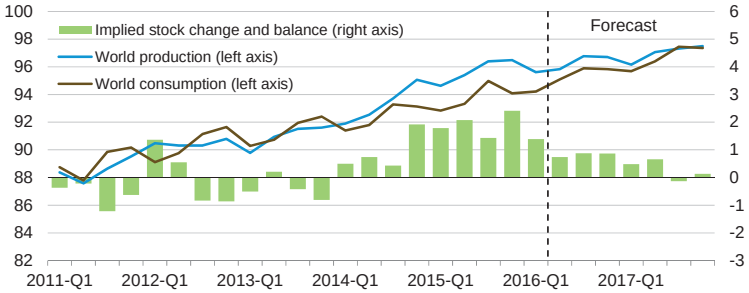
dollars per thousand cubic feet




Source: Short-Term Energy Outlook, June 2016.

## World Liquid Fuels Production and Consumption Balance

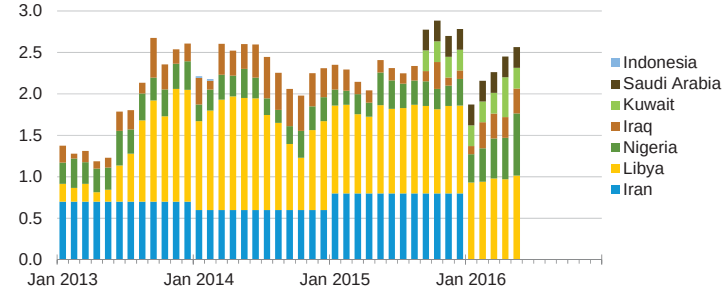
million barrels per day (MMb/d)




Source: Short-Term Energy Outlook, June 2016.

## Estimated Historical Unplanned OPEC Crude Oil Production Outages

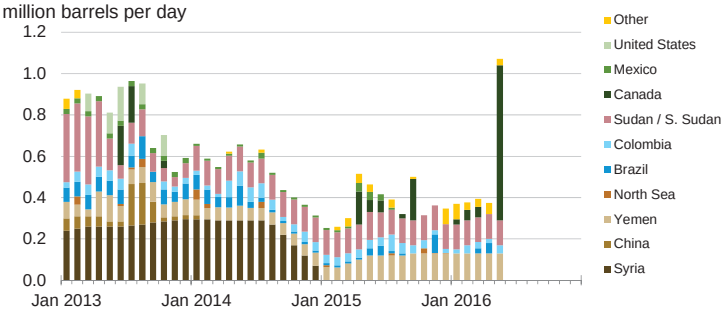
million barrels per day




Source: Short-Term Energy Outlook, June 2016.

## Estimated Historical Unplanned Non-OPEC Liquid Fuels Production Outages

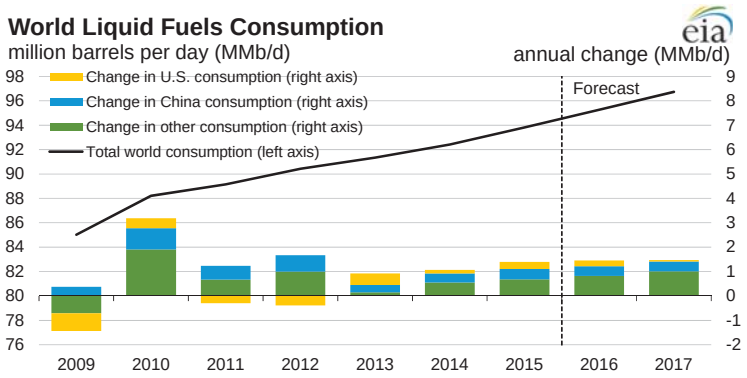
million barrels per day




Source: Short-Term Energy Outlook, June 2016.

## World Liquid Fuels Consumption

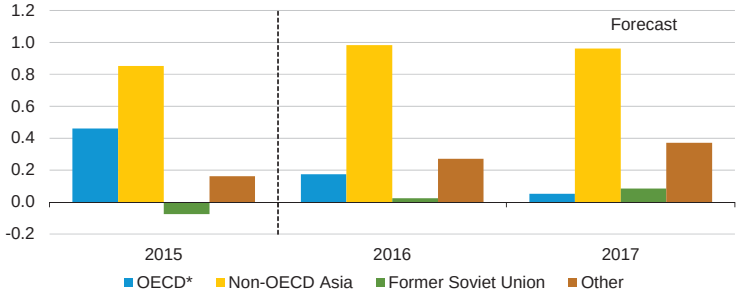
million barrels per day (MMb/d)




Source: Short-Term Energy Outlook, June 2016.

## World Liquid Fuels Consumption Growth

million barrels per day

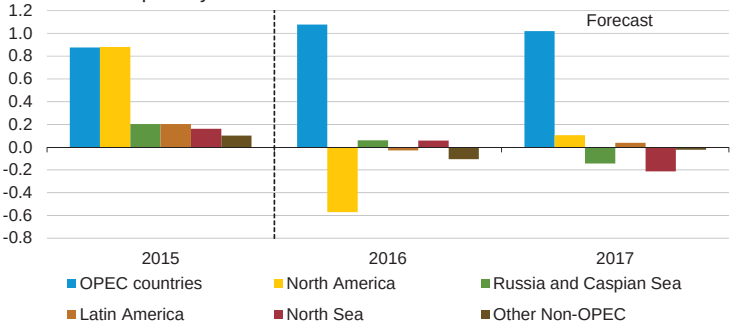



* Countries belonging to the Organization for Economic Cooperation and Development

Source: Short-Term Energy Outlook, June 2016.

## World Crude Oil and Liquid Fuels Production Growth

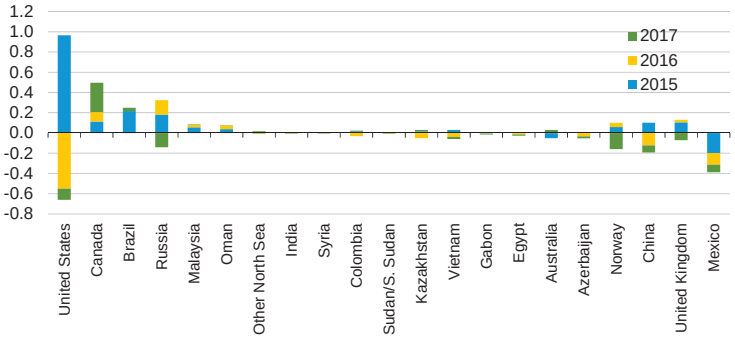
million barrels per day




Source: Short-Term Energy Outlook, June 2016.

## Non-OPEC Crude Oil and Liquid Fuels Production Growth

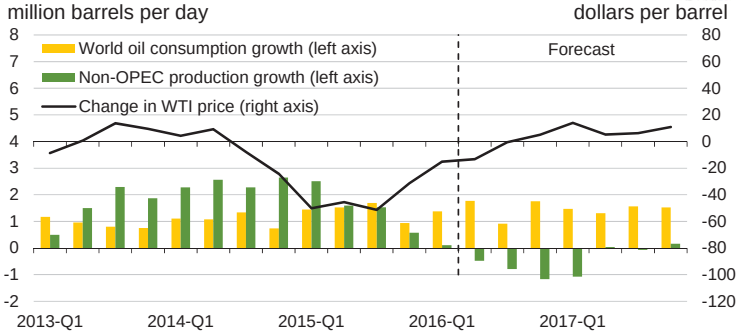
million barrels per day




Source: Short-Term Energy Outlook, June 2016.

## World Consumption and Non-OPEC Production Growth

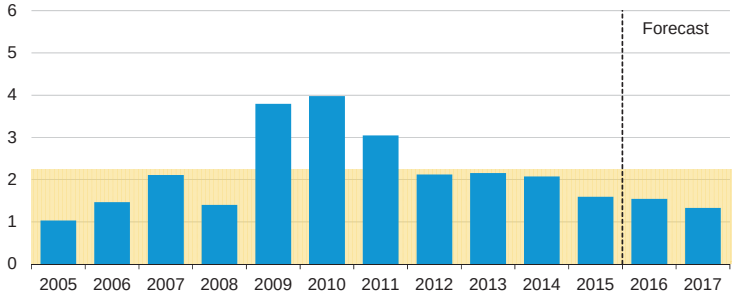
million barrels per day | dollars per barrel




Source: Short-Term Energy Outlook, June 2016.

## OPEC surplus crude oil production capacity

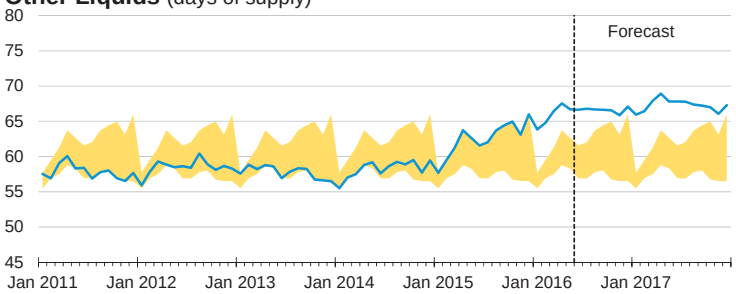
million barrels per day




Note: Shaded area represents 2005-2015 average (2.3 million barrels per day).

Source: Short-Term Energy Outlook, June 2016.

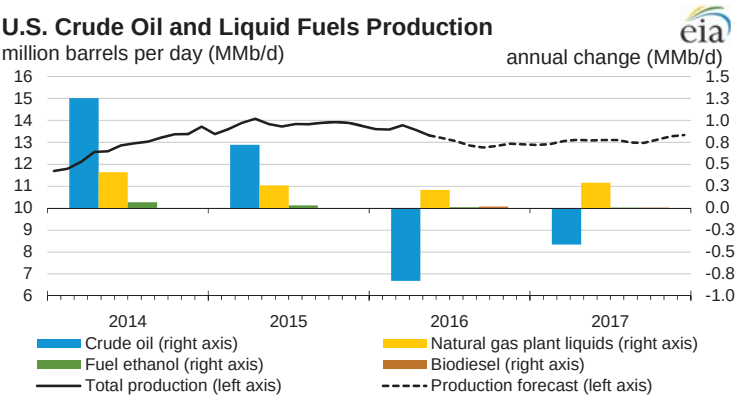
## OECD Commercial Stocks of Crude Oil and Other Liquids (days of supply)




Note: Colored band around days of supply of crude oil and other liquids stocks represents the range between the minimum and maximum from Jan. 2011 - Dec. 2015.

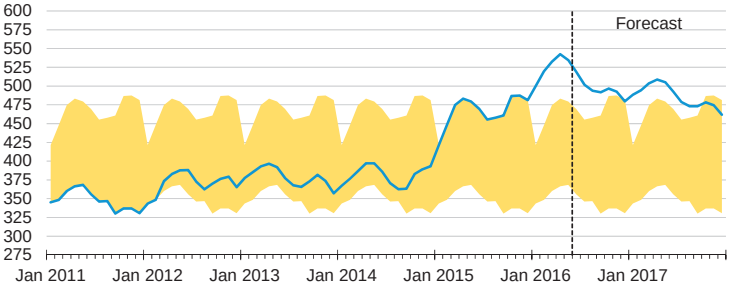
Source: Short-Term Energy Outlook, June 2016.

## U.S. Crude Oil and Liquid Fuels Production




Source: Short-Term Energy Outlook, June 2016.

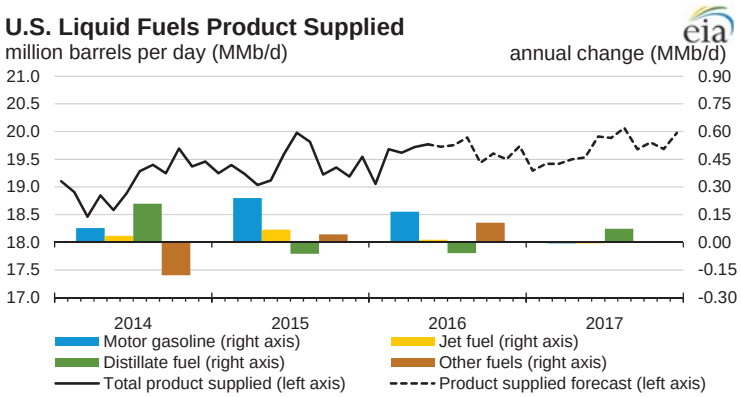
## U.S. Commercial Crude Oil Stocks




Note: Colored band around storage levels represents the range between the minimum and maximum from Jan. 2011 - Dec. 2015.

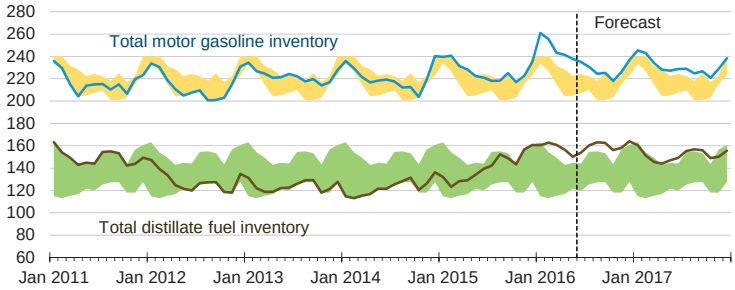
Source: Short-Term Energy Outlook, June 2016.

## U.S. Liquid Fuels Product Supplied




Source: Short-Term Energy Outlook, June 2016.

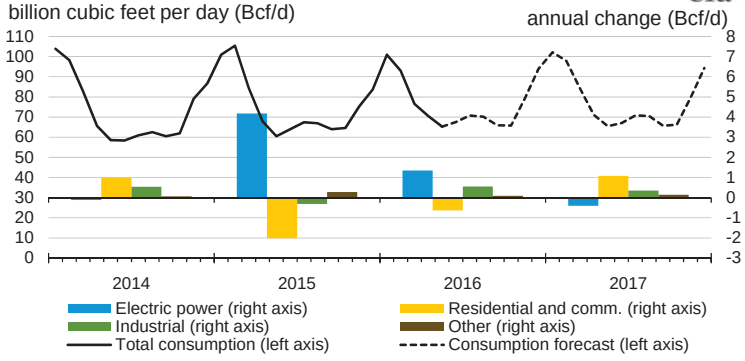
## U.S. Gasoline and Distillate Inventories




Note: Colored bands around storage levels represent the range between the minimum and maximum from Jan. 2011 - Dec. 2015.

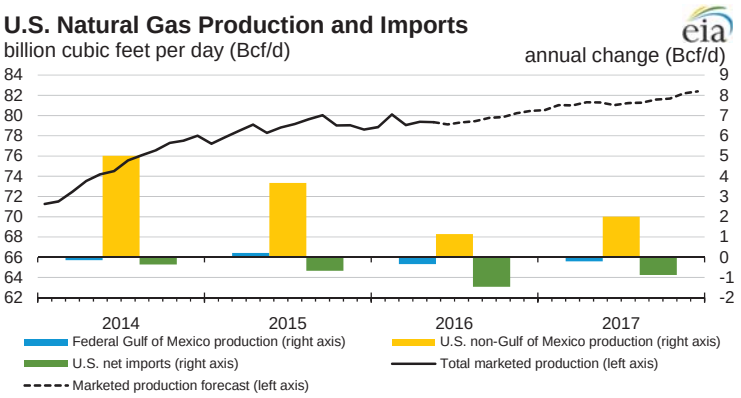
Source: Short-Term Energy Outlook, June 2016.

## U.S. Natural Gas Consumption



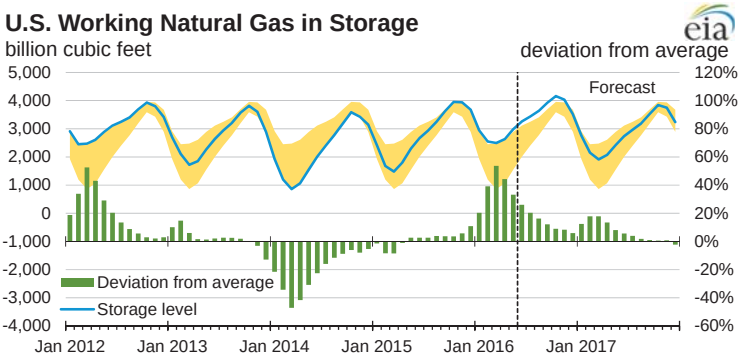

Source: Short-Term Energy Outlook, June 2016.

## U.S. Natural Gas Production and Imports



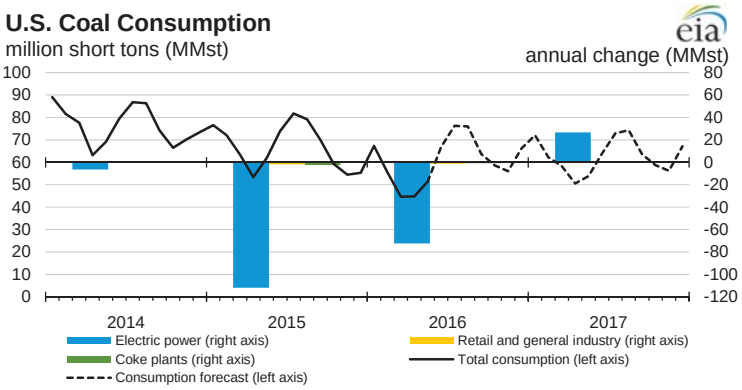

Source: Short-Term Energy Outlook, June 2016.

## U.S. Working Natural Gas in Storage




Note: Colored band around storage levels represents the range between the minimum and maximum from Jan. 2011 - Dec. 2015.
Source: Short-Term Energy Outlook, June 2016.

## U.S. Coal Consumption

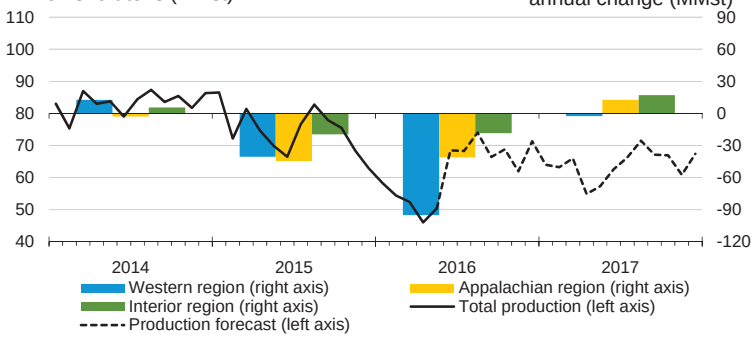



Source: Short-Term Energy Outlook, June 2016.

## U.S. Coal Production

million short tons (MMst)

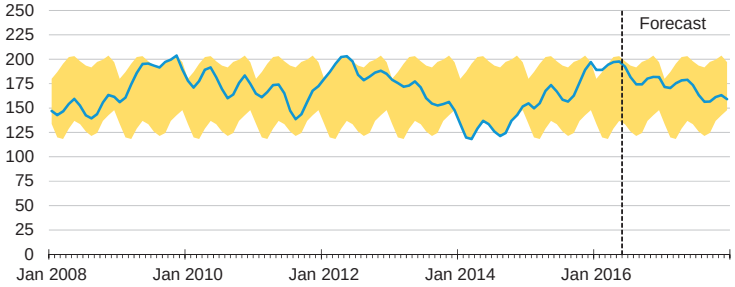
annual change (MMst)




Source: Short-Term Energy Outlook, June 2016.

## U.S. Electric Power Coal Stocks

million short tons



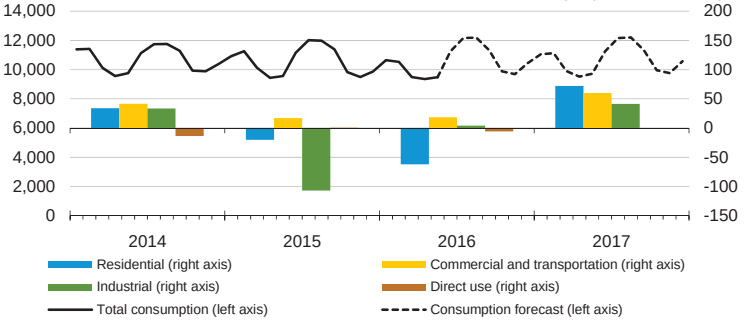

Note: Colored band around stock levels represents the range between the minimum and maximum from Jan. 2008 - Dec. 2015.

Source: Short-Term Energy Outlook, June 2016.

## U.S. Electricity Consumption

million kilowatthours per day (kWh/d)

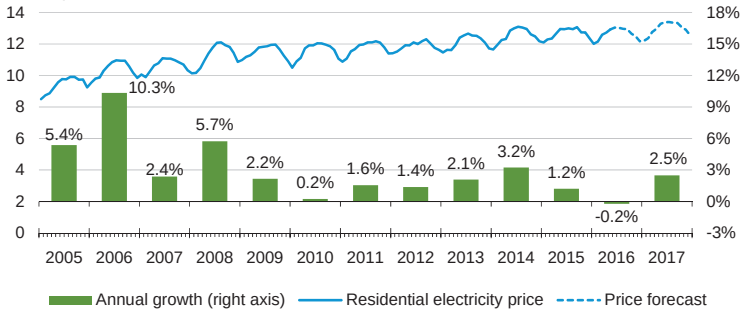
annual change (million kWh/d)




Source: Short-Term Energy Outlook, June 2016.

## U.S. Residential Electricity Price

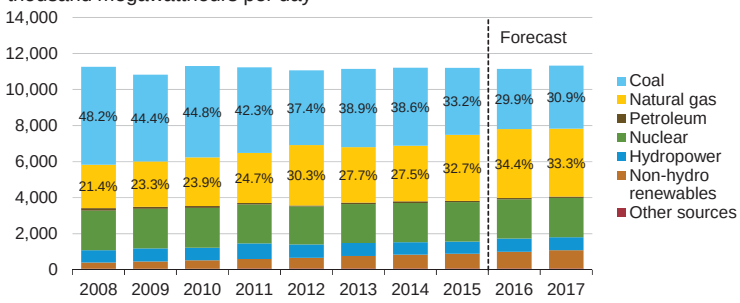
cents per kilowatthour




Source: Short-Term Energy Outlook, June 2016.

## U.S. Electricity Generation by Fuel, All Sectors

thousand megawatthours per day

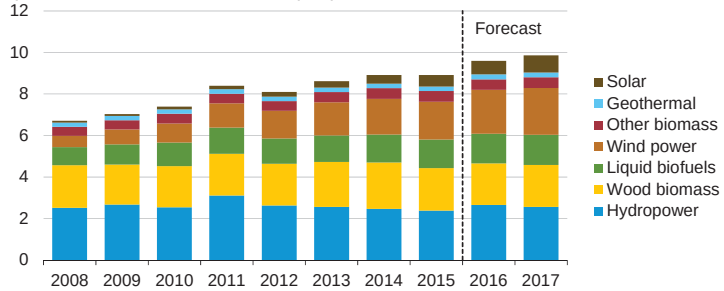



Note: Labels show percentage share of total generation provided by coal and natural gas.

Source: Short-Term Energy Outlook, June 2016.

## U.S. Renewable Energy Supply

quadrillion British thermal units (Btu)

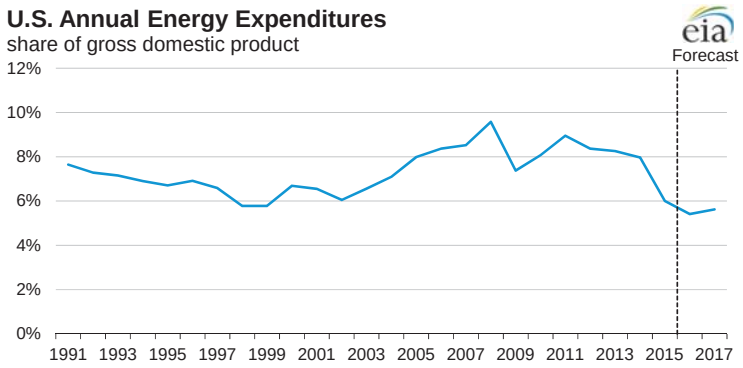



Note: Hydropower excludes pumped storage generation. Liquid biofuels include ethanol and biodiesel. Other biomass includes municipal waste from biogenic sources, landfill gas, and other non-wood waste.

Source: Short-Term Energy Outlook, June 2016.

## U.S. Annual Energy Expenditures

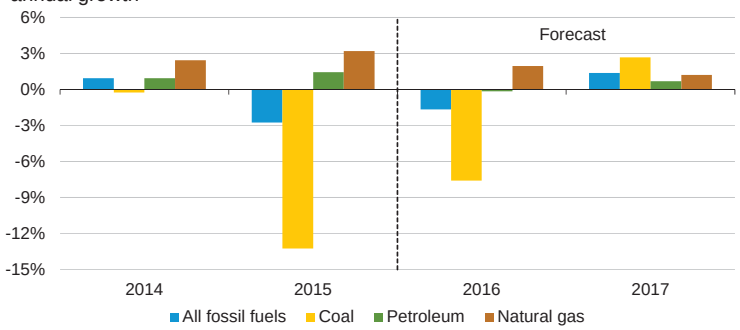
share of gross domestic product




Source: Short-Term Energy Outlook, June 2016.

## U.S. Energy-Related Carbon Dioxide Emissions

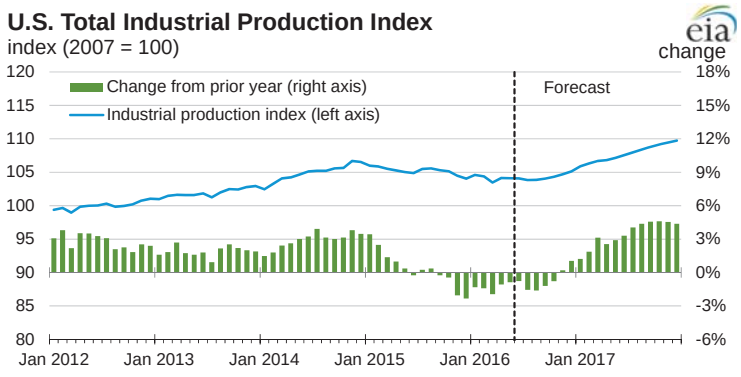
annual growth




Source: Short-Term Energy Outlook, June 2016.

## U.S. Total Industrial Production Index

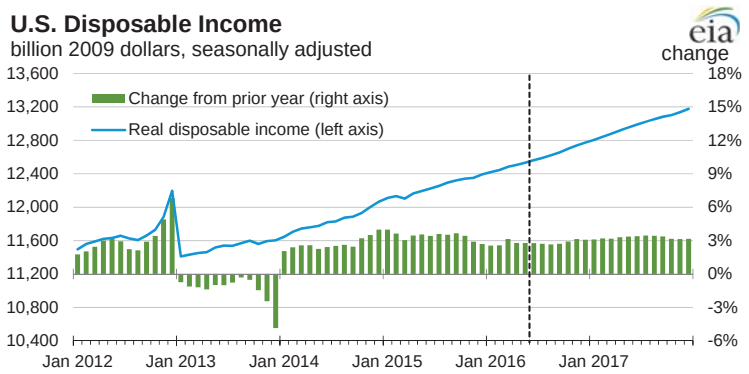
index (2007 = 100)




Source: Short-Term Energy Outlook, June 2016.

## U.S. Disposable Income

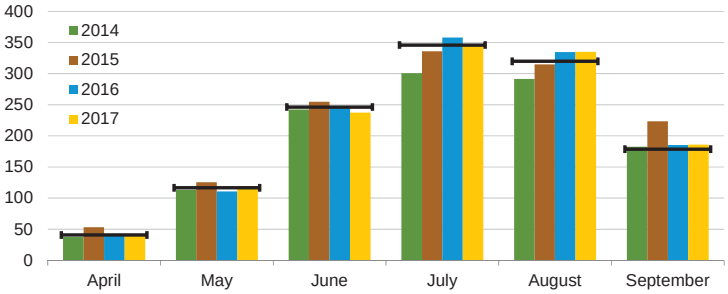
billion 2009 dollars, seasonally adjusted




Source: Short-Term Energy Outlook, June 2016.

## U.S. Summer Cooling Degree Days

population-weighted

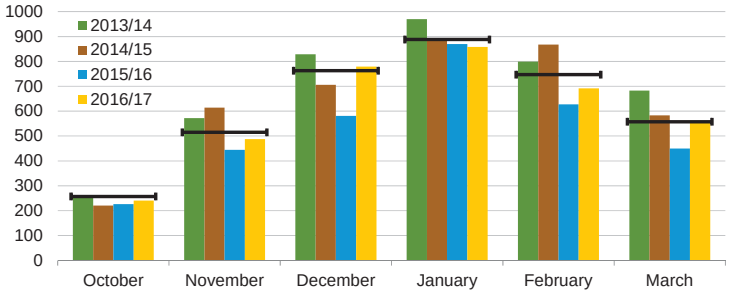



Note: EIA calculations based on from the National Oceanic and Atmospheric Administration data. Horizontal lines indicate each month's prior 10-year average (2006-2015). Projections reflect NOAA's 14-16 month outlook.

Source: Short-Term Energy Outlook, June 2016.

## U.S. Winter Heating Degree Days

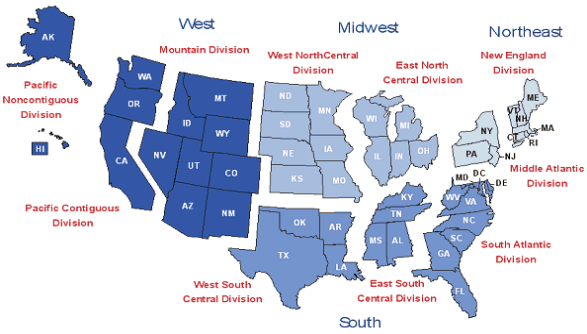
population-weighted




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

Source: Short-Term Energy Outlook, June 2016.

## U.S. Census Regions and Divisions




Source: Short-Term Energy Outlook, June 2016.

## Table SF01. U.S. Motor Gasoline Summer Outlook

U.S. Energy Information Administration | Short-Term Energy Outlook - June 2016

| | 2015 | | | 2016 | | | Year-over-year Change (percent) | | |
|---|---|---|---|---|---|---|---|---|---|
| | Q2 | Q3 | Season | Q2 | Q3 | Season | Q2 | Q3 | Season |
| **Nominal Prices** (dollars per gallon) | | | | | | | | | |
| WTI Crude Oil (Spot) [a] | **1.38** | **1.11** | **1.24** | *1.06* | *1.10* | *1.08* | *-23.0* | *-1.2* | *-13.2* |
| Brent Crude Oil Price (Spot) | **1.47** | **1.20** | **1.33** | *1.07* | *1.10* | *1.08* | *-27.4* | *-8.8* | *-18.9* |
| U.S. Refiner Average Crude Oil Cost | **1.37** | **1.14** | **1.25** | *1.04* | *1.07* | *1.05* | *-24.2* | *-5.6* | *-15.7* |
| Wholesale Gasoline Price [b] | **2.01** | **1.84** | **1.93** | *1.58* | *1.55* | *1.57* | *-21.5* | *-15.9* | *-18.8* |
| Wholesale Diesel Fuel Price [b] | **1.89** | **1.61** | **1.75** | *1.40* | *1.48* | *1.44* | *-25.7* | *-8.6* | *-17.7* |
| Regular Gasoline Retail Price [c] | **2.67** | **2.60** | **2.63** | *2.25* | *2.29* | *2.27* | *-15.7* | *-12.2* | *-13.9* |
| Diesel Fuel Retail Price [c] | **2.85** | **2.63** | **2.74** | *2.30* | *2.45* | *2.37* | *-19.3* | *-6.9* | *-13.3* |
| **Gasoline Consumption/Supply** (million barrels per day) | | | | | | | | | |
| Total Consumption | **9.260** | **9.395** | **9.328** | *9.535* | *9.468* | *9.501* | *3.0* | *0.8* | *1.9* |
| Total Refinery and Blender Net Supply [d] | **8.022** | **8.305** | **8.164** | *8.328* | *8.647* | *8.489* | *3.8* | *4.1* | *4.0* |
| Fuel Ethanol Blending | **0.919** | **0.935** | **0.927** | *0.937* | *0.945* | *0.941* | *2.0* | *1.1* | *1.5* |
| Total Stock Withdrawal [e] | **0.115** | **-0.044** | **0.035** | *0.091* | *0.108* | *0.099* | | | |
| Net Imports [e] | **0.204** | **0.200** | **0.202** | *0.179* | *-0.232* | *-0.027* | *-12.4* | *-216.0* | *-113.5* |
| Refinery Utilization (percent) | **92.8** | **93.2** | **93.0** | *90.7* | *93.0* | *91.9* | | | |
| **Gasoline Stocks, Including Blending Components** (million barrels) | | | | | | | | | |
| Beginning | **231.5** | **221.0** | **231.5** | *243.3* | *235.1* | *243.3* | | | |
| Ending | **221.0** | **225.1** | **225.1** | *235.1* | *225.2* | *225.2* | | | |
| **Economic Indicators** (annualized billion 2000 dollars) | | | | | | | | | |
| Real GDP | **16,334** | **16,414** | **16,374** | *16,565* | *16,660* | *16,612* | *1.4* | *1.5* | *1.5* |
| Real Income | **12,194** | **12,290** | **12,242** | *12,534* | *12,621* | *12,577* | *2.8* | *2.7* | *2.7* |

[a] Spot Price of West Texas Intermediate (WTI) crude oil.

[b] Price product sold by refiners to resellers.

[c] Average pump price including taxes.

[d] Finished gasoline net production minus gasoline blend components net inputs minus fuel ethanol blending and supply adjustment.

[e] Total stock withdrawal and net imports includes both finished gasoline and gasoline blend components.

GDP = gross domestic product.

Notes: Minor discrepancies with other Energy Information Administration (EIA) published historical data are due to rounding. Historical data are printed in bold. Forecasts are in italic. The forecasts were generated by simulation of the Short-Term Integrated Forecasting System.

Sources: Historical data: latest data available from: EIA, *Petroleum Supply Monthly* , DOE/EIA-0109; Monthly Energy Review, DOE/EIA-0035; U.S. Department of Commerce, Bureau of Economic Analysis (GDP and income); Reuters News Service (WTI and Brent crude oil spot prices). Macroeconomic projections are based on IHS Global Insight Macroeconomic Forecast Model.

## Table SF02 Average Summer Residential Electricity Usage, Prices and Expenditures

U.S. Energy Information Administration | Short-Term Energy Outlook - June 2016

| | 2011 | 2012 | 2013 | 2014 | 2015 | Forecast 2016 | Change from 2015 |
|---|---|---|---|---|---|---|---|
| **United States** | | | | | | | |
| Usage (kWh) | 3,444 | 3,354 | 3,129 | 3,037 | 3,153 | **3,156** | 0.1% |
| Price (cents/kWh) | 12.06 | 12.09 | 12.58 | 13.04 | 12.95 | **13.01** | 0.4% |
| Expenditures | $415 | $405 | $393 | $396 | $408 | **$410** | 0.5% |
| **New England** | | | | | | | |
| Usage (kWh) | 2,122 | 2,188 | 2,173 | 1,930 | 1,993 | **2,042** | 2.5% |
| Price (cents/kWh) | 15.85 | 15.50 | 16.04 | 17.63 | 18.64 | **17.87** | -4.1% |
| Expenditures | $336 | $339 | $348 | $340 | $372 | **$365** | -1.8% |
| **Mid-Atlantic** | | | | | | | |
| Usage (kWh) | 2,531 | 2,548 | 2,447 | 2,234 | 2,372 | **2,423** | 2.1% |
| Price (cents/kWh) | 16.39 | 15.63 | 16.39 | 16.90 | 16.52 | **16.78** | 1.6% |
| Expenditures | $415 | $398 | $401 | $378 | $392 | **$406** | 3.8% |
| **East North Central** | | | | | | | |
| Usage (kWh) | 2,975 | 3,048 | 2,618 | 2,505 | 2,556 | **2,719** | 6.4% |
| Price (cents/kWh) | 12.17 | 12.08 | 12.57 | 13.24 | 13.20 | **13.54** | 2.6% |
| Expenditures | $362 | $368 | $329 | $332 | $337 | **$368** | 9.1% |
| **West North Central** | | | | | | | |
| Usage (kWh) | 3,517 | 3,547 | 3,098 | 3,040 | 3,054 | **3,135** | 2.7% |
| Price (cents/kWh) | 11.16 | 11.50 | 12.25 | 12.42 | 12.66 | **13.05** | 3.1% |
| Expenditures | $393 | $408 | $380 | $378 | $387 | **$409** | 5.8% |
| **South Atlantic** | | | | | | | |
| Usage (kWh) | 4,277 | 4,001 | 3,771 | 3,776 | 3,957 | **3,873** | -2.1% |
| Price (cents/kWh) | 11.48 | 11.65 | 11.76 | 12.09 | 12.10 | **11.97** | -1.1% |
| Expenditures | $491 | $466 | $443 | $457 | $479 | **$463** | -3.2% |
| **East South Central** | | | | | | | |
| Usage (kWh) | 4,750 | 4,467 | 4,078 | 4,033 | 4,296 | **4,254** | -1.0% |
| Price (cents/kWh) | 10.28 | 10.36 | 10.71 | 11.09 | 10.90 | **10.94** | 0.4% |
| Expenditures | $488 | $463 | $437 | $447 | $468 | **$465** | -0.6% |
| **West South Central** | | | | | | | |
| Usage (kWh) | 5,231 | 4,781 | 4,507 | 4,252 | 4,518 | **4,415** | -2.3% |
| Price (cents/kWh) | 10.64 | 10.27 | 10.94 | 11.46 | 11.05 | **10.92** | -1.1% |
| Expenditures | $557 | $491 | $493 | $487 | $499 | **$482** | -3.4% |
| **Mountain** | | | | | | | |
| Usage (kWh) | 3,322 | 3,440 | 3,380 | 3,228 | 3,304 | **3,331** | 0.8% |
| Price (cents/kWh) | 11.29 | 11.55 | 11.97 | 12.32 | 12.36 | **12.45** | 0.7% |
| Expenditures | $375 | $397 | $405 | $398 | $408 | **$415** | 1.6% |
| **Pacific** | | | | | | | |
| Usage (kWh) | 2,022 | 2,079 | 2,036 | 2,090 | 2,056 | **2,000** | -2.7% |
| Price (cents/kWh) | 13.22 | 13.78 | 14.47 | 15.17 | 15.34 | **15.49** | 1.0% |
| Expenditures | $267 | $286 | $295 | $317 | $315 | **$310** | -1.8% |

Notes: kWh = kilowatthours. All data cover the 3-month period of June-August of each year. Usage amounts represent total residential retail electricity sales per customer. Prices and expenditures are not adjusted for inflation.

Source: EIA Form-861 and Form-826 databases, Short-Term Energy Outlook.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - June 2016

| | 2015 | | | | 2016 | | | | 2017 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2015 | 2016 | 2017 |
| **Energy Supply** | | | | | | | | | | | | | | | |
| Crude Oil Production (a) | | | | | | | | | | | | | | | |
| (million barrels per day) | **9.48** | **9.50** | **9.43** | **9.32** | **9.15** | *8.78* | *8.26* | *8.23* | *8.23* | *8.20* | *8.07* | *8.26* | **9.43** | *8.60* | *8.19* |
| Dry Natural Gas Production | | | | | | | | | | | | | | | |
| (billion cubic feet per day) | **73.41** | **74.03** | **74.85** | **73.96** | **74.43** | *74.37* | *74.56* | *75.20* | *75.82* | *76.16* | *76.30* | *76.97* | **74.06** | *74.64* | *76.32* |
| Coal Production | | | | | | | | | | | | | | | |
| (million short tons) | **240** | **211** | **237** | **207** | **165** | *165* | *209* | *202* | *193* | *175* | *205* | *195* | **895** | *741* | *768* |
| **Energy Consumption** | | | | | | | | | | | | | | | |
| Liquid Fuels | | | | | | | | | | | | | | | |
| (million barrels per day) | **19.29** | **19.25** | **19.68** | **19.36** | **19.45** | *19.74* | *19.70* | *19.61* | *19.37* | *19.65* | *19.88* | *19.82* | **19.40** | *19.62* | *19.68* |
| Natural Gas | | | | | | | | | | | | | | | |
| (billion cubic feet per day) | **96.65** | **64.09** | **66.11** | **74.54** | **90.13** | *67.77* | *69.01* | *79.67* | *94.63* | *67.82* | *69.02* | *80.01* | **75.26** | *76.63* | *77.81* |
| Coal (b) | | | | | | | | | | | | | | | |
| (million short tons) | **212** | **189** | **231** | **169** | **168** | *163* | *216* | *181* | *193* | *168* | *211* | *182* | **802** | *727* | *754* |
| Electricity | | | | | | | | | | | | | | | |
| (billion kilowatt hours per day) | **10.75** | **10.05** | **11.80** | **9.73** | **10.21** | *10.02* | *11.90* | *10.01* | *10.67* | *10.16* | *11.91* | *10.10* | **10.58** | *10.54* | *10.71* |
| Renewables (c) | | | | | | | | | | | | | | | |
| (quadrillion Btu) | **2.43** | **2.43** | **2.34** | **2.47** | **2.65** | *2.75* | *2.49* | *2.50* | *2.57* | *2.85* | *2.64* | *2.61* | **9.67** | *10.39* | *10.68* |
| Total Energy Consumption (d) | | | | | | | | | | | | | | | |
| (quadrillion Btu) | **26.35** | **22.99** | **24.45** | **23.74** | **25.28** | *22.82* | *24.24* | *24.33* | *25.61* | *23.15* | *24.39* | *24.59* | **97.53** | *96.67* | *97.74* |
| **Energy Prices** | | | | | | | | | | | | | | | |
| Crude Oil West Texas Intermediate Spot | | | | | | | | | | | | | | | |
| (dollars per barrel) | **48.48** | **57.85** | **46.55** | **41.94** | **33.35** | *44.52* | *46.00* | *47.00* | *47.37* | *49.69* | *52.32* | *57.94* | **48.67** | *42.83* | *51.82* |
| Natural Gas Henry Hub Spot | | | | | | | | | | | | | | | |
| (dollars per million Btu) | **2.90** | **2.75** | **2.76** | **2.12** | **2.00** | *1.95* | *2.29* | *2.63* | *3.02* | *2.81* | *2.94* | *3.08* | **2.63** | *2.22* | *2.96* |
| Coal | | | | | | | | | | | | | | | |
| (dollars per million Btu) | **2.27** | **2.25** | **2.22** | **2.15** | **2.13** | *2.19* | *2.22* | *2.17* | *2.17* | *2.21* | *2.24* | *2.20* | **2.23** | *2.18* | *2.20* |
| **Macroeconomic** | | | | | | | | | | | | | | | |
| Real Gross Domestic Product | | | | | | | | | | | | | | | |
| (billion chained 2009 dollars - SAAR) | **16,177** | **16,334** | **16,414** | **16,471** | **16,493** | *16,565* | *16,660* | *16,799* | *16,934* | *17,066* | *17,197* | *17,309* | **16,349** | *16,629* | *17,127* |
| Percent change from prior year | **2.9** | **2.7** | **2.1** | **2.0** | **1.9** | *1.4* | *1.5* | *2.0* | *2.7* | *3.0* | *3.2* | *3.0* | **2.4** | *1.7* | *3.0* |
| GDP Implicit Price Deflator | | | | | | | | | | | | | | | |
| (Index, 2009=100) | **109.1** | **109.7** | **110.0** | **110.3** | **110.5** | *110.9* | *111.4* | *111.9* | *112.6* | *113.1* | *113.6* | *114.3* | **109.8** | *111.2* | *113.4* |
| Percent change from prior year | **1.0** | **1.0** | **0.9** | **1.1** | **1.3** | *1.1* | *1.2* | *1.5* | *1.9* | *1.9* | *2.0* | *2.1* | **1.0** | *1.3* | *2.0* |
| Real Disposable Personal Income | | | | | | | | | | | | | | | |
| (billion chained 2009 dollars - SAAR) | **12,115** | **12,194** | **12,290** | **12,360** | **12,449** | *12,534* | *12,621* | *12,737* | *12,842* | *12,954* | *13,052* | *13,139* | **12,240** | *12,585* | *12,997* |
| Percent change from prior year | **3.6** | **3.5** | **3.6** | **3.0** | **2.8** | *2.8* | *2.7* | *3.0* | *3.2* | *3.4* | *3.4* | *3.2* | **3.4** | *2.8* | *3.3* |
| Manufacturing Production Index | | | | | | | | | | | | | | | |
| (Index, 2012=100) | **103.2** | **103.4** | **103.9** | **103.7** | **103.9** | *103.8* | *103.8* | *104.6* | *106.3* | *107.0* | *108.2* | *109.2* | **103.6** | *104.0* | *107.6* |
| Percent change from prior year | **2.1** | **1.1** | **0.9** | **0.1** | **0.6** | *0.4* | *-0.1* | *0.9* | *2.3* | *3.0* | *4.2* | *4.3* | **1.1** | *0.5* | *3.5* |
| **Weather** | | | | | | | | | | | | | | | |
| U.S. Heating Degree-Days | **2,340** | **442** | **49** | **1,252** | **1,947** | *482* | *64* | *1,508* | *2,112* | *484* | *66* | *1,505* | **4,084** | *4,000* | *4,167* |
| U.S. Cooling Degree-Days | **46** | **434** | **874** | **133** | **54** | *401* | *878* | *100* | *42* | *396* | *867* | *100* | **1,488** | *1,432* | *1,405* |

- = 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 - June 2016

| | 2015 | | | | 2016 | | | | 2017 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2015 | 2016 | 2017 |
| **Crude Oil** (dollars per barrel) | | | | | | | | | | | | | | | |
| West Texas Intermediate Spot Average | **48.48** | **57.85** | **46.55** | **41.94** | **33.35** | *44.52* | *46.00* | *47.00* | *47.37* | *49.69* | *52.32* | *57.94* | **48.67** | *42.83* | *51.82* |
| Brent Spot Average | **53.91** | **61.65** | **50.43** | **43.55** | **33.89** | *44.78* | *46.00* | *47.00* | *47.37* | *49.69* | *52.32* | *57.94* | **52.32** | *43.03* | *51.82* |
| U.S. Imported Average | **46.40** | **56.12** | **45.60** | **37.88** | **27.90** | *41.00* | *42.50* | *43.50* | *43.85* | *46.16* | *48.83* | *54.51* | **46.37** | *38.90* | *48.39* |
| U.S. Refiner Average Acquisition Cost | **47.98** | **57.47** | **47.68** | **40.49** | **30.50** | *43.56* | *45.00* | *46.00* | *46.35* | *48.67* | *51.30* | *57.04* | **48.41** | *41.39* | *50.91* |
| **U.S. Liquid Fuels** (cents per gallon) | | | | | | | | | | | | | | | |
| **Refiner Prices for Resale** | | | | | | | | | | | | | | | |
| Gasoline | **159** | **201** | **184** | **145** | **119** | *158* | *155* | *134* | *135* | *163* | *164* | *156* | **173** | *142* | *155* |
| Diesel Fuel | **176** | **189** | **161** | **141** | **109** | *140* | *148* | *153* | *156* | *161* | *170* | *186* | **167** | *138* | *168* |
| Heating Oil | **178** | **180** | **151** | **129** | **99** | *132* | *139* | *147* | *154* | *152* | *160* | *180* | **157** | *122* | *162* |
| **Refiner Prices to End Users** | | | | | | | | | | | | | | | |
| Jet Fuel | **172** | **186** | **156** | **138** | **107** | *134* | *144* | *149* | *153* | *156* | *165* | *182* | **162** | *134* | *164* |
| No. 6 Residual Fuel Oil (a) | **137** | **154** | **123** | **101** | **69** | *97* | *112* | *114* | *116* | *118* | *126* | *138* | **125** | *96* | *125* |
| **Retail Prices Including Taxes** | | | | | | | | | | | | | | | |
| Gasoline Regular Grade (b) | **227** | **267** | **260** | **216** | **190** | *225* | *229* | *208* | *204* | *236* | *239* | *229* | **243** | *213* | *227* |
| Gasoline All Grades (b) | **236** | **275** | **269** | **226** | **200** | *235* | *239* | *219* | *215* | *246* | *249* | *241* | **252** | *224* | *238* |
| On-highway Diesel Fuel | **292** | **285** | **263** | **243** | **208** | *230* | *245* | *251* | *258* | *262* | *269* | *286* | **271** | *234* | *269* |
| Heating Oil | **288** | **276** | **247** | **224** | **195** | *210* | *229* | *242* | *254* | *250* | *256* | *277* | **265** | *216* | *261* |
| **Natural Gas** | | | | | | | | | | | | | | | |
| Henry Hub Spot (dollars per thousand cubic feet) | **2.99** | **2.83** | **2.84** | **2.18** | **2.06** | *2.01* | *2.36* | *2.71* | *3.11* | *2.89* | *3.03* | *3.17* | **2.71** | *2.29* | *3.05* |
| Henry Hub Spot (dollars per million Btu) | **2.90** | **2.75** | **2.76** | **2.12** | **2.00** | *1.95* | *2.29* | *2.63* | *3.02* | *2.81* | *2.94* | *3.08* | **2.63** | *2.22* | *2.96* |
| **U.S. Retail Prices** (dollars per thousand cubic feet) | | | | | | | | | | | | | | | |
| Industrial Sector | **4.57** | **3.68** | **3.66** | **3.34** | **3.34** | *2.87* | *3.15* | *3.74* | *4.35* | *3.77* | *3.92* | *4.29* | **3.84** | *3.29* | *4.10* |
| Commercial Sector | **7.94** | **8.13** | **8.42** | **7.38** | **6.84** | *7.23* | *7.92* | *7.38* | *7.68* | *8.16* | *8.71* | *8.08* | **7.88** | *7.19* | *7.99* |
| Residential Sector | **9.30** | **11.96** | **16.45** | **10.11** | **8.53** | *11.07* | *15.30* | *9.74* | *9.13* | *11.91* | *16.11* | *10.37* | **10.36** | *9.80* | *10.42* |
| **U.S. Electricity** | | | | | | | | | | | | | | | |
| **Power Generation Fuel Costs** (dollars per million Btu) | | | | | | | | | | | | | | | |
| Coal | **2.27** | **2.25** | **2.22** | **2.15** | **2.13** | *2.19* | *2.22* | *2.17* | *2.17* | *2.21* | *2.24* | *2.20* | **2.23** | *2.18* | *2.20* |
| Natural Gas | **4.09** | **3.12** | **3.09** | **2.72** | **2.65** | *2.46* | *2.62* | *3.41* | *3.90* | *3.29* | *3.28* | *3.91* | **3.22** | *2.77* | *3.56* |
| Residual Fuel Oil (c) | **10.82** | **11.64** | **10.48** | **7.76** | **6.42** | *8.35* | *8.89* | *8.96* | *8.91* | *9.74* | *9.69* | *10.16* | **10.36** | *8.15* | *9.61* |
| Distillate Fuel Oil | **15.61** | **15.17** | **13.19** | **11.74** | **9.02** | *11.54* | *11.82* | *12.58* | *13.05* | *13.26* | *13.70* | *15.22* | **14.43** | *11.19* | *13.76* |
| **Retail Prices** (cents per kilowatthour) | | | | | | | | | | | | | | | |
| Industrial Sector | **6.79** | **6.81** | **7.32** | **6.63** | **6.42** | *6.68* | *7.25* | *6.65* | *6.49* | *6.80* | *7.39* | *6.78* | **6.90** | *6.76* | *6.88* |
| Commercial Sector | **10.46** | **10.54** | **10.95** | **10.36** | **10.08** | *10.55* | *10.94* | *10.33* | *10.19* | *10.73* | *11.21* | *10.61* | **10.59** | *10.50* | *10.71* |
| Residential Sector | **12.24** | **12.85** | **12.99** | **12.59** | **12.22** | *12.91* | *12.98* | *12.42* | *12.41* | *13.22* | *13.35* | *12.82* | **12.67** | *12.64* | *12.96* |

- = 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 - June 2016

| | 2015 | | | | 2016 | | | | 2017 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2015 | 2016 | 2017 |
| **Supply (million barrels per day) (a)** | | | | | | | | | | | | | | | |
| OECD | **26.64** | **26.43** | **26.81** | **27.07** | **26.96** | *25.96* | *25.93* | *26.08* | *26.13* | *26.17* | *26.01* | *26.33* | **26.74** | *26.23* | *26.16* |
| U.S. (50 States) | **14.81** | **15.10** | **15.13** | **15.12** | **14.94** | *14.64* | *14.20* | *14.20* | *14.22* | *14.40* | *14.35* | *14.57* | **15.04** | *14.49* | *14.38* |
| Canada | **4.69** | **4.16** | **4.56** | **4.62** | **4.73** | *4.13* | *4.71* | *4.82* | *4.89* | *4.86* | *4.89* | *4.92* | **4.51** | *4.60* | *4.89* |
| Mexico | **2.68** | **2.58** | **2.62** | **2.62** | **2.57** | *2.50* | *2.49* | *2.48* | *2.46* | *2.45* | *2.42* | *2.40* | **2.62** | *2.51* | *2.43* |
| North Sea (b) | **3.00** | **3.10** | **2.95** | **3.20** | **3.23** | *3.17* | *3.02* | *3.06* | *3.04* | *2.93* | *2.79* | *2.87* | **3.06** | *3.12* | *2.91* |
| Other OECD | **1.46** | **1.49** | **1.55** | **1.52** | **1.49** | *1.51* | *1.52* | *1.53* | *1.53* | *1.53* | *1.55* | *1.57* | **1.50** | *1.51* | *1.54* |
| Non-OECD | **68.00** | **68.97** | **69.59** | **69.42** | **68.65** | *69.88* | *70.83* | *70.62* | *70.04* | *70.90* | *71.31* | *71.17* | **69.00** | *70.00* | *70.86* |
| OPEC | **37.39** | **38.10** | **38.57** | **38.40** | **38.26** | *39.02* | *39.72* | *39.77* | *39.90* | *40.21* | *40.34* | *40.41* | **38.12** | *39.20* | *40.22* |
| Crude Oil Portion | **30.84** | **31.53** | **31.99** | **31.81** | **31.58** | *32.17* | *32.82* | *32.82* | *32.81* | *33.07* | *33.12* | *33.14* | **31.55** | *32.35* | *33.04* |
| Other Liquids (c) | **6.54** | **6.57** | **6.58** | **6.59** | **6.67** | *6.85* | *6.90* | *6.95* | *7.09* | *7.14* | *7.21* | *7.27* | **6.57** | *6.85* | *7.18* |
| Eurasia | **14.18** | **14.00** | **14.00** | **14.13** | **14.23** | *14.19* | *14.12* | *14.05* | *14.03* | *14.00* | *13.97* | *13.98* | **14.08** | *14.15* | *13.99* |
| China | **4.68** | **4.76** | **4.73** | **4.72** | **4.59** | *4.58* | *4.61* | *4.62* | *4.50* | *4.53* | *4.54* | *4.54* | **4.72** | *4.60* | *4.53* |
| Other Non-OECD | **11.75** | **12.12** | **12.29** | **12.18** | **11.57** | *12.09* | *12.38* | *12.18* | *11.61* | *12.16* | *12.46* | *12.24* | **12.09** | *12.06* | *12.12* |
| Total World Supply | **94.63** | **95.40** | **96.40** | **96.49** | **95.61** | *95.84* | *96.76* | *96.70* | *96.17* | *97.07* | *97.32* | *97.50* | **95.74** | *96.23* | *97.02* |
| Non-OPEC Supply | **57.25** | **57.30** | **57.83** | **58.09** | **57.35** | *56.82* | *57.05* | *56.93* | *56.27* | *56.85* | *56.98* | *57.09* | **57.62** | *57.04* | *56.80* |
| **Consumption (million barrels per day) (d)** | | | | | | | | | | | | | | | |
| OECD | **46.48** | **45.38** | **46.71** | **46.36** | **46.61** | *45.86* | *46.35* | *46.81* | *46.67* | *45.72* | *46.48* | *46.96* | **46.23** | *46.41* | *46.46* |
| U.S. (50 States) | **19.29** | **19.25** | **19.68** | **19.36** | **19.45** | *19.74* | *19.70* | *19.61* | *19.37* | *19.65* | *19.88* | *19.82* | **19.40** | *19.62* | *19.68* |
| U.S. Territories | **0.37** | **0.37** | **0.37** | **0.37** | **0.40** | *0.40* | *0.40* | *0.40* | *0.42* | *0.42* | *0.42* | *0.42* | **0.37** | *0.40* | *0.42* |
| Canada | **2.36** | **2.26** | **2.38** | **2.34** | **2.34** | *2.28* | *2.39* | *2.38* | *2.34* | *2.28* | *2.39* | *2.38* | **2.34** | *2.35* | *2.35* |
| Europe | **13.42** | **13.53** | **14.10** | **13.65** | **13.47** | *13.36* | *13.80* | *13.75* | *13.56* | *13.30* | *13.75* | *13.69* | **13.68** | *13.60* | *13.58* |
| Japan | **4.79** | **3.89** | **3.94** | **4.23** | **4.51** | *3.82* | *3.85* | *4.22* | *4.45* | *3.75* | *3.78* | *4.14* | **4.21** | *4.10* | *4.03* |
| Other OECD | **6.24** | **6.08** | **6.24** | **6.41** | **6.44** | *6.26* | *6.21* | *6.45* | *6.52* | *6.32* | *6.26* | *6.51* | **6.24** | *6.34* | *6.40* |
| Non-OECD | **46.36** | **47.94** | **48.26** | **47.72** | **47.61** | *49.23* | *49.54* | *49.03* | *49.01* | *50.68* | *50.97* | *50.41* | **47.58** | *48.86* | *50.27* |
| Eurasia | **4.71** | **4.65** | **4.92** | **4.90** | **4.73** | *4.66* | *4.93* | *4.92* | *4.80* | *4.73* | *5.01* | *4.99* | **4.80** | *4.81* | *4.88* |
| Europe | **0.71** | **0.72** | **0.74** | **0.74** | **0.72** | *0.73* | *0.75* | *0.75* | *0.73* | *0.74* | *0.76* | *0.76* | **0.73** | *0.73* | *0.74* |
| China | **10.87** | **11.46** | **11.42** | **11.37** | **11.25** | *11.87* | *11.82* | *11.77* | *11.64* | *12.28* | *12.23* | *12.17* | **11.28** | *11.68* | *12.08* |
| Other Asia | **12.22** | **12.44** | **11.97** | **12.30** | **12.80** | *13.03* | *12.52* | *12.93* | *13.38* | *13.61* | *13.07* | *13.45* | **12.24** | *12.82* | *13.38* |
| Other Non-OECD | **17.85** | **18.67** | **19.22** | **18.41** | **18.10** | *18.95* | *19.51* | *18.67* | *18.46* | *19.32* | *19.90* | *19.03* | **18.54** | *18.81* | *19.18* |
| Total World Consumption | **92.84** | **93.32** | **94.97** | **94.08** | **94.22** | *95.10* | *95.89* | *95.84* | *95.68* | *96.41* | *97.45* | *97.37* | **93.81** | *95.26* | *96.73* |
| **Total Crude Oil and Other Liquids Inventory Net Withdrawals (million barrels per day)** | | | | | | | | | | | | | | | |
| U.S. (50 States) | **-0.54** | **-0.69** | **-0.32** | **-0.15** | **-0.41** | *-0.09* | *0.13* | *0.57* | *0.17* | *-0.31* | *-0.05* | *0.61* | **-0.43** | *0.05* | *0.11* |
| Other OECD | **-0.34** | **-0.35** | **-0.42** | **-0.28** | **-0.26** | *-0.23* | *-0.35* | *-0.51* | *-0.23* | *-0.12* | *0.06* | *-0.26* | **-0.34** | *-0.34* | *-0.14* |
| Other Stock Draws and Balance | **-0.91** | **-1.04** | **-0.69** | **-1.99** | **-0.72** | *-0.43* | *-0.66* | *-0.93* | *-0.42* | *-0.23* | *0.12* | *-0.48* | **-1.16** | *-0.68* | *-0.25* |
| Total Stock Draw | **-1.79** | **-2.08** | **-1.43** | **-2.41** | **-1.39** | *-0.74* | *-0.87* | *-0.87* | *-0.48* | *-0.66* | *0.14* | *-0.13* | **-1.93** | *-0.97* | *-0.28* |
| **End-of-period Commercial Crude Oil and Other Liquids Inventories** | | | | | | | | | | | | | | | |
| U.S. Commercial Inventory | **1,217** | **1,277** | **1,306** | **1,320** | **1,357** | *1,365* | *1,353* | *1,300* | *1,285* | *1,313* | *1,317* | *1,262* | **1,320** | *1,300* | *1,262* |
| OECD Commercial Inventory | **2,799** | **2,890** | **2,965** | **2,997** | **3,056** | *3,084* | *3,104* | *3,099* | *3,104* | *3,144* | *3,142* | *3,111* | **2,997** | *3,099* | *3,111* |

- = 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, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Slovakia, Slovenia, South Korea, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.

OPEC = Organization of Petroleum Exporting Countries: Algeria, Angola, Ecuador, 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 prodessing 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 - June 2016

| | 2015 | | | | 2016 | | | | 2017 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2015 | 2016 | 2017 |
| **North America** | **22.17** | **21.84** | **22.32** | **22.36** | **22.23** | *21.28* | *21.40* | *21.50* | *21.56* | *21.70* | *21.66* | *21.89* | **22.17** | *21.60* | *21.71* |
| Canada | **4.69** | **4.16** | **4.56** | **4.62** | **4.73** | *4.13* | *4.71* | *4.82* | *4.89* | *4.86* | *4.89* | *4.92* | **4.51** | *4.60* | *4.89* |
| Mexico | **2.68** | **2.58** | **2.62** | **2.62** | **2.57** | *2.50* | *2.49* | *2.48* | *2.46* | *2.45* | *2.42* | *2.40* | **2.62** | *2.51* | *2.43* |
| United States | **14.81** | **15.10** | **15.13** | **15.12** | **14.94** | *14.64* | *14.20* | *14.20* | *14.22* | *14.40* | *14.35* | *14.57* | **15.04** | *14.49* | *14.38* |
| **Central and South America** | **4.95** | **5.42** | **5.66** | **5.44** | **4.84** | *5.40* | *5.67* | *5.47* | *4.91* | *5.43* | *5.70* | *5.49* | **5.37** | *5.34* | *5.38* |
| Argentina | **0.70** | **0.71** | **0.72** | **0.72** | **0.69** | *0.72* | *0.73* | *0.72* | *0.71* | *0.72* | *0.73* | *0.72* | **0.71** | *0.72* | *0.72* |
| Brazil | **2.75** | **3.23** | **3.50** | **3.24** | **2.70** | *3.25* | *3.52* | *3.26* | *2.76* | *3.26* | *3.54* | *3.28* | **3.18** | *3.18* | *3.21* |
| Colombia | **1.06** | **1.05** | **1.00** | **1.02** | **0.99** | *1.01* | *1.00* | *1.02* | *1.00* | *1.01* | *1.00* | *1.02* | **1.03** | *1.00* | *1.01* |
| Other Central and S. America | **0.45** | **0.43** | **0.44** | **0.46** | **0.45** | *0.43* | *0.43* | *0.46* | *0.45* | *0.42* | *0.43* | *0.46* | **0.45** | *0.44* | *0.44* |
| **Europe** | **3.95** | **4.05** | **3.91** | **4.15** | **4.18** | *4.12* | *3.97* | *4.00* | *3.98* | *3.87* | *3.74* | *3.81* | **4.02** | *4.07* | *3.85* |
| Norway | **1.94** | **1.94** | **1.92** | **2.03** | **2.05** | *2.03* | *1.99* | *1.93* | *1.89* | *1.86* | *1.82* | *1.79* | **1.96** | *2.00* | *1.84* |
| United Kingdom (offshore) | **0.88** | **0.97** | **0.85** | **0.99** | **1.03** | *0.97* | *0.85* | *0.94* | *0.96* | *0.88* | *0.78* | *0.89* | **0.93** | *0.95* | *0.88* |
| Other North Sea | **0.18** | **0.18** | **0.18** | **0.17** | **0.16** | *0.18* | *0.18* | *0.19* | *0.19* | *0.19* | *0.19* | *0.19* | **0.18** | *0.17* | *0.19* |
| **Eurasia** | **14.20** | **14.02** | **14.01** | **14.14** | **14.25** | *14.21* | *14.13* | *14.06* | *14.05* | *14.01* | *13.99* | *13.99* | **14.09** | *14.16* | *14.01* |
| Azerbaijan | **0.89** | **0.85** | **0.85** | **0.83** | **0.84** | *0.80* | *0.81* | *0.84* | *0.83* | *0.81* | *0.79* | *0.78* | **0.86** | *0.82* | *0.80* |
| Kazakhstan | **1.80** | **1.74** | **1.68** | **1.72** | **1.67** | *1.69* | *1.69* | *1.68* | *1.70* | *1.69* | *1.69* | *1.71* | **1.73** | *1.68* | *1.70* |
| Russia | **11.00** | **10.96** | **11.01** | **11.14** | **11.27** | *11.22* | *11.14* | *11.06* | *11.03* | *11.03* | *11.03* | *11.02* | **11.03** | *11.17* | *11.03* |
| Turkmenistan | **0.29** | **0.27** | **0.28** | **0.27** | **0.28** | *0.29* | *0.29* | *0.28* | *0.29* | *0.29* | *0.29* | *0.29* | **0.28** | *0.28* | *0.29* |
| Other Eurasia | **0.20** | **0.19** | **0.19** | **0.18** | **0.19** | *0.21* | *0.20* | *0.20* | *0.20* | *0.19* | *0.19* | *0.19* | **0.19** | *0.20* | *0.19* |
| **Middle East** | **1.18** | **1.13** | **1.13** | **1.13** | **1.14** | *1.14* | *1.14* | *1.14* | *1.14* | *1.14* | *1.14* | *1.14* | **1.14** | *1.14* | *1.14* |
| Oman | **0.97** | **0.98** | **1.00** | **1.00** | **1.02** | *1.03* | *1.03* | *1.02* | *1.03* | *1.03* | *1.03* | *1.02* | **0.99** | *1.03* | *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 | **0.11** | **0.04** | **0.02** | **0.02** | **0.02** | *0.01* | *0.01* | *0.01* | *0.01* | *0.01* | *0.01* | *0.01* | **0.05** | *0.01* | *0.01* |
| **Asia and Oceania** | **8.45** | **8.50** | **8.48** | **8.53** | **8.39** | *8.36* | *8.41* | *8.42* | *8.31* | *8.35* | *8.37* | *8.38* | **8.49** | *8.40* | *8.35* |
| Australia | **0.39** | **0.39** | **0.45** | **0.43** | **0.41** | *0.42* | *0.42* | *0.43* | *0.43* | *0.44* | *0.45* | *0.46* | **0.42** | *0.42* | *0.45* |
| China | **4.68** | **4.76** | **4.73** | **4.72** | **4.59** | *4.58* | *4.61* | *4.62* | *4.50* | *4.53* | *4.54* | *4.54* | **4.72** | *4.60* | *4.53* |
| India | **1.01** | **1.00** | **1.01** | **1.02** | **1.00** | *1.01* | *1.02* | *1.00* | *1.00* | *1.01* | *1.01* | *1.00* | **1.01** | *1.01* | *1.00* |
| Malaysia | **0.78** | **0.75** | **0.70** | **0.74** | **0.77** | *0.76* | *0.77* | *0.78* | *0.77* | *0.77* | *0.77* | *0.77* | **0.74** | *0.77* | *0.77* |
| Vietnam | **0.36** | **0.34** | **0.35** | **0.37** | **0.34** | *0.31* | *0.31* | *0.30* | *0.30* | *0.30* | *0.29* | *0.29* | **0.36** | *0.32* | *0.30* |
| **Africa** | **2.34** | **2.33** | **2.33** | **2.34** | **2.32** | *2.31* | *2.32* | *2.34* | *2.31* | *2.35* | *2.37* | *2.38* | **2.33** | *2.32* | *2.35* |
| Egypt | **0.71** | **0.70** | **0.71** | **0.70** | **0.70** | *0.69* | *0.69* | *0.69* | *0.68* | *0.68* | *0.68* | *0.67* | **0.71** | *0.69* | *0.68* |
| Equatorial Guinea | **0.27** | **0.27** | **0.27** | **0.27** | **0.24** | *0.25* | *0.25* | *0.25* | *0.23* | *0.24* | *0.24* | *0.24* | **0.27** | *0.25* | *0.24* |
| Gabon | **0.21** | **0.21** | **0.21** | **0.21** | **0.21** | *0.21* | *0.21* | *0.21* | *0.20* | *0.20* | *0.20* | *0.20* | **0.21** | *0.21* | *0.20* |
| Sudan and South Sudan | **0.26** | **0.26** | **0.26** | **0.26** | **0.26** | *0.26* | *0.26* | *0.26* | *0.25* | *0.25* | *0.25* | *0.25* | **0.26** | *0.26* | *0.25* |
| **Total non-OPEC liquids** | **57.25** | **57.30** | **57.83** | **58.09** | **57.35** | *56.82* | *57.05* | *56.93* | *56.27* | *56.85* | *56.98* | *57.09* | **57.62** | *57.04* | *56.80* |
| **OPEC non-crude liquids** | **6.54** | **6.57** | **6.58** | **6.59** | **6.67** | *6.85* | *6.90* | *6.95* | *7.09* | *7.14* | *7.21* | *7.27* | **6.57** | *6.85* | *7.18* |
| **Non-OPEC + OPEC non-crude** | **63.79** | **63.87** | **64.42** | **64.68** | **64.02** | *63.67* | *63.95* | *63.88* | *63.36* | *63.99* | *64.19* | *64.36* | **64.19** | *63.88* | *63.98* |
| **Unplanned non-OPEC Production Outages** | **0.27** | **0.46** | **0.40** | **0.34** | **0.38** | *n/a* | *n/a* | *n/a* | *n/a* | *n/a* | *n/a* | *n/a* | **0.37** | *n/a* | *n/a* |

- = no data available

OPEC = Organization of Petroleum Exporting Countries: Algeria, Angola, Ecuador, Indonesia, 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 - June 2016

| | 2015 | | | | 2016 | | | | 2017 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2015 | 2016 | 2017 |
| **Crude Oil** | | | | | | | | | | | | | | | |
| Algeria | **1.10** | **1.10** | **1.10** | **1.10** | **1.05** | - | - | - | - | - | - | - | **1.10** | - | - |
| Angola | **1.75** | **1.77** | **1.82** | **1.78** | **1.78** | - | - | - | - | - | - | - | **1.78** | - | - |
| Ecudaor | **0.55** | **0.54** | **0.55** | **0.57** | **0.57** | - | - | - | - | - | - | - | **0.55** | - | - |
| Indonesia | **0.67** | **0.69** | **0.69** | **0.69** | **0.73** | - | - | - | - | - | - | - | **0.68** | - | - |
| Iran | **2.80** | **2.80** | **2.80** | **2.80** | **3.03** | - | - | - | - | - | - | - | **2.80** | - | - |
| Iraq | **3.49** | **3.97** | **4.30** | **4.35** | **4.29** | - | - | - | - | - | - | - | **4.03** | - | - |
| Kuwait | **2.57** | **2.53** | **2.50** | **2.45** | **2.48** | - | - | - | - | - | - | - | **2.51** | - | - |
| Libya | **0.40** | **0.45** | **0.38** | **0.39** | **0.35** | - | - | - | - | - | - | - | **0.40** | - | - |
| Nigeria | **2.00** | **1.83** | **1.86** | **1.90** | **1.77** | - | - | - | - | - | - | - | **1.90** | - | - |
| Qatar | **0.68** | **0.68** | **0.68** | **0.68** | **0.66** | - | - | - | - | - | - | - | **0.68** | - | - |
| Saudi Arabia | **9.73** | **10.07** | **10.22** | **10.00** | **9.98** | - | - | - | - | - | - | - | **10.01** | - | - |
| United Arab Emirates | **2.70** | **2.70** | **2.70** | **2.70** | **2.60** | - | - | - | - | - | - | - | **2.70** | - | - |
| Venezuela | **2.40** | **2.40** | **2.40** | **2.40** | **2.30** | - | - | - | - | - | - | - | **2.40** | - | - |
| OPEC Total | **30.84** | **31.53** | **31.99** | **31.81** | **31.58** | *32.17* | *32.82* | *32.82* | *32.81* | *33.07* | *33.12* | *33.14* | **31.55** | *32.35* | *33.04* |
| **Other Liquids (a)** | **6.54** | **6.57** | **6.58** | **6.59** | **6.67** | *6.85* | *6.90* | *6.95* | *7.09* | *7.14* | *7.21* | *7.27* | **6.57** | *6.85* | *7.18* |
| **Total OPEC Supply** | **37.39** | **38.10** | **38.57** | **38.40** | **38.26** | *39.02* | *39.72* | *39.77* | *39.90* | *40.21* | *40.34* | *40.41* | **38.12** | *39.20* | *40.22* |
| **Crude Oil Production Capacity** | | | | | | | | | | | | | | | |
| Africa | **5.25** | **5.15** | **5.16** | **5.17** | **4.95** | *4.72* | *4.98* | *5.15* | *5.15* | *5.23* | *5.30* | *5.38* | **5.18** | *4.95* | *5.26* |
| South America | **2.95** | **2.94** | **2.95** | **2.97** | **2.87** | *2.79* | *2.76* | *2.69* | *2.67* | *2.66* | *2.55* | *2.55* | **2.95** | *2.78* | *2.61* |
| Middle East | **23.89** | **24.28** | **24.53** | **24.58** | **25.00** | *25.47* | *25.60* | *25.68* | *25.70* | *25.74* | *25.79* | *25.83* | **24.32** | *25.44* | *25.77* |
| Asia | **0.67** | **0.69** | **0.69** | **0.69** | **0.73** | *0.74* | *0.73* | *0.73* | *0.73* | *0.73* | *0.73* | *0.73* | **0.68** | *0.73* | *0.73* |
| OPEC Total | **32.76** | **33.06** | **33.32** | **33.41** | **33.54** | *33.72* | *34.07* | *34.24* | *34.26* | *34.36* | *34.37* | *34.49* | **33.14** | *33.89* | *34.37* |
| **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* |
| 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* |
| Middle East | **1.92** | **1.53** | **1.33** | **1.60** | **1.96** | *1.55* | *1.25* | *1.42* | *1.45* | *1.28* | *1.25* | *1.35* | **1.59** | *1.54* | *1.33* |
| Asia | **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 | **1.92** | **1.53** | **1.33** | **1.60** | **1.96** | *1.55* | *1.25* | *1.42* | *1.45* | *1.28* | *1.25* | *1.35* | **1.59** | *1.54* | *1.33* |
| **Unplanned OPEC Production Outages** | **2.56** | **2.66** | **2.79** | **2.79** | **2.10** | *n/a* | *n/a* | *n/a* | *n/a* | *n/a* | *n/a* | *n/a* | **2.70** | *n/a* | *n/a* |

- = no data available

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

(a) Includes lease condensate, natural gas plant liquids, other liquids, and refinery prodessing 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 - June 2016

| | 2015 | | | | 2016 | | | | 2017 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | 2015 | 2016 | 2017 |
| **North America** | **23.57** | **23.46** | **24.11** | **23.73** | **23.75** | *24.00* | *24.05* | *23.95* | *23.68* | *23.91* | *24.23* | *24.16* | **23.72** | *23.94* | *24.00* |
| Canada | **2.36** | **2.26** | **2.38** | **2.34** | **2.34** | *2.28* | *2.39* | *2.38* | *2.34* | *2.28* | *2.39* | *2.38* | **2.34** | *2.35* | *2.35* |
| Mexico | **1.91** | **1.95** | **2.04** | **2.02** | **1.95** | *1.97* | *1.94* | *1.95* | *1.95* | *1.97* | *1.94* | *1.95* | **1.98** | *1.95* | *1.95* |
| United States | **19.29** | **19.25** | **19.68** | **19.36** | **19.45** | *19.74* | *19.70* | *19.61* | *19.37* | *19.65* | *19.88* | *19.82* | **19.40** | *19.62* | *19.68* |
| **Central and South America** | **7.05** | **7.30** | **7.32** | **7.32** | **7.05** | *7.33* | *7.36* | *7.34* | *7.06* | *7.32* | *7.35* | *7.33* | **7.25** | *7.27* | *7.26* |
| Brazil | **3.00** | **3.11** | **3.18** | **3.17** | **2.95** | *3.06* | *3.13* | *3.12* | *2.90* | *3.01* | *3.08* | *3.06* | **3.12** | *3.06* | *3.02* |
| **Europe** | **14.13** | **14.25** | **14.84** | **14.39** | **14.19** | *14.08* | *14.55* | *14.50* | *14.29* | *14.04* | *14.51* | *14.45* | **14.40** | *14.33* | *14.32* |
| **Eurasia** | **4.74** | **4.68** | **4.95** | **4.93** | **4.76** | *4.69* | *4.97* | *4.95* | *4.84* | *4.76* | *5.04* | *5.03* | **4.83** | *4.84* | *4.92* |
| Russia | **3.39** | **3.34** | **3.54** | **3.53** | **3.35** | *3.30* | *3.50* | *3.48* | *3.36* | *3.31* | *3.51* | *3.49* | **3.45** | *3.41* | *3.42* |
| **Middle East** | **7.84** | **8.43** | **8.99** | **8.15** | **8.02** | *8.64* | *9.22* | *8.35* | *8.27* | *8.90* | *9.50* | *8.59* | **8.36** | *8.56* | *8.82* |
| **Asia and Oceania** | **31.61** | **31.33** | **30.93** | **31.70** | **32.41** | *32.32* | *31.75* | *32.75* | *33.35* | *33.29* | *32.68* | *33.64* | **31.39** | *32.31* | *33.24* |
| China | **10.87** | **11.46** | **11.42** | **11.37** | **11.25** | *11.87* | *11.82* | *11.77* | *11.64* | *12.28* | *12.23* | *12.17* | **11.28** | *11.68* | *12.08* |
| Japan | **4.79** | **3.89** | **3.94** | **4.23** | **4.51** | *3.82* | *3.85* | *4.22* | *4.45* | *3.75* | *3.78* | *4.14* | **4.21** | *4.10* | *4.03* |
| India | **4.19** | **4.17** | **3.82** | **4.13** | **4.54** | *4.52* | *4.14* | *4.53* | *4.91* | *4.89* | *4.48* | *4.84* | **4.08** | *4.43* | *4.78* |
| **Africa** | **3.89** | **3.88** | **3.84** | **3.86** | **4.04** | *4.03* | *3.99* | *4.01* | *4.20* | *4.19* | *4.14* | *4.17* | **3.86** | *4.02* | *4.17* |
| **Total OECD Liquid Fuels Consumption** | **46.48** | **45.38** | **46.71** | **46.36** | **46.61** | *45.86* | *46.35* | *46.81* | *46.67* | *45.72* | *46.48* | *46.96* | **46.23** | *46.41* | *46.46* |
| **Total non-OECD Liquid Fuels Consumption** | **46.36** | **47.94** | **48.26** | **47.72** | **47.61** | *49.23* | *49.54* | *49.03* | *49.01* | *50.68* | *50.97* | *50.41* | **47.58** | *48.86* | *50.27* |
| **Total World Liquid Fuels Consumption** | **92.84** | **93.32** | **94.97** | **94.08** | **94.22** | *95.10* | *95.89* | *95.84* | *95.68* | *96.41* | *97.45* | *97.37* | **93.81** | *95.26* | *96.73* |
| **Oil-weighted Real Gross Domestic Product (a)** | | | | | | | | | | | | | | | |
| World Index, 2010 Q1 = 100 | **116.3** | **116.9** | **117.6** | **118.2** | **118.4** | *119.3* | *120.2* | *121.1* | *122.0* | *122.8* | *123.7* | *124.6* | **117.3** | *119.8* | *123.3* |
| Percent change from prior year | **2.7** | **2.6** | **2.4** | **2.2** | **1.8** | *2.0* | *2.2* | *2.5* | *3.0* | *3.0* | *2.9* | *2.8* | **2.4** | *2.1* | *2.9* |
| OECD Index, 2010 Q1 = 100 | **109.2** | **109.8** | **110.4** | **110.8** | **111.1** | *111.6* | *112.1* | *112.9* | *113.7* | *114.2* | *114.9* | *115.5* | **110.1** | *111.9* | *114.6* |
| Percent change from prior year | **2.0** | **2.1** | **2.1** | **1.9** | **1.7** | *1.6* | *1.5* | *1.9* | *2.3* | *2.4* | *2.5* | *2.3* | **2.0** | *1.7* | *2.4* |
| Non-OECD Index, 2010 Q1 = 100 | **125.3** | **126.0** | **126.8** | **127.7** | **127.8** | *129.2* | *130.6* | *131.7* | *132.7* | *133.9* | *135.0* | *136.3* | **126.4** | *129.8* | *134.5* |
| Percent change from prior year | **3.4** | **3.0** | **2.8** | **2.5** | **2.0** | *2.5* | *2.9* | *3.2* | *3.9* | *3.6* | *3.4* | *3.5* | **2.9** | *2.7* | *3.6* |
| **Real U.S. Dollar Exchange Rate (a)** | | | | | | | | | | | | | | | |
| Index, January 2010 = 100 | **119.41** | **119.71** | **123.04** | **124.95** | **128.76** | *127.62* | *128.81* | *129.10* | *129.59* | *129.62* | *129.60* | *129.50* | **121.78** | *128.57* | *129.58* |
| Percent change from prior year | **10.2** | **10.8** | **12.7** | **9.8** | **7.8** | *6.6* | *4.7* | *3.3* | *0.6* | *1.6* | *0.6* | *0.3* | **10.9** | *5.6* | *0.8* |

- = no data available

OECD = Organisation for Economic Co-operation and Development: Australia, Austria, Belgium, Canada, Chile, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Slovakia, Slovenia, South Korea, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and 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 - June 2016

| | 2015 | | | | 2016 | | | | 2017 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2015 | 2016 | 2017 |
| **Supply (million barrels per day)** | | | | | | | | | | | | | | | |
| Crude Oil Supply | | | | | | | | | | | | | | | |
| Domestic Production (a) | **9.48** | **9.50** | **9.43** | **9.32** | **9.15** | *8.78* | *8.26* | *8.23* | *8.23* | *8.20* | *8.07* | *8.26* | **9.43** | *8.60* | *8.19* |
| Alaska | **0.50** | **0.48** | **0.44** | **0.51** | **0.51** | *0.47* | *0.42* | *0.48* | *0.48* | *0.44* | *0.41* | *0.47* | **0.48** | *0.47* | *0.45* |
| Federal Gulf of Mexico (b) | **1.46** | **1.47** | **1.64** | **1.59** | **1.61** | *1.67* | *1.60* | *1.75* | *1.84* | *1.87* | *1.78* | *1.90* | **1.54** | *1.66* | *1.85* |
| Lower 48 States (excl GOM) | **7.52** | **7.55** | **7.35** | **7.21** | **7.03** | *6.64* | *6.24* | *6.00* | *5.91* | *5.89* | *5.88* | *5.89* | **7.41** | *6.48* | *5.89* |
| Crude Oil Net Imports (c) | **6.84** | **6.74** | **6.93** | **7.06** | **7.46** | *7.37* | *8.09* | *8.00* | *7.85* | *8.06* | *8.34* | *7.98* | **6.89** | *7.73* | *8.06* |
| SPR Net Withdrawals | **0.00** | **-0.03** | **-0.01** | **0.00** | **0.00** | *0.00* | *0.00* | *0.00* | *0.00* | *0.00* | *0.00* | *0.01* | **-0.01** | *0.00* | *0.00* |
| Commercial Inventory Net Withdrawals | **-0.91** | **0.06** | **0.10** | **-0.22** | **-0.56** | *0.15* | *0.29* | *0.13* | *-0.27* | *0.12* | *0.21* | *0.12* | **-0.24** | *0.00* | *0.05* |
| Crude Oil Adjustment (d) | **0.11** | **0.22** | **0.13** | **0.08** | **-0.05** | *0.10* | *0.21* | *0.15* | *0.19* | *0.19* | *0.21* | *0.15* | **0.14** | *0.10* | *0.19* |
| Total Crude Oil Input to Refineries | **15.53** | **16.48** | **16.58** | **16.24** | **16.00** | *16.40* | *16.86* | *16.51* | *16.00* | *16.56* | *16.84* | *16.53* | **16.21** | *16.44* | *16.48* |
| Other Supply | | | | | | | | | | | | | | | |
| Refinery Processing Gain | **0.99** | **1.02** | **1.08** | **1.06** | **1.07** | *1.07* | *1.08* | *1.08* | *1.04* | *1.07* | *1.09* | *1.09* | **1.04** | *1.07* | *1.07* |
| Natural Gas Plant Liquids Production | **3.09** | **3.27** | **3.31** | **3.41** | **3.38** | *3.48* | *3.51* | *3.56* | *3.60* | *3.77* | *3.83* | *3.87* | **3.27** | *3.48* | *3.77* |
| Renewables and Oxygenate Production (e) | **1.05** | **1.10** | **1.10** | **1.11** | **1.12** | *1.10* | *1.12* | *1.11* | *1.12* | *1.12* | *1.12* | *1.11* | **1.09** | *1.11* | *1.12* |
| Fuel Ethanol Production | **0.96** | **0.96** | **0.96** | **0.99** | **0.99** | *0.97* | *0.98* | *0.97* | *0.99* | *0.99* | *0.98* | *0.97* | **0.97** | *0.98* | *0.98* |
| Petroleum Products Adjustment (f) | **0.20** | **0.21** | **0.21** | **0.22** | **0.21** | *0.22* | *0.23* | *0.23* | *0.22* | *0.23* | *0.24* | *0.24* | **0.21** | *0.22* | *0.23* |
| Product Net Imports (c) | **-1.89** | **-2.12** | **-2.20** | **-2.75** | **-2.48** | *-2.29* | *-2.93* | *-3.31* | *-3.05* | *-2.68* | *-2.98* | *-3.50* | **-2.24** | *-2.76* | *-3.05* |
| Hydrocarbon Gas Liquids | **-0.68** | **-0.80** | **-0.93** | **-0.87** | **-1.00** | *-1.05* | *-1.19* | *-1.17* | *-1.31* | *-1.37* | *-1.39* | *-1.40* | **-0.82** | *-1.10* | *-1.37* |
| Unfinished Oils | **0.26** | **0.28** | **0.38** | **0.19** | **0.30** | *0.29* | *0.31* | *0.27* | *0.30* | *0.32* | *0.34* | *0.29* | **0.28** | *0.29* | *0.31* |
| Other HC/Oxygenates | **-0.08** | **-0.09** | **-0.06** | **-0.07** | **-0.10** | *-0.06* | *-0.04* | *-0.04* | *-0.07* | *-0.06* | *-0.04* | *-0.04* | **-0.07** | *-0.06* | *-0.05* |
| Motor Gasoline Blend Comp. | **0.41** | **0.52** | **0.60** | **0.28** | **0.34** | *0.56* | *0.43* | *0.39* | *0.43* | *0.64* | *0.51* | *0.42* | **0.45** | *0.43* | *0.50* |
| Finished Motor Gasoline | **-0.44** | **-0.32** | **-0.40** | **-0.46** | **-0.56** | *-0.38* | *-0.66* | *-0.78* | *-0.62* | *-0.52* | *-0.52* | *-0.73* | **-0.40** | *-0.60* | *-0.60* |
| Jet Fuel | **-0.06** | **0.01** | **-0.05** | **-0.06** | **-0.03** | *-0.03* | *-0.01* | *-0.13* | *-0.06* | *0.00* | *-0.03* | *-0.13* | **-0.04** | *-0.05* | *-0.06* |
| Distillate Fuel Oil | **-0.67** | **-1.05** | **-1.12** | **-1.10** | **-0.85** | *-0.94* | *-1.09* | *-1.10* | *-0.99* | *-1.03* | *-1.16* | *-1.11* | **-0.99** | *-1.00* | *-1.07* |
| Residual Fuel Oil | **-0.13** | **-0.21** | **-0.11** | **-0.09** | **-0.06** | *-0.19* | *-0.21* | *-0.19* | *-0.21* | *-0.25* | *-0.21* | *-0.21* | **-0.14** | *-0.16* | *-0.22* |
| Other Oils (g) | **-0.50** | **-0.46** | **-0.50** | **-0.57** | **-0.52** | *-0.48* | *-0.47* | *-0.58* | *-0.51* | *-0.43* | *-0.48* | *-0.59* | **-0.51** | *-0.51* | *-0.50* |
| Product Inventory Net Withdrawals | **0.36** | **-0.72** | **-0.41** | **0.08** | **0.15** | *-0.24* | *-0.16* | *0.44* | *0.44* | *-0.43* | *-0.26* | *0.48* | **-0.17** | *0.05* | *0.06* |
| Total Supply | **19.32** | **19.25** | **19.68** | **19.36** | **19.45** | *19.74* | *19.70* | *19.61* | *19.37* | *19.65* | *19.88* | *19.82* | **19.40** | *19.62* | *19.68* |
| **Consumption (million barrels per day)** | | | | | | | | | | | | | | | |
| Hydrocarbon Gas Liquids | **2.72** | **2.27** | **2.29** | **2.58** | **2.73** | *2.28* | *2.32* | *2.68* | *2.66* | *2.31* | *2.41* | *2.77* | **2.47** | *2.50* | *2.54* |
| Unfinished Oils | **-0.05** | **0.05** | **-0.03** | **-0.01** | **0.01** | *-0.01* | *-0.01* | *0.04* | *0.00* | *-0.01* | *-0.01* | *0.04* | **-0.01** | *0.01* | *0.00* |
| Motor Gasoline | **8.81** | **9.26** | **9.39** | **9.17** | **9.09** | *9.53* | *9.47* | *9.21* | *9.06* | *9.49* | *9.49* | *9.24* | **9.16** | *9.33* | *9.32* |
| Fuel Ethanol blended into Motor Gasoline | **0.87** | **0.92** | **0.93** | **0.91** | **0.91** | *0.94* | *0.94* | *0.93* | *0.90* | *0.95* | *0.95* | *0.93* | **0.91** | *0.93* | *0.93* |
| Jet Fuel | **1.45** | **1.54** | **1.59** | **1.57** | **1.50** | *1.62* | *1.59* | *1.51* | *1.47* | *1.60* | *1.60* | *1.52* | **1.54** | *1.55* | *1.55* |
| Distillate Fuel Oil | **4.27** | **3.88** | **3.93** | **3.83** | **3.90** | *3.94* | *3.85* | *3.98* | *4.08* | *3.95* | *3.89* | *4.05* | **3.98** | *3.92* | *3.99* |
| Residual Fuel Oil | **0.24** | **0.19** | **0.31** | **0.30** | **0.31** | *0.28* | *0.23* | *0.22* | *0.21* | *0.19* | *0.22* | *0.20* | **0.26** | *0.26* | *0.21* |
| Other Oils (g) | **1.85** | **2.06** | **2.20** | **1.92** | **1.89** | *2.10* | *2.25* | *1.99* | *1.91* | *2.12* | *2.27* | *2.00* | **2.01** | *2.06* | *2.08* |
| Total Consumption | **19.29** | **19.25** | **19.68** | **19.36** | **19.45** | *19.74* | *19.70* | *19.61* | *19.37* | *19.65* | *19.88* | *19.82* | **19.40** | *19.62* | *19.68* |
| **Total Petroleum and Other Liquids Net Imports** | **4.95** | **4.61** | **4.74** | **4.31** | **4.97** | *5.09* | *5.16* | *4.69* | *4.80* | *5.38* | *5.37* | *4.49* | **4.65** | *4.98* | *5.01* |
| **End-of-period Inventories (million barrels)** | | | | | | | | | | | | | | | |
| Commercial Inventory | | | | | | | | | | | | | | | |
| Crude Oil (excluding SPR) | **474.8** | **469.5** | **460.8** | **481.4** | **532.5** | *519.0* | *491.9* | *479.8* | *503.9* | *492.6* | *473.0* | *461.9* | **481.4** | *479.8* | *461.9* |
| Hydrocarbon Gas Liquids | **138.8** | **196.3** | **228.7** | **197.3** | **154.4** | *202.6* | *229.1* | *182.5* | *145.8* | *189.9* | *217.7* | *169.6* | **197.3** | *182.5* | *169.6* |
| Unfinished Oils | **84.7** | **86.0** | **88.8** | **82.6** | **91.4** | *89.3* | *85.6* | *79.6* | *89.4* | *88.2* | *85.7* | *79.5* | **82.6** | *79.6* | *79.5* |
| Other HC/Oxygenates | **26.7** | **25.0** | **23.8** | **26.8** | **28.2** | *26.2* | *25.5* | *25.7* | *27.9* | *26.7* | *26.0* | *26.3* | **26.8** | *25.7* | *26.3* |
| Total Motor Gasoline | **231.5** | **221.0** | **225.1** | **235.0** | **243.3** | *235.1* | *225.2* | *236.8* | *234.2* | *228.6* | *226.7* | *238.3* | **235.0** | *236.8* | *238.3* |
| Finished Motor Gasoline | **26.9** | **25.7** | **29.0** | **28.5** | **26.5** | *26.4* | *26.1* | *27.6* | *27.1* | *25.6* | *26.4* | *27.9* | **28.5** | *27.6* | *27.9* |
| Motor Gasoline Blend Comp. | **204.6** | **195.4** | **196.1** | **206.5** | **216.9** | *208.7* | *199.0* | *209.2* | *207.1* | *203.1* | *200.3* | *210.5* | **206.5** | *209.2* | *210.5* |
| Jet Fuel | **37.2** | **43.7** | **40.4** | **40.3** | **43.8** | *41.9* | *44.1* | *40.4* | *40.1* | *41.4* | *43.7* | *40.0* | **40.3** | *40.4* | *40.0* |
| Distillate Fuel Oil | **128.3** | **139.4** | **148.8** | **160.7** | **160.6** | *153.9* | *162.6* | *164.0* | *145.5* | *149.1* | *155.9* | *155.5* | **160.7** | *164.0* | *155.5* |
| Residual Fuel Oil | **38.1** | **41.8** | **41.3** | **42.2** | **44.5** | *41.1* | *38.8* | *38.8* | *40.2* | *40.7* | *38.7* | *38.8* | **42.2** | *38.8* | *38.8* |
| Other Oils (g) | **57.3** | **54.6** | **48.3** | **53.5** | **58.4** | *56.2* | *50.2* | *52.5* | *57.8* | *55.8* | *49.8* | *52.3* | **53.5** | *52.5* | *52.3* |
| Total Commercial Inventory | **1,217** | **1,277** | **1,306** | **1,320** | **1,357** | *1,365* | *1,353* | *1,300* | *1,285* | *1,313* | *1,317* | *1,262* | **1,320** | *1,300* | *1,262* |
| Crude Oil in SPR | **691** | **694** | **695** | **695** | **695** | *695* | *695* | *695* | *695* | *695* | *695* | *694* | **695** | *695* | *694* |

- = 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" inludes 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 - June 2016

| | 2015 | | | | 2016 | | | | 2017 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2015 | 2016 | 2017 |
| **HGL Production** | | | | | | | | | | | | | | | |
| **Natural Gas Processing Plants** | | | | | | | | | | | | | | | |
| Ethane | **1.05** | **1.10** | **1.09** | **1.20** | **1.20** | *1.25* | *1.26* | *1.31* | *1.33* | *1.41* | *1.46* | *1.50* | **1.11** | *1.26* | *1.43* |
| Propane | **1.07** | **1.12** | **1.13** | **1.15** | **1.15** | *1.16* | *1.15* | *1.16* | *1.19* | *1.23* | *1.22* | *1.23* | **1.12** | *1.15* | *1.22* |
| Butanes | **0.58** | **0.62** | **0.64** | **0.64** | **0.63** | *0.63* | *0.63* | *0.65* | *0.65* | *0.68* | *0.67* | *0.69* | **0.62** | *0.64* | *0.67* |
| Natural Gasoline (Pentanes Plus) | **0.39** | **0.44** | **0.46** | **0.43** | **0.41** | *0.44* | *0.46* | *0.44* | *0.43* | *0.46* | *0.48* | *0.46* | **0.43** | *0.44* | *0.46* |
| **Refinery and Blender Net Production** | | | | | | | | | | | | | | | |
| Ethane/Ethylene | **0.01** | **0.01** | **0.01** | **0.01** | **0.00** | *0.01* | *0.01* | *0.00* | *0.00* | *0.01* | *0.00* | *0.00* | **0.01** | *0.01* | *0.00* |
| Propane/Propylene | **0.54** | **0.58** | **0.56** | **0.55** | **0.58** | *0.58* | *0.59* | *0.57* | *0.56* | *0.58* | *0.58* | *0.56* | **0.56** | *0.58* | *0.57* |
| Butanes/Butylenes | **-0.08** | **0.27** | **0.19** | **-0.19** | **-0.11** | *0.25* | *0.19* | *-0.17* | *-0.06* | *0.25* | *0.19* | *-0.17* | **0.05** | *0.04* | *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 | **-0.06** | **-0.07** | **-0.06** | **-0.07** | **-0.08** | *-0.12* | *-0.16* | *-0.19* | *-0.21* | *-0.22* | *-0.24* | *-0.26* | **-0.06** | *-0.14* | *-0.23* |
| Propane/Propylene | **-0.40** | **-0.49** | **-0.56** | **-0.57** | **-0.65** | *-0.61* | *-0.65* | *-0.62* | *-0.75* | *-0.75* | *-0.70* | *-0.73* | **-0.50** | *-0.63* | *-0.74* |
| Butanes/Butylenes | **-0.06** | **-0.09** | **-0.11** | **-0.08** | **-0.07** | *-0.13* | *-0.16* | *-0.15* | *-0.14* | *-0.20* | *-0.21* | *-0.19* | **-0.08** | *-0.13* | *-0.18* |
| Natural Gasoline (Pentanes Plus) | **-0.17** | **-0.15** | **-0.21** | **-0.16** | **-0.20** | *-0.19* | *-0.22* | *-0.21* | *-0.22* | *-0.20* | *-0.23* | *-0.22* | **-0.17** | *-0.20* | *-0.22* |
| **HGL Refinery and Blender Net Inputs** | | | | | | | | | | | | | | | |
| Butanes/Butylenes | **0.40** | **0.27** | **0.32** | **0.50** | **0.43** | *0.27* | *0.31* | *0.44* | *0.37* | *0.28* | *0.31* | *0.44* | **0.37** | *0.36* | *0.35* |
| Natural Gasoline (Pentanes Plus) | **0.15** | **0.14** | **0.16** | **0.15** | **0.14** | *0.16* | *0.16* | *0.16* | *0.15* | *0.16* | *0.16* | *0.16* | **0.15** | *0.16* | *0.16* |
| **HGL Consumption** | | | | | | | | | | | | | | | |
| Ethane/Ethylene | **1.03** | **1.02** | **1.02** | **1.13** | **1.10** | *1.09* | *1.12* | *1.16* | *1.12* | *1.16* | *1.23* | *1.28* | **1.05** | *1.12* | *1.20* |
| Propane/Propylene | **1.43** | **0.92** | **0.96** | **1.17** | **1.41** | *0.92* | *0.95* | *1.25* | *1.33* | *0.89* | *0.94* | *1.22* | **1.12** | *1.13* | *1.10* |
| Butanes/Butylenes | **0.16** | **0.24** | **0.22** | **0.20** | **0.18** | *0.21* | *0.18* | *0.20* | *0.15* | *0.20* | *0.18* | *0.20* | **0.20** | *0.19* | *0.18* |
| Natural Gasoline (Pentanes Plus) | **0.10** | **0.09** | **0.09** | **0.08** | **0.04** | *0.06* | *0.06* | *0.07* | *0.05* | *0.06* | *0.06* | *0.07* | **0.09** | *0.06* | *0.06* |
| **HGL Inventories (million barrels)** | | | | | | | | | | | | | | | |
| Ethane/Ethylene | **31.38** | **31.65** | **31.86** | **33.79** | **33.76** | *38.38* | *38.89* | *36.72* | *35.09* | *38.67* | *39.10* | *37.05* | **32.18** | *36.94* | *37.49* |
| Propane/Propylene | **58.10** | **84.20** | **100.20** | **96.67** | **66.38** | *85.32* | *97.80* | *84.47* | *54.77* | *69.45* | *82.91* | *67.79* | **96.67** | *84.47* | *67.79* |
| Butanes/Butylenes | **32.46** | **59.42** | **76.52** | **46.14** | **32.39** | *56.11* | *71.16* | *42.67* | *36.29* | *59.77* | *74.14* | *45.22* | **46.14** | *42.67* | *45.22* |
| Natural Gasoline (Pentanes Plus) | **17.16** | **20.51** | **19.00** | **20.54** | **20.40** | *21.80* | *21.62* | *20.11* | *18.74* | *21.18* | *21.83* | *20.95* | **20.54** | *20.11* | *20.95* |
| **Refinery and Blender Net Inputs** | | | | | | | | | | | | | | | |
| Crude Oil | **15.53** | **16.48** | **16.58** | **16.24** | **16.00** | *16.40* | *16.86* | *16.51* | *16.00* | *16.56* | *16.84* | *16.53* | **16.21** | *16.44* | *16.48* |
| Hydrocarbon Gas Liquids | **0.54** | **0.40** | **0.47** | **0.64** | **0.57** | *0.43* | *0.47* | *0.60* | *0.53* | *0.44* | *0.47* | *0.60* | **0.52** | *0.52* | *0.51* |
| Other Hydrocarbons/Oxygenates | **1.12** | **1.18** | **1.19** | **1.17** | **1.15** | *1.23* | *1.26* | *1.24* | *1.21* | *1.26* | *1.28* | *1.26* | **1.16** | *1.22* | *1.25* |
| Unfinished Oils | **0.24** | **0.22** | **0.38** | **0.27** | **0.19** | *0.33* | *0.36* | *0.30* | *0.19* | *0.34* | *0.37* | *0.32* | **0.28** | *0.29* | *0.31* |
| Motor Gasoline Blend Components | **0.72** | **0.91** | **0.75** | **0.39** | **0.31** | *0.77* | *0.73* | *0.48* | *0.66* | *0.91* | *0.74* | *0.51* | **0.69** | *0.57* | *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 | **18.14** | **19.18** | **19.38** | **18.71** | **18.22** | *19.16* | *19.68* | *19.13* | *18.59* | *19.52* | *19.70* | *19.21* | **18.86** | *19.05* | *19.26* |
| **Refinery Processing Gain** | **0.99** | **1.02** | **1.08** | **1.06** | **1.07** | *1.07* | *1.08* | *1.08* | *1.04* | *1.07* | *1.09* | *1.09* | **1.04** | *1.07* | *1.07* |
| **Refinery and Blender Net Production** | | | | | | | | | | | | | | | |
| Hydrocarbon Gas Liquids | **0.47** | **0.86** | **0.76** | **0.37** | **0.47** | *0.84* | *0.78* | *0.40* | *0.51* | *0.84* | *0.77* | *0.39* | **0.61** | *0.62* | *0.63* |
| Finished Motor Gasoline | **9.48** | **9.83** | **9.97** | **9.83** | **9.68** | *10.02* | *10.31* | *10.19* | *9.87* | *10.20* | *10.20* | *10.17* | **9.78** | *10.05* | *10.11* |
| Jet Fuel | **1.50** | **1.61** | **1.60** | **1.63** | **1.57** | *1.62* | *1.62* | *1.60* | *1.52* | *1.61* | *1.66* | *1.61* | **1.59** | *1.60* | *1.60* |
| Distillate Fuel | **4.82** | **4.99** | **5.08** | **5.00** | **4.70** | *4.75* | *4.98* | *5.03* | *4.80* | *4.96* | *5.06* | *5.10* | **4.97** | *4.87* | *4.98* |
| Residual Fuel | **0.43** | **0.44** | **0.41** | **0.39** | **0.40** | *0.44* | *0.42* | *0.40* | *0.44* | *0.44* | *0.41* | *0.41* | **0.42** | *0.41* | *0.43* |
| Other Oils (a) | **2.44** | **2.48** | **2.63** | **2.55** | **2.47** | *2.55* | *2.66* | *2.59* | *2.48* | *2.53* | *2.68* | *2.61* | **2.52** | *2.57* | *2.58* |
| Total Refinery and Blender Net Production | **19.13** | **20.20** | **20.45** | **19.77** | **19.29** | *20.22* | *20.76* | *20.21* | *19.63* | *20.58* | *20.79* | *20.30* | **19.89** | *20.12* | *20.33* |
| **Refinery Distillation Inputs** | **15.78** | **16.69** | **16.85** | **16.40** | **16.27** | *16.59* | *17.10* | *16.74* | *16.26* | *16.77* | *17.09* | *16.76* | **16.43** | *16.68* | *16.72* |
| **Refinery Operable Distillation Capacity** | **17.88** | **17.98** | **18.08** | **18.16** | **18.31** | *18.29* | *18.39* | *18.46* | *18.51* | *18.51* | *18.51* | *18.51* | **18.03** | *18.37* | *18.51* |
| **Refinery Distillation Utilization Factor** | **0.88** | **0.93** | **0.93** | **0.90** | **0.89** | *0.91* | *0.93* | *0.91* | *0.88* | *0.91* | *0.92* | *0.91* | **0.91** | *0.91* | *0.90* |

- = no data available

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

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

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

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

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

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

U.S. Energy Information Administration | Short-Term Energy Outlook - June 2016

| | 2015 | | | | 2016 | | | | 2017 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2015 | 2016 | 2017 |
| **Prices (cents per gallon)** | | | | | | | | | | | | | | | |
| **Refiner Wholesale Price** | **159** | **201** | **184** | **145** | **119** | *158* | *155* | *134* | *135* | *163* | *164* | *156* | **173** | *142* | *155* |
| **Gasoline Regular Grade Retail Prices Including Taxes** | | | | | | | | | | | | | | | |
| PADD 1 | **228** | **259** | **247** | **211** | **187** | *220* | *223* | *209* | *207* | *233* | *235* | *232* | **236** | *210* | *227* |
| PADD 2 | **216** | **255** | **253** | **209** | **176** | *220* | *222* | *200* | *197* | *232* | *234* | *223* | **234** | *205* | *222* |
| PADD 3 | **204** | **240** | **228** | **190** | **167** | *201* | *205* | *184* | *184* | *212* | *213* | *205* | **216** | *189* | *204* |
| PADD 4 | **207** | **261** | **276** | **218** | **184** | *221* | *230* | *207* | *191* | *224* | *240* | *228* | **241** | *211* | *221* |
| PADD 5 | **271** | **328** | **327** | **264** | **241** | *266* | *274* | *246* | *233* | *273* | *278* | *260* | **298** | *257* | *261* |
| U.S. Average | **227** | **267** | **260** | **216** | **190** | *225* | *229* | *208* | *204* | *236* | *239* | *229* | **243** | *213* | *227* |
| **Gasoline All Grades Including Taxes** | **236** | **275** | **269** | **226** | **200** | *235* | *239* | *219* | *215* | *246* | *249* | *241* | **252** | *224* | *238* |
| **End-of-period Inventories (million barrels)** | | | | | | | | | | | | | | | |
| **Total Gasoline Inventories** | | | | | | | | | | | | | | | |
| PADD 1 | **64.5** | **61.3** | **62.6** | **60.3** | **65.9** | *66.2* | *60.8* | *62.0* | *62.0* | *63.8* | *61.4* | *63.9* | **60.3** | *62.0* | *63.9* |
| PADD 2 | **52.9** | **50.4** | **47.0** | **53.7** | **56.7** | *52.0* | *49.7* | *51.8* | *52.3* | *49.5* | *49.6* | *52.0* | **53.7** | *51.8* | *52.0* |
| PADD 3 | **78.4** | **74.6** | **78.1** | **84.6** | **83.0** | *80.2* | *78.6* | *82.9* | *81.9* | *79.7* | *80.2* | *82.8* | **84.6** | *82.9* | *82.8* |
| PADD 4 | **6.5** | **6.8** | **7.1** | **7.7** | **8.4** | *7.4* | *7.0* | *7.7* | *7.1* | *7.2* | *7.3* | *7.8* | **7.7** | *7.7* | *7.8* |
| PADD 5 | **29.2** | **28.0** | **30.3** | **28.7** | **29.4** | *29.3* | *28.9* | *32.4* | *30.9* | *28.4* | *28.3* | *31.8* | **28.7** | *32.4* | *31.8* |
| U.S. Total | **231.5** | **221.0** | **225.1** | **235.0** | **243.3** | *235.1* | *225.2* | *236.8* | *234.2* | *228.6* | *226.7* | *238.3* | **235.0** | *236.8* | *238.3* |
| **Finished Gasoline Inventories** | | | | | | | | | | | | | | | |
| U.S. Total | **26.9** | **25.7** | **29.0** | **28.5** | **26.5** | *26.4* | *26.1* | *27.6* | *27.1* | *25.6* | *26.4* | *27.9* | **28.5** | *27.6* | *27.9* |
| **Gasoline Blending Components Inventories** | | | | | | | | | | | | | | | |
| U.S. Total | **204.6** | **195.4** | **196.1** | **206.5** | **216.9** | *208.7* | *199.0* | *209.2* | *207.1* | *203.1* | *200.3* | *210.5* | **206.5** | *209.2* | *210.5* |

- = 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 - June 2016

| | 2015 | | | | 2016 | | | | 2017 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2015 | 2016 | 2017 |
| **Supply (billion cubic feet per day)** | | | | | | | | | | | | | | | |
| Total Marketed Production | **77.85** | **78.73** | **79.60** | **78.88** | **79.32** | *79.29* | *79.50* | *80.19* | *80.85* | *81.21* | *81.36* | *82.08* | **78.77** | *79.58* | *81.38* |
| Alaska | **0.99** | **0.93** | **0.86** | **0.98** | **0.98** | *0.84* | *0.76* | *0.92* | *0.97* | *0.81* | *0.74* | *0.91* | **0.94** | *0.87* | *0.86* |
| Federal GOM (a) | **3.37** | **3.68** | **3.95** | **3.58** | **3.47** | *3.38* | *3.21* | *3.17* | *3.22* | *3.17* | *3.00* | *3.03* | **3.65** | *3.31* | *3.10* |
| Lower 48 States (excl GOM) | **73.49** | **74.11** | **74.79** | **74.32** | **74.87** | *75.07* | *75.54* | *76.09* | *76.66* | *77.23* | *77.62* | *78.14* | **74.18** | *75.40* | *77.42* |
| Total Dry Gas Production | **73.41** | **74.03** | **74.85** | **73.96** | **74.43** | *74.37* | *74.56* | *75.20* | *75.82* | *76.16* | *76.30* | *76.97* | **74.06** | *74.64* | *76.32* |
| LNG Gross Imports | **0.43** | **0.08** | **0.26** | **0.24** | **0.33** | *0.16* | *0.17* | *0.15* | *0.12* | *0.12* | *0.12* | *0.12* | **0.25** | *0.20* | *0.12* |
| LNG Gross Exports | **0.06** | **0.06** | **0.09** | **0.10** | **0.15** | *0.38* | *0.66* | *1.00* | *1.04* | *1.10* | *1.35* | *1.73* | **0.08** | *0.55* | *1.31* |
| Pipeline Gross Imports | **8.36** | **6.69** | **6.69** | **7.06** | **8.06** | *6.25* | *6.53* | *6.77* | *7.46* | *6.20* | *6.50* | *6.81* | **7.20** | *6.90* | *6.74* |
| Pipeline Gross Exports | **4.98** | **4.36** | **4.81** | **5.08** | **5.68** | *5.16* | *5.44* | *5.55* | *5.28* | *5.16* | *5.30* | *5.58* | **4.81** | *5.46* | *5.33* |
| Supplemental Gaseous Fuels | **0.17** | **0.16** | **0.14** | **0.18** | **0.17** | *0.16* | *0.16* | *0.16* | *0.17* | *0.17* | *0.17* | *0.17* | **0.16** | *0.17* | *0.17* |
| Net Inventory Withdrawals | **18.48** | **-12.99** | **-10.48** | **-0.55** | **13.12** | *-8.47* | *-7.18* | *4.48* | *17.77* | *-9.03* | *-8.67* | *3.15* | **-1.46** | *0.48* | *0.74* |
| Total Supply | **95.81** | **63.53** | **66.56** | **75.72** | **90.28** | *66.93* | *68.13* | *80.22* | *95.01* | *67.37* | *67.76* | *79.92* | **75.33** | *76.38* | *77.45* |
| Balancing Item (b) | **0.84** | **0.55** | **-0.46** | **-1.17** | **-0.15** | *0.84* | *0.88* | *-0.55* | *-0.37* | *0.45* | *1.26* | *0.08* | **-0.07** | *0.25* | *0.36* |
| Total Primary Supply | **96.65** | **64.09** | **66.11** | **74.54** | **90.13** | *67.77* | *69.01* | *79.67* | *94.63* | *67.82* | *69.02* | *80.01* | **75.26** | *76.63* | *77.81* |
| **Consumption (billion cubic feet per day)** | | | | | | | | | | | | | | | |
| Residential | **27.52** | **6.91** | **3.46** | **12.92** | **22.50** | *7.30* | *3.63* | *15.19* | *24.83* | *7.44* | *3.65* | *15.43* | **12.64** | *12.14* | *12.78* |
| Commercial | **16.01** | **5.87** | **4.43** | **8.95** | **13.45** | *6.13* | *4.64* | *10.40* | *14.83* | *6.22* | *4.70* | *10.68* | **8.78** | *8.65* | *9.09* |
| Industrial | **22.68** | **19.62** | **19.18** | **20.84** | **22.62** | *20.25* | *19.90* | *21.75* | *22.98* | *20.55* | *20.28* | *22.13* | **20.57** | *21.13* | *21.48* |
| Electric Power (c) | **23.05** | **25.28** | **32.50** | **25.07** | **24.28** | *27.53* | *34.22* | *25.32* | *24.45* | *26.94* | *33.66* | *24.65* | **26.50** | *27.85* | *27.44* |
| Lease and Plant Fuel | **4.27** | **4.32** | **4.37** | **4.33** | **4.35** | *4.35* | *4.36* | *4.40* | *4.44* | *4.46* | *4.46* | *4.50* | **4.32** | *4.37* | *4.47* |
| Pipeline and Distribution Use | **3.03** | **2.01** | **2.07** | **2.33** | **2.82** | *2.10* | *2.14* | *2.50* | *2.99* | *2.10* | *2.14* | *2.51* | **2.36** | *2.39* | *2.43* |
| Vehicle Use | **0.09** | **0.09** | **0.10** | **0.10** | **0.11** | *0.11* | *0.11* | *0.11* | *0.11* | *0.11* | *0.11* | *0.11* | **0.09** | *0.11* | *0.11* |
| Total Consumption | **96.65** | **64.09** | **66.11** | **74.54** | **90.13** | *67.77* | *69.01* | *79.67* | *94.63* | *67.82* | *69.02* | *80.01* | **75.26** | *76.63* | *77.81* |
| **End-of-period Inventories (billion cubic feet)** | | | | | | | | | | | | | | | |
| Working Gas Inventory | **1,483** | **2,658** | **3,625** | **3,677** | **2,492** | *3,263* | *3,924* | *3,511* | *1,912* | *2,734* | *3,531* | *3,241* | **3,677** | *3,511* | *3,241* |
| East Region (d) | **242** | **576** | **859** | **856** | **436** | *645* | *860* | *700* | *234* | *500* | *767* | *633* | **856** | *700* | *633* |
| Midwest Region (d) | **252** | **565** | **972** | **987** | **542** | *776* | *1,086* | *910* | *388* | *631* | *982* | *839* | **987** | *910* | *839* |
| South Central Region (d) | **575** | **1,002** | **1,206** | **1,304** | **1,078** | *1,284* | *1,328* | *1,299* | *864* | *1,047* | *1,129* | *1,167* | **1,304** | *1,299* | *1,167* |
| Mountain Region (d) | **113** | **155** | **203** | **186** | **145** | *203* | *258* | *231* | *153* | *185* | *236* | *211* | **186** | *231* | *211* |
| Pacific Region (d) | **276** | **336** | **359** | **320** | **266** | *330* | *367* | *346* | *247* | *346* | *392* | *367* | **320** | *346* | *367* |
| Alaska | **24** | **24** | **25** | **24** | **25** | *24* | *25* | *24* | *25* | *24* | *25* | *24* | **24** | *24* | *24* |

- = 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 fee**

U.S. Energy Information Administration | Short-Term Energy Outlook - June 2016

| | 2015 | | | | 2016 | | | | 2017 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2015 | 2016 | 2017 |
| **Wholesale/Spot** | | | | | | | | | | | | | | | |
| Henry Hub Spot Price ..... | **2.99** | **2.83** | **2.84** | **2.18** | **2.06** | *2.01* | *2.36* | *2.71* | *3.11* | *2.89* | *3.03* | *3.17* | **2.71** | *2.29* | *3.05* |
| **Residential Retail** | | | | | | | | | | | | | | | |
| New England ..... | **13.09** | **13.33** | **16.17** | **12.55** | **11.75** | *12.89* | *15.88* | *12.72* | *12.60* | *13.82* | *16.46* | *13.18* | **13.19** | *12.51* | *13.21* |
| Middle Atlantic ..... | **9.53** | **11.20** | **16.32** | **10.99** | **8.86** | *11.47* | *16.35* | *11.01* | *9.82* | *12.18* | *16.72* | *11.25* | **10.52** | *10.44* | *11.00* |
| E. N. Central ..... | **7.78** | **10.58** | **16.71** | **7.96** | **6.78** | *9.74* | *15.95* | *8.04* | *7.79* | *11.04* | *16.59* | *8.57* | **8.67** | *8.15* | *8.93* |
| W. N. Central ..... | **8.66** | **11.84** | **17.65** | **9.34** | **7.38** | *9.96* | *15.86* | *8.49* | *7.80* | *10.64* | *17.43* | *9.66* | **9.74** | *8.59* | *9.21* |
| S. Atlantic ..... | **10.74** | **16.68** | **22.48** | **14.02** | **10.23** | *15.62* | *21.33* | *12.29* | *10.67* | *15.58* | *21.54* | *12.39* | **12.93** | *12.33* | *12.42* |
| E. S. Central ..... | **9.34** | **14.36** | **19.42** | **11.83** | **8.54** | *12.14* | *17.55* | *10.38* | *8.97* | *13.14* | *18.60* | *11.26* | **10.92** | *10.13* | *10.53* |
| W. S. Central ..... | **8.45** | **13.94** | **19.90** | **12.07** | **8.25** | *12.76* | *17.50* | *10.65* | *8.81* | *13.76* | *19.09* | *11.85* | **10.72** | *10.41* | *11.02* |
| Mountain ..... | **9.57** | **10.87** | **14.57** | **8.56** | **8.19** | *9.36* | *12.91* | *8.66* | *8.80* | *10.26* | *14.01* | *9.77* | **9.77** | *8.88* | *9.74* |
| Pacific ..... | **11.46** | **11.40** | **12.05** | **10.88** | **10.95** | *10.14* | *10.43* | *9.67* | *10.12* | *10.66* | *11.24* | *10.43* | **11.32** | *10.34* | *10.46* |
| U.S. Average ..... | **9.30** | **11.96** | **16.45** | **10.11** | **8.53** | *11.07* | *15.30* | *9.74* | *9.13* | *11.91* | *16.11* | *10.37* | **10.36** | *9.80* | *10.42* |
| **Commercial Retail** | | | | | | | | | | | | | | | |
| New England ..... | **10.77** | **10.13** | **9.69** | **9.13** | **8.75** | *8.97* | *9.15* | *9.78* | *10.33* | *10.22* | *10.38* | *10.56* | **10.21** | *9.13* | *10.38* |
| Middle Atlantic ..... | **7.91** | **7.48** | **6.62** | **7.01** | **6.87** | *6.38* | *6.53* | *7.42* | *8.01* | *7.62* | *7.38* | *8.12* | **7.49** | *6.91* | *7.90* |
| E. N. Central ..... | **6.95** | **7.51** | **8.80** | **6.30** | **5.90** | *6.89* | *8.05* | *6.41* | *6.71* | *8.05* | *8.93* | *7.09* | **7.01** | *6.38* | *7.16* |
| W. N. Central ..... | **7.65** | **7.98** | **9.01** | **6.70** | **6.25** | *6.62* | *8.00* | *6.80* | *7.18* | *7.57* | *8.76* | *7.38* | **7.54** | *6.63* | *7.42* |
| S. Atlantic ..... | **8.48** | **9.21** | **9.62** | **8.92** | **7.53** | *8.58* | *9.25* | *8.55* | *8.62* | *9.11* | *9.77* | *9.07* | **8.83** | *8.23* | *8.96* |
| E. S. Central ..... | **8.54** | **9.62** | **10.00** | **8.90** | **7.47** | *8.17* | *9.13* | *8.38* | *8.10* | *9.02* | *9.88* | *9.09* | **8.93** | *8.04* | *8.71* |
| W. S. Central ..... | **7.15** | **7.21** | **8.00** | **7.27** | **6.23** | *6.61* | *7.21* | *6.84* | *6.92* | *7.52* | *8.02* | *7.48* | **7.31** | *6.61* | *7.33* |
| Mountain ..... | **8.28** | **8.35** | **9.03** | **7.23** | **6.94** | *7.03* | *7.88* | *6.95* | *7.12* | *7.68* | *8.83* | *7.92* | **8.02** | *7.06* | *7.65* |
| Pacific ..... | **9.20** | **8.43** | **8.69** | **8.14** | **8.33** | *8.10* | *8.25* | *7.99* | *8.53* | *8.56* | *9.00* | *8.78* | **8.61** | *8.16* | *8.69* |
| U.S. Average ..... | **7.94** | **8.13** | **8.42** | **7.38** | **6.84** | *7.23* | *7.92* | *7.38* | *7.68* | *8.16* | *8.71* | *8.08* | **7.88** | *7.19* | *7.99* |
| **Industrial Retail** | | | | | | | | | | | | | | | |
| New England ..... | **9.10** | **7.61** | **6.10** | **6.77** | **7.08** | *6.93* | *6.82* | *8.08* | *8.52* | *7.72* | *7.43* | *8.42* | **7.77** | *7.26* | *8.16* |
| Middle Atlantic ..... | **8.31** | **7.58** | **7.08** | **7.12** | **7.04** | *6.51* | *6.74* | *7.43* | *7.86* | *7.19* | *7.43* | *8.01* | **7.82** | *6.99* | *7.72* |
| E. N. Central ..... | **6.41** | **5.65** | **5.54** | **5.15** | **5.08** | *4.73* | *5.27* | *5.57* | *6.25* | *6.03* | *6.22* | *6.25* | **5.89** | *5.19* | *6.21* |
| W. N. Central ..... | **5.81** | **4.53** | **4.41** | **4.37** | **4.33** | *3.39* | *3.56* | *4.48* | *5.12* | *4.51* | *4.59* | *5.12* | **4.87** | *3.98* | *4.87* |
| S. Atlantic ..... | **5.46** | **4.51** | **4.54** | **4.26** | **4.37** | *3.94* | *4.32* | *4.76* | *5.18* | *4.79* | *4.93* | *5.24* | **4.73** | *4.36* | *5.05* |
| E. S. Central ..... | **5.15** | **4.28** | **4.14** | **3.84** | **3.84** | *3.67* | *3.95* | *4.50* | *4.97* | *4.51* | *4.58* | *4.90* | **4.39** | *3.99* | *4.76* |
| W. S. Central ..... | **3.21** | **2.92** | **3.07** | **2.49** | **2.25** | *2.16* | *2.55* | *2.86* | *3.24* | *3.05* | *3.31* | *3.40* | **2.92** | *2.45* | *3.25* |
| Mountain ..... | **6.61** | **6.22** | **6.12** | **5.71** | **5.29** | *4.78* | *5.13* | *5.30* | *5.59* | *5.34* | *5.72* | *5.79* | **6.18** | *5.15* | *5.62* |
| Pacific ..... | **7.32** | **6.57** | **6.62** | **6.48** | **6.68** | *5.60* | *5.72* | *6.05* | *6.53* | *6.08* | *6.44* | *6.59* | **6.77** | *6.05* | *6.42* |
| U.S. Average ..... | **4.57** | **3.68** | **3.66** | **3.34** | **3.34** | *2.87* | *3.15* | *3.74* | *4.35* | *3.77* | *3.92* | *4.29* | **3.84** | *3.29* | *4.10* |

- = 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 - June 2016

| | 2015 | | | | 2016 | | | | 2017 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2015 | 2016 | 2017 |
| **Supply (million short tons)** | | | | | | | | | | | | | | | |
| Production | **240.2** | **211.1** | **237.3** | **206.8** | **165.1** | *165.0* | *208.7* | *202.0* | *193.3* | *174.8* | *204.8* | *195.2* | **895.4** | *740.8* | *768.0* |
| Appalachia | **62.3** | **54.6** | **56.5** | **50.6** | **40.3** | *41.1* | *51.2* | *50.2* | *49.9* | *47.9* | *49.9* | *47.7* | **224.0** | *182.8* | *195.4* |
| Interior | **45.2** | **38.9** | **45.2** | **39.7** | **31.0** | *31.2* | *44.7* | *43.6* | *41.2* | *38.4* | *45.3* | *42.8* | **169.1** | *150.6* | *167.7* |
| Western | **132.7** | **117.6** | **135.5** | **116.5** | **93.9** | *92.7* | *112.7* | *108.1* | *102.2* | *88.6* | *109.6* | *104.6* | **502.3** | *407.4* | *404.9* |
| Primary Inventory Withdrawals | **-0.7** | **0.3** | **3.1** | **-1.6** | **-1.0** | *3.2* | *0.4* | *-1.6* | *0.2* | *1.9* | *-1.3* | *0.2* | **1.1** | *1.0* | *1.1* |
| Imports | **3.0** | **2.6** | **3.0** | **2.7** | **2.7** | *2.6* | *3.3* | *2.9* | *2.2* | *2.4* | *3.3* | *2.9* | **11.3** | *11.6* | *10.8* |
| Exports | **22.0** | **19.8** | **16.9** | **15.3** | **14.2** | *18.1* | *16.6* | *17.3* | *12.8* | *14.6* | *14.8* | *15.8* | **74.0** | *66.2* | *58.1* |
| Metallurgical Coal | **13.5** | **12.7** | **10.3** | **9.4** | **10.2** | *11.1* | *9.2* | *9.7* | *8.2* | *9.4* | *8.3* | *9.5* | **46.0** | *40.1* | *35.3* |
| Steam Coal | **8.5** | **7.0** | **6.6** | **5.9** | **4.0** | *7.1* | *7.4* | *7.6* | *4.6* | *5.3* | *6.5* | *6.3* | **28.0** | *26.1* | *22.7* |
| Total Primary Supply | **220.5** | **194.3** | **226.4** | **192.6** | **152.7** | *152.7* | *195.8* | *185.9* | *182.9* | *164.5* | *191.9* | *182.5* | **833.8** | *687.1* | *721.8* |
| Secondary Inventory Withdrawals | **-2.3** | **-12.8** | **3.8** | **-34.8** | **3.7** | *1.3* | *17.6* | *-7.7* | *7.3* | *1.3* | *16.4* | *-2.9* | **-46.1** | *15.0* | *22.2* |
| Waste Coal (a) | **2.4** | **2.4** | **2.4** | **2.4** | **2.5** | *2.5* | *2.5* | *2.5* | *2.5* | *2.5* | *2.5* | *2.5* | **9.5** | *10.0* | *10.0* |
| Total Supply | **220.5** | **183.9** | **232.6** | **160.2** | **158.9** | *156.5* | *215.9* | *180.8* | *192.7* | *168.3* | *210.8* | *182.2* | **797.2** | *712.1* | *753.9* |
| **Consumption (million short tons)** | | | | | | | | | | | | | | | |
| Coke Plants | **4.4** | **4.4** | **5.1** | **5.0** | **4.2** | *4.0* | *5.0* | *4.9* | *4.3* | *4.2* | *4.9* | *4.5* | **18.9** | *18.1* | *17.9* |
| Electric Power Sector (b) | **196.3** | **174.6** | **215.5** | **153.3** | **152.4** | *148.9* | *200.8* | *165.3* | *177.3* | *153.8* | *195.8* | *167.1* | **739.7** | *667.4* | *694.1* |
| Retail and Other Industry | **11.4** | **10.4** | **10.5** | **10.8** | **11.0** | *10.2* | *10.0* | *10.6* | *11.0* | *10.3* | *10.1* | *10.6* | **43.0** | *41.8* | *41.9* |
| Residential and Commercial | **0.8** | **0.6** | **0.6** | **0.7** | **0.8** | *0.5* | *0.5* | *0.6* | *0.7* | *0.5* | *0.4* | *0.5* | **2.7** | *2.4* | *2.1* |
| Other Industrial | **10.6** | **9.8** | **9.9** | **10.1** | **10.2** | *9.6* | *9.6* | *9.9* | *10.3* | *9.8* | *9.7* | *10.0* | **40.3** | *39.4* | *39.8* |
| Total Consumption | **212.1** | **189.4** | **231.0** | **169.1** | **167.6** | *163.0* | *215.9* | *180.8* | *192.7* | *168.3* | *210.8* | *182.2* | **801.6** | *727.3* | *753.9* |
| Discrepancy (c) | **8.4** | **-5.4** | **1.6** | **-8.9** | **-8.6** | *-6.5* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | **-4.4** | *-15.1* | *0.0* |
| **End-of-period Inventories (million short tons)** | | | | | | | | | | | | | | | |
| Primary Inventories (d) | **39.6** | **39.3** | **36.2** | **37.8** | **38.8** | *35.6* | *35.2* | *36.9* | *36.7* | *34.7* | *36.0* | *35.8* | **37.8** | *36.9* | *35.8* |
| Secondary Inventories | **161.2** | **173.9** | **170.1** | **204.9** | **201.2** | *199.8* | *182.2* | *189.9* | *182.6* | *181.3* | *164.9* | *167.7* | **204.9** | *189.9* | *167.7* |
| Electric Power Sector | **155.0** | **167.0** | **162.7** | **197.1** | **194.4** | *192.4* | *174.3* | *181.6* | *175.3* | *173.4* | *156.6* | *159.2* | **197.1** | *181.6* | *159.2* |
| Retail and General Industry | **4.1** | **4.5** | **5.1** | **5.5** | **4.8** | *5.1* | *5.7* | *6.0* | *5.2* | *5.4* | *6.0* | *6.2* | **5.5** | *6.0* | *6.2* |
| Coke Plants | **1.6** | **1.9** | **1.9** | **1.8** | **1.5** | *1.9* | *1.8* | *1.8* | *1.5* | *1.9* | *1.8* | *1.8* | **1.8** | *1.8* | *1.8* |
| **Coal Market Indicators** | | | | | | | | | | | | | | | |
| Coal Miner Productivity (Tons per hour) | **5.61** | **5.61** | **5.61** | **5.61** | **5.46** | *5.46* | *5.46* | *5.46* | *5.32* | *5.32* | *5.32* | *5.32* | **5.61** | *5.46* | *5.32* |
| Total Raw Steel Production (Million short tons per day) | **0.247** | **0.242** | **0.248** | **0.226** | **0.238** | *0.247* | *0.245* | *0.215* | *0.212* | *0.220* | *0.198* | *0.166* | **0.241** | *0.236* | *0.199* |
| Cost of Coal to Electric Utilities (Dollars per million Btu) | **2.27** | **2.25** | **2.22** | **2.15** | **2.13** | *2.19* | *2.22* | *2.17* | *2.17* | *2.21* | *2.24* | *2.20* | **2.23** | *2.18* | *2.20* |

- = no data available

(a) Waste coal includes waste coal and cloal 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 - June 2016

| | 2015 | | | | 2016 | | | | 2017 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2015 | 2016 | 2017 |
| **Electricity Supply (billion kilowatthours per day)** | | | | | | | | | | | | | | | |
| Electricity Generation | **11.36** | **10.77** | **12.46** | **10.21** | **10.67** | *10.78* | *12.50* | *10.60* | *11.14* | *10.93* | *12.53* | *10.69* | **11.20** | *11.14* | *11.33* |
| Electric Power Sector (a) | **10.93** | **10.36** | **12.01** | **9.78** | **10.24** | *10.38* | *12.06* | *10.18* | *10.71* | *10.53* | *12.09* | *10.27* | **10.77** | *10.72* | *10.90* |
| Comm. and Indus. Sectors (b) | **0.43** | **0.41** | **0.45** | **0.43** | **0.43** | *0.41* | *0.44* | *0.42* | *0.43* | *0.40* | *0.44* | *0.43* | **0.43** | *0.42* | *0.42* |
| Net Imports | **0.17** | **0.20** | **0.20** | **0.16** | **0.19** | *0.20* | *0.21* | *0.14* | *0.15* | *0.15* | *0.18* | *0.13* | **0.18** | *0.19* | *0.16* |
| Total Supply | **11.52** | **10.97** | **12.66** | **10.37** | **10.86** | *10.98* | *12.71* | *10.74* | *11.29* | *11.08* | *12.72* | *10.83* | **11.38** | *11.33* | *11.48* |
| Losses and Unaccounted for (c) | **0.77** | **0.92** | **0.86** | **0.63** | **0.65** | *0.96* | *0.81* | *0.73* | *0.62* | *0.92* | *0.81* | *0.73* | **0.80** | *0.79* | *0.77* |
| **Electricity Consumption (billion kilowatthours per day unless noted)** | | | | | | | | | | | | | | | |
| Retail Sales | **10.37** | **9.69** | **11.40** | **9.35** | **9.83** | *9.66* | *11.51* | *9.64* | *10.30* | *9.81* | *11.52* | *9.72* | **10.20** | *10.16* | *10.34* |
| Residential Sector | **4.20** | **3.35** | **4.51** | **3.29** | **3.81** | *3.32* | *4.52* | *3.44* | *4.05* | *3.34* | *4.49* | *3.50* | **3.84** | *3.77* | *3.85* |
| Commercial Sector | **3.60** | **3.65** | **4.12** | **3.51** | **3.51** | *3.67* | *4.19* | *3.59* | *3.63* | *3.75* | *4.21* | *3.60* | **3.72** | *3.74* | *3.80* |
| Industrial Sector | **2.55** | **2.67** | **2.76** | **2.53** | **2.49** | *2.65* | *2.78* | *2.59* | *2.59* | *2.70* | *2.79* | *2.60* | **2.63** | *2.63* | *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) | **0.38** | **0.36** | **0.40** | **0.38** | **0.38** | *0.36* | *0.39* | *0.37* | *0.38* | *0.36* | *0.39* | *0.38* | **0.38** | *0.37* | *0.37* |
| Total Consumption | **10.75** | **10.05** | **11.80** | **9.73** | **10.21** | *10.02* | *11.90* | *10.01* | *10.67* | *10.16* | *11.91* | *10.10* | **10.58** | *10.54* | *10.71* |
| Average residential electricity usage per customer (kWh) | **2,924** | **2,350** | **3,190** | **2,323** | **2,657** | *2,308* | *3,169* | *2,411* | *2,770* | *2,300* | *3,125* | *2,426* | **10,787** | *10,545* | *10,622* |
| **Prices** | | | | | | | | | | | | | | | |
| **Power Generation Fuel Costs (dollars per million Btu)** | | | | | | | | | | | | | | | |
| Coal | **2.27** | **2.25** | **2.22** | **2.15** | **2.13** | *2.19* | *2.22* | *2.17* | *2.17* | *2.21* | *2.24* | *2.20* | **2.23** | *2.18* | *2.20* |
| Natural Gas | **4.09** | **3.12** | **3.09** | **2.72** | **2.65** | *2.46* | *2.62* | *3.41* | *3.90* | *3.29* | *3.28* | *3.91* | **3.22** | *2.77* | *3.56* |
| Residual Fuel Oil | **10.82** | **11.64** | **10.48** | **7.76** | **6.42** | *8.35* | *8.89* | *8.96* | *8.91* | *9.74* | *9.69* | *10.16* | **10.36** | *8.15* | *9.61* |
| Distillate Fuel Oil | **15.61** | **15.17** | **13.19** | **11.74** | **9.02** | *11.54* | *11.82* | *12.58* | *13.05* | *13.26* | *13.70* | *15.22* | **14.43** | *11.19* | *13.76* |
| **Retail Prices (cents per kilowatthour)** | | | | | | | | | | | | | | | |
| Residential Sector | **12.24** | **12.85** | **12.99** | **12.59** | **12.22** | *12.91* | *12.98* | *12.42* | *12.41* | *13.22* | *13.35* | *12.82* | **12.67** | *12.64* | *12.96* |
| Commercial Sector | **10.46** | **10.54** | **10.95** | **10.36** | **10.08** | *10.55* | *10.94* | *10.33* | *10.19* | *10.73* | *11.21* | *10.61* | **10.59** | *10.50* | *10.71* |
| Industrial Sector | **6.79** | **6.81** | **7.32** | **6.63** | **6.42** | *6.68* | *7.25* | *6.65* | *6.49* | *6.80* | *7.39* | *6.78* | **6.90** | *6.76* | *6.88* |

- = 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 - June 2016

| | 2015 | | | | 2016 | | | | 2017 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2015 | 2016 | 2017 |
| **Residential Sector** | | | | | | | | | | | | | | | |
| New England | **152** | **112** | **144** | **112** | **133** | *112* | *142* | *119* | *142* | *112* | *138* | *121* | **130** | *127* | *128* |
| Middle Atlantic | **423** | **321** | **423** | **306** | **367** | *313* | *423* | *322* | *392* | *312* | *415* | *325* | **368** | *356* | *361* |
| E. N. Central | **587** | **428** | **556** | **434** | **522** | *432* | *576* | *464* | *556* | *433* | *568* | *471* | **501** | *499* | *507* |
| W. N. Central | **325** | **232** | **309** | **243** | **298** | *231* | *314* | *259* | *321* | *235* | *310* | *264* | **277** | *275* | *283* |
| S. Atlantic | **1,078** | **889** | **1,137** | **809** | **969** | *859* | *1,148* | *867* | *1,035* | *857* | *1,148* | *883* | **978** | *961* | *981* |
| E. S. Central | **390** | **275** | **384** | **254** | **337** | *270* | *388* | *281* | *363* | *275* | *388* | *287* | **326** | *319* | *328* |
| W. S. Central | **602** | **503** | **782** | **479** | **526** | *515* | *757* | *491* | *558* | *516* | *760* | *497* | **592** | *572* | *583* |
| Mountain | **235** | **240** | **333** | **237** | **240** | *241* | *345* | *239* | *251* | *246* | *346* | *243* | **261** | *266* | *271* |
| Pacific contiguous | **396** | **337** | **425** | **400** | **406** | *333* | *411* | *388* | *422* | *341* | *408* | *391* | **389** | *385* | *390* |
| AK and HI | **13** | **12** | **13** | **14** | **13** | *12* | *12* | *13* | *13* | *11* | *12* | *13* | **13** | *13* | *12* |
| Total | **4,202** | **3,349** | **4,505** | **3,288** | **3,811** | *3,318* | *4,516* | *3,443* | *4,053* | *3,337* | *4,493* | *3,497* | **3,835** | *3,773* | *3,845* |
| **Commercial Sector** | | | | | | | | | | | | | | | |
| New England | **147** | **139** | **159** | **137** | **141** | *138* | *158* | *138* | *143* | *138* | *157* | *136* | **146** | *144* | *144* |
| Middle Atlantic | **444** | **417** | **478** | **404** | **424** | *412* | *478* | *409* | *432* | *416* | *475* | *406* | **436** | *431* | *432* |
| E. N. Central | **509** | **490** | **544** | **471** | **489** | *495* | *556* | *491* | *512* | *504* | *557* | *491* | **503** | *508* | *516* |
| W. N. Central | **281** | **269** | **305** | **265** | **272** | *274* | *313* | *277* | *286* | *281* | *314* | *278* | **280** | *284* | *289* |
| S. Atlantic | **805** | **859** | **939** | **795** | **792** | *858* | *959* | *813* | *818* | *881* | *967* | *819* | **850** | *856* | *872* |
| E. S. Central | **235** | **239** | **279** | **222** | **226** | *237* | *284* | *227* | *235* | *245* | *285* | *227* | **244** | *244* | *248* |
| W. S. Central | **499** | **534** | **630** | **506** | **486** | *541* | *637* | *514* | *499* | *551* | *648* | *522* | **542** | *544* | *556* |
| Mountain | **240** | **256** | **289** | **246** | **240** | *265* | *301* | *255* | *254* | *273* | *306* | *260* | **258** | *265* | *273* |
| Pacific contiguous | **424** | **433** | **479** | **449** | **418** | *438* | *487* | *448* | *433* | *440* | *487* | *448* | **447** | *448* | *452* |
| AK and HI | **16** | **16** | **17** | **17** | **16** | *16* | *17* | *17* | *17* | *16* | *17* | *17* | **16** | *16* | *17* |
| Total | **3,603** | **3,651** | **4,119** | **3,511** | **3,506** | *3,674* | *4,190* | *3,587* | *3,629* | *3,746* | *4,212* | *3,605* | **3,722** | *3,740* | *3,799* |
| **Industrial Sector** | | | | | | | | | | | | | | | |
| New England | **49** | **50** | **52** | **49** | **46** | *48* | *52* | *48* | *48* | *49* | *52* | *47* | **50** | *49* | *49* |
| Middle Atlantic | **198** | **196** | **204** | **188** | **193** | *194* | *206* | *194* | *202* | *200* | *207* | *195* | **197** | *197* | *201* |
| E. N. Central | **520** | **525** | **531** | **493** | **504** | *516* | *529* | *498* | *514* | *519* | *528* | *497* | **517** | *512* | *515* |
| W. N. Central | **237** | **240** | **252** | **231** | **223** | *240* | *258* | *240* | *239* | *246* | *260* | *242* | **240** | *241* | *247* |
| S. Atlantic | **375** | **406** | **406** | **379** | **362** | *392* | *401* | *378* | *376* | *402* | *405* | *382* | **391** | *383* | *391* |
| E. S. Central | **279** | **287** | **290** | **265** | **266** | *278* | *289* | *278* | *290* | *288* | *287* | *276* | **280** | *278* | *285* |
| W. S. Central | **433** | **462** | **492** | **458** | **457** | *480* | *503* | *470* | *452* | *481* | *498* | *465* | **461** | *477* | *474* |
| Mountain | **217** | **235** | **251** | **223** | **214** | *239* | *259* | *229* | *225* | *249* | *265* | *235* | **232** | *235* | *244* |
| Pacific contiguous | **227** | **251** | **266** | **234** | **215** | *251* | *272* | *243* | *234* | *255* | *275* | *246* | **245** | *245* | *253* |
| AK and HI | **13** | **13** | **15** | **14** | **13** | *14* | *15* | *14* | *14* | *14* | *14* | *14* | **14** | *14* | *14* |
| Total | **2,546** | **2,666** | **2,757** | **2,535** | **2,492** | *2,652* | *2,783* | *2,592* | *2,593* | *2,702* | *2,792* | *2,599* | **2,626** | *2,630* | *2,672* |
| **Total All Sectors** (a) | | | | | | | | | | | | | | | |
| New England | **350** | **302** | **357** | **299** | **322** | *300* | *354* | *307* | *335* | *300* | *348* | *306* | **327** | *321* | *322* |
| Middle Atlantic | **1,077** | **944** | **1,115** | **909** | **995** | *930* | *1,118* | *935* | *1,038* | *938* | *1,108* | *938* | **1,011** | *995* | *1,006* |
| E. N. Central | **1,618** | **1,444** | **1,632** | **1,399** | **1,516** | *1,444* | *1,663* | *1,454* | *1,584* | *1,458* | *1,655* | *1,461* | **1,523** | *1,520* | *1,539* |
| W. N. Central | **844** | **742** | **866** | **739** | **793** | *746* | *885* | *776* | *846* | *762* | *884* | *784* | **797** | *800* | *819* |
| S. Atlantic | **2,262** | **2,158** | **2,486** | **1,986** | **2,127** | *2,113* | *2,512* | *2,061* | *2,233* | *2,143* | *2,523* | *2,087* | **2,223** | *2,204* | *2,247* |
| E. S. Central | **904** | **801** | **953** | **741** | **830** | *786* | *961* | *786* | *888* | *809* | *960* | *791* | **850** | *841* | *862* |
| W. S. Central | **1,535** | **1,499** | **1,904** | **1,444** | **1,468** | *1,536* | *1,898* | *1,475* | *1,509* | *1,548* | *1,906* | *1,485* | **1,596** | *1,595* | *1,613* |
| Mountain | **692** | **731** | **874** | **707** | **695** | *745* | *905* | *723* | *731* | *768* | *917* | *738* | **752** | *767* | *789* |
| Pacific contiguous | **1,050** | **1,023** | **1,172** | **1,085** | **1,042** | *1,024* | *1,173* | *1,081* | *1,092* | *1,039* | *1,173* | *1,088* | **1,083** | *1,080* | *1,098* |
| AK and HI | **43** | **41** | **44** | **44** | **42** | *41* | *44* | *44* | *43* | *41* | *43* | *44* | **43** | *43* | *43* |
| Total | **10,374** | **9,685** | **11,402** | **9,354** | **9,830** | *9,664* | *11,512* | *9,643* | *10,298* | *9,806* | *11,519* | *9,723* | **10,204** | *10,165* | *10,338* |

- = 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 - June 2016

| | 2015 | | | | 2016 | | | | 2017 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2015 | 2016 | 2017 |
| **Residential Sector** | | | | | | | | | | | | | | | |
| New England | **20.43** | **20.29** | **18.35** | **18.62** | **19.37** | *18.71* | *17.74* | *17.95* | *19.05* | *18.70* | *18.06* | *18.39* | **19.43** | *18.43* | *18.55* |
| Middle Atlantic | **15.77** | **16.07** | **16.47** | **16.04** | **15.28** | *16.16* | *16.74* | *16.00* | *15.77* | *16.83* | *17.53* | *16.75* | **16.09** | *16.07* | *16.73* |
| E. N. Central | **12.22** | **13.21** | **13.16** | **13.09** | **12.52** | *13.65* | *13.46* | *13.14* | *12.98* | *14.22* | *14.04* | *13.71* | **12.88** | *13.18* | *13.72* |
| W. N. Central | **10.24** | **12.16** | **12.46** | **11.22** | **10.62** | *12.50* | *12.91* | *11.31* | *10.85* | *12.80* | *13.22* | *11.56* | **11.48** | *11.83* | *12.08* |
| S. Atlantic | **11.37** | **11.91** | **12.14** | **11.70** | **11.43** | *11.92* | *11.92* | *11.34* | *11.53* | *12.13* | *12.17* | *11.63* | **11.79** | *11.67* | *11.87* |
| E. S. Central | **10.34** | **11.15** | **10.89** | **10.95** | **10.36** | *11.09* | *10.93* | *10.86* | *10.56* | *11.31* | *11.17* | *11.12* | **10.79** | *10.80* | *11.02* |
| W. S. Central | **10.67** | **11.35** | **11.03** | **10.81** | **10.35** | *11.15* | *10.83* | *10.42* | *10.36* | *11.45* | *11.34* | *10.96* | **10.96** | *10.70* | *11.05* |
| Mountain | **11.31** | **12.21** | **12.33** | **11.34** | **11.03** | *12.10* | *12.44* | *11.50* | *11.26* | *12.38* | *12.76* | *11.79* | **11.85** | *11.84* | *12.11* |
| Pacific | **13.69** | **13.47** | **15.76** | **13.89** | **14.13** | *14.14* | *15.71* | *13.85* | *14.22* | *14.26* | *15.91* | *14.15* | **14.26** | *14.49* | *14.66* |
| U.S. Average | **12.24** | **12.85** | **12.99** | **12.59** | **12.22** | *12.91* | *12.98* | *12.42* | *12.41* | *13.22* | *13.35* | *12.82* | **12.67** | *12.64* | *12.96* |
| **Commercial Sector** | | | | | | | | | | | | | | | |
| New England | **16.92** | **15.21** | **14.91** | **14.86** | **15.30** | *15.36* | *15.33* | *14.86* | *15.37* | *15.51* | *15.79* | *15.39* | **15.47** | *15.22* | *15.52* |
| Middle Atlantic | **13.07** | **13.04** | **13.72** | **12.57** | **11.92** | *12.49* | *13.43* | *12.29* | *12.05* | *12.76* | *13.83* | *12.68* | **13.13** | *12.57* | *12.86* |
| E. N. Central | **9.72** | **9.96** | **10.04** | **9.81** | **9.63** | *9.96* | *10.02* | *9.84* | *9.81* | *10.13* | *10.18* | *9.99* | **9.89** | *9.87* | *10.03* |
| W. N. Central | **8.57** | **9.52** | **9.95** | **8.89** | **8.86** | *9.54* | *9.99* | *8.80* | *9.05* | *9.80* | *10.29* | *9.05* | **9.25** | *9.32* | *9.57* |
| S. Atlantic | **9.66** | **9.45** | **9.59** | **9.35** | **9.38** | *9.65* | *9.64* | *9.36* | *9.49* | *9.84* | *9.90* | *9.67* | **9.52** | *9.52* | *9.73* |
| E. S. Central | **10.21** | **10.38** | **10.27** | **10.17** | **9.99** | *10.23* | *10.26* | *10.32* | *10.16* | *10.41* | *10.49* | *10.57* | **10.26** | *10.20* | *10.41* |
| W. S. Central | **8.05** | **7.89** | **7.94** | **7.72** | **7.65** | *7.91* | *7.94* | *7.64* | *7.58* | *8.01* | *8.21* | *7.94* | **7.90** | *7.80* | *7.96* |
| Mountain | **9.37** | **9.95** | **10.21** | **9.37** | **9.00** | *9.70* | *10.13* | *9.49* | *9.02* | *9.80* | *10.29* | *9.65* | **9.75** | *9.61* | *9.73* |
| Pacific | **12.23** | **13.30** | **15.61** | **13.44** | **12.21** | *13.74* | *15.67* | *13.48* | *12.34* | *13.99* | *16.02* | *13.82* | **13.71** | *13.85* | *14.11* |
| U.S. Average | **10.46** | **10.54** | **10.95** | **10.36** | **10.08** | *10.55* | *10.94* | *10.33* | *10.19* | *10.73* | *11.21* | *10.61* | **10.59** | *10.50* | *10.71* |
| **Industrial Sector** | | | | | | | | | | | | | | | |
| New England | **13.18** | **11.85** | **11.87** | **11.85** | **12.20** | *12.52* | *12.98* | *12.22* | *12.86* | *12.99* | *13.36* | *12.47* | **12.17** | *12.49* | *12.93* |
| Middle Atlantic | **7.90** | **7.22** | **7.36** | **7.06** | **7.05** | *7.03* | *7.27* | *6.95* | *7.15* | *7.16* | *7.46* | *7.09* | **7.39** | *7.08* | *7.22* |
| E. N. Central | **6.87** | **6.77** | **7.06** | **6.76** | **6.75** | *6.75* | *7.09* | *6.84* | *6.84* | *6.85* | *7.18* | *6.94* | **6.87** | *6.86* | *6.95* |
| W. N. Central | **6.49** | **6.88** | **7.51** | **6.48** | **6.65** | *6.94* | *7.56* | *6.55* | *6.72* | *7.03* | *7.66* | *6.64* | **6.85** | *6.94* | *7.03* |
| S. Atlantic | **6.55** | **6.38** | **6.90** | **6.26** | **6.16** | *6.45* | *6.85* | *6.38* | *6.22* | *6.58* | *6.99* | *6.50* | **6.53** | *6.47* | *6.58* |
| E. S. Central | **5.78** | **5.95** | **6.58** | **5.74** | **5.48** | *6.08* | *6.78* | *5.79* | *5.56* | *6.22* | *6.96* | *5.95* | **6.02** | *6.05* | *6.18* |
| W. S. Central | **5.69** | **5.53** | **5.73** | **5.27** | **5.06** | *5.16* | *5.56* | *5.22* | *5.15* | *5.32* | *5.74* | *5.40* | **5.56** | *5.26* | *5.41* |
| Mountain | **6.16** | **6.65** | **7.17** | **6.00** | **5.82** | *6.20* | *6.97* | *6.06* | *5.91* | *6.33* | *7.14* | *6.23* | **6.52** | *6.29* | *6.43* |
| Pacific | **8.00** | **8.94** | **10.46** | **9.21** | **7.99** | *8.69* | *9.97* | *9.02* | *7.67* | *8.66* | *9.97* | *9.01* | **9.21** | *8.98* | *8.88* |
| U.S. Average | **6.79** | **6.81** | **7.32** | **6.63** | **6.42** | *6.68* | *7.25* | *6.65* | *6.49* | *6.80* | *7.39* | *6.78* | **6.90** | *6.76* | *6.88* |
| **All Sectors** (a) | | | | | | | | | | | | | | | |
| New England | **17.90** | **16.51** | **15.83** | **15.74** | **16.50** | *16.13* | *15.92* | *15.61* | *16.54* | *16.26* | *16.30* | *16.09* | **16.51** | *16.04* | *16.30* |
| Middle Atlantic | **13.17** | **12.85** | **13.58** | **12.58** | **12.21** | *12.57* | *13.53* | *12.44* | *12.49* | *12.90* | *14.00* | *12.91* | **13.08** | *12.72* | *13.10* |
| E. N. Central | **9.71** | **9.76** | **10.13** | **9.75** | **9.66** | *9.91* | *10.28* | *9.86* | *9.96* | *10.17* | *10.54* | *10.15* | **9.84** | *9.94* | *10.21* |
| W. N. Central | **8.63** | **9.50** | **10.14** | **8.89** | **8.90** | *9.62* | *10.32* | *8.94* | *9.08* | *9.83* | *10.55* | *9.15* | **9.30** | *9.47* | *9.67* |
| S. Atlantic | **9.96** | **9.89** | **10.31** | **9.71** | **9.76** | *9.98* | *10.24* | *9.64* | *9.89* | *10.14* | *10.46* | *9.92* | **9.99** | *9.92* | *10.12* |
| E. S. Central | **8.90** | **9.06** | **9.40** | **8.85** | **8.70** | *9.06* | *9.48* | *8.91* | *8.83* | *9.22* | *9.71* | *9.15* | **9.07** | *9.06* | *9.24* |
| W. S. Central | **8.41** | **8.33** | **8.64** | **7.96** | **7.81** | *8.14* | *8.46* | *7.79* | *7.88* | *8.32* | *8.81* | *8.16* | **8.36** | *8.08* | *8.33* |
| Mountain | **9.02** | **9.63** | **10.14** | **8.96** | **8.72** | *9.35* | *10.11* | *9.07* | *8.83* | *9.50* | *10.31* | *9.27* | **9.48** | *9.37* | *9.53* |
| Pacific | **11.85** | **12.28** | **14.48** | **12.68** | **12.08** | *12.62* | *14.35* | *12.59* | *12.06* | *12.75* | *14.55* | *12.84* | **12.88** | *12.96* | *13.09* |
| U.S. Average | **10.27** | **10.31** | **10.88** | **10.13** | **9.99** | *10.30* | *10.84* | *10.08* | *10.13* | *10.49* | *11.12* | *10.38* | **10.42** | *10.33* | *10.55* |

- = 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 - June 2016

| | 2015 | | | | 2016 | | | | 2017 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2015 | 2016 | 2017 |
| **United States** | | | | | | | | | | | | | | | |
| Coal | **4,091** | **3,512** | **4,276** | **2,988** | **3,066** | *2,994* | *3,992* | *3,265* | *3,663* | *3,119* | *3,902* | *3,310* | **3,715** | *3,331* | *3,499* |
| Natural Gas | **3,248** | **3,477** | **4,392** | **3,503** | **3,428** | *3,737* | *4,593* | *3,549* | *3,426* | *3,652* | *4,519* | *3,462* | **3,658** | *3,828* | *3,767* |
| Petroleum (a) | **124** | **61** | **72** | **57** | **69** | *67* | *75* | *66* | *81* | *69* | *76* | *67* | **78** | *69* | *73* |
| Other Gases | **38** | **34** | **40** | **30** | **40** | *36* | *42* | *31* | *42* | *36* | *42* | *32* | **36** | *37* | *38* |
| Nuclear | **2,248** | **2,133** | **2,286** | **2,070** | **2,245** | *2,083* | *2,250* | *2,116* | *2,226* | *2,055* | *2,290* | *2,146* | **2,184** | *2,174* | *2,179* |
| Renewable Energy Sources: | **1,590** | **1,528** | **1,373** | **1,533** | **1,802** | *1,840* | *1,521* | *1,547* | *1,677* | *1,974* | *1,679* | *1,654* | **1,506** | *1,677* | *1,746* |
| Conventional Hydropower | **803** | **691** | **617** | **644** | **846** | *849* | *689* | *624* | *689* | *867* | *757* | *643* | **688** | *751* | *739* |
| Wind | **506** | **534** | **442** | **610** | **665** | *665* | *484* | *619* | *674* | *721* | *527* | *681* | **523** | *608* | *650* |
| Wood Biomass | **118** | **112** | **122** | **112** | **114** | *110* | *121* | *114* | *117* | *112* | *124* | *118* | **116** | *115* | *118* |
| Waste Biomass | **58** | **59** | **61** | **62** | **59** | *58* | *59* | *59* | *58* | *58* | *59* | *59* | **60** | *59* | *59* |
| Geothermal | **48** | **46** | **45** | **45** | **46** | *46* | *47* | *48* | *48* | *47* | *47* | *47* | **46** | *47* | *47* |
| Solar | **57** | **87** | **86** | **60** | **74** | *112* | *120* | *84* | *91* | *170* | *164* | *107* | **73** | *98* | *133* |
| Pumped Storage Hydropower | **-16** | **-11** | **-18** | **-11** | **-12** | *-11* | *-15* | *-14* | *-12* | *-11* | *-16* | *-14* | **-14** | *-13* | *-13* |
| Other Nonrenewable Fuels (b) | **33** | **37** | **39** | **37** | **35** | *37* | *39* | *36* | *35* | *37* | *39* | *36* | **36** | *37* | *37* |
| Total Generation | **11,355** | **10,770** | **12,460** | **10,207** | **10,672** | *10,783* | *12,497* | *10,598* | *11,138* | *10,932* | *12,532* | *10,693* | **11,198** | *11,140* | *11,326* |
| **Northeast Census Region** | | | | | | | | | | | | | | | |
| Coal | **292** | **175** | **203** | **139** | **163** | *113* | *165* | *172* | *267* | *142* | *186* | *191* | **202** | *153* | *196* |
| Natural Gas | **483** | **534** | **714** | **543** | **515** | *580* | *734* | *567* | *529* | *563* | *698* | *550* | **569** | *599* | *585* |
| Petroleum (a) | **46** | **2** | **5** | **2** | **7** | *4* | *6* | *5* | *10* | *4* | *6* | *5* | **14** | *5* | *6* |
| Other Gases | **2** | **2** | **2** | **1** | **2** | *2* | *2* | *1* | *2* | *2* | *2* | *1* | **2** | *2* | *2* |
| Nuclear | **545** | **499** | **542** | **499** | **543** | *475* | *530* | *497* | *507* | *468* | *522* | *489* | **521** | *511* | *497* |
| Hydropower (c) | **93** | **99** | **98** | **102** | **115** | *115* | *105* | *97* | *98* | *116* | *105* | *96* | **98** | *108* | *104* |
| Other Renewables (d) | **76** | **65** | **58** | **73** | **78** | *65* | *61* | *71* | *75* | *67* | *64* | *76* | **68** | *69* | *71* |
| Other Nonrenewable Fuels (b) | **11** | **12** | **12** | **12** | **11** | *12* | *12* | *12* | *12* | *12* | *12* | *12* | **12** | *12* | *12* |
| Total Generation | **1,548** | **1,388** | **1,634** | **1,373** | **1,436** | *1,366* | *1,615* | *1,423* | *1,501* | *1,375* | *1,594* | *1,421* | **1,485** | *1,460* | *1,473* |
| **South Census Region** | | | | | | | | | | | | | | | |
| Coal | **1,716** | **1,539** | **1,908** | **1,167** | **1,272** | *1,290* | *1,724* | *1,270* | *1,431* | *1,347* | *1,709* | *1,279* | **1,582** | *1,390* | *1,442* |
| Natural Gas | **1,971** | **2,075** | **2,465** | **1,975** | **2,005** | *2,275* | *2,626* | *1,957* | *1,977* | *2,226* | *2,581* | *1,930* | **2,122** | *2,217* | *2,180* |
| Petroleum (a) | **42** | **24** | **29** | **22** | **30** | *28* | *31* | *24* | *33* | *28* | *31* | *24* | **29** | *28* | *29* |
| Other Gases | **15** | **13** | **15** | **14** | **15** | *14* | *16* | *15* | *15* | *14* | *16* | *15* | **14** | *15* | *15* |
| Nuclear | **974** | **956** | **1,001** | **872** | **951** | *938* | *995* | *940* | *997* | *920* | *1,026* | *961* | **951** | *956* | *976* |
| Hydropower (c) | **122** | **108** | **94** | **145** | **191** | *133* | *109* | *136* | *160* | *132* | *109* | *134* | **117** | *142* | *134* |
| Other Renewables (d) | **231** | **267** | **255** | **287** | **326** | *329* | *272* | *322* | *348* | *379* | *310* | *365* | **260** | *312* | *351* |
| Other Nonrenewable Fuels (b) | **14** | **15** | **16** | **15** | **15** | *16* | *16* | *14* | *14* | *16* | *16* | *14* | **15** | *15* | *15* |
| Total Generation | **5,084** | **4,999** | **5,783** | **4,497** | **4,805** | *5,023* | *5,789* | *4,679* | *4,975* | *5,062* | *5,798* | *4,723* | **5,091** | *5,075* | *5,141* |
| **Midwest Census Region** | | | | | | | | | | | | | | | |
| Coal | **1,578** | **1,302** | **1,578** | **1,166** | **1,203** | *1,100* | *1,458* | *1,228* | *1,341* | *1,156* | *1,455* | *1,245* | **1,405** | *1,248* | *1,299* |
| Natural Gas | **300** | **257** | **340** | **285** | **361** | *404* | *480* | *368* | *367* | *367* | *458* | *339* | **296** | *403* | *383* |
| Petroleum (a) | **12** | **11** | **13** | **9** | **10** | *11* | *13* | *10* | *12* | *11* | *12* | *10* | **11** | *11* | *11* |
| Other Gases | **14** | **13** | **16** | **8** | **15** | *14* | *17* | *9* | *17* | *15* | *18* | *9* | **13** | *14* | *15* |
| Nuclear | **553** | **529** | **570** | **547** | **573** | *516* | *560* | *525* | *558* | *515* | *574* | *538* | **550** | *544* | *546* |
| Hydropower (c) | **44** | **47** | **42** | **37** | **45** | *53* | *44* | *35* | *38* | *53* | *44* | *34* | **43** | *44* | *42* |
| Other Renewables (d) | **251** | **218** | **168** | **277** | **280** | *254* | *183* | *269* | *288* | *275* | *198* | *289* | **228** | *247* | *262* |
| Other Nonrenewable Fuels (b) | **4** | **5** | **5** | **5** | **4** | *5* | *5* | *5* | *4* | *5* | *5* | *5* | **5** | *5* | *5* |
| Total Generation | **2,757** | **2,382** | **2,731** | **2,335** | **2,493** | *2,356* | *2,760* | *2,448* | *2,624* | *2,396* | *2,763* | *2,469* | **2,550** | *2,515* | *2,563* |
| **West Census Region** | | | | | | | | | | | | | | | |
| Coal | **505** | **496** | **587** | **517** | **427** | *491* | *646* | *594* | *625* | *475* | *553* | *594* | **526** | *540* | *561* |
| Natural Gas | **494** | **611** | **874** | **699** | **546** | *478* | *753* | *657* | *553* | *496* | *782* | *643* | **671** | *609* | *619* |
| Petroleum (a) | **23** | **22** | **25** | **23** | **21** | *24* | *26* | *27* | *27* | *26* | *27* | *28* | **23** | *25* | *27* |
| Other Gases | **7** | **6** | **7** | **7** | **7** | *6* | *7* | *7* | *8* | *6* | *7* | *7* | **7** | *7* | *7* |
| Nuclear | **176** | **149** | **172** | **152** | **178** | *154* | *165* | *154* | *164* | *152* | *169* | *158* | **162** | *163* | *161* |
| Hydropower (c) | **527** | **426** | **365** | **348** | **482** | *537* | *416* | *343* | *381* | *555* | *484* | *365* | **416** | *444* | *446* |
| Other Renewables (d) | **230** | **287** | **276** | **252** | **273** | *343* | *316* | *260* | *276* | *386* | *350* | *281* | **261** | *298* | *323* |
| Other Nonrenewable Fuels (b) | **4** | **5** | **5** | **5** | **5** | *5* | *5* | *5* | *5* | *5* | *6* | *5* | **5** | *5* | *5* |
| Total Generation | **1,967** | **2,002** | **2,311** | **2,002** | **1,938** | *2,038* | *2,333* | *2,048* | *2,038* | *2,099* | *2,377* | *2,080* | **2,071** | *2,090* | *2,150* |

(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 - June 2016

| | 2015 | | | | 2016 | | | | 2017 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2015 | 2016 | 2017 |
| **Fuel Consumption for Electricity Generation, All Sectors** | | | | | | | | | | | | | | | |
| **United States** | | | | | | | | | | | | | | | |
| Coal (thousand st/d) | **2,185** | **1,922** | **2,347** | **1,667** | **1,678** | *1,640* | *2,188* | *1,801* | *1,974* | *1,695* | *2,135* | *1,821* | **2,030** | *1,828* | *1,906* |
| Natural Gas (million cf/d) | **24,017** | **26,265** | **33,602** | **26,144** | **25,311** | *28,495* | *35,224* | *26,314* | *25,398* | *27,843* | *34,649* | *25,665* | **27,530** | *28,846* | *28,407* |
| Petroleum (thousand b/d) | **215** | **108** | **126** | **100** | **122** | *120* | *133* | *117* | *144* | *124* | *135* | *119* | **137** | *123* | *130* |
| Residual Fuel Oil | **76** | **26** | **33** | **26** | **30** | *28* | *32* | *29* | *35* | *31* | *34* | *30* | **40** | *30* | *32* |
| Distillate Fuel Oil | **66** | **25** | **24** | **25** | **30** | *28* | *29* | *28* | *37* | *27* | *29* | *28* | **35** | *28* | *30* |
| Petroleum Coke (a) | **61** | **52** | **65** | **46** | **57** | *60* | *66* | *55* | *64* | *60* | *67* | *56* | **56** | *60* | *62* |
| Other Petroleum Liquids (b) | **13** | **4** | **4** | **3** | **5** | *4* | *5* | *5* | *8* | *5* | *5* | *5* | **6** | *5* | *6* |
| **Northeast Census Region** | | | | | | | | | | | | | | | |
| Coal (thousand st/d) | **133** | **82** | **99** | **68** | **82** | *54* | *80* | *83* | *124* | *67* | *90* | *92* | **95** | *75* | *93* |
| Natural Gas (million cf/d) | **3,638** | **4,102** | **5,595** | **4,107** | **3,888** | *4,449* | *5,731* | *4,285* | *4,004* | *4,314* | *5,435* | *4,147* | **4,365** | *4,591* | *4,478* |
| Petroleum (thousand b/d) | **75** | **5** | **9** | **4** | **13** | *7* | *11* | *9* | *18* | *8* | *11* | *9* | **23** | *10* | *12* |
| **South Census Region** | | | | | | | | | | | | | | | |
| Coal (thousand st/d) | **888** | **819** | **1,023** | **638** | **672** | *688* | *920* | *684* | *749* | *714* | *914* | *690* | **842** | *741* | *767* |
| Natural Gas (million cf/d) | **14,399** | **15,637** | **18,741** | **14,727** | **14,721** | *17,302* | *20,034* | *14,445* | *14,560* | *16,932* | *19,697* | *14,245* | **15,885** | *16,629* | *16,367* |
| Petroleum (thousand b/d) | **79** | **45** | **53** | **41** | **56** | *54* | *59* | *46* | *61* | *55* | *59* | *45* | **54** | *54* | *55* |
| **Midwest Census Region** | | | | | | | | | | | | | | | |
| Coal (thousand st/d) | **880** | **742** | **895** | **668** | **680** | *622* | *826* | *697* | *751* | *650* | *820* | *703* | **796** | *707* | *731* |
| Natural Gas (million cf/d) | **2,329** | **2,014** | **2,725** | **2,211** | **2,728** | *3,172* | *3,882* | *2,815* | *2,801* | *2,892* | *3,719* | *2,606* | **2,320** | *3,151* | *3,006* |
| Petroleum (thousand b/d) | **24** | **23** | **26** | **18** | **19** | *20* | *22* | *20* | *21* | *20* | *22* | *20* | **23** | *21* | *21* |
| **West Census Region** | | | | | | | | | | | | | | | |
| Coal (thousand st/d) | **285** | **280** | **331** | **293** | **244** | *275* | *362* | *337* | *351* | *264* | *310* | *336* | **297** | *305* | *315* |
| Natural Gas (million cf/d) | **3,651** | **4,513** | **6,541** | **5,100** | **3,973** | *3,571* | *5,577* | *4,769* | *4,033* | *3,705* | *5,798* | *4,667* | **4,960** | *4,476* | *4,556* |
| Petroleum (thousand b/d) | **37** | **36** | **39** | **37** | **34** | *38* | *41* | *43* | *43* | *41* | *44* | *45* | **37** | *39* | *43* |
| **End-of-period U.S. Fuel Inventories Held by Electric Power Sector** | | | | | | | | | | | | | | | |
| Coal (million short tons) | **155.0** | **167.0** | **162.7** | **197.1** | **194.4** | *192.4* | *174.3* | *181.6* | *175.3* | *173.4* | *156.6* | *159.2* | **197.1** | *181.6* | *159.2* |
| Residual Fuel Oil (mmb) | **10.2** | **10.5** | **10.6** | **12.4** | **11.9** | *11.8* | *11.6* | *12.1* | *12.2* | *11.9* | *11.6* | *12.0* | **12.4** | *12.1* | *12.0* |
| Distillate Fuel Oil (mmb) | **16.7** | **16.7** | **17.2** | **17.4** | **16.9** | *16.8* | *16.7* | *17.0* | *17.1* | *17.0* | *16.9* | *17.2* | **17.4** | *17.0* | *17.2* |
| Petroleum Coke (mmb) | **4.1** | **5.2** | **5.5** | **6.7** | **6.2** | *6.0* | *5.9* | *5.8* | *5.6* | *5.5* | *5.4* | *5.3* | **6.7** | *5.8* | *5.3* |

(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 - June 2016

| | 2015 | | | | 2016 | | | | 2017 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2015 | 2016 | 2017 |
| **Electric Power Sector** | | | | | | | | | | | | | | | |
| Hydroelectric Power (a) | **0.684** | **0.594** | **0.538** | **0.560** | **0.728** | *0.771* | *0.601* | *0.543* | *0.587* | *0.748* | *0.660* | *0.559* | **2.376** | *2.643* | *2.554* |
| Wood Biomass (b) | **0.063** | **0.057** | **0.067** | **0.060** | **0.062** | *0.057* | *0.072* | *0.066* | *0.067* | *0.061* | *0.075* | *0.069* | **0.246** | *0.256* | *0.272* |
| Waste Biomass (c) | **0.067** | **0.066** | **0.070** | **0.071** | **0.069** | *0.066* | *0.069* | *0.068* | *0.066* | *0.067* | *0.070* | *0.068* | **0.274** | *0.272* | *0.270* |
| Wind | **0.433** | **0.462** | **0.387** | **0.534** | **0.575** | *0.575* | *0.423* | *0.541* | *0.577* | *0.624* | *0.461* | *0.596* | **1.815** | *2.114* | *2.257* |
| Geothermal | **0.041** | **0.040** | **0.039** | **0.040** | **0.040** | *0.040* | *0.041* | *0.042* | *0.041* | *0.040* | *0.041* | *0.041* | **0.159** | *0.163* | *0.163* |
| Solar | **0.047** | **0.073** | **0.074** | **0.052** | **0.062** | *0.096* | *0.104* | *0.072* | *0.076* | *0.145* | *0.142* | *0.092* | **0.246** | *0.334* | *0.456* |
| Subtotal | **1.335** | **1.292** | **1.174** | **1.315** | **1.536** | *1.605* | *1.310* | *1.331* | *1.413* | *1.685* | *1.450* | *1.424* | **5.117** | *5.782* | *5.973* |
| **Industrial Sector** | | | | | | | | | | | | | | | |
| Hydroelectric Power (a) | **0.004** | **0.003** | **0.002** | **0.003** | **0.003** | *0.003* | *0.003* | *0.003* | *0.003* | *0.003* | *0.003* | *0.003* | **0.013** | *0.013* | *0.013* |
| Wood Biomass (b) | **0.324** | **0.320** | **0.324** | **0.321** | **0.317** | *0.306* | *0.314* | *0.315* | *0.307* | *0.303* | *0.313* | *0.316* | **1.290** | *1.252* | *1.238* |
| Waste Biomass (c) | **0.046** | **0.049** | **0.050** | **0.049** | **0.046** | *0.047* | *0.049* | *0.048* | *0.048* | *0.048* | *0.049* | *0.049* | **0.195** | *0.190* | *0.193* |
| 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) | **0.189** | **0.192** | **0.195** | **0.200** | **0.193** | *0.197* | *0.199* | *0.197* | *0.197* | *0.198* | *0.199* | *0.197* | **0.776** | *0.786* | *0.790* |
| Subtotal | **0.568** | **0.570** | **0.576** | **0.578** | **0.565** | *0.558* | *0.570* | *0.568* | *0.560* | *0.556* | *0.570* | *0.569* | **2.292** | *2.260* | *2.254* |
| **Commercial Sector** | | | | | | | | | | | | | | | |
| Wood Biomass (b) | **0.018** | **0.018** | **0.018** | **0.018** | **0.019** | *0.019* | *0.019* | *0.019* | *0.020* | *0.020* | *0.020* | *0.020* | **0.073** | *0.077* | *0.078* |
| Waste Biomass (c) | **0.013** | **0.010** | **0.010** | **0.012** | **0.011** | *0.010* | *0.012* | *0.011* | *0.011* | *0.011* | *0.012* | *0.012* | **0.045** | *0.045* | *0.046* |
| 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 | **0.038** | **0.036** | **0.036** | **0.038** | **0.037** | *0.036* | *0.037* | *0.037* | *0.037* | *0.036* | *0.038* | *0.037* | **0.148** | *0.146* | *0.148* |
| **Residential Sector** | | | | | | | | | | | | | | | |
| Wood Biomass (b) | **0.106** | **0.108** | **0.109** | **0.109** | **0.099** | *0.104* | *0.105* | *0.105* | *0.106* | *0.106* | *0.106* | *0.106* | **0.432** | *0.414* | *0.426* |
| Geothermal | **0.010** | **0.010** | **0.010** | **0.010** | **0.011** | *0.011* | *0.011* | *0.011* | *0.011* | *0.011* | *0.011* | *0.011* | **0.041** | *0.044* | *0.045* |
| Solar (d) | **0.074** | **0.074** | **0.075** | **0.075** | **0.084** | *0.077* | *0.078* | *0.078* | *0.098* | *0.091* | *0.092* | *0.092* | **0.298** | *0.318* | *0.372* |
| Subtotal | **0.190** | **0.192** | **0.194** | **0.194** | **0.193** | *0.193* | *0.195* | *0.195* | *0.216* | *0.208* | *0.209* | *0.209* | **0.770** | *0.776* | *0.843* |
| **Transportation Sector** | | | | | | | | | | | | | | | |
| Ethanol (e) | **0.266** | **0.284** | **0.293** | **0.285** | **0.276** | *0.292* | *0.296* | *0.290* | *0.277* | *0.294* | *0.296* | *0.290* | **1.128** | *1.155* | *1.157* |
| Biomass-based Diesel (e) | **0.034** | **0.058** | **0.064** | **0.058** | **0.050** | *0.068* | *0.079* | *0.078* | *0.067* | *0.071* | *0.081* | *0.080* | **0.214** | *0.275* | *0.300* |
| Subtotal | **0.300** | **0.342** | **0.357** | **0.343** | **0.327** | *0.360* | *0.375* | *0.368* | *0.344* | *0.365* | *0.377* | *0.371* | **1.342** | *1.430* | *1.457* |
| **All Sectors Total** | | | | | | | | | | | | | | | |
| Hydroelectric Power (a) | **0.687** | **0.598** | **0.540** | **0.563** | **0.732** | *0.774* | *0.604* | *0.546* | *0.590* | *0.751* | *0.664* | *0.563* | **2.389** | *2.656* | *2.567* |
| Wood Biomass (b) | **0.512** | **0.503** | **0.518** | **0.508** | **0.497** | *0.486* | *0.511* | *0.506* | *0.500* | *0.490* | *0.515* | *0.510* | **2.040** | *1.999* | *2.015* |
| Waste Biomass (c) | **0.126** | **0.125** | **0.130** | **0.132** | **0.126** | *0.124* | *0.130* | *0.127* | *0.125* | *0.125* | *0.131* | *0.128* | **0.514** | *0.507* | *0.510* |
| Wind | **0.433** | **0.462** | **0.387** | **0.534** | **0.575** | *0.575* | *0.423* | *0.541* | *0.577* | *0.624* | *0.461* | *0.596* | **1.815** | *2.114* | *2.257* |
| Geothermal | **0.057** | **0.056** | **0.056** | **0.056** | **0.057** | *0.057* | *0.059* | *0.059* | *0.058* | *0.057* | *0.058* | *0.058* | **0.224** | *0.231* | *0.232* |
| Solar | **0.122** | **0.149** | **0.151** | **0.128** | **0.146** | *0.174* | *0.183* | *0.152* | *0.176* | *0.237* | *0.235* | *0.185* | **0.550** | *0.655* | *0.833* |
| Ethanol (e) | **0.271** | **0.289** | **0.298** | **0.290** | **0.287** | *0.295* | *0.301* | *0.295* | *0.282* | *0.299* | *0.301* | *0.295* | **1.147** | *1.179* | *1.177* |
| Biomass-based Diesel (e) | **0.034** | **0.058** | **0.064** | **0.058** | **0.050** | *0.068* | *0.079* | *0.078* | *0.067* | *0.071* | *0.081* | *0.080* | **0.214** | *0.275* | *0.300* |
| Biofuel Losses and Co-products (f) | **0.189** | **0.192** | **0.195** | **0.200** | **0.193** | *0.197* | *0.199* | *0.197* | *0.197* | *0.198* | *0.199* | *0.197* | **0.776** | *0.786* | *0.790* |
| **Total Consumption** | **2.431** | **2.432** | **2.337** | **2.469** | **2.649** | *2.751* | *2.487* | *2.499* | *2.570* | *2.852* | *2.644* | *2.611* | **9.669** | *10.386* | *10.676* |

- = 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 $CO_2$ Emissions**

U.S. Energy Information Administration | Short-Term Energy Outlook - June 2016

| | 2015 | | | | 2016 | | | | 2017 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2015 | 2016 | 2017 |
| **Macroeconomic** | | | | | | | | | | | | | | | |
| Real Gross Domestic Product | | | | | | | | | | | | | | | |
| (billion chained 2009 dollars - SAAR) | **16,177** | **16,334** | **16,414** | **16,471** | **16,493** | *16,565* | *16,660* | *16,799* | *16,934* | *17,066* | *17,197* | *17,309* | **16,349** | *16,629* | *17,127* |
| Real Personal Consumption Expend. | | | | | | | | | | | | | | | |
| (billion chained 2009 dollars - SAAR) | **11,081** | **11,179** | **11,262** | **11,331** | **11,383** | *11,474* | *11,566* | *11,656* | *11,758* | *11,850* | *11,943* | *12,022* | **11,213** | *11,520* | *11,893* |
| Real Fixed Investment | | | | | | | | | | | | | | | |
| (billion chained 2009 dollars - SAAR) | **2,701** | **2,736** | **2,761** | **2,763** | **2,752** | *2,775* | *2,805* | *2,841* | *2,885* | *2,932* | *2,980* | *3,026* | **2,740** | *2,793* | *2,956* |
| Business Inventory Change | | | | | | | | | | | | | | | |
| (billion chained 2009 dollars - SAAR) | **127** | **128** | **95** | **87** | **69** | *27* | *4* | *22* | *26* | *44* | *54* | *62* | **109** | *30* | *46* |
| Real Government Expenditures | | | | | | | | | | | | | | | |
| (billion chained 2009 dollars - SAAR) | **2,839** | **2,857** | **2,870** | **2,871** | **2,879** | *2,888* | *2,902* | *2,913* | *2,921* | *2,928* | *2,932* | *2,933* | **2,859** | *2,896* | *2,928* |
| Real Exports of Goods & Services | | | | | | | | | | | | | | | |
| (billion chained 2009 dollars - SAAR) | **2,091** | **2,118** | **2,121** | **2,110** | **2,097** | *2,097* | *2,115* | *2,135* | *2,156* | *2,176* | *2,197* | *2,219* | **2,110** | *2,111* | *2,187* |
| Real Imports of Goods & Services | | | | | | | | | | | | | | | |
| (billion chained 2009 dollars - SAAR) | **2,633** | **2,652** | **2,667** | **2,662** | **2,663** | *2,677* | *2,718* | *2,754* | *2,798* | *2,849* | *2,897* | *2,939* | **2,653** | *2,703* | *2,871* |
| Real Disposable Personal Income | | | | | | | | | | | | | | | |
| (billion chained 2009 dollars - SAAR) | **12,115** | **12,194** | **12,290** | **12,360** | **12,449** | *12,534* | *12,621* | *12,737* | *12,842* | *12,954* | *13,052* | *13,139* | **12,240** | *12,585* | *12,997* |
| Non-Farm Employment | | | | | | | | | | | | | | | |
| (millions) | **140.8** | **141.5** | **142.2** | **142.9** | **143.5** | *144.2* | *144.8* | *145.5* | *146.1* | *146.5* | *147.0* | *147.4* | **141.8** | *144.5* | *146.7* |
| Civilian Unemployment Rate | | | | | | | | | | | | | | | |
| (percent) | **5.6** | **5.4** | **5.2** | **5.0** | **4.9** | *4.9* | *4.9* | *4.9* | *4.8* | *4.7* | *4.6* | *4.6* | **5.3** | *4.9* | *4.7* |
| Housing Starts | | | | | | | | | | | | | | | |
| (millions - SAAR) | **0.99** | **1.16** | **1.16** | **1.13** | **1.15** | *1.16* | *1.18* | *1.25* | *1.35* | *1.40* | *1.44* | *1.49* | **1.11** | *1.18* | *1.42* |
| **Industrial Production Indices (Index, 2012=100)** | | | | | | | | | | | | | | | |
| Total Industrial Production | **105.8** | **105.1** | **105.5** | **104.6** | **104.1** | *104.1* | *103.9* | *104.7* | *106.3* | *107.2* | *108.4* | *109.4* | **105.2** | *104.2* | *107.8* |
| Manufacturing | **103.2** | **103.4** | **103.9** | **103.7** | **103.9** | *103.8* | *103.8* | *104.6* | *106.3* | *107.0* | *108.2* | *109.2* | **103.6** | *104.0* | *107.6* |
| Food | **103.1** | **102.6** | **103.4** | **103.2** | **104.4** | *104.7* | *105.0* | *105.5* | *106.1* | *106.6* | *107.2* | *107.8* | **103.1** | *104.9* | *106.9* |
| Paper | **98.9** | **98.5** | **97.0** | **96.6** | **96.7** | *96.0* | *95.7* | *95.6* | *95.5* | *95.4* | *95.5* | *95.5* | **97.7** | *96.0* | *95.5* |
| Petroleum and Coal Products | **102.4** | **104.7** | **105.7** | **106.9** | **106.8** | *107.7* | *108.9* | *110.0* | *110.8* | *111.6* | *112.0* | *112.3* | **104.9** | *108.3* | *111.7* |
| Chemicals | **97.9** | **97.9** | **97.7** | **98.5** | **99.1** | *99.3* | *99.7* | *100.4* | *101.2* | *102.1* | *103.2* | *104.4* | **98.0** | *99.6* | *102.7* |
| Nonmetallic Mineral Products | **111.3** | **111.7** | **113.0** | **116.1** | **116.5** | *116.9* | *117.4* | *118.4* | *119.6* | *120.9* | *122.3* | *123.5* | **113.0** | *117.3* | *121.6* |
| Primary Metals | **98.2** | **97.1** | **96.6** | **95.0** | **94.9** | *94.1* | *93.5* | *93.2* | *93.8* | *93.5* | *94.1* | *93.8* | **96.7** | *93.9* | *93.8* |
| Coal-weighted Manufacturing (a) | **102.0** | **102.1** | **102.2** | **102.5** | **102.8** | *102.8* | *102.9* | *103.3* | *104.0* | *104.4* | *105.2* | *105.6* | **102.2** | *102.9* | *104.8* |
| Distillate-weighted Manufacturing (a) | **104.4** | **104.5** | **105.3** | **106.0** | **106.1** | *106.3* | *106.7* | *107.5* | *108.5* | *109.4* | *110.4* | *111.1* | **105.0** | *106.7* | *109.9* |
| Electricity-weighted Manufacturing (a) | **102.9** | **103.1** | **103.3** | **103.3** | **103.5** | *103.5* | *103.8* | *104.3* | *105.4* | *105.9* | *106.9* | *107.5* | **103.1** | *103.8* | *106.4* |
| Natural Gas-weighted Manufacturing (a) | **102.3** | **103.4** | **103.5** | **104.1** | **104.4** | *104.7* | *105.1* | *105.8* | *106.9* | *107.6* | *108.9* | *109.8* | **103.3** | *105.0* | *108.3* |
| **Price Indexes** | | | | | | | | | | | | | | | |
| Consumer Price Index (all urban consumers) | | | | | | | | | | | | | | | |
| (index, 1982-1984=1.00) | **2.35** | **2.37** | **2.38** | **2.38** | **2.38** | *2.39* | *2.39* | *2.40* | *2.42* | *2.43* | *2.45* | *2.47* | **2.37** | *2.39* | *2.44* |
| Producer Price Index: All Commodities | | | | | | | | | | | | | | | |
| (index, 1982=1.00) | **1.92** | **1.92** | **1.90** | **1.87** | **1.83** | *1.85* | *1.85* | *1.86* | *1.89* | *1.90* | *1.92* | *1.95* | **1.90** | *1.85* | *1.91* |
| Producer Price Index: Petroleum | | | | | | | | | | | | | | | |
| (index, 1982=1.00) | **1.71** | **1.96** | **1.85** | **1.53** | **1.23** | *1.53* | *1.60* | *1.52* | *1.53* | *1.68* | *1.73* | *1.77* | **1.76** | *1.47* | *1.68* |
| GDP Implicit Price Deflator | | | | | | | | | | | | | | | |
| (index, 2009=100) | **109.1** | **109.7** | **110.0** | **110.3** | **110.5** | *110.9* | *111.4* | *111.9* | *112.6* | *113.1* | *113.6* | *114.3* | **109.8** | *111.2* | *113.4* |
| **Miscellaneous** | | | | | | | | | | | | | | | |
| Vehicle Miles Traveled (b) | | | | | | | | | | | | | | | |
| (million miles/day) | **7,957** | **8,940** | **8,862** | **8,538** | **8,198** | *9,249* | *9,032* | *8,687* | *8,322* | *9,283* | *9,127* | *8,770* | **8,577** | *8,792* | *8,878* |
| Air Travel Capacity | | | | | | | | | | | | | | | |
| (Available ton-miles/day, thousands) | **517** | **574** | **584** | **560** | **542** | *591* | *579* | *535* | *531* | *592* | *580* | *536* | **559** | *562* | *560* |
| Aircraft Utilization | | | | | | | | | | | | | | | |
| (Revenue ton-miles/day, thousands) | **322** | **356** | **365** | **343** | **326** | *372* | *368* | *329* | *325* | *374* | *370* | *331* | **347** | *349* | *350* |
| Airline Ticket Price Index | | | | | | | | | | | | | | | |
| (index, 1982-1984=100) | **286.4** | **313.0** | **283.3** | **286.2** | **281.8** | *304.0* | *291.3* | *295.1* | *289.5* | *314.0* | *301.8* | *308.3* | **292.2** | *293.0* | *303.4* |
| Raw Steel Production | | | | | | | | | | | | | | | |
| (million short tons per day) | **0.247** | **0.242** | **0.248** | **0.226** | **0.238** | *0.247* | *0.245* | *0.215* | *0.212* | *0.220* | *0.198* | *0.166* | **0.241** | *0.236* | *0.199* |
| **Carbon Dioxide ($CO_2$) Emissions (million metric tons)** | | | | | | | | | | | | | | | |
| Petroleum | **561** | **567** | **584** | **572** | **561** | *565* | *580* | *575* | *559* | *575* | *583* | *579* | **2,284** | *2,281* | *2,296* |
| Natural Gas | **470** | **314** | **328** | **369** | **443** | *331* | *341* | *394* | *460* | *331* | *341* | *396* | **1,480** | *1,509* | *1,527* |
| Coal | **393** | **351** | **428** | **315** | **325** | *306* | *404* | *339* | *360* | *316* | *394* | *340* | **1,486** | *1,374* | *1,410* |
| Total Energy (c) | **1,426** | **1,234** | **1,341** | **1,257** | **1,330** | *1,204* | *1,326* | *1,309* | *1,381* | *1,224* | *1,319* | *1,317* | **5,257** | *5,170* | *5,240* |

- = no data available

SAAR = Seasonally-adjusted annual rate

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

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

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

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

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

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

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

U.S. Energy Information Administration | Short-Term Energy Outlook - June 2016

| | 2015 | | | | 2016 | | | | 2017 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2015 | 2016 | 2017 |
| **Real Gross State Product (Billion $2009)** | | | | | | | | | | | | | | | |
| New England | **854** | **863** | **868** | **868** | **868** | *872* | *877* | *883* | *889* | *894* | *900* | *905* | **863** | *875* | *897* |
| Middle Atlantic | **2,409** | **2,437** | **2,446** | **2,457** | **2,457** | *2,467* | *2,478* | *2,496* | *2,510* | *2,526* | *2,541* | *2,553* | **2,437** | *2,474* | *2,532* |
| E. N. Central | **2,198** | **2,220** | **2,234** | **2,241** | **2,239** | *2,245* | *2,255* | *2,271* | *2,286* | *2,300* | *2,314* | *2,325* | **2,223** | *2,253* | *2,306* |
| W. N. Central | **1,028** | **1,038** | **1,049** | **1,052** | **1,053** | *1,056* | *1,062* | *1,071* | *1,078* | *1,085* | *1,093* | *1,099* | **1,042** | *1,060* | *1,089* |
| S. Atlantic | **2,868** | **2,899** | **2,913** | **2,929** | **2,938** | *2,955* | *2,975* | *3,003* | *3,028* | *3,053* | *3,077* | *3,098* | **2,902** | *2,968* | *3,064* |
| E. S. Central | **736** | **742** | **746** | **749** | **750** | *754* | *758* | *764* | *769* | *775* | *781* | *785* | **743** | *756* | *778* |
| W. S. Central | **2,021** | **2,025** | **2,028** | **2,031** | **2,031** | *2,036* | *2,046* | *2,064* | *2,086* | *2,107* | *2,131* | *2,152* | **2,027** | *2,044* | *2,119* |
| Mountain | **1,043** | **1,053** | **1,058** | **1,062** | **1,065** | *1,072* | *1,080* | *1,091* | *1,102* | *1,113* | *1,124* | *1,134* | **1,054** | *1,077* | *1,118* |
| Pacific | **2,919** | **2,954** | **2,969** | **2,979** | **2,988** | *3,004* | *3,024* | *3,051* | *3,079* | *3,104* | *3,129* | *3,151* | **2,955** | *3,017* | *3,116* |
| **Industrial Output, Manufacturing (Index, Year 2012=100)** | | | | | | | | | | | | | | | |
| New England | **99.4** | **99.6** | **99.9** | **99.6** | **99.8** | *99.9* | *99.8* | *100.5* | *102.1* | *102.7* | *103.7* | *104.6* | **99.6** | *100.0* | *103.3* |
| Middle Atlantic | **99.8** | **99.9** | **100.3** | **99.8** | **99.8** | *99.8* | *99.7* | *100.4* | *101.9* | *102.5* | *103.6* | *104.6* | **100.0** | *99.9* | *103.2* |
| E. N. Central | **105.1** | **105.4** | **106.0** | **106.2** | **106.1** | *105.8* | *105.8* | *106.6* | *108.0* | *108.5* | *109.7* | *110.5* | **105.7** | *106.1* | *109.2* |
| W. N. Central | **103.3** | **103.2** | **103.4** | **103.1** | **103.0** | *103.0* | *103.1* | *103.9* | *105.5* | *106.2* | *107.3* | *108.3* | **103.3** | *103.2* | *106.8* |
| S. Atlantic | **104.3** | **104.9** | **105.9** | **106.2** | **106.6** | *106.7* | *106.7* | *107.5* | *109.2* | *109.8* | *110.9* | *111.8* | **105.3** | *106.9* | *110.4* |
| E. S. Central | **105.5** | **106.1** | **107.2** | **107.6** | **108.4** | *108.5* | *108.6* | *109.4* | *110.9* | *111.5* | *112.6* | *113.5* | **106.6** | *108.7* | *112.2* |
| W. S. Central | **102.9** | **101.6** | **101.0** | **99.7** | **99.1** | *98.5* | *98.3* | *99.0* | *100.7* | *101.4* | *102.7* | *103.9* | **101.3** | *98.7* | *102.2* |
| Mountain | **104.7** | **105.2** | **106.2** | **106.8** | **107.5** | *107.7* | *107.9* | *109.0* | *111.1* | *112.0* | *113.5* | *114.7* | **105.7** | *108.0* | *112.8* |
| Pacific | **103.6** | **104.1** | **104.7** | **104.2** | **104.2** | *104.1* | *104.1* | *105.0* | *106.7* | *107.5* | *108.8* | *110.0* | **104.1** | *104.3* | *108.3* |
| **Real Personal Income (Billion $2009)** | | | | | | | | | | | | | | | |
| New England | **740** | **748** | **751** | **756** | **763** | *767* | *772* | *778* | *784* | *790* | *796* | *800* | **749** | *770* | *793* |
| Middle Atlantic | **1,895** | **1,913** | **1,928** | **1,938** | **1,950** | *1,962* | *1,975* | *1,989* | *2,002* | *2,017* | *2,029* | *2,039* | **1,919** | *1,969* | *2,022* |
| E. N. Central | **2,011** | **2,023** | **2,040** | **2,057** | **2,074** | *2,087* | *2,099* | *2,115* | *2,131* | *2,148* | *2,162* | *2,171* | **2,033** | *2,093* | *2,153* |
| W. N. Central | **972** | **974** | **978** | **982** | **990** | *997* | *1,003* | *1,011* | *1,019* | *1,027* | *1,034* | *1,040* | **977** | *1,000* | *1,030* |
| S. Atlantic | **2,620** | **2,642** | **2,667** | **2,686** | **2,710** | *2,734* | *2,756* | *2,783* | *2,810* | *2,836* | *2,859* | *2,877* | **2,654** | *2,746* | *2,846* |
| E. S. Central | **759** | **764** | **771** | **777** | **782** | *787* | *792* | *799* | *806* | *813* | *819* | *823* | **768** | *790* | *815* |
| W. S. Central | **1,711** | **1,706** | **1,719** | **1,727** | **1,739** | *1,749* | *1,761* | *1,778* | *1,796* | *1,816* | *1,833* | *1,848* | **1,716** | *1,757* | *1,823* |
| Mountain | **922** | **930** | **936** | **943** | **952** | *961* | *969* | *979* | *990* | *1,000* | *1,009* | *1,017* | **933** | *965* | *1,004* |
| Pacific | **2,218** | **2,253** | **2,271** | **2,288** | **2,305** | *2,323* | *2,342* | *2,363* | *2,384* | *2,405* | *2,423* | *2,439* | **2,258** | *2,333* | *2,413* |
| **Households (Thousands)** | | | | | | | | | | | | | | | |
| New England | **5,831** | **5,838** | **5,843** | **5,849** | **5,858** | *5,867* | *5,872* | *5,878* | *5,885* | *5,893* | *5,901* | *5,911* | **5,849** | *5,878* | *5,911* |
| Middle Atlantic | **15,986** | **16,005** | **16,015** | **16,028** | **16,049** | *16,071* | *16,082* | *16,092* | *16,105* | *16,120* | *16,138* | *16,156* | **16,028** | *16,092* | *16,156* |
| E. N. Central | **18,606** | **18,613** | **18,622** | **18,639** | **18,662** | *18,688* | *18,703* | *18,722* | *18,742* | *18,761* | *18,783* | *18,806* | **18,639** | *18,722* | *18,806* |
| W. N. Central | **8,448** | **8,464** | **8,478** | **8,493** | **8,514** | *8,535* | *8,553* | *8,571* | *8,592* | *8,612* | *8,632* | *8,653* | **8,493** | *8,571* | *8,653* |
| S. Atlantic | **24,611** | **24,700** | **24,787** | **24,879** | **24,986** | *25,093* | *25,185* | *25,279* | *25,372* | *25,467* | *25,562* | *25,659* | **24,879** | *25,279* | *25,659* |
| E. S. Central | **7,517** | **7,524** | **7,532** | **7,543** | **7,558** | *7,576* | *7,590* | *7,604* | *7,619* | *7,634* | *7,650* | *7,666* | **7,543** | *7,604* | *7,666* |
| W. S. Central | **14,319** | **14,373** | **14,421** | **14,471** | **14,530** | *14,592* | *14,647* | *14,700* | *14,754* | *14,808* | *14,864* | *14,921* | **14,471** | *14,700* | *14,921* |
| Mountain | **8,783** | **8,817** | **8,850** | **8,885** | **8,926** | *8,966* | *9,005* | *9,044* | *9,083* | *9,123* | *9,164* | *9,206* | **8,885** | *9,044* | *9,206* |
| Pacific | **18,402** | **18,459** | **18,508** | **18,560** | **18,624** | *18,689* | *18,741* | *18,797* | *18,852* | *18,909* | *18,967* | *19,025* | **18,560** | *18,797* | *19,025* |
| **Total Non-farm Employment (Millions)** | | | | | | | | | | | | | | | |
| New England | **7.2** | **7.2** | **7.2** | **7.2** | **7.3** | *7.3* | *7.3* | *7.4* | *7.4* | *7.4* | *7.4* | *7.4* | **7.2** | *7.3* | *7.4* |
| Middle Atlantic | **18.9** | **19.0** | **19.1** | **19.1** | **19.2** | *19.3* | *19.3* | *19.4* | *19.4* | *19.4* | *19.5* | *19.5* | **19.0** | *19.3* | *19.5* |
| E. N. Central | **21.4** | **21.4** | **21.5** | **21.6** | **21.7** | *21.8* | *21.8* | *21.9* | *22.0* | *22.0* | *22.1* | *22.1* | **21.5** | *21.8* | *22.0* |
| W. N. Central | **10.4** | **10.5** | **10.5** | **10.5** | **10.5** | *10.5* | *10.6* | *10.6* | *10.7* | *10.7* | *10.7* | *10.7* | **10.5** | *10.6* | *10.7* |
| S. Atlantic | **26.7** | **26.9** | **27.1** | **27.3** | **27.4** | *27.6* | *27.8* | *27.9* | *28.0* | *28.2* | *28.3* | *28.4* | **27.0** | *27.7* | *28.2* |
| E. S. Central | **7.8** | **7.8** | **7.8** | **7.9** | **7.9** | *8.0* | *8.0* | *8.0* | *8.1* | *8.1* | *8.1* | *8.1* | **7.8** | *8.0* | *8.1* |
| W. S. Central | **16.6** | **16.6** | **16.7** | **16.7** | **16.8** | *16.8* | *16.9* | *17.0* | *17.1* | *17.1* | *17.2* | *17.3* | **16.6** | *16.9* | *17.2* |
| Mountain | **9.9** | **10.0** | **10.0** | **10.1** | **10.2** | *10.3* | *10.3* | *10.4* | *10.5* | *10.5* | *10.6* | *10.6* | **10.0** | *10.3* | *10.5* |
| Pacific | **21.6** | **21.8** | **22.0** | **22.1** | **22.3** | *22.4* | *22.5* | *22.6* | *22.7* | *22.8* | *22.8* | *22.9* | **21.9** | *22.4* | *22.8* |

- = 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 - June 2016

| | 2015 | | | | 2016 | | | | 2017 | | | | Year | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 1st | 2nd | 3rd | 4th | 2015 | 2016 | 2017 |
| **Heating Degree Days** | | | | | | | | | | | | | | | |
| New England | **3,853** | **821** | **58** | **1,791** | **2,839** | *914* | *122* | *2,197* | *3,197* | *884* | *126* | *2,197* | **6,522** | *6,072* | *6,403* |
| Middle Atlantic | **3,581** | **612** | **40** | **1,544** | **2,665** | *763* | *72* | *1,989* | *2,931* | *699* | *77* | *1,989* | **5,777** | *5,488* | *5,695* |
| E. N. Central | **3,690** | **658** | **75** | **1,740** | **2,865** | *769* | *107* | *2,233* | *3,149* | *737* | *111* | *2,233* | **6,163** | *5,974* | *6,230* |
| W. N. Central | **3,374** | **652** | **95** | **1,963** | **2,890** | *674* | *134* | *2,402* | *3,235* | *688* | *136* | *2,402* | **6,084** | *6,100* | *6,462* |
| South Atlantic | **1,671** | **155** | **8** | **662** | **1,385** | *223* | *12* | *970* | *1,454* | *210* | *12* | *968* | **2,497** | *2,590* | *2,645* |
| E. S. Central | **2,145** | **183** | **14** | **881** | **1,756** | *249* | *18* | *1,293* | *1,855* | *265* | *18* | *1,293* | **3,223** | *3,315* | *3,431* |
| W. S. Central | **1,400** | **69** | **2** | **616** | **1,055** | *93* | *4* | *767* | *1,151* | *84* | *4* | *766* | **2,088** | *1,919* | *2,006* |
| Mountain | **1,898** | **703** | **123** | **1,865** | **2,072** | *647* | *124* | *1,783* | *2,185* | *663* | *127* | *1,782* | **4,589** | *4,626* | *4,757* |
| Pacific | **1,083** | **524** | **78** | **1,197** | **1,298** | *422* | *73* | *1,100* | *1,384* | *529* | *78* | *1,101* | **2,881** | *2,894* | *3,091* |
| U.S. Average | **2,340** | **442** | **49** | **1,252** | **1,947** | *482* | *64* | *1,508* | *2,112* | *484* | *66* | *1,505* | **4,084** | *4,000* | *4,167* |
| **Heating Degree Days, Prior 10-year Average** | | | | | | | | | | | | | | | |
| New England | **3,166** | **838** | **134** | **2,147** | **3,212** | *824* | *133* | *2,105* | *3,201* | *832* | *127* | *2,133* | **6,285** | *6,273* | *6,292* |
| Middle Atlantic | **2,935** | **666** | **90** | **1,976** | **2,983** | *651* | *90* | *1,926* | *2,982* | *662* | *84* | *1,949* | **5,667** | *5,650* | *5,677* |
| E. N. Central | **3,192** | **694** | **123** | **2,262** | **3,246** | *689* | *125* | *2,205* | *3,254* | *702* | *120* | *2,217* | **6,272** | *6,266* | *6,293* |
| W. N. Central | **3,273** | **691** | **150** | **2,433** | **3,298** | *693* | *150* | *2,392* | *3,302* | *708* | *145* | *2,406* | **6,546** | *6,533* | *6,561* |
| South Atlantic | **1,481** | **196** | **14** | **1,013** | **1,502** | *185* | *14* | *975* | *1,505* | *190* | *13* | *979* | **2,704** | *2,676* | *2,687* |
| E. S. Central | **1,853** | **236** | **19** | **1,358** | **1,898** | *225* | *19* | *1,308* | *1,906* | *232* | *17* | *1,306* | **3,466** | *3,450* | *3,461* |
| W. S. Central | **1,188** | **86** | **5** | **834** | **1,221** | *83* | *5* | *815* | *1,227* | *89* | *4* | *814* | **2,113** | *2,123* | *2,135* |
| Mountain | **2,258** | **730** | **150** | **1,873** | **2,230** | *724* | *147* | *1,879* | *2,214* | *730* | *138* | *1,869* | **5,012** | *4,981* | *4,952* |
| Pacific | **1,534** | **621** | **92** | **1,205** | **1,495** | *609* | *88* | *1,211* | *1,460* | *592* | *86* | *1,199* | **3,453** | *3,404* | *3,337* |
| U.S. Average | **2,183** | **493** | **77** | **1,567** | **2,199** | *483* | *76* | *1,535* | *2,192* | *487* | *72* | *1,537* | **4,319** | *4,293* | *4,289* |
| **Cooling Degree Days** | | | | | | | | | | | | | | | |
| New England | **0** | **71** | **486** | **0** | **0** | *120* | *448* | *1* | *0* | *81* | *415* | *1* | **557** | *569* | *497* |
| Middle Atlantic | **0** | **184** | **614** | **3** | **0** | *194* | *590* | *6* | *0* | *159* | *566* | *6* | **801** | *790* | *730* |
| E. N. Central | **0** | **221** | **498** | **9** | **4** | *219* | *578* | *9* | *0* | *214* | *565* | *9* | **728** | *810* | *788* |
| W. N. Central | **3** | **267** | **659** | **13** | **10** | *262* | *714* | *13* | *3* | *273* | *706* | *13* | **942** | *999* | *994* |
| South Atlantic | **136** | **763** | **1,157** | **336** | **136** | *658* | *1,168* | *237* | *117* | *625* | *1,163* | *237* | **2,393** | *2,198* | *2,142* |
| E. S. Central | **23** | **580** | **1,019** | **98** | **42** | *511* | *1,073* | *74* | *27* | *498* | *1,067* | *74* | **1,720** | *1,700* | *1,665* |
| W. S. Central | **52** | **854** | **1,568** | **266** | **121** | *820* | *1,510* | *217* | *87* | *858* | *1,510* | *217* | **2,740** | *2,668* | *2,672* |
| Mountain | **45** | **432** | **922** | **87** | **35** | *412* | *992* | *89* | *22* | *447* | *980* | *89* | **1,486** | *1,528* | *1,538* |
| Pacific | **52** | **228** | **680** | **121** | **36** | *189* | *611* | *76* | *32* | *196* | *590* | *76* | **1,081** | *911* | *893* |
| U.S. Average | **46** | **434** | **874** | **133** | **54** | *401* | *878* | *100* | *42* | *396* | *867* | *100* | **1,488** | *1,432* | *1,405* |
| **Cooling Degree Days, Prior 10-year Average** | | | | | | | | | | | | | | | |
| New England | **0** | **85** | **420** | **1** | **0** | *81* | *419* | *1* | *0* | *85* | *424* | *1* | **506** | *501* | *510* |
| Middle Atlantic | **0** | **168** | **557** | **5** | **0** | *168* | *549* | *5* | *0* | *174* | *552* | *6* | **731** | *722* | *732* |
| E. N. Central | **3** | **234** | **545** | **6** | **3** | *229* | *528* | *6* | *3* | *233* | *530* | *7* | **787** | *766* | *773* |
| W. N. Central | **7** | **282** | **683** | **9** | **7** | *279* | *674* | *9* | *7* | *275* | *673* | *10* | **981** | *969* | *966* |
| South Atlantic | **110** | **635** | **1,154** | **210** | **113** | *659* | *1,144* | *222* | *116* | *665* | *1,146* | *225* | **2,108** | *2,138* | *2,152* |
| E. S. Central | **33** | **526** | **1,053** | **52** | **32** | *541* | *1,038* | *56* | *33* | *542* | *1,038* | *60* | **1,663** | *1,668* | *1,673* |
| W. S. Central | **94** | **883** | **1,519** | **184** | **91** | *890* | *1,517* | *191* | *90* | *875* | *1,519* | *193* | **2,679** | *2,689* | *2,677* |
| Mountain | **17** | **423** | **930** | **75** | **21** | *429* | *931* | *76* | *23* | *419* | *942* | *79* | **1,445** | *1,457* | *1,463* |
| Pacific | **26** | **170** | **601** | **65** | **29** | *180* | *612* | *72* | *30* | *177* | *611* | *74* | **863** | *893* | *892* |
| U.S. Average | **40** | **396** | **849** | **83** | **42** | *404* | *845* | *88* | *43* | *404* | *848* | *91* | **1,369** | *1,379* | *1,386* |

- = 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).

# Appendix

This appendix is prepared in fulfillment of section 1245(d)(4)(A) of the National Defense Authorization Act (NDAA) for Fiscal Year 2012, as amended. The law requires the U.S. Energy Information Administration (EIA), the statistical and analytical agency within the U.S. Department of Energy, to submit to Congress a report on the availability and price of petroleum and petroleum products produced in countries other than Iran in the two-month period preceding the submission of the report. By law, EIA's data, analyses, and forecasts are independent of approval by any other officer or employee of the U.S. Government. The data in this appendix, therefore, should not be construed as representing those of the U.S. Department of Energy or other federal agencies.

EIA consulted with the U.S. Department of the Treasury, the U.S. Department of State, and the intelligence community in the process of developing the NDAA report, which was previously published as a stand-alone report. Detailed background and contextual information not repeated here can be found in early editions of the NDAA report.

## Table a1. Summary of Estimated Petroleum and Other Liquids Quantities

| | April 2016 | May 2016 | April – May 2016 Average | April – May 2015 Average | 2013 – 2015 Average |
|---|---|---|---|---|---|
| **Global Petroleum and Other Liquids (million barrels per day)** | | | | | |
| Global Petroleum and Other Liquids Production (a) | 95.7 | 95.3 | 95.5 | 95.2 | 93.3 |
| Global Petroleum and Other Liquids Consumption (b) | 95.1 | 94.6 | 94.9 | 92.9 | 92.5 |
| Biofuels Production (c) | 2.0 | 2.3 | 2.1 | 2.1 | 2.0 |
| Biofuels Consumption (c) | 2.0 | 2.1 | 2.1 | 2.0 | 2.0 |
| Iran Liquid Fuels Production | 4.3 | 4.4 | 4.4 | 3.4 | 3.3 |
| Iran Liquid Fuels Consumption | 1.7 | 1.7 | 1.7 | 1.8 | 1.9 |
| **Petroleum and Petroleum Products Produced and Consumed in Countries Other Than Iran (million barrels per day)** | | | | | |
| Production (d) | 89.5 | 88.6 | 89.0 | 89.7 | 88.0 |
| Consumption (d) | 91.4 | 90.8 | 91.1 | 89.1 | 88.7 |
| Production minus Consumption | -1.9 | -2.2 | -2.0 | 0.6 | -0.7 |
| World Inventory Net Withdrawals Including Iran | -0.6 | -0.7 | -0.7 | -2.3 | -0.8 |
| Estimated OECD Inventory Level (e) (million barrels) | 3,071 | 3,077 | 3,074 | 2,858 | 2,738 |
| **Surplus Production Capacity (million barrels per day)** | | | | | |
| OPEC Surplus Crude Oil Production Capacity (f) | 2.1 | 1.4 | 1.7 | 1.6 | 1.9 |

Note: The term "petroleum and other liquids" encompasses crude oil, lease condensate, natural gas liquids, biofuels, coal-to-liquids, gas-to-liquids, and refinery processing gains, which are important to consider in concert due to the inter-related supply, demand, and price dynamics of petroleum, petroleum products, and related fuels.
(a) Production includes crude oil (including lease condensates), natural gas liquids, other liquids, and refinery processing gains.
(b) Consumption of petroleum by the OECD countries is synonymous with "products 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.
(c) Biofuels production and consumption are based on EIA estimates as published in the International Energy Statistics. Biofuels production in the third quarter tends to be at its highest level in the year as ethanol production in Brazil reaches its seasonal peak and is typically lowest in the first quarter as seasonal production falls in the South/South-Central region of Brazil.
(d) Global production of petroleum and petroleum products outside of Iran is derived by subtracting biofuels production and Iran liquid fuels production from global liquid fuels production. The same method is used to calculate global consumption outside of Iran.
(e) Estimated inventory level is for OECD countries only.

(f) EIA defines surplus oil production capacity as potential oil production that could be brought online within 30 days and sustained for at least 90 days, consistent with sound business practices. This does not include oil production increases that could not be sustained without degrading the future production capacity of a field. It also does not include additional capacity that may be available in Iran, but which is currently offline due to the impacts of U.S. and EU sanctions on Iran's ability to sell its oil.
Source: U.S. Energy Information Administration.

## Table a2. Crude Oil and Petroleum Product Price Data

| Item | April 2016 | May 2016 | April – May 2016 Average | April – May 2015 Average | 2013 – 2015 Average |
|---|---|---|---|---|---|
| Brent Front Month Futures Price ($ per barrel) | 43.34 | 47.65 | 45.50 | 63.32 | 87.25 |
| WTI Front Month Futures Price ($ per barrel) | 41.12 | 46.80 | 43.96 | 56.94 | 79.91 |
| Dubai Front Month Futures Price ($ per barrel) | 39.68 | 44.37 | 42.03 | 61.15 | 84.58 |
| Brent 1st - 13th Month Futures Spread ($ per barrel) | -3.30 | -3.35 | -3.33 | -5.29 | 0.15 |
| WTI 1st - 13th Month Futures Spread ($ per barrel) | -4.53 | -2.88 | -3.71 | -5.25 | 1.52 |
| RBOB Front Month Futures Price ($ per gallon) | 1.49 | 1.58 | 1.53 | 1.96 | 2.37 |
| Heating Oil Front Month Futures Price ($ per gallon) | 1.25 | 1.42 | 1.33 | 1.90 | 2.47 |
| RBOB - Brent Futures Crack Spread ($ per gallon) | 0.46 | 0.45 | 0.45 | 0.45 | 0.29 |
| Heating Oil - Brent Futures Crack Spread ($ per gallon) | 0.22 | 0.29 | 0.25 | 0.39 | 0.40 |

(a) Brent refers to Brent crude oil traded on the Intercontinental Exchange (ICE).
(b) WTI refers to West Texas Intermediate crude oil traded on the New York Mercantile Exchange (NYMEX), owned by Chicago Mercantile Exchange (CME) Group.
(c) RBOB refers to reformulated blendstock for oxygenate blending traded on the NYMEX.
Source: U.S. Energy Information Administration, based on Chicago Mercantile Exchange (CME), Intercontinental Exchange (ICE), and Dubai Mercantile Exchange (DME).