Independent Statistics & Analysis

U.S. Energy Information Administration

Short-Term Energy Outlook (STEO)

Highlights

- North Sea Brent crude oil prices averaged $42/barrel (b) in April, a $3/b increase from March. Improving economic data, growing supply disruptions, and falling U.S. crude oil production and rig counts contributed to the price increase.

- Brent crude oil prices are forecast to average $41/b in 2016 and $51/b in 2017, $6/b and $10/b higher than forecast in last month's STEO, respectively. West Texas Intermediate (WTI) crude oil prices are forecast to average slightly less 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 August 2016 of $42/b should be considered in the context of Nymex contract values for August 2016 delivery. These contracts traded during the five-day period ending May 5 (*Market Prices and Uncertainty Report*) suggest the market expects WTI prices to range from $32/b to $65/b (at the 95% confidence interval) in August 2016.

- During the April-through-September summer driving season of 2016, U.S. regular gasoline retail prices are forecast to average $2.21/gallon (gal), 17 cents/gal higher than forecast in last month's STEO but 42 cents/gal lower than last summer. U.S. regular gasoline retail prices are forecast to average $2.08/gal in 2016 and $2.24/gal in 2017, 14 cents/gal higher and 24 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. The 2017 forecast is about 0.1 million b/d higher than forecast in the April STEO. EIA estimates that crude oil production for the month of April 2016 averaged 9.0 million b/d, which is 0.1 million b/d below the March 2016 level, and 0.7 million b/d below the 9.7 million b/d level reached in April 2015.

- Natural gas working inventories were 2,625 billion cubic feet (Bcf) on April 29, which was 49% higher than a year earlier, and 47% higher than the previous five-year (2011–15) average for that week. April is typically the beginning of the inventory injection season, which runs through October. EIA projects natural gas inventories will be 4,158 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 $2.25/million British thermal units (MMBtu) in 2016 and $3.02/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 and 0.2 million b/d in 2017.

Inventory builds are expected to continue through the first half of 2017, but at a generally decreasing rate. An inventory draw of 0.3 million b/d is expected in the third quarter of 2017. Lower inventory builds in this STEO compared with last month's STEO mainly reflect revised historical rates of demand growth for 2015, along with the expectation of higher demand growth in 2016 and 2017.

Global Petroleum and Other Liquids Consumption. EIA increased its estimates of historical and forecast global consumption for 2015–17 compared with the April STEO. Global consumption of petroleum and other liquid fuels is now estimated to have grown by 1.4 million b/d in 2015 (0.1 million b/d higher than previously estimated). Changes to global consumption mainly reflect upward revisions to 2015 growth in both China and India of 0.1 million b/d, which were partially offset by reductions to estimated consumption growth in Europe. EIA estimates that China's consumption grew by more than 0.4 million b/d in 2015, driven by increased use of gasoline, jet fuel, and hydrocarbon gas liquids (HGL), which more than offset decreases in diesel consumption. Increased use of HGL, in particular, had a large effect on consumption growth, where an increase in the number of propane dehydrogenation (PDH) plants led to an increased use of propane. Similarly, India's fuel consumption growth for 2015 was revised up to 0.3 million b/d (0.1 million b/d higher than previously estimated), mainly in transportation, coal mining, and industrial activities.

EIA now expects global consumption of petroleum and other liquid fuels to increase by 1.4 million b/d in 2016 and by 1.5 million b/d in 2017, growth that is 0.3 million b/d and 0.2 million b/d higher, respectively, than forecast in the April STEO. Many of the same drivers that prompted revisions to 2015 demand growth rates are expected to continue affecting demand in the forecast period. China's consumption is forecast to grow by 0.4 million b/d in both 2016 and 2017. EIA expects that China's demand for HGL will continue to grow at a fairly steady pace as additional PDH plants come online, including Oriental Energy's plant in Zhejiang and Haiwei's plant in Hebei. Gasoline and jet fuel consumption is also expected to grow in 2016. Similarly, EIA expects continued strength in India's consumption growth through the forecast period, particularly transportation fuel consumption, which is expected to drive year-on-year increases of 0.3 million b/d in both 2016 and 2017.

Overall consumption of petroleum and other liquid fuels in countries outside of the Organization for Economic Cooperation and Development (OECD) increased by an estimated 0.9 million b/d in 2015. Non-OECD consumption growth is expected to be 1.2 million b/d in 2016 and 1.4 million b/d in 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 0.1 million b/d in 2017. In

the OECD, growth in U.S. consumption 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 1.6 million b/d in 2015, with most of the growth occurring in North America. EIA expects non-OPEC production to decline by 0.7 million b/d in 2016 and by 0.2 million b/d in 2017, with most of the production declines occurring in the United States.

Changes in non-OPEC production are largely driven by changes in U.S. tight oil production, which is characterized by high production decline rates and relatively short investment horizons, making it among the most price-sensitive oil production globally. However, increases in HGL production from natural gas plants and in crude oil production from the Gulf of Mexico will partially offset lower tight oil production. Forecast total U.S. production of liquid fuels declines by 0.6 million b/d in 2016 and by 0.1 million b/d in 2017, as declining crude oil production is partially offset by expected growth in HGL production, liquid biofuels production, and refinery processing gain. Outside of the United States, forecast non-OPEC production declines by 0.2 million b/d in 2016 and by 0.1 million b/d in 2017.

Petroleum and other liquids production, with the exception of U.S. tight oil plays, is relatively robust 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 levels beyond 2017.

Among non-OPEC producers outside of the United States, the largest declines are forecast to be in Asia and the North Sea. After increasing in 2014 and 2015, production in the North Sea is expected to return to its long-term declining trend in 2016 and 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 over the forecast period by nearly 0.2 million b/d as the three largest state-owned oil companies have announced capital expenditure cuts and output reductions, mainly from mature fields that require high investment to maintain production. Also, fewer new offshore developments in China are expected to come online in 2016 compared with 2015.

Canada's production is expected to increase by less than 0.1 million b/d in 2016 and by 0.3 million b/d in 2017. Compared with the April STEO, EIA revised its outlook for Canada's 2016 production growth downward by almost 0.2 million b/d on average to reflect oil sands production outages caused by wildfires. On May 4, wildfires reached the city of Fort McMurray, Alberta, which houses many of the workers and support infrastructure related to Canada's oil sands operations. At the time of writing, Fort McMurray has been evacuated, but there is no known damage to any oil sands facility. However, Suncor, Shell Albian Sands, and Syncrude are among the oil sands companies confirming production outages or reduced rates at their sites. EIA expects that Canada's production in the second-quarter of 2016 will fall by an average of 0.5 million b/d from first-quarter levels, before returning to first quarter levels in the third quarter.

Non-OPEC unplanned supply outages in April were almost 0.4 million b/d. A fire at one of Brazil's offshore platforms in mid-March shut in about 50,000 b/d of production. In Colombia, attacks on pipelines kept about 20,000 b/d of production shut in. EIA will publish its estimate of disrupted volumes in Canada in the June STEO, but depending on how the situation develops, unplanned outages could extend into the summer.

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 0.9 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 almost 2.5 million b/d in April, 0.2 million b/d higher than in March. In April, disrupted volumes increased in Kuwait, where an oil worker labor strike resulted in 0.2 million b/d of shut-in production. The Kuwait Oil Company workers' strike lasted only four days, but output at its oil fields was reduced by as much as 60% during the industrial action. Overall, Kuwait's shut-in volumes totaled nearly 0.5 million b/d, half of which are continued disrupted volumes in the Neutral Zone.

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, continuing inventory builds through the first half of 2017 and high current and forecast levels of global oil inventories make the projected low surplus capacity level 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 3.11 billion barrels at the end of 2016 and are expected to be at the same level at the end of 2017.

Crude Oil Prices. Brent crude oil spot prices increased by $3/b in April to a monthly average of $42/b, which was the highest monthly average for Brent so far this year. This was the third consecutive increase in the monthly average Brent price, the longest such stretch since April–June 2014. Several factors put upward pressure on crude oil prices in April: improving economic data and related indications that global oil demand growth is accelerating; ongoing declines in the U.S. rig count and crude oil production; and growing oil supply outages.

Despite the recent increase in prices, EIA expects global oil inventory builds to average 0.9 million b/d in the second and third quarters of 2016, limiting upward price pressures in the

coming months. Brent prices are expected to average $42/b in the second and third quarters of 2016, before rising to $44/b in the fourth quarter as a result of slowing global oil inventory growth.

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 $51/b in 2017, $10/b higher than forecast in last month's STEO. Forecast Brent prices reach an average of $57/b in the fourth quarter of 2017, reflecting the potential for more significant inventory draws beyond the forecast period.

The higher oil price forecast in this month's STEO compared with the April STEO largely reflects tighter market balances, particularly for the second half of 2017, based on a stronger outlook for global oil consumption. Higher oil consumption data in non-OECD Asia, supported by economic data, contributed to upward revisions for global oil consumption growth of 0.3 million b/d and 0.2 million b/d in 2016 and 2017, respectively. Previously, the pace of economic growth and related oil demand growth had been considered one of the main downside risks to oil prices in the forecast period, and although economic risks remain, they are lower than previously assumed.

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 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 August 2016 delivery that were traded during the five-day period ending May 5 averaged $46/b, and implied volatility averaged 41%. These levels established the lower and upper limits of the 95% confidence interval for the market's expectations of monthly average WTI prices in August 2016 at $32/b and $65/b, respectively. The 95% confidence interval for market expectations widens over time, with lower and upper limits of $26/b and $83/b for prices in December 2016. At this time last year, WTI for August 2015 delivery averaged $61/b, and implied volatility averaged 33%, with the corresponding lower and upper limits of the 95% confidence interval at $46/b and $81/b.

U.S. Petroleum and Other Liquid Fuels

Growing domestic and global consumption of gasoline have contributed to higher refinery wholesale gasoline margins (the difference between the wholesale price of gasoline and the price of Brent crude oil). Margins averaged 48 cents/gallon (gal) in 2015, compared with the previous five-year average of 25 cents/gal. Strong demand for gasoline thus far in 2016 has contributed to gasoline margins increasing to 49 cents/gal in April, compared with 42 cents/gal in April of last year. Monthly data show gasoline consumption in the United States during the first two months of 2016 was 2.8% higher than during the same two-month period last year.

The U.S. average regular gasoline retail price increased to $2.11/gal in April, 14 cents/gal higher than in March, reflecting higher crude oil prices, increasing gasoline margins, and typical seasonal price increases. Monthly average retail gasoline prices for April 2016 ranged from a low of $1.88/gal in the Gulf Coast—Petroleum Administration for Defense District (PADD) 3—to a high of $2.58/gal in the West Coast (PADD 5). EIA expects the U.S. regular gasoline retail price to average $2.25/gal in May and to reach an annual peak of $2.28/gal in June, followed by lower prices in the second half of 2016.

Liquid Fuels 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 140,000 b/d (0.7%) in 2016 and by an additional 120,000 b/d (0.6%) in 2017.

Motor gasoline consumption increased by an estimated 240,000 b/d (2.7%) in 2015 to an average of 9.2 million b/d. Gasoline consumption is forecast to increase by 160,000 b/d (1.7%) to more than 9.3 b/d in 2016, which would be the highest annual average gasoline consumption on record. The previous annual average high was 9.3 million b/d in 2007. The increase in consumption reflects a forecast 2.3% increase in highway travel (because of employment growth and low retail gasoline prices) that is partially offset by increases in vehicle fleet fuel economy. In 2017, forecast gasoline consumption is 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 offsetting 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 100,000 b/d (2.5%) 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 100,000 b/d (2.5%).

Hydrocarbon gas liquids (HGL) consumption is forecast to increase by 10,000 b/d (0.5%) in 2016 and by 50,000 b/d (2.2%) in 2017, as increased ethane consumption more than offsets reduced consumption of other HGL. U.S. ethane consumption is forecast to increase by 60,000 b/d (5.4%) 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 (7.6%), as capacity begins to ramp up at five new petrochemical plants and at a previously deactivated plant.

Liquid Fuels 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 2017 forecast is more than 0.1 million b/d higher than forecast in the April STEO because of higher expected crude oil prices. 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 total U.S. crude oil production has fallen by 0.7 million b/d since April 2015 to an average of 9.0 million b/d in April 2016. All of the production decline was in the Lower 48 onshore.

Based on the current price forecast, EIA expects oil production to decline in most Lower 48 onshore oil production regions. 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 the average number of total rigs in operation during April at less than 440, down from more than 600 in January. The decline in rig counts continues to limit EIA's forecast of future drilling and production through 2017.

EIA expects U.S. crude oil production to decline from 9.1 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, at an average rate each month of about 160,000 b/d. Production is then expected to be relatively flat from October 2016 through July 2017, averaging about 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 there that could moderate production declines in the region. Several projects in the Gulf of Mexico that began operations in 2014-15 or that will begin operations later this year 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 (5.7%) in 2016 and by 0.3 million b/d (8.2%) 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.

Petroleum Product Prices. EIA expects the retail price of regular-grade gasoline will average $2.21/gal during the 2016 summer driving season (April through September), 17 cents/gal higher than forecast in last month's STEO, but 42 cents/gal lower than the price in summer 2015. Higher forecast prices compared with the April STEO reflect higher forecast crude oil prices and higher gasoline demand during the summer. The projected monthly average retail price of gasoline increases from $2.11/gal in April to a peak of $2.28/gal in June before falling to $2.12/gal in September.

The U.S. regular gasoline retail price, which averaged $2.43/gal in 2015, is projected to average $2.08/gal in 2016, which is 14 cents/gal higher than projected in last month's STEO. U.S. regular gasoline retail prices are forecast to average $2.24/gal in 2017.

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, led to higher prices for high-octane gasoline blending components, which also contributed to 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 last summer, 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. Additionally, any unplanned refinery outages or unexpected growth in demand could result in margins increasing above their forecast levels.

The diesel fuel retail price, which averaged $2.71/gal in 2015, is forecast to average $2.27/gal in 2016 and $2.64/gal in 2017, which is 16 cents/gal and 31 cents/gal higher than in last month's STEO, respectively. Higher diesel prices in this month's STEO reflect higher forecast crude oil prices.

Natural Gas

Marketed natural gas production was 80.1 billion cubic feet per day (Bcf/d) in February 2016, according to the latest *Natural Gas Monthly* data, which is the second-highest production level on record and an increase of 1.4% from January. Growth was strongest in the Marcellus and Utica production areas. Production in Pennsylvania (measured in Bcf/d) increased by 3.5% from January levels, and production in Ohio and West Virginia increased by 10.7% and by 1.7%, respectively. However, preliminary data since February, including EIA's *Drilling Productivity Report*, indicate production growth may be slowing because of reduced drilling activity in response to low natural gas prices.

Natural Gas Consumption. EIA's forecast of U.S. total natural gas consumption averages 76.5 Bcf per day (Bcf/d) in 2016 and 77.4 Bcf/d in 2017, compared with 75.3 Bcf/d in 2015. In 2016, natural gas consumption increases in the electric power sector primarily drive increases in total consumption. Forecast electric power sector use of natural gas increases by 4.0% in 2016, then declines by 1.6% in 2017, as natural gas prices rise and contribute to increasing coal generation. Forecast industrial sector consumption of natural gas increases by 2.4% in 2016 and by 2.0% in 2017, as new fertilizer and chemical projects come online.

Natural Gas Production and Trade. Despite recent data showing growing natural gas production in February, more recent preliminary data indicate production may be leveling in the next few months. EIA forecasts relatively unchanged production through the rest of 2016, as low natural gas prices and declining rig activity begin to affect production. In 2017, however, production is expected to rise in response to increases in price, demand, and liquefied natural gas (LNG) exports. Overall, EIA expects production will rise by 0.9% in 2016 and by 2.2% 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 increase 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. Inventories in March ended at 2,478 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. Looking to the start of next winter, EIA forecasts inventories to be 4,158 Bcf at the end of October 2016, which would be the highest level on record to begin the heating season.

Natural Gas Prices. The Henry Hub natural gas spot price averaged $1.92/million British thermal units (MMBtu) in April, an increase of 19 cents/MMBtu from the March price. 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 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 December 2016. Forecast Henry Hub natural gas prices average $2.25/MMBtu in 2016 and $3.02/MMBtu in 2017.

Natural gas futures contracts for August 2016 delivery that were traded during the five-day period ending May 5 averaged $2.36/MMBtu. Current options and futures prices imply that market participants place the lower and upper bounds for the 95% confidence interval for August 2016 contracts at $1.64/MMBtu and $3.39/MMBtu, respectively. In early May 2015, the natural gas futures contract for August 2015 delivery averaged $2.85/MMBtu, and the corresponding lower and upper limits of the 95% confidence interval were $1.98/MMBtu and $4.11/MMBtu.

Coal

Coal Supply. EIA estimates that U.S. coal production in April was 46 million short tons (MMst), a 6 MMst (12%) decrease from the previous month and 29 MMst (38%) lower than in April 2015. Forecast coal production is expected to decrease by 150 MMst (17%) in 2016, which would be the largest decline in terms of both tons and percentage since data collection started in 1949. In 2016, forecast coal production in the Appalachian region and Western region declines by 15% and by 20%, respectively. Interior region production declines by 9%. In 2017, total U.S. coal production is expected to increase by 32 MMst (4%).

According to the most recent data, electric power sector coal stockpiles were 189 MMst in February, nearly unchanged from January. This pattern deviates from the normal seasonal pattern where stockpiles decrease during the winter months. U.S. end-of-February coal stockpiles were still at high levels, despite the coal plant retirements that have occurred in recent months. This year, February stocks were 26% (39 MMst) higher than the February 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 58 MMst (8%) in 2016. The decline is a result of competition with low-priced natural gas and from warmer-than-normal winter weather that reduced overall electricity generation. Coal consumption in the electric power sector is forecast to increase by 25 MMst (4%) in 2017, primarily because of rising natural gas prices.

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 Environmental Protection Agency's (EPA) Mercury and Air Toxics Standards (MATS). In April, EPA granted units at five power plants an additional one-year extension to comply with MATS. These power plants will continue to operate while emission controls are installed or until reliable alternative generation sources are made available.

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 February were 5 MMst, up 2% from January but 31% lower than the amount exported in February 2015. EIA forecasts U.S. coal exports to decline by 15 MMst (20%) in 2016 and by 3 MMst (4%) 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 total about 11 MMst in 2016 and 2017.

Coal Prices. EIA estimates the delivered coal price averaged $2.23/MMBtu in 2015. Forecast prices are $2.18/MMBtu in 2016 and $2.21/MMBtu in 2017.

Electricity

Wholesale electricity prices this past winter (October through March) were significantly lower than in the winter of 2014–15. Day-ahead peak power prices averaged $35 per megawatthour (MWh) during winter 2015–16 in the wholesale market for the independent system operator (ISO) of New England, which was 52% below the average peak price during the 2014–15 winter. In the Electricity Reliability Council of Texas (ERCOT) ISO, peak wholesale prices averaged $21/MWh this past winter, a 36% decline from the previous winter. Mild winter temperatures along with low natural gas prices contributed to the lower wholesale electricity prices.

Electricity Consumption. U.S. temperatures during summer 2016, as measured by cooling degree days, are forecast to be close to last summer's level, but 3% higher than the 10-year average. However, regional variations are expected. Forecast cooling degree days in the Pacific states in summer 2016 are 11% lower than in 2015, while cooling degree days in the East North Central states are expected to be 12% higher than in 2015. These regional differences in the level of cooling contribute to flat growth in summer residential electricity sales and 1.5% summer-over-summer growth in commercial electricity sales.

Electricity Generation. Total U.S. electricity generation in 2016 is expected to average 11.2 terawatthours per day, slightly below the amount of electricity generated in 2015. Forecast total U.S. generation increases by 1.6% in 2017. EIA expects 34.0% of total electricity will be generated by natural gas in 2016, up from 32.7% last year. The projected share of coal-fired generation averages 30.5% in 2016, down from 33.2% last year. This would be the first year in which the annual generation share for natural gas exceeds that for coal. Coal is forecast to regain some of its generation share in 2017, as forecast natural gas prices slowly rise, but the forecast share of coal generation (31.4%) in 2017 remains below that of natural gas generation (32.9%).

Electricity Retail Prices. EIA expects the U.S. average retail price of electricity for the residential sector in May will average 12.9 cents per kilowatthour (kWh), with 18.5 cents/kWh in New England as the highest price and 11.1 cents/kWh in the East South Central region as the lowest

price. The U.S. residential electricity price averaged 12.7 cents/kWh in 2015 and is expected to fall by 0.7% to 12.6 cents/kWh in 2016 and then rise 2.4% to 12.9 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 11.3% in 2016 and by 4.4% in 2017. Forecast hydropower generation in the electric power sector increases by 9.1% in 2016 and then falls by 0.6% in 2017. Generation from renewables other than hydropower is forecast to grow by 13.3% in 2016 and by 8.6% in 2017.

EIA expects that from 2015 to 2017, utility-scale solar photovoltaic (PV) capacity will grow by more than 13 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*, in 2015 electricity generation from utility-scale PV exceeded generation from wind in California for the first time. Forecast utility-scale solar power generation averages 1.1% of total U.S. electricity generation in 2017.

Wind capacity, which starts from a significantly larger installed capacity base than solar, grew by 12% in 2015, and it is forecast to increase by 9% in 2016 and by 10% in 2017. In 2017, wind generation accounts for almost 6% of total generation.

Liquid Biofuels. On November 30, 2015, EPA finalized a rule setting Renewable Fuel Standard (RFS) volumes for 2014 through 2016. EIA used these final volumes to develop the current STEO forecast and assumes the 2016 targets will also apply to 2017. However, EPA did issue a biomass-based diesel target for 2017 of 2.0 billion gallons, which EIA uses for this forecast. 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 proposed RFS targets will be on biodiesel consumption, which 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 42,000 b/d in 2016 and to 47,000 b/d in 2017.

Energy-Related Carbon Dioxide Emissions. EIA estimates that energy-related emissions of carbon dioxide decreased by 2.7% in 2015. Emissions are forecast to decrease by 1.5% 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 0.5% in the first quarter of 2016, down from an estimated 1.4% in the fourth quarter of 2015. The slowing growth in real GDP in the first quarter mainly reflects a decline in nonresidential fixed investment, slower growth in personal consumption expenditures, and lower spending by the federal government.

EIA used the April 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 is 2.0% in 2016, below the 2.1% forecast in last month's STEO, and 2.9% in 2017. Forecast real disposable income grows by 2.7% in 2016 and by 3.3% in 2017. Total industrial production falls by 1.3% in 2016, and then rises by 3.3% in 2017. Projected growth in nonfarm employment averages 1.8% in 2016 and 1.5% in 2017.

Expenditures. Forecast private real fixed investment growth averages 2.8% and 6.3% in 2016 and 2017, respectively. Real consumption expenditures grow faster than real GDP in 2016 at 2.5%, and in 2017 at 3.2%. Forecast export growth is 1.4% and 4.6% over the same two years, while import growth is 2.3% in 2016 and 6.6% in 2017. Total government expenditures rise by 2.0% in 2016 and by 0.4% in 2017.
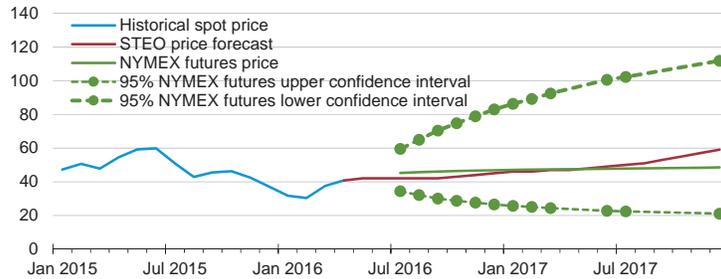
U.S. Energy Information Administration
Independent Statistics & Analysis

Short-Term Energy Outlook

Chart Gallery for May 2016

West Texas Intermediate (WTI) Crude Oil Price
dollars per barrel

- Historical spot price
- STEO price forecast
- NYMEX futures price
- 95% NYMEX futures upper confidence interval
- 95% NYMEX futures lower confidence interval

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

Source: Short-Term Energy Outlook, May 2016.

U.S. Gasoline and Crude Oil Prices
dollars per gallon
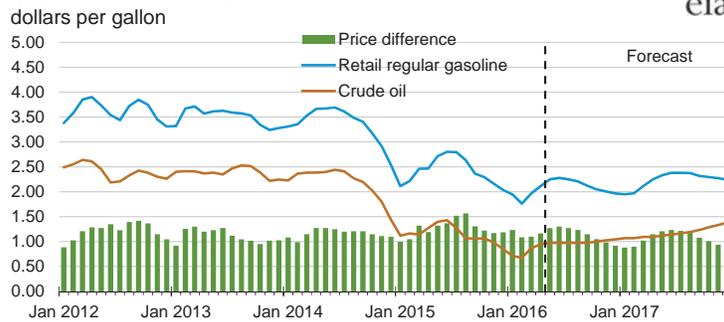
- Price difference
- Retail regular gasoline
- Crude oil

Forecast

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

Source: Short-Term Energy Outlook, May 2016.

U.S. Diesel Fuel and Crude Oil Prices

dollars per gallon

Price difference
Retail diesel fuel
Crude oil

Forecast

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

Source: Short-Term Energy Outlook, May 2016.

Henry Hub Natural Gas Price
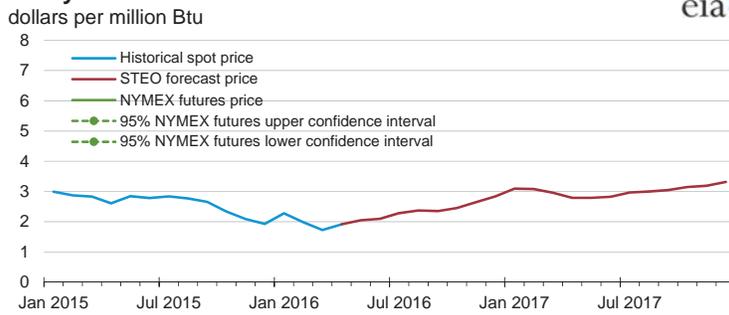
dollars per million Btu

Historical spot price
STEO forecast price
NYMEX futures price
95% NYMEX futures upper confidence interval
95% NYMEX futures lower confidence interval

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

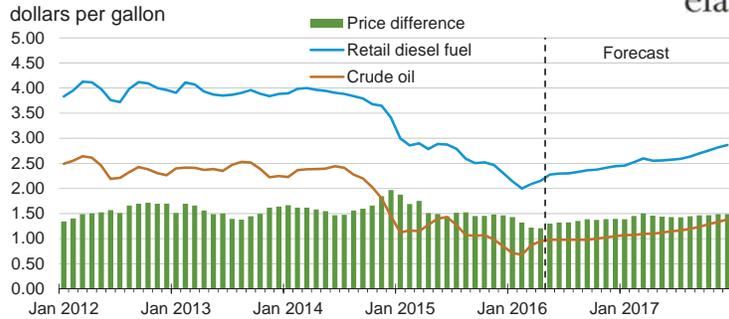Source: Short-Term Energy Outlook, May 2016.

U.S. Natural Gas Prices

dollars per thousand cubic feet

Residential price
Henry Hub spot price

Forecast
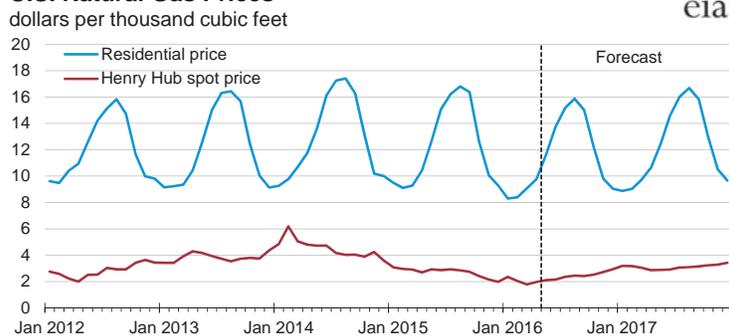
Source: Short-Term Energy Outlook, May 2016.

World Liquid Fuels Production and Consumption Balance

million barrels per day (MMb/d)

- Implied stock change and balance (right axis)
- World production (left axis)
- World consumption (left axis)

Forecast

Source: Short-Term Energy Outlook, May 2016.

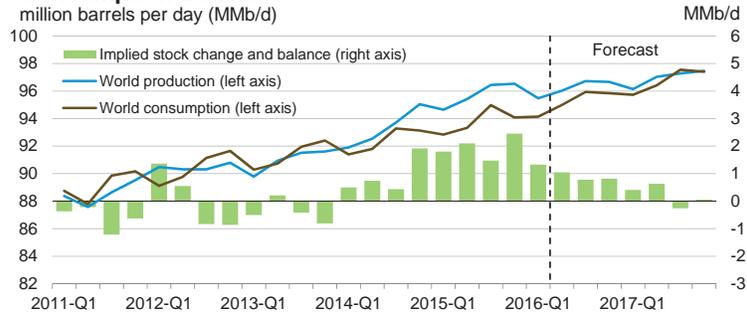**Estimated Historical Unplanned OPEC Crude Oil Production Outages**

million barrels per day

- Indonesia
- Saudi Arabia
- Kuwait
- Iraq
- Nigeria
- Libya
- Iran
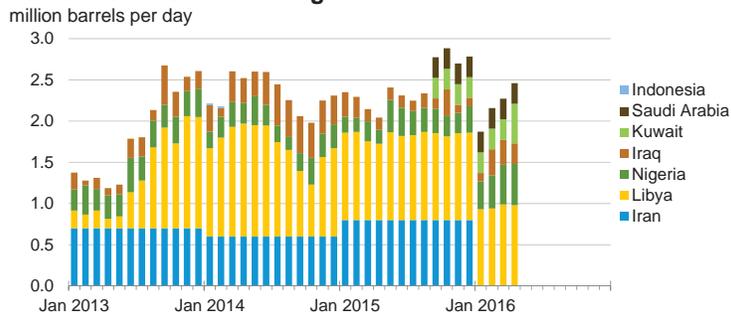
Source: Short-Term Energy Outlook, May 2016.

Estimated Historical Unplanned Non-OPEC Liquid Fuels Production Outages
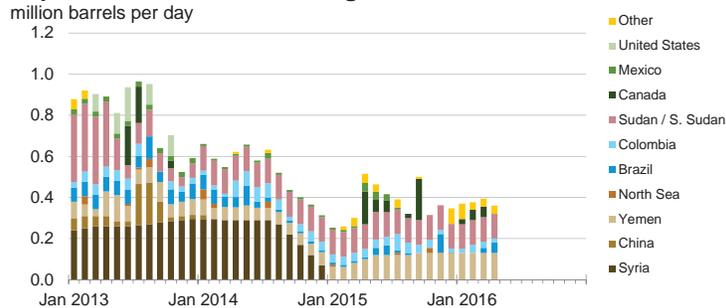
million barrels per day

- Other
- United States
- Mexico
- Canada
- Sudan / S. Sudan
- Colombia
- Brazil
- North Sea
- Yemen
- China
- Syria

Source: Short-Term Energy Outlook, May 2016.

World Liquid Fuels Consumption
million barrels per day (MMb/d)

annual change (MMb/d)

- Change in U.S. consumption (right axis)
- Change in China consumption (right axis)
- Change in other consumption (right axis)
- Total world consumption (left axis)

Forecast
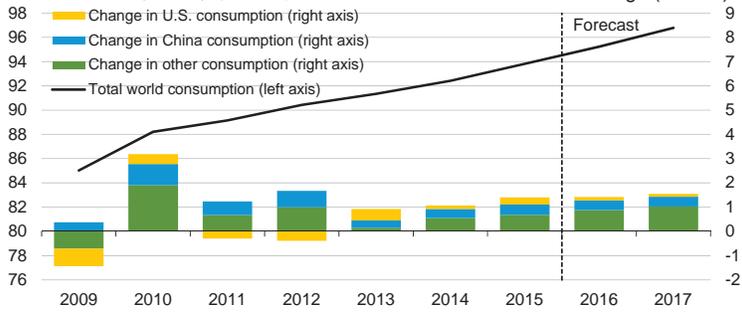
Source: Short-Term Energy Outlook, May 2016.

World Liquid Fuels Consumption Growth
million barrels per day

Forecast

OECD*   Non-OECD Asia   Former Soviet Union   Other
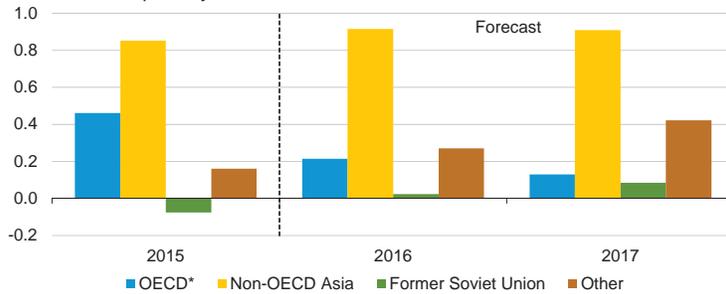
* Countries belonging to the Organization for Economic Cooperation and Development

Source: Short-Term Energy Outlook, May 2016.

World Crude Oil and Liquid Fuels Production Growth
million barrels per day

Forecast

OPEC countries   North America   Russia and Caspian Sea
Latin America   North Sea   Other Non-OPEC

Source: Short-Term Energy Outlook, May 2016.

Non-OPEC Crude Oil and Liquid Fuels Production Growth
million barrels per day

Legend: 2017, 2016, 2015

Categories: Canada, United States, Brazil, Russia, Oman, Malaysia, China, Other North Sea, Syria, India, Australia, Sudan/S. Sudan, Kazakhstan, Gabon, Vietnam, Egypt, Norway, Azerbaijan, Colombia, United Kingdom, Mexico
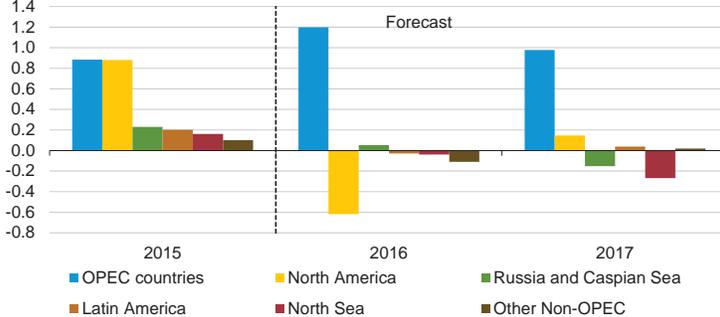
Source: Short-Term Energy Outlook, May 2016.

World Consumption and Non-OPEC Production Growth
million barrels per day   dollars per barrel

- World oil consumption growth (left axis)
- Non-OPEC production growth (left axis)
- Change in WTI price (right axis)

Forecast

2013-Q1, 2014-Q1, 2015-Q1, 2016-Q1, 2017-Q1

Source: Short-Term Energy Outlook, May 2016.

OPEC surplus crude oil production capacity
million barrels per day

Forecast

2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017

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

Source: Short-Term Energy Outlook, May 2016.
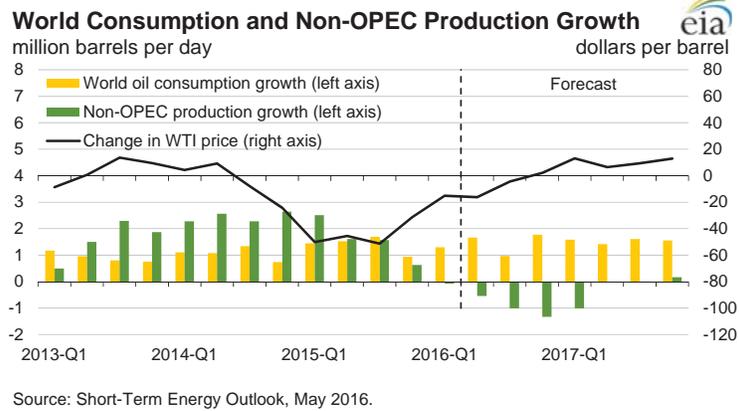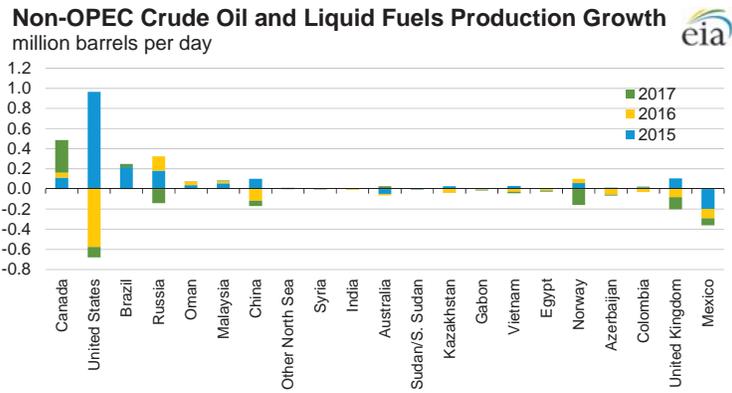
OECD Commercial Stocks of Crude Oil and Other Liquids (days of supply)

Forecast

80
75
70
65
60
55
50
45

Jan 2011   Jan 2012   Jan 2013   Jan 2014   Jan 2015   Jan 2016   Jan 2017

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.
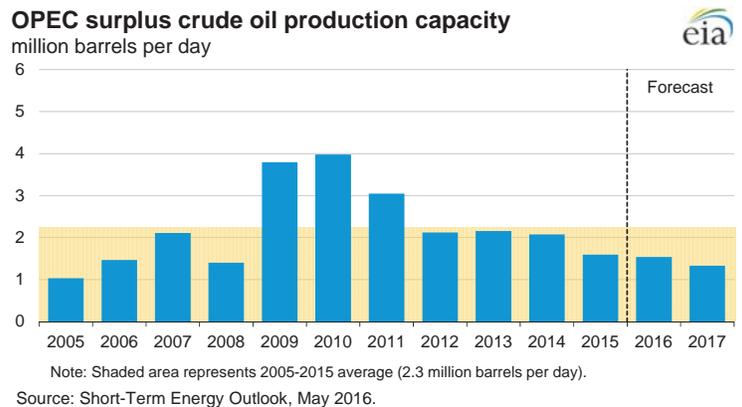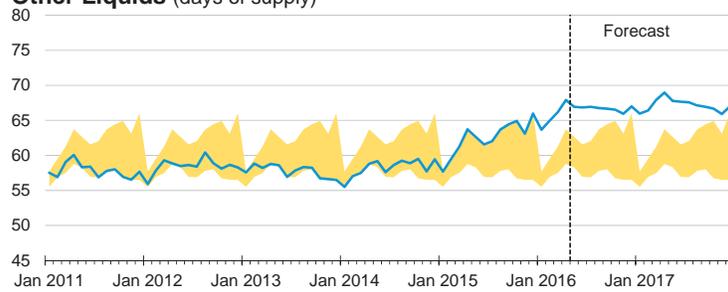
Source: Short-Term Energy Outlook, May 2016.

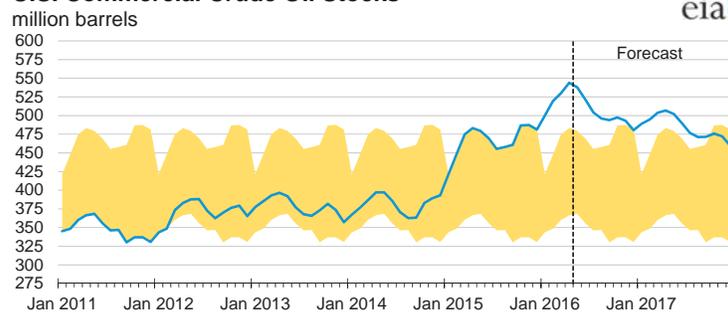## U.S. Crude Oil and Liquid Fuels Production

million barrels per day (MMb/d)   annual change (MMb/d)

16   1.5
15   1.3
14   1.0
13   0.8
12   0.5
11   0.3
10   0.0
9   -0.3
8   -0.5
7   -0.8
6   -1.0

          2014   2015   2016   2017

■ Crude oil (right axis)   ■ Natural gas plant liquids (right axis)
■ Fuel ethanol (right axis)   ■ Biodiesel (right axis)
— Total production (left axis)   ---- Production forecast (left axis)
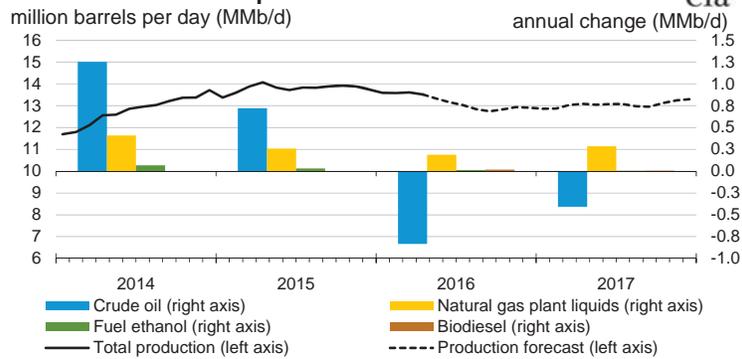
Source: Short-Term Energy Outlook, May 2016.

U.S. Commercial Crude Oil Stocks

million barrels

600
575
550   Forecast
525
500
475
450
425
400
375
350
325
300
275

Jan 2011   Jan 2012   Jan 2013   Jan 2014   Jan 2015   Jan 2016   Jan 2017
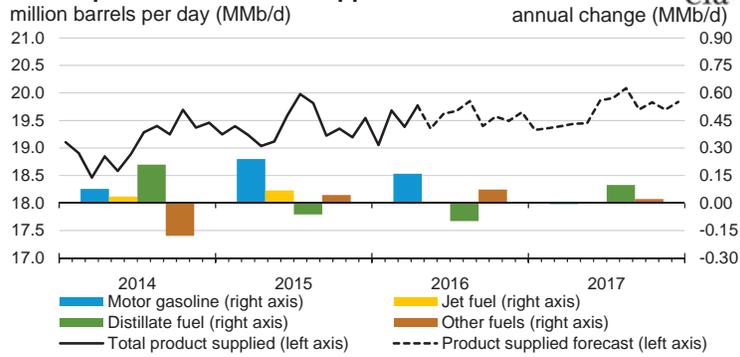
Note: Colored band around storage levels represents the range between the minimum and maximum from Jan. 2011 - Dec. 2015.

Source: Short-Term Energy Outlook, May 2016.

U.S. Liquid Fuels Product Supplied

million barrels per day (MMb/d) — annual change (MMb/d)

Motor gasoline (right axis)
Jet fuel (right axis)
Distillate fuel (right axis)
Other fuels (right axis)
Total product supplied (left axis)
Product supplied forecast (left axis)

Source: Short-Term Energy Outlook, May 2016.

U.S. Gasoline and Distillate Inventories

million barrels

Forecast

Total motor gasoline inventory

Total distillate fuel inventory

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

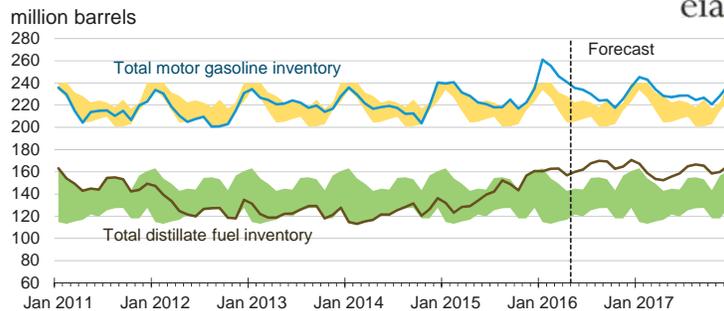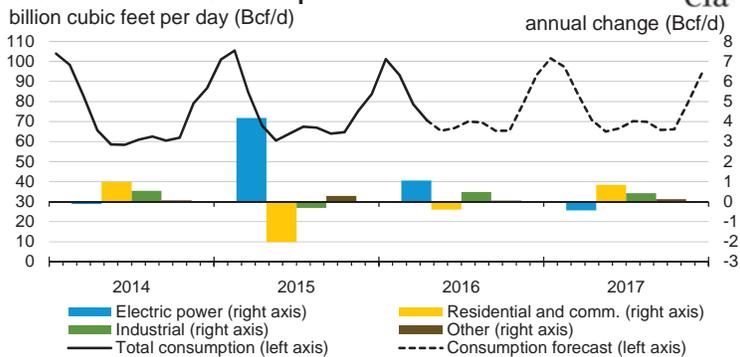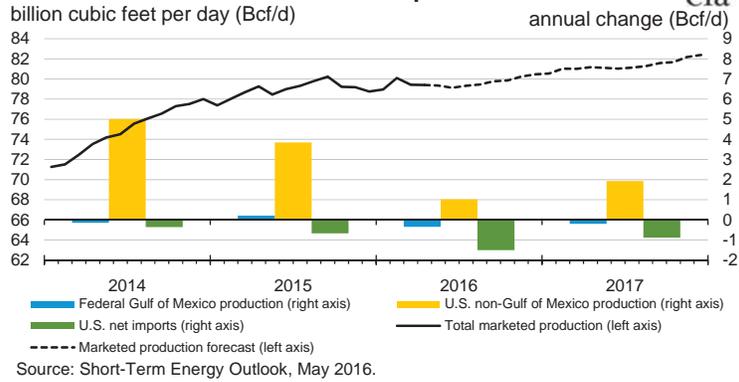Source: Short-Term Energy Outlook, May 2016.

U.S. Natural Gas Consumption

billion cubic feet per day (Bcf/d) — annual change (Bcf/d)

Electric power (right axis)
Residential and comm. (right axis)
Industrial (right axis)
Other (right axis)
Total consumption (left axis)
Consumption forecast (left axis)

Source: Short-Term Energy Outlook, May 2016.

U.S. Natural Gas Production and Imports
billion cubic feet per day (Bcf/d)   annual change (Bcf/d)

- Federal Gulf of Mexico production (right axis)
- U.S. non-Gulf of Mexico production (right axis)
- U.S. net imports (right axis)
- Total marketed production (left axis)
- Marketed production forecast (left axis)

Source: Short-Term Energy Outlook, May 2016.

U.S. Working Natural Gas in Storage
billion cubic feet   deviation from average

Forecast

- Deviation from average
- Storage level

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

U.S. Coal Consumption
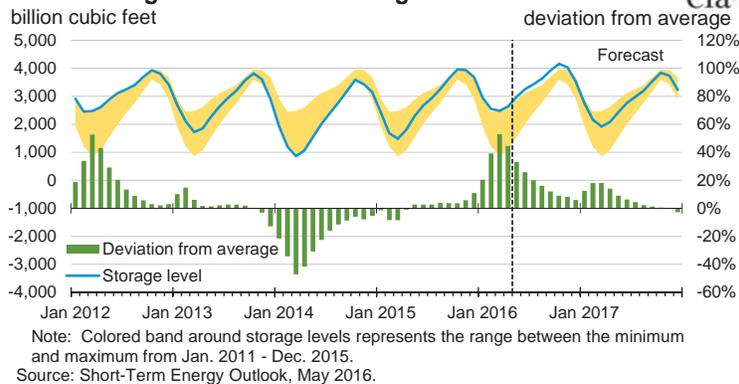million short tons (MMst)   annual change (MMst)

- Electric power (right axis)
- Retail and general industry (right axis)
- Coke plants (right axis)
- Total consumption (left axis)
- Consumption forecast (left axis)

Source: Short-Term Energy Outlook, May 2016.

U.S. Coal Production

million short tons (MMst)   annual change (MMst)

Source: Short-Term Energy Outlook, May 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, May 2016.

U.S. Electricity Consumption

million kilowatthours per day (kWh/d)   annual change (million kWh/d)
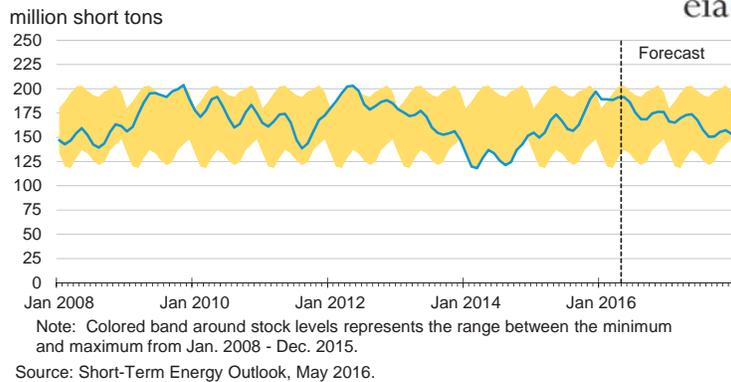
Source: Short-Term Energy Outlook, May 2016.
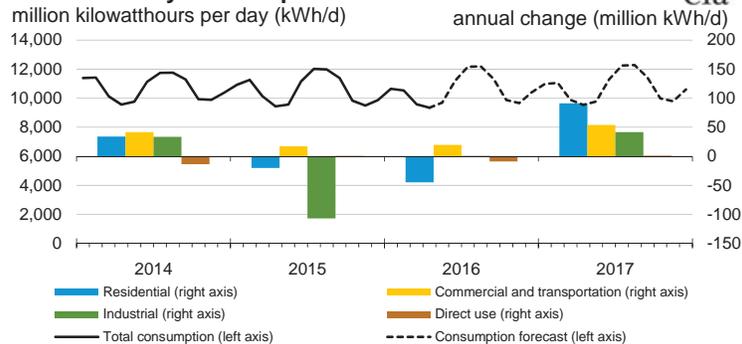
U.S. Residential Electricity Price
cents per kilowatthour

Annual growth (right axis) —— Residential electricity price ----- Price forecast
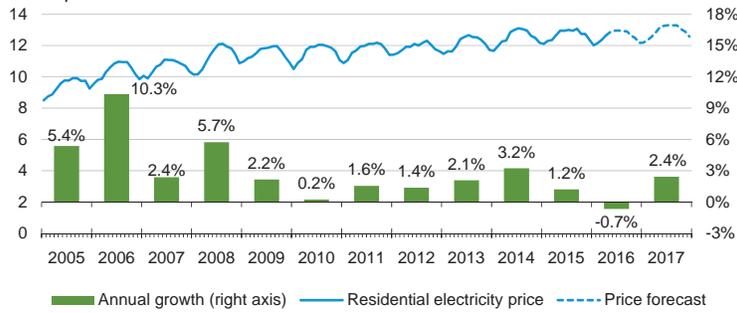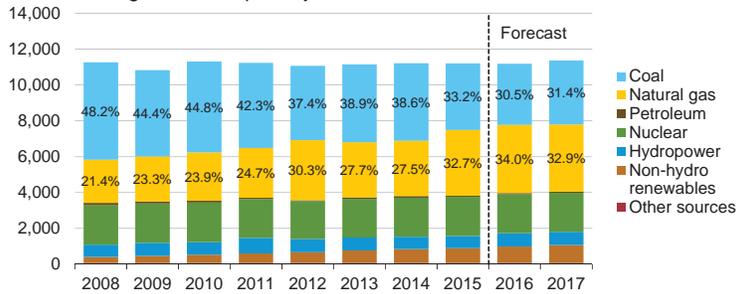
Source: Short-Term Energy Outlook, May 2016.

U.S. Electricity Generation by Fuel, All Sectors
thousand megawatthours per day

Forecast

- Coal
- Natural gas
- Petroleum
- Nuclear
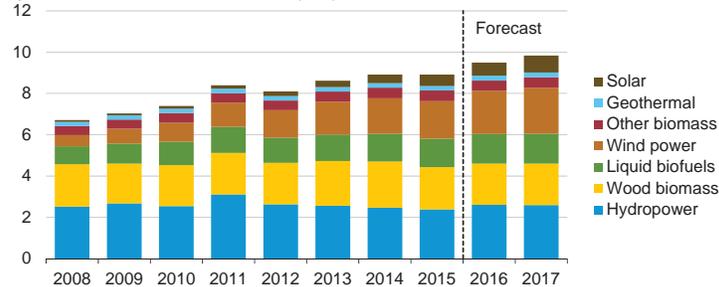- Hydropower
- Non-hydro renewables
- Other sources

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

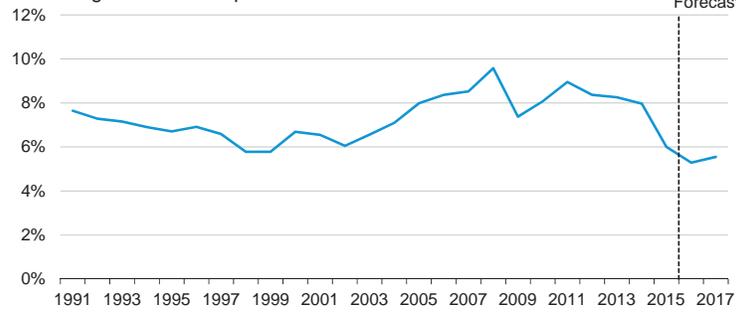Source: Short-Term Energy Outlook, May 2016.

U.S. Renewable Energy Supply
quadrillion British thermal units (Btu)

Forecast

- Solar
- Geothermal
- Other biomass
- Wind power
- Liquid biofuels
- Wood biomass
- Hydropower

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.
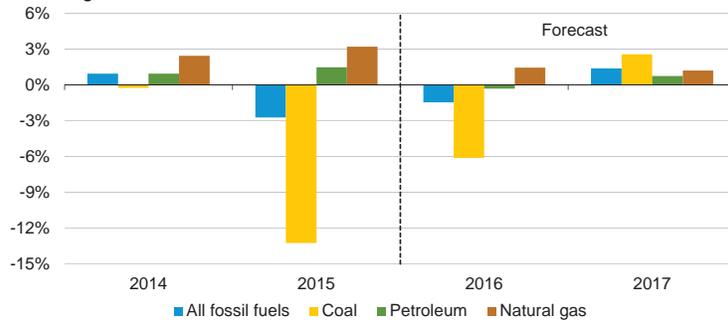
Source: Short-Term Energy Outlook, May 2016.

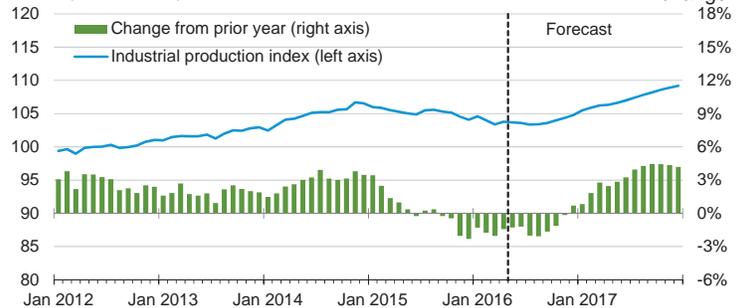## U.S. Annual Energy Expenditures
share of gross domestic product

Source: Short-Term Energy Outlook, May 2016.

U.S. Energy-Related Carbon Dioxide Emissions
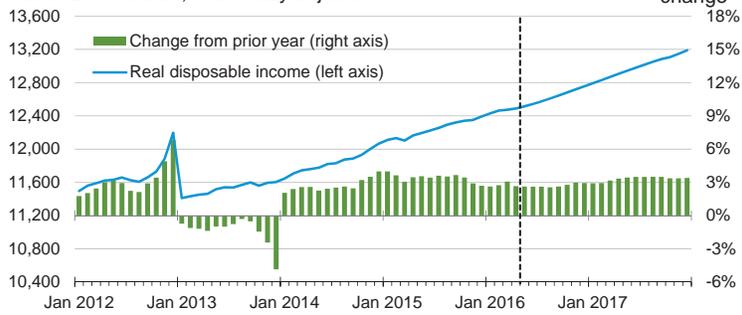annual growth

Source: Short-Term Energy Outlook, May 2016.

U.S. Total Industrial Production Index
index (2007 = 100)

Source: Short-Term Energy Outlook, May 2016.

U.S. Disposable Income
billion 2009 dollars, seasonally adjusted

Source: Short-Term Energy Outlook, May 2016.

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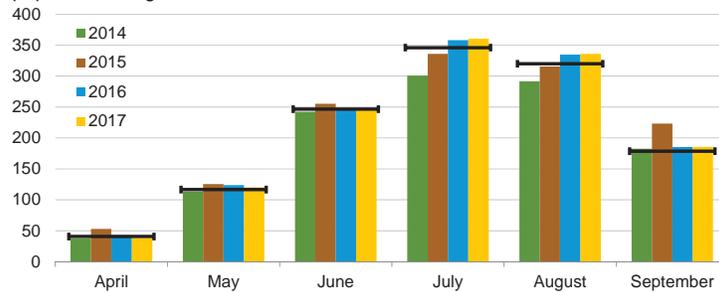
Note: EIA calculations based on from the National Oceanic and Atmospheric Administration data. Horizontal lines indicate each month's prior 10-year average (2006-2015). Projections reflect NOAA's 14-16 month outlook.

Source: Short-Term Energy Outlook, May 2016.

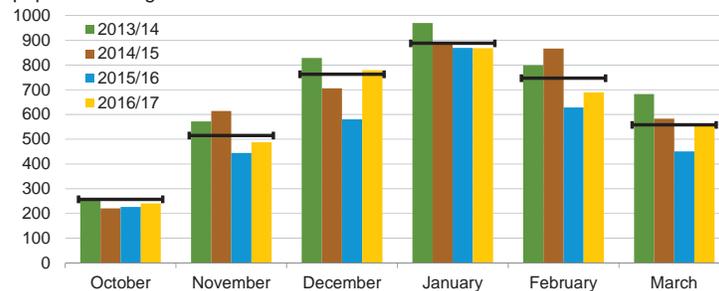## U.S. Winter Heating Degree Days
population-weighted

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, May 2016.

U.S. Census Regions and Divisions

Source: Short-Term Energy Outlook, May 2016.

Table SF01. U.S. Motor Gasoline Summer Outlook

U.S. Energy Information Administration | Short-Term Energy Outlook - May 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	0.99	1.00	1.00	-28.1	-9.8	-19.8
Brent Crude Oil Price (Spot)	1.47	1.20	1.33	1.00	1.00	1.00	-32.1	-16.7	-25.1
U.S. Refiner Average Crude Oil Cost	1.37	1.14	1.25	0.97	0.98	0.97	-29.3	-14.0	-22.3
Wholesale Gasoline Price [b]	2.01	1.84	1.93	1.53	1.46	1.50	-23.9	-20.9	-22.4
Wholesale Diesel Fuel Price [b]	1.89	1.61	1.75	1.31	1.36	1.34	-30.6	-15.5	-23.5
Regular Gasoline Retail Price [c]	2.67	2.60	2.63	2.21	2.20	2.21	-16.9	-15.6	-16.3
Diesel Fuel Retail Price [c]	2.85	2.63	2.74	2.24	2.33	2.29	-21.3	-11.4	-16.5
Gasoline Consumption/Supply (million barrels per day)									
Total Consumption	9.260	9.395	9.328	9.490	9.475	9.482	2.5	0.9	1.7
Total Refinery and Blender Net Supply [d]	8.022	8.305	8.164	8.252	8.337	8.294	2.9	0.4	1.6
Fuel Ethanol Blending	0.919	0.935	0.927	0.933	0.945	0.939	1.6	1.2	1.4
Total Stock Withdrawal [e]	0.115	-0.044	0.035	0.134	0.100	0.117			
Net Imports [e]	0.204	0.200	0.202	0.171	0.093	0.132	-16.4	-53.6	-34.9
Refinery Utilization (percent)	92.8	93.2	93.0	91.2	92.5	91.9			
Gasoline Stocks, Including Blending Components (million barrels)									
Beginning	231.5	221.0	231.5	246.0	233.8	246.0			
Ending	221.0	225.1	225.1	233.8	224.6	224.6			
Economic Indicators (annualized billion 2000 dollars)									
Real GDP	16,334	16,414	16,374	16,613	16,715	16,664	1.7	1.8	1.8
Real Income	12,194	12,290	12,242	12,515	12,609	12,562	2.6	2.6	2.6

[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 - May 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	**3,157**	0.1%
Price (cents/kWh)	12.06	12.09	12.58	13.04	12.95	**12.93**	-0.2%
Expenditures	$415	$405	$393	$396	$408	**$408**	-0.1%
New England							
Usage (kWh)	2,122	2,188	2,173	1,930	1,993	**2,044**	2.6%
Price (cents/kWh)	15.85	15.50	16.04	17.63	18.64	**17.72**	-4.9%
Expenditures	$336	$339	$348	$340	$372	**$362**	-2.5%
Mid-Atlantic							
Usage (kWh)	2,531	2,548	2,447	2,234	2,372	**2,425**	2.2%
Price (cents/kWh)	16.39	15.63	16.39	16.90	16.52	**16.60**	0.5%
Expenditures	$415	$398	$401	$378	$392	**$402**	2.7%
East North Central							
Usage (kWh)	2,975	3,048	2,618	2,505	2,556	**2,720**	6.4%
Price (cents/kWh)	12.17	12.08	12.57	13.24	13.20	**13.45**	2.0%
Expenditures	$362	$368	$329	$332	$337	**$366**	8.5%
West North Central							
Usage (kWh)	3,517	3,547	3,098	3,040	3,054	**3,136**	2.7%
Price (cents/kWh)	11.16	11.50	12.25	12.42	12.66	**13.02**	2.8%
Expenditures	$393	$408	$380	$378	$387	**$408**	5.6%
South Atlantic							
Usage (kWh)	4,277	4,001	3,771	3,776	3,957	**3,874**	-2.1%
Price (cents/kWh)	11.48	11.65	11.76	12.09	12.10	**11.83**	-2.2%
Expenditures	$491	$466	$443	$457	$479	**$458**	-4.3%
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	**10.95**	0.4%
Expenditures	$488	$463	$437	$447	$468	**$466**	-0.5%
West South Central							
Usage (kWh)	5,231	4,781	4,507	4,252	4,518	**4,414**	-2.3%
Price (cents/kWh)	10.64	10.27	10.94	11.46	11.05	**10.84**	-1.9%
Expenditures	$557	$491	$493	$487	$499	**$478**	-4.1%
Mountain							
Usage (kWh)	3,322	3,440	3,380	3,228	3,304	**3,332**	0.8%
Price (cents/kWh)	11.29	11.55	11.97	12.32	12.36	**12.51**	1.2%
Expenditures	$375	$397	$405	$398	$408	**$417**	2.1%
Pacific							
Usage (kWh)	2,022	2,079	2,036	2,090	2,056	**2,001**	-2.7%
Price (cents/kWh)	13.22	13.78	14.47	15.17	15.34	**15.50**	1.0%
Expenditures	$267	$286	$295	$317	$315	**$310**	-1.7%

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 - May 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	9.13	8.78	8.27	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)	73.58	74.20	75.02	74.13	74.67	74.49	74.69	75.33	75.95	76.18	76.40	77.11	74.24	74.80	76.41
Coal Production															
(million short tons)	240	211	237	207	165	171	208	201	193	178	210	198	895	746	778
Energy Consumption															
Liquid Fuels															
(million barrels per day)	19.29	19.25	19.68	19.36	19.37	19.58	19.64	19.57	19.36	19.58	19.90	19.79	19.40	19.54	19.66
Natural Gas															
(billion cubic feet per day)	96.66	64.10	66.12	74.55	90.96	67.51	68.34	79.16	94.01	67.46	68.64	79.85	75.27	76.48	77.43
Coal (b)															
(million short tons)	212	189	231	169	174	167	218	182	193	172	216	185	802	741	766
Electricity															
(billion kilowatt hours per day)	10.75	10.05	11.80	9.73	10.24	10.07	11.89	9.99	10.63	10.20	11.99	10.13	10.58	10.55	10.74
Renewables (c)															
(quadrillion Btu)	2.43	2.43	2.34	2.47	2.57	2.70	2.50	2.49	2.57	2.85	2.63	2.59	9.67	10.26	10.64
Total Energy Consumption (d)															
(quadrillion Btu)	26.35	22.99	24.46	23.74	25.10	22.86	24.20	24.27	25.54	23.14	24.45	24.59	97.54	96.43	97.72
Energy Prices															
Crude Oil West Texas Intermediate Spot															
(dollars per barrel)	48.48	57.85	46.55	41.94	33.35	41.59	42.00	44.02	46.37	48.03	51.32	56.94	48.67	40.32	50.65
Natural Gas Henry Hub Spot															
(dollars per million Btu)	2.90	2.75	2.76	2.12	2.00	2.02	2.34	2.65	3.04	2.80	3.01	3.22	2.63	2.25	3.02
Coal															
(dollars per million Btu)	2.27	2.25	2.22	2.15	2.12	2.19	2.22	2.17	2.17	2.22	2.25	2.21	2.23	2.18	2.21
Macroeconomic															
Real Gross Domestic Product															
(billion chained 2009 dollars - SAAR)	16,177	16,334	16,414	16,471	16,515	16,613	16,715	16,841	16,965	17,103	17,234	17,345	16,349	16,671	17,162
Percent change from prior year	2.9	2.7	2.1	2.0	2.1	1.7	1.8	2.2	2.7	3.0	3.1	3.0	2.4	2.0	2.9
GDP Implicit Price Deflator															
(Index, 2009=100)	109.1	109.7	110.0	110.3	110.7	111.2	111.6	112.2	112.8	113.3	113.8	114.4	109.8	111.4	113.6
Percent change from prior year	1.0	1.0	0.9	1.1	1.5	1.4	1.5	1.7	1.9	1.9	1.9	2.0	1.0	1.5	1.9
Real Disposable Personal Income															
(billion chained 2009 dollars - SAAR)	12,115	12,194	12,290	12,360	12,456	12,515	12,609	12,718	12,831	12,943	13,049	13,148	12,240	12,574	12,993
Percent change from prior year	3.6	3.5	3.6	3.0	2.8	2.6	2.6	2.9	3.0	3.4	3.5	3.4	3.4	2.7	3.3
Manufacturing Production Index															
(Index, 2012=100)	103.2	103.4	103.9	103.8	103.9	103.5	103.3	104.1	105.7	106.3	107.4	108.6	103.6	103.7	107.0
Percent change from prior year	2.1	1.1	0.9	0.2	0.7	0.1	-0.6	0.3	1.7	2.7	4.0	4.3	1.1	0.1	3.2
Weather															
U.S. Heating Degree-Days	2,340	443	49	1,251	1,948	451	64	1,508	2,120	476	76	1,549	4,083	3,971	4,221
U.S. Cooling Degree-Days	47	434	875	133	53	414	878	100	40	405	882	100	1,488	1,445	1,427

- = 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 - May 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	41.59	42.00	44.02	46.37	48.03	51.32	56.94	48.67	40.32	50.65
Brent Spot Average	53.91	61.65	50.43	43.55	33.89	41.86	42.00	44.02	46.37	48.03	51.32	56.94	52.32	40.52	50.65
U.S. Imported Average	46.40	56.12	45.60	37.88	29.42	38.09	38.50	40.51	42.86	44.50	47.82	53.51	46.37	36.72	47.23
U.S. Refiner Average Acquisition Cost	47.98	57.47	47.68	40.49	31.77	40.60	41.00	43.02	45.35	47.01	50.30	56.03	48.41	39.16	49.75
U.S. Liquid Fuels (cents per gallon)															
Refiner Prices for Resale															
Gasoline	159	201	184	145	119	153	146	127	132	159	162	153	173	136	152
Diesel Fuel	176	189	161	141	110	131	136	143	151	155	165	181	167	131	163
Heating Oil	178	180	151	129	101	124	127	138	148	146	156	176	157	118	156
Refiner Prices to End Users															
Jet Fuel	172	186	156	138	108	127	132	139	148	149	160	177	162	127	159
No. 6 Residual Fuel Oil (a)	137	154	123	101	73	95	102	106	113	115	123	136	125	92	122
Retail Prices Including Taxes															
Gasoline Regular Grade (b)	227	267	260	216	190	221	220	201	202	232	236	227	243	208	224
Gasoline All Grades (b)	236	275	269	226	200	232	230	212	212	242	247	238	252	219	235
On-highway Diesel Fuel	292	285	263	243	208	224	233	241	253	256	264	281	271	227	264
Heating Oil	288	276	247	224	195	211	218	233	248	244	252	273	265	212	255
Natural Gas															
Henry Hub Spot (dollars per thousand cubic feet)	2.99	2.83	2.84	2.18	2.06	2.08	2.41	2.73	3.14	2.89	3.10	3.32	2.71	2.32	3.11
Henry Hub Spot (dollars per million Btu)	2.90	2.75	2.76	2.12	2.00	2.02	2.34	2.65	3.04	2.80	3.01	3.22	2.63	2.25	3.02
U.S. Retail Prices (dollars per thousand cubic feet)															
Industrial Sector	4.57	3.68	3.66	3.34	3.39	2.90	3.20	3.76	4.36	3.76	3.98	4.41	3.84	3.32	4.14
Commercial Sector	7.94	8.13	8.42	7.38	6.83	7.26	7.99	7.44	7.71	8.18	8.74	8.14	7.88	7.22	8.03
Residential Sector	9.30	11.96	16.45	10.11	8.52	11.09	15.34	9.77	9.15	11.93	16.16	10.44	10.36	9.79	10.45
U.S. Electricity															
Power Generation Fuel Costs (dollars per million Btu)															
Coal	2.27	2.25	2.22	2.15	2.12	2.19	2.22	2.17	2.17	2.22	2.25	2.21	2.23	2.18	2.21
Natural Gas	4.09	3.12	3.09	2.72	2.69	2.48	2.66	3.42	3.92	3.28	3.35	4.05	3.22	2.79	3.62
Residual Fuel Oil (c)	10.82	11.64	10.48	7.76	6.98	8.37	8.41	8.42	8.62	9.53	9.52	10.03	10.36	8.01	9.41
Distillate Fuel Oil	15.61	15.17	13.19	11.74	9.57	11.70	11.86	12.74	13.47	13.62	14.18	15.67	14.43	11.44	14.19
Retail Prices (cents per kilowatthour)															
Industrial Sector	6.79	6.81	7.32	6.63	6.40	6.61	7.20	6.62	6.46	6.73	7.34	6.75	6.90	6.72	6.83
Commercial Sector	10.46	10.54	10.95	10.36	10.09	10.49	10.86	10.31	10.21	10.67	11.12	10.59	10.59	10.46	10.67
Residential Sector	12.24	12.85	12.99	12.59	12.16	12.83	12.92	12.40	12.35	13.11	13.28	12.80	12.67	12.59	12.89

- = 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 - May 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	26.77	25.86	25.72	25.93	25.96	25.99	25.83	26.15	26.74	26.07	25.98
U.S. (50 States)	14.81	15.10	15.13	15.12	14.87	14.62	14.18	14.20	14.19	14.37	14.33	14.55	15.04	14.47	14.36
Canada	4.69	4.16	4.56	4.62	4.63	4.12	4.66	4.81	4.88	4.85	4.88	4.91	4.51	4.56	4.88
Mexico	2.68	2.58	2.62	2.62	2.57	2.53	2.52	2.51	2.49	2.47	2.45	2.43	2.62	2.53	2.46
North Sea (b)	3.00	3.10	2.96	3.20	3.21	3.10	2.87	2.91	2.90	2.78	2.64	2.71	3.06	3.02	2.75
Other OECD	1.47	1.48	1.54	1.52	1.49	1.48	1.49	1.51	1.51	1.52	1.54	1.55	1.50	1.49	1.53
Non-OECD	68.01	69.00	69.64	69.46	68.70	70.17	71.00	70.74	70.18	71.05	71.46	71.32	69.03	70.15	71.00
OPEC	37.40	38.11	38.58	38.41	38.30	39.26	39.86	39.87	39.99	40.30	40.42	40.50	38.13	39.33	40.30
Crude Oil Portion	30.84	31.54	31.99	31.81	31.56	32.37	32.92	32.87	32.86	33.12	33.17	33.19	31.55	32.43	33.09
Other Liquids (c)	6.55	6.58	6.59	6.59	6.74	6.90	6.94	6.99	7.13	7.18	7.25	7.31	6.58	6.89	7.22
Eurasia	14.19	14.02	14.04	14.16	14.27	14.20	14.13	14.06	14.04	14.01	13.98	13.98	14.10	14.16	14.00
China	4.68	4.75	4.73	4.72	4.58	4.61	4.61	4.61	4.52	4.55	4.56	4.56	4.72	4.60	4.55
Other Non-OECD	11.74	12.11	12.29	12.18	11.55	12.09	12.40	12.20	11.63	12.19	12.49	12.27	12.08	12.06	12.15
Total World Supply	94.65	95.42	96.45	96.53	95.47	96.03	96.72	96.67	96.14	97.04	97.29	97.47	95.77	96.23	96.99
Non-OPEC Supply	57.25	57.31	57.87	58.13	57.17	56.77	56.86	56.80	56.16	56.74	56.87	56.97	57.64	56.90	56.69
Consumption (million barrels per day) (d)															
OECD	46.48	45.38	46.71	46.36	46.62	45.83	46.43	46.90	46.80	45.80	46.65	47.07	46.23	46.45	46.58
U.S. (50 States)	19.29	19.25	19.68	19.36	19.37	19.58	19.64	19.57	19.36	19.58	19.90	19.79	19.40	19.54	19.66
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	2.35	2.29	2.40	2.38	2.35	2.29	2.40	2.38	2.34	2.35	2.35
Europe	13.42	13.53	14.10	13.65	13.50	13.41	13.85	13.80	13.61	13.36	13.80	13.74	13.68	13.64	13.63
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	6.49	6.34	6.29	6.53	6.60	6.40	6.34	6.59	6.24	6.41	6.48
Non-OECD	46.36	47.94	48.26	47.72	47.53	49.15	49.51	48.95	48.93	50.61	50.90	50.34	47.58	48.79	50.20
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	12.72	12.95	12.49	12.85	13.26	13.49	12.96	13.33	12.24	12.75	13.26
Other Non-OECD	17.85	18.67	19.22	18.41	18.10	18.95	19.51	18.67	18.50	19.37	19.96	19.08	18.54	18.81	19.23
Total World Consumption	92.84	93.32	94.97	94.08	94.15	94.99	95.94	95.85	95.73	96.41	97.55	97.40	93.81	95.24	96.78
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	-0.40	-0.16	0.16	0.58	0.15	-0.28	-0.01	0.62	-0.43	0.05	0.12
Other OECD	-0.34	-0.35	-0.42	-0.28	-0.27	-0.31	-0.33	-0.50	-0.20	-0.12	0.09	-0.24	-0.34	-0.35	-0.12
Other Stock Draws and Balance	-0.92	-1.06	-0.73	-2.03	-0.66	-0.58	-0.61	-0.90	-0.36	-0.23	0.17	-0.44	-1.19	-0.68	-0.21
Total Stock Draw	-1.80	-2.10	-1.48	-2.45	-1.33	-1.04	-0.78	-0.82	-0.41	-0.63	0.26	-0.06	-1.96	-0.99	-0.21
End-of-period Commercial Crude Oil and Other Liquids Inventories															
U.S. Commercial Inventory	1,217	1,277	1,306	1,320	1,356	1,370	1,356	1,302	1,289	1,315	1,315	1,259	1,320	1,302	1,259
OECD Commercial Inventory	2,799	2,890	2,965	2,997	3,056	3,098	3,114	3,106	3,111	3,147	3,140	3,106	2,997	3,106	3,106

- = 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 - May 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	22.07	21.28	21.36	21.51	21.55	21.69	21.66	21.89	22.17	21.55	21.70
Canada	4.69	4.16	4.56	4.62	4.63	4.12	4.66	4.81	4.88	4.85	4.88	4.91	4.51	4.56	4.88
Mexico	2.68	2.58	2.62	2.62	2.57	2.53	2.52	2.51	2.49	2.47	2.45	2.43	2.62	2.53	2.46
United States	14.81	15.10	15.13	15.12	14.87	14.62	14.18	14.20	14.19	14.37	14.33	14.55	15.04	14.47	14.36
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	4.16	4.04	3.81	3.85	3.84	3.72	3.58	3.65	4.02	3.97	3.70
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	0.99	0.89	0.70	0.79	0.81	0.73	0.62	0.73	0.93	0.84	0.72
Other North Sea	0.18	0.18	0.18	0.17	0.17	0.18	0.18	0.19	0.19	0.19	0.19	0.19	0.18	0.18	0.19
Eurasia	14.21	14.04	14.05	14.17	14.28	14.22	14.14	14.07	14.06	14.02	14.00	14.00	14.12	14.18	14.02
Azerbaijan	0.90	0.86	0.88	0.84	0.80	0.80	0.81	0.84	0.83	0.81	0.79	0.78	0.87	0.81	0.80
Kazakhstan	1.80	1.76	1.70	1.73	1.73	1.71	1.70	1.69	1.71	1.70	1.70	1.72	1.75	1.71	1.71
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	0.19	0.20	0.20	0.20	0.20	0.19	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	1.15	1.14	1.15	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	8.37	8.38	8.41	8.42	8.34	8.39	8.41	8.42	8.49	8.39	8.39
Australia	0.39	0.39	0.45	0.43	0.40	0.40	0.40	0.41	0.42	0.42	0.43	0.45	0.42	0.40	0.43
China	4.68	4.75	4.73	4.72	4.58	4.61	4.61	4.61	4.52	4.55	4.56	4.56	4.72	4.60	4.55
India	1.01	1.00	1.01	1.02	1.00	1.01	1.01	1.00	1.00	1.01	1.02	1.01	1.01	1.00	1.01
Malaysia	0.78	0.75	0.70	0.74	0.75	0.75	0.76	0.78	0.77	0.77	0.77	0.77	0.74	0.76	0.77
Vietnam	0.36	0.34	0.35	0.37	0.34	0.32	0.32	0.32	0.32	0.31	0.31	0.31	0.36	0.33	0.31
Africa	2.33	2.33	2.33	2.34	2.31	2.31	2.32	2.34	2.31	2.35	2.37	2.39	2.33	2.32	2.36
Egypt	0.71	0.70	0.71	0.70	0.69	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	0.25	0.25	0.25	0.26	0.24	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	0.25	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	57.31	57.87	58.13	57.17	56.77	56.86	56.80	56.16	56.74	56.87	56.97	57.64	56.90	56.69
OPEC non-crude liquids	6.55	6.58	6.59	6.59	6.74	6.90	6.94	6.99	7.13	7.18	7.25	7.31	6.58	6.89	7.22
Non-OPEC + OPEC non-crude	63.80	63.89	64.46	64.72	63.91	63.67	63.80	63.80	63.28	63.91	64.12	64.28	64.22	63.79	63.90
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 - May 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	-	-
Ecuador	0.55	0.54	0.55	0.57	0.57	-	-	-	-	-	-	-	0.55	-	-
Indonesia	0.67	0.69	0.69	0.69	0.72	-	-	-	-	-	-	-	0.69	-	-
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	9.97	-	-	-	-	-	-	-	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	31.54	31.99	31.81	31.56	32.37	32.92	32.87	32.86	33.12	33.17	33.19	31.55	32.43	33.09
Other Liquids (a)	6.55	6.58	6.59	6.59	6.74	6.90	6.94	6.99	7.13	7.18	7.25	7.31	6.58	6.89	7.22
Total OPEC Supply	37.40	38.11	38.58	38.41	38.30	39.26	39.86	39.87	39.99	40.30	40.42	40.50	38.13	39.33	40.30
Crude Oil Production Capacity															
Africa	5.25	5.15	5.16	5.17	4.94	4.88	5.08	5.20	5.20	5.28	5.35	5.43	5.18	5.02	5.31
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	25.49	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	0.69	0.73	0.73
OPEC Total	32.76	33.07	33.32	33.41	33.54	33.90	34.17	34.29	34.31	34.41	34.42	34.54	33.14	33.97	34.42
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	1.97	1.53	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	0.01	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	1.97	1.53	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 Petrioleum and Other Liquids Consumption (million barrels per day)
U.S. Energy Information Administration | Short-Term Energy Outlook - May 2016

	2015 Q1	Q2	Q3	Q4	2016 Q1	Q2	Q3	Q4	2017 Q1	Q2	Q3	Q4	2015	2016	2017
North America	23.57	23.46	24.11	23.73	23.66	23.83	23.98	23.89	23.65	23.83	24.23	24.11	**23.72**	23.84	23.96
Canada	2.36	2.26	2.38	2.34	2.35	2.29	2.40	2.38	2.35	2.29	2.40	2.38	**2.34**	2.35	2.35
Mexico	1.91	1.95	2.04	2.02	1.94	1.95	1.92	1.93	1.93	1.95	1.92	1.93	**1.98**	1.94	1.93
United States	19.29	19.25	19.68	19.36	19.37	19.58	19.64	19.57	19.36	19.58	19.90	19.79	**19.40**	19.54	19.66
Central and South America	7.05	7.30	7.32	7.32	7.05	7.33	7.36	7.34	7.10	7.37	7.40	7.38	**7.25**	7.27	7.31
Brazil	3.00	3.11	3.18	3.17	2.95	3.06	3.13	3.12	2.95	3.06	3.13	3.12	**3.12**	3.06	3.07
Europe	14.13	14.25	14.84	14.39	14.22	14.13	14.60	14.55	14.34	14.09	14.56	14.50	**14.40**	14.38	14.37
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	32.40	32.34	31.83	32.77	33.33	33.27	32.67	33.63	**31.39**	32.33	33.22
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	4.49	4.47	4.15	4.48	4.85	4.83	4.42	4.78	**4.08**	4.39	4.72
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	46.62	45.83	46.43	46.90	46.80	45.80	46.65	47.07	**46.23**	46.45	46.58
Total non-OECD Liquid Fuels Consumption	46.36	47.94	48.26	47.72	47.53	49.15	49.51	48.95	48.93	50.61	50.90	50.34	**47.58**	48.79	50.20
Total World Liquid Fuels Consumption	92.84	93.32	94.97	94.08	94.15	94.99	95.94	95.85	95.73	96.41	97.55	97.40	**93.81**	95.24	96.78
Oil-weighted Real Gross Domestic Product (a)															
World Index, 2010 Q1 = 100	116.2	116.9	117.6	118.1	118.6	119.4	120.3	121.2	122.2	123.0	123.9	124.8	**117.2**	119.9	123.4
Percent change from prior year	2.7	2.5	2.4	2.1	2.0	2.2	2.3	2.6	3.0	3.0	3.0	3.0	**2.4**	2.3	3.0
OECD Index, 2010 Q1 = 100	109.2	109.8	110.4	110.7	111.1	111.7	112.3	113.0	113.8	114.3	114.9	115.6	**110.0**	112.0	114.6
Percent change from prior year	2.0	2.1	2.0	1.8	1.7	1.7	1.7	2.0	2.4	2.3	2.4	2.3	**2.0**	1.8	2.3
Non-OECD Index, 2010 Q1 = 100	125.2	125.9	126.8	127.6	128.1	129.4	130.6	131.7	133.0	134.2	135.4	136.7	**126.4**	130.0	134.8
Percent change from prior year	3.4	3.0	2.8	2.5	2.3	2.8	3.0	3.2	3.8	3.7	3.7	3.9	**2.9**	2.8	3.8
Real U.S. Dollar Exchange Rate (a)															
Index, January 2010 = 100	119.42	119.72	123.05	124.95	129.47	131.57	131.67	131.40	130.96	130.41	130.10	129.79	**121.78**	131.03	130.31
Percent change from prior year	10.2	10.8	12.7	9.8	8.4	9.9	7.0	5.2	1.2	-0.9	-1.2	-1.2	**10.9**	7.6	-0.5

- = 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 - May 2016

	2015 1st	2015 2nd	2015 3rd	2015 4th	2016 1st	2016 2nd	2016 3rd	2016 4th	2017 1st	2017 2nd	2017 3rd	2017 4th	Year 2015	Year 2016	Year 2017
Supply (million barrels per day)															
Crude Oil Supply															
Domestic Production (a)	9.48	9.50	9.43	9.32	9.13	8.78	8.27	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	0.47	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	1.66	1.60	1.75	1.85	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	7.01	6.64	6.24	6.00	5.91	5.89	5.88	5.89	7.41	6.47	5.89
Crude Oil Net Imports (c)	6.84	6.74	6.93	7.06	7.42	7.39	7.92	7.75	7.68	8.06	8.40	7.93	6.89	7.62	8.02
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	-0.53	0.09	0.30	0.15	-0.26	0.15	0.20	0.12	-0.24	0.00	0.06
Crude Oil Adjustment (d)	0.11	0.22	0.13	0.09	-0.02	0.15	0.21	0.15	0.19	0.19	0.21	0.15	0.14	0.12	0.19
Total Crude Oil Input to Refineries	15.53	16.48	16.58	16.24	16.00	16.41	16.70	16.28	15.83	16.59	16.89	16.48	16.21	16.35	16.45
Other Supply															
Refinery Processing Gain	0.99	1.02	1.08	1.06	1.05	1.06	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	3.35	3.45	3.48	3.55	3.57	3.75	3.80	3.85	3.27	3.46	3.75
Renewables and Oxygenate Production (e)	1.05	1.10	1.10	1.11	1.11	1.11	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	0.98	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	0.22	0.23	0.23	0.23	0.22	0.24	0.24	0.24	0.21	0.23	0.24
Product Net Imports (c)	-1.89	-2.12	-2.20	-2.75	-2.50	-2.43	-2.83	-3.12	-2.84	-2.75	-3.03	-3.46	-2.24	-2.72	-3.02
Hydrocarbon Gas Liquids	-0.68	-0.80	-0.93	-0.87	-1.01	-1.09	-1.22	-1.18	-1.26	-1.37	-1.44	-1.40	-0.82	-1.13	-1.37
Unfinished Oils	0.26	0.28	0.38	0.19	0.31	0.30	0.32	0.27	0.30	0.31	0.34	0.29	0.28	0.30	0.31
Other HC/Oxygenates	-0.08	-0.09	-0.06	-0.07	-0.10	-0.07	-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	0.32	0.51	0.44	0.39	0.43	0.64	0.51	0.42	0.45	0.41	0.50
Finished Motor Gasoline	-0.44	-0.32	-0.40	-0.46	-0.45	-0.34	-0.35	-0.51	-0.40	-0.37	-0.37	-0.60	-0.40	-0.41	-0.44
Jet Fuel	-0.06	0.01	-0.05	-0.06	-0.04	-0.05	0.00	-0.10	-0.04	-0.02	-0.03	-0.10	-0.04	-0.05	-0.05
Distillate Fuel Oil	-0.67	-1.05	-1.12	-1.10	-0.87	-1.06	-1.30	-1.17	-1.06	-1.23	-1.31	-1.24	-0.99	-1.10	-1.21
Residual Fuel Oil	-0.13	-0.21	-0.11	-0.09	-0.08	-0.20	-0.21	-0.19	-0.22	-0.24	-0.21	-0.21	-0.14	-0.17	-0.22
Other Oils (g)	-0.50	-0.46	-0.50	-0.57	-0.58	-0.44	-0.47	-0.58	-0.51	-0.42	-0.47	-0.59	-0.51	-0.52	-0.50
Product Inventory Net Withdrawals	0.36	-0.72	-0.41	0.08	0.14	-0.25	-0.15	0.44	0.41	-0.43	-0.21	0.49	-0.17	0.04	0.06
Total Supply	19.32	19.25	19.68	19.36	19.37	19.58	19.64	19.57	19.36	19.58	19.90	19.79	19.40	19.54	19.66
Consumption (million barrels per day)															
Hydrocarbon Gas Liquids	2.72	2.27	2.29	2.58	2.72	2.26	2.28	2.65	2.67	2.29	2.40	2.77	2.47	2.48	2.53
Unfinished Oils	-0.05	0.05	-0.03	-0.01	0.05	-0.01	-0.01	0.04	0.00	-0.01	-0.01	0.04	-0.01	0.02	0.00
Motor Gasoline	8.81	9.26	9.39	9.17	9.10	9.49	9.47	9.22	9.05	9.49	9.49	9.23	9.16	9.32	9.31
Fuel Ethanol blended into Motor Gasoline	0.87	0.92	0.93	0.91	0.91	0.93	0.95	0.93	0.90	0.95	0.95	0.92	0.91	0.93	0.93
Jet Fuel	1.45	1.54	1.59	1.57	1.49	1.59	1.59	1.53	1.48	1.57	1.60	1.55	1.54	1.55	1.55
Distillate Fuel Oil	4.27	3.88	3.93	3.83	3.83	3.91	3.84	3.94	4.06	3.92	3.92	4.01	3.98	3.88	3.98
Residual Fuel Oil	0.24	0.19	0.31	0.30	0.31	0.25	0.23	0.21	0.21	0.19	0.22	0.20	0.26	0.25	0.21
Other Oils (g)	1.85	2.06	2.20	1.92	1.87	2.10	2.25	1.98	1.90	2.12	2.28	2.00	2.01	2.05	2.08
Total Consumption	19.29	19.25	19.68	19.36	19.37	19.58	19.64	19.57	19.36	19.58	19.90	19.79	19.40	19.54	19.66
Total Petroleum and Other Liquids Net Imports	4.95	4.61	4.74	4.31	4.92	4.97	5.09	4.64	4.84	5.31	5.36	4.46	4.65	4.90	4.99
End-of-period Inventories (million barrels)															
Commercial Inventory															
Crude Oil (excluding SPR)	474.8	469.5	460.8	481.4	529.9	521.8	493.8	480.4	503.8	490.1	471.5	460.1	481.4	480.4	460.1
Hydrocarbon Gas Liquids	138.8	196.3	228.7	197.3	151.1	196.5	222.2	176.4	140.6	183.6	206.6	158.1	197.3	176.4	158.1
Unfinished Oils	84.7	86.0	88.8	82.6	89.9	88.1	85.1	79.5	89.4	87.6	85.2	79.3	82.6	79.5	79.3
Other HC/Oxygenates	26.7	25.0	23.8	26.8	28.6	27.6	26.8	27.1	29.2	28.1	27.4	27.6	26.8	27.1	27.6
Total Motor Gasoline	231.5	221.0	225.1	235.0	246.0	233.8	224.6	236.5	234.2	228.4	226.8	238.1	235.0	236.5	238.1
Finished Motor Gasoline	26.9	25.7	29.0	28.5	26.9	26.3	26.1	27.6	27.1	25.6	26.5	27.9	28.5	27.6	27.9
Motor Gasoline Blend Comp.	204.6	195.4	196.1	206.5	219.1	207.6	198.5	208.9	207.1	202.9	200.3	210.2	206.5	208.9	210.2
Jet Fuel	37.2	43.7	40.4	40.3	44.6	42.4	44.4	40.6	40.3	41.5	43.9	40.2	40.3	40.6	40.2
Distillate Fuel Oil	128.3	139.4	148.8	160.7	163.0	162.0	169.2	170.6	153.5	158.6	165.4	165.4	160.7	170.6	165.4
Residual Fuel Oil	38.1	41.8	41.3	42.2	44.2	42.0	39.3	39.1	40.3	40.9	38.8	38.5	42.2	39.1	38.5
Other Oils (g)	57.3	54.6	48.3	53.5	58.5	56.2	50.2	52.1	57.9	55.8	49.8	51.9	53.5	52.1	51.9
Total Commercial Inventory	1,217	1,277	1,306	1,320	1,356	1,370	1,356	1,302	1,289	1,315	1,315	1,259	1,320	1,302	1,259
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 - May 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	1.18	1.24	1.25	1.30	1.33	1.41	1.45	1.49	1.11	1.24	1.42
Propane	1.07	1.12	1.13	1.15	1.14	1.14	1.14	1.16	1.17	1.20	1.20	1.22	1.12	1.15	1.20
Butanes	0.58	0.62	0.64	0.64	0.63	0.63	0.63	0.65	0.65	0.67	0.67	0.69	0.62	0.63	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	0.56	0.59	0.57	0.56	0.55	0.58	0.57	0.56	0.56	0.57	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	-0.09	-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	-0.64	-0.66	-0.62	-0.69	-0.75	-0.75	-0.72	-0.50	-0.64	-0.73
Butanes/Butylenes	-0.06	-0.09	-0.11	-0.08	-0.07	-0.14	-0.17	-0.16	-0.14	-0.20	-0.21	-0.19	-0.08	-0.14	-0.19
Natural Gasoline (Pentanes Plus)	-0.17	-0.15	-0.21	-0.16	-0.20	-0.19	-0.22	-0.21	-0.22	-0.20	-0.24	-0.23	-0.17	-0.21	-0.22
HGL Refinery and Blender Net Inputs															
Butanes/Butylenes	0.40	0.27	0.32	0.50	0.42	0.27	0.30	0.43	0.37	0.27	0.30	0.43	0.37	0.36	0.34
Natural Gasoline (Pentanes Plus)	0.15	0.14	0.16	0.15	0.15	0.16	0.16	0.15	0.15	0.16	0.16	0.16	0.15	0.15	0.15
HGL Consumption															
Ethane/Ethylene	1.03	1.02	1.02	1.13	1.10	1.08	1.10	1.15	1.12	1.15	1.22	1.27	1.05	1.11	1.19
Propane/Propylene	1.43	0.92	0.96	1.17	1.40	0.91	0.93	1.24	1.35	0.89	0.93	1.22	1.12	1.12	1.10
Butanes/Butylenes	0.16	0.24	0.22	0.20	0.17	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	33.34	37.16	37.82	35.80	34.20	37.93	38.42	35.96	32.18	36.03	36.64
Propane/Propylene	58.10	84.20	100.20	96.67	64.76	80.80	92.14	79.31	50.56	63.97	72.67	57.70	96.67	79.31	57.70
Butanes/Butylenes	32.46	59.42	76.52	46.14	32.37	56.05	71.12	42.64	36.26	59.75	74.12	45.15	46.14	42.64	45.15
Natural Gasoline (Pentanes Plus)	17.16	20.51	19.00	20.54	19.97	21.44	21.41	19.99	18.67	21.10	21.75	20.88	20.54	19.99	20.88
Refinery and Blender Net Inputs															
Crude OIl	15.53	16.48	16.58	16.24	16.00	16.41	16.70	16.28	15.83	16.59	16.89	16.48	16.21	16.35	16.45
Hydrocarbon Gas Liquids	0.54	0.40	0.47	0.64	0.57	0.43	0.46	0.58	0.52	0.43	0.46	0.59	0.52	0.51	0.50
Other Hydrocarbons/Oxygenates	1.12	1.18	1.19	1.17	1.15	1.24	1.27	1.25	1.21	1.27	1.28	1.26	1.16	1.23	1.26
Unfinished Oils	0.24	0.22	0.38	0.27	0.17	0.33	0.36	0.30	0.19	0.34	0.37	0.31	0.28	0.29	0.31
Motor Gasoline Blend Components	0.72	0.91	0.75	0.39	0.30	0.82	0.73	0.48	0.66	0.91	0.74	0.51	0.69	0.58	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	18.19	19.23	19.52	18.89	18.41	19.54	19.74	19.15	18.86	18.96	19.22
Refinery Processing Gain	0.99	1.02	1.08	1.06	1.05	1.06	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	0.46	0.85	0.76	0.39	0.49	0.84	0.76	0.40	0.61	0.62	0.62
Finished Motor Gasoline	9.48	9.83	9.97	9.83	9.62	10.00	10.00	9.93	9.66	10.05	10.06	10.02	9.78	9.89	9.95
Jet Fuel	1.50	1.61	1.60	1.63	1.58	1.61	1.61	1.59	1.52	1.61	1.66	1.61	1.59	1.60	1.60
Distillate Fuel	4.82	4.99	5.08	5.00	4.68	4.90	5.16	5.07	4.87	5.15	5.25	5.19	4.97	4.95	5.12
Residual Fuel	0.43	0.44	0.41	0.39	0.40	0.42	0.41	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	2.51	2.51	2.65	2.59	2.48	2.52	2.69	2.61	2.52	2.56	2.58
Total Refinery and Blender Net Production	19.13	20.20	20.45	19.77	19.25	20.29	20.60	19.96	19.45	20.61	20.83	20.24	19.89	20.03	20.29
Refinery Distillation Inputs	15.78	16.69	16.85	16.40	16.28	16.63	16.97	16.54	16.11	16.79	17.13	16.71	16.43	16.61	16.69
Refinery Operable Distillation Capacity	17.88	17.98	18.08	18.16	18.27	18.24	18.33	18.40	18.45	18.45	18.45	18.45	18.03	18.31	18.45
Refinery Distillation Utilization Factor	0.88	0.93	0.93	0.90	0.89	0.91	0.93	0.90	0.87	0.91	0.93	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 - May 2016

	2015 1st	2015 2nd	2015 3rd	2015 4th	2016 1st	2016 2nd	2016 3rd	2016 4th	2017 1st	2017 2nd	2017 3rd	2017 4th	Year 2015	Year 2016	Year 2017
Prices (cents per gallon)															
Refiner Wholesale Price	159	201	184	145	119	153	146	127	132	159	162	153	173	136	152
Gasoline Regular Grade Retail Prices Including Taxes															
PADD 1	228	259	247	211	187	217	214	201	204	229	232	229	236	205	224
PADD 2	216	255	253	209	176	215	213	193	195	228	231	221	234	199	219
PADD 3	204	240	229	190	167	198	196	176	181	208	211	203	216	184	201
PADD 4	207	261	276	218	184	215	221	199	188	221	237	225	241	205	218
PADD 5	271	328	327	264	241	265	265	238	230	269	275	257	298	253	258
U.S. Average	227	267	260	216	190	221	220	201	202	232	236	227	243	208	224
Gasoline All Grades Including Taxes	236	275	269	226	200	232	230	212	212	242	247	238	252	219	235
End-of-period Inventories (million barrels)															
Total Gasoline Inventories															
PADD 1	64.5	61.3	62.6	60.3	65.9	65.9	60.5	61.9	61.9	63.8	61.4	63.8	60.3	61.9	63.8
PADD 2	52.9	50.4	47.0	53.7	56.7	51.6	49.6	51.6	52.2	49.4	49.7	51.8	53.7	51.6	51.8
PADD 3	78.4	74.6	78.1	84.6	84.5	79.6	78.6	82.9	81.9	79.6	80.1	82.8	84.6	82.9	82.8
PADD 4	6.5	6.8	7.1	7.7	8.5	7.5	7.1	7.7	7.1	7.2	7.3	7.9	7.7	7.7	7.9
PADD 5	29.2	28.0	30.3	28.7	30.3	29.2	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	246.0	233.8	224.6	236.5	234.2	228.4	226.8	238.1	235.0	236.5	238.1
Finished Gasoline Inventories															
U.S. Total	26.9	25.7	29.0	28.5	26.9	26.3	26.1	27.6	27.1	25.6	26.5	27.9	28.5	27.6	27.9
Gasoline Blending Components Inventories															
U.S. Total	204.6	195.4	196.1	206.5	219.1	207.6	198.5	208.9	207.1	202.9	200.3	210.2	206.5	208.9	210.2

- = 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 - May 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	78.02	78.90	79.78	79.05	79.48	79.29	79.50	80.19	80.85	81.10	81.32	82.08	78.94	79.62	81.34
Alaska	0.99	0.93	0.86	0.98	0.99	0.84	0.76	0.92	0.97	0.81	0.74	0.91	0.94	0.88	0.86
Federal GOM (a)	3.37	3.68	3.95	3.58	3.43	3.38	3.21	3.17	3.22	3.17	3.00	3.03	3.65	3.30	3.10
Lower 48 States (excl GOM)	73.66	74.28	74.97	74.50	75.06	75.07	75.54	76.09	76.66	77.12	77.59	78.14	74.35	75.44	77.38
Total Dry Gas Production	73.58	74.20	75.02	74.13	74.67	74.49	74.69	75.33	75.95	76.18	76.40	77.11	74.24	74.80	76.41
LNG Gross Imports	0.43	0.08	0.26	0.24	0.29	0.16	0.17	0.15	0.12	0.12	0.12	0.12	0.25	0.19	0.12
LNG Gross Exports	0.06	0.06	0.09	0.10	0.13	0.33	0.66	1.00	1.04	1.10	1.35	1.73	0.08	0.53	1.31
Pipeline Gross Imports	8.36	6.69	6.69	7.06	7.77	6.22	6.53	6.71	7.34	6.20	6.51	6.76	7.20	6.81	6.70
Pipeline Gross Exports	4.98	4.36	4.81	5.08	5.47	5.16	5.44	5.55	5.28	5.16	5.30	5.58	4.81	5.41	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	0.16	0.17
Net Inventory Withdrawals	18.48	-12.99	-10.48	-0.55	13.20	-8.53	-7.22	4.44	17.71	-9.20	-8.53	3.37	-1.46	0.46	0.77
Total Supply	95.98	63.71	66.74	75.89	90.51	67.02	68.22	80.24	94.96	67.21	68.01	80.23	75.50	76.49	77.53
Balancing Item (b)	0.68	0.39	-0.62	-1.33	0.45	0.50	0.12	-1.09	-0.95	0.25	0.64	-0.38	-0.23	-0.01	-0.11
Total Primary Supply	96.66	64.10	66.12	74.55	90.96	67.51	68.34	79.16	94.01	67.46	68.64	79.85	75.27	76.48	77.43
Consumption (billion cubic feet per day)															
Residential	27.52	6.91	3.46	12.92	23.16	7.30	3.63	15.19	24.83	7.44	3.65	15.43	12.64	12.30	12.78
Commercial	16.01	5.87	4.43	8.95	13.76	6.13	4.64	10.40	14.83	6.22	4.70	10.68	8.78	8.73	9.09
Industrial	22.68	19.62	19.18	20.84	22.48	20.16	19.87	21.72	22.93	20.51	20.30	22.19	20.57	21.06	21.48
Electric Power (c)	23.05	25.28	32.50	25.07	24.26	27.39	33.64	24.89	23.94	26.67	33.31	24.47	26.50	27.55	27.12
Lease and Plant Fuel	4.28	4.33	4.38	4.34	4.36	4.35	4.36	4.40	4.44	4.45	4.46	4.50	4.33	4.37	4.46
Pipeline and Distribution Use	3.03	2.01	2.07	2.33	2.84	2.07	2.10	2.45	2.94	2.07	2.11	2.47	2.36	2.37	2.40
Vehicle Use	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.11	0.09	0.10	0.11
Total Consumption	96.66	64.10	66.12	74.55	90.96	67.51	68.34	79.16	94.01	67.46	68.64	79.85	75.27	76.48	77.43
End-of-period Inventories (billion cubic feet)															
Working Gas Inventory	1,483	2,658	3,625	3,677	2,478	3,255	3,919	3,510	1,916	2,753	3,538	3,228	3,677	3,510	3,228
East Region (d)	242	576	859	856	430	647	860	701	259	527	780	644	856	701	644
Midwest Region (d)	252	565	972	987	544	738	1,049	884	379	626	974	825	987	884	825
South Central Region (d)	575	1,002	1,206	1,304	1,071	1,313	1,361	1,326	866	1,052	1,139	1,183	1,304	1,326	1,183
Mountain Region (d)	113	155	203	186	147	194	247	221	144	178	230	204	186	221	204
Pacific Region (d)	276	336	359	320	262	339	378	354	243	346	391	347	320	354	347
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 - May 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	2.08	2.41	2.73	3.14	2.89	3.10	3.32	2.71	2.32	3.11
Residential Retail															
New England	13.09	13.33	16.17	12.55	11.84	13.01	15.94	12.75	12.61	13.80	16.53	13.32	13.19	12.58	13.27
Middle Atlantic	9.53	11.20	16.32	10.99	8.98	11.72	16.49	11.09	9.96	12.41	16.93	11.46	10.52	10.51	11.19
E. N. Central	7.78	10.58	16.71	7.96	6.88	9.89	15.95	7.98	7.75	10.98	16.59	8.67	8.67	8.16	8.93
W. N. Central	8.66	11.84	17.65	9.34	7.31	9.68	16.00	8.72	8.01	10.77	17.45	9.66	9.74	8.57	9.35
S. Atlantic	10.74	16.68	22.48	14.02	10.25	15.48	21.41	12.33	10.77	15.76	21.75	12.57	12.93	12.28	12.58
E. S. Central	9.34	14.36	19.42	11.83	8.62	12.19	17.63	10.40	9.01	13.15	18.62	11.30	10.92	10.10	10.56
W. S. Central	8.45	13.94	19.90	12.07	8.10	12.05	17.27	10.49	8.61	13.19	18.92	11.98	10.72	10.08	10.83
Mountain	9.57	10.87	14.57	8.56	8.11	9.21	12.91	8.74	8.78	10.24	14.02	9.70	9.77	8.85	9.69
Pacific	11.46	11.40	12.05	10.88	10.93	10.13	10.50	9.74	10.05	10.60	11.24	10.33	11.32	10.35	10.38
U.S. Average	9.30	11.96	16.45	10.11	8.52	11.09	15.34	9.77	9.15	11.93	16.16	10.44	10.36	9.79	10.45
Commercial Retail															
New England	10.77	10.13	9.69	9.13	8.84	9.14	9.31	9.85	10.39	10.38	10.47	10.61	10.21	9.23	10.46
Middle Atlantic	7.91	7.48	6.62	7.01	6.96	6.69	6.75	7.58	8.17	7.72	7.47	8.24	7.49	7.07	8.03
E. N. Central	6.95	7.51	8.80	6.30	5.90	6.86	8.05	6.42	6.72	8.03	8.93	7.16	7.01	6.37	7.19
W. N. Central	7.65	7.98	9.01	6.70	6.24	6.58	8.04	6.83	7.22	7.58	8.79	7.45	7.54	6.62	7.46
S. Atlantic	8.48	9.21	9.62	8.92	7.54	8.52	9.27	8.57	8.66	9.17	9.86	9.18	8.83	8.22	9.04
E. S. Central	8.54	9.62	10.00	8.90	7.46	8.13	9.15	8.39	8.12	9.03	9.91	9.14	8.93	8.02	8.74
W. S. Central	7.15	7.21	8.00	7.27	6.14	6.48	7.25	6.86	6.92	7.47	8.04	7.58	7.31	6.56	7.35
Mountain	8.28	8.35	9.03	7.23	6.90	6.99	7.92	7.03	7.13	7.63	8.81	7.84	8.02	7.06	7.61
Pacific	9.20	8.43	8.69	8.14	8.24	8.02	8.29	8.06	8.47	8.54	9.00	8.69	8.61	8.15	8.64
U.S. Average	7.94	8.13	8.42	7.38	6.83	7.26	7.99	7.44	7.71	8.18	8.74	8.14	7.88	7.22	8.03
Industrial Retail															
New England	9.10	7.61	6.10	6.77	7.11	6.92	6.86	8.11	8.42	7.63	7.49	8.51	7.77	7.29	8.13
Middle Atlantic	8.31	7.58	7.08	7.12	6.87	6.15	6.63	7.40	7.83	7.14	7.44	8.10	7.82	6.83	7.72
E. N. Central	6.41	5.65	5.54	5.15	5.17	4.90	5.35	5.60	6.29	6.03	6.22	6.31	5.89	5.28	6.25
W. N. Central	5.81	4.53	4.41	4.37	4.36	3.45	3.65	4.55	5.18	4.53	4.63	5.19	4.87	4.05	4.92
S. Atlantic	5.46	4.51	4.54	4.26	4.35	3.97	4.38	4.78	5.21	4.81	5.01	5.36	4.73	4.38	5.11
E. S. Central	5.15	4.28	4.14	3.84	3.89	3.70	4.03	4.54	5.01	4.50	4.63	5.02	4.39	4.05	4.81
W. S. Central	3.21	2.92	3.07	2.49	2.29	2.19	2.59	2.87	3.24	3.04	3.37	3.54	2.92	2.49	3.30
Mountain	6.61	6.22	6.12	5.71	5.16	4.51	5.05	5.30	5.62	5.37	5.77	5.87	6.18	5.04	5.67
Pacific	7.32	6.57	6.62	6.48	6.63	5.51	5.76	6.10	6.54	6.06	6.45	6.61	6.77	6.05	6.43
U.S. Average	4.57	3.68	3.66	3.34	3.39	2.90	3.20	3.76	4.36	3.76	3.98	4.41	3.84	3.32	4.14

- = 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 - May 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	171.0	208.3	201.2	192.6	177.6	209.7	198.0	895.4	745.7	777.9
Appalachia	62.3	54.6	56.5	50.6	40.3	45.6	53.2	51.1	50.4	49.3	52.0	49.1	224.0	190.2	200.8
Interior	45.2	38.9	45.2	39.7	31.0	34.7	45.1	43.3	40.8	38.5	45.5	42.8	169.1	154.1	167.7
Western	132.7	117.6	135.5	116.5	93.9	90.8	110.0	106.8	101.4	89.8	112.2	106.1	502.3	401.4	409.4
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	2.6	2.5	3.3	2.9	2.2	2.4	3.3	2.9	11.3	11.3	10.8
Exports	22.0	19.8	16.9	15.3	13.9	15.8	14.1	15.3	11.6	14.1	14.7	16.0	74.0	59.1	56.5
Metallurgical Coal	13.5	12.7	10.3	9.4	10.6	10.4	8.0	8.7	7.8	9.4	8.6	10.0	46.0	37.8	35.7
Steam Coal	8.5	7.0	6.6	5.9	3.3	5.4	6.0	6.5	3.8	4.7	6.1	6.1	28.0	21.3	20.8
Total Primary Supply	220.5	194.3	226.4	192.6	152.8	161.0	197.9	187.1	183.4	167.8	196.9	185.1	833.8	698.9	733.3
Secondary Inventory Withdrawals	-2.3	-12.8	3.8	-34.8	9.7	1.4	17.4	-7.9	7.4	1.3	16.6	-2.9	-46.1	20.6	22.4
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	165.0	164.9	217.8	181.7	193.3	171.6	216.0	184.8	797.2	729.5	765.7
Consumption (million short tons)															
Coke Plants	4.4	4.4	5.1	5.0	4.1	3.9	4.9	4.7	4.2	4.0	4.7	4.3	18.9	17.7	17.1
Electric Power Sector (b)	196.3	174.6	215.5	153.3	159.0	153.3	202.9	166.5	178.2	157.5	201.3	169.8	739.7	681.7	706.8
Retail and Other Industry	11.4	10.4	10.5	10.8	11.0	10.2	10.0	10.5	10.9	10.2	10.0	10.6	43.0	41.7	41.7
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	0.6	2.7	2.4	2.1
Other Industrial	10.6	9.8	9.9	10.1	10.2	9.6	9.5	9.9	10.2	9.7	9.7	10.1	40.3	39.3	39.6
Total Consumption	212.1	189.4	231.0	169.1	174.2	167.4	217.8	181.7	193.3	171.6	216.0	184.8	801.6	741.2	765.7
Discrepancy (c)	8.4	-5.4	1.6	-8.9	-9.2	-2.5	0.0	0.0	0.0	0.0	0.0	0.0	-4.4	-11.7	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	195.2	193.8	176.4	184.3	176.9	175.6	159.0	161.9	204.9	184.3	161.9
Electric Power Sector	155.0	167.0	162.7	197.1	188.4	186.4	168.5	176.1	169.7	167.8	150.8	153.4	197.1	176.1	153.4
Retail and General Industry	4.1	4.5	5.1	5.5	4.8	5.0	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	0.244	0.235	0.204	0.202	0.211	0.188	0.158	0.241	0.230	0.190
Cost of Coal to Electric Utilities															
(Dollars per million Btu)	2.27	2.25	2.22	2.15	2.12	2.19	2.22	2.17	2.17	2.22	2.25	2.21	2.23	2.18	2.21

- = 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 - May 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	10.77	10.85	12.50	10.57	11.09	10.98	12.61	10.72	11.20	11.18	11.36
Electric Power Sector (a)	10.93	10.36	12.01	9.78	10.35	10.45	12.07	10.15	10.68	10.58	12.17	10.29	10.77	10.76	10.93
Comm. and Indus. Sectors (b)	0.43	0.41	0.45	0.43	0.42	0.40	0.44	0.42	0.41	0.40	0.44	0.43	0.43	0.42	0.42
Net Imports	0.17	0.20	0.20	0.16	0.17	0.16	0.19	0.13	0.15	0.15	0.19	0.13	0.18	0.17	0.15
Total Supply	11.52	10.97	12.66	10.37	10.94	11.02	12.70	10.71	11.24	11.13	12.80	10.86	11.38	11.34	11.51
Losses and Unaccounted for (c)	0.77	0.92	0.86	0.63	0.70	0.95	0.80	0.72	0.61	0.93	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	9.87	9.72	11.51	9.62	10.26	9.85	11.60	9.75	10.20	10.18	10.37
Residential Sector	4.20	3.35	4.51	3.29	3.85	3.34	4.52	3.44	4.08	3.39	4.54	3.51	3.84	3.79	3.88
Commercial Sector	3.60	3.65	4.12	3.51	3.50	3.69	4.20	3.57	3.57	3.73	4.25	3.62	3.72	3.74	3.79
Industrial Sector	2.55	2.67	2.76	2.53	2.49	2.67	2.77	2.58	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	0.37	0.35	0.39	0.37	0.37	0.35	0.39	0.38	0.38	0.37	0.37
Total Consumption	10.75	10.05	11.80	9.73	10.24	10.07	11.89	9.99	10.63	10.20	11.99	10.13	10.58	10.55	10.74
Average residential electricity usage per customer (kWh)	2,924	2,350	3,190	2,323	2,687	2,325	3,170	2,412	2,789	2,340	3,156	2,436	10,787	10,593	10,721
Prices															
Power Generation Fuel Costs (dollars per million Btu)															
Coal	2.27	2.25	2.22	2.15	2.12	2.19	2.22	2.17	2.17	2.22	2.25	2.21	2.23	2.18	2.21
Natural Gas	4.09	3.12	3.09	2.72	2.69	2.48	2.66	3.42	3.92	3.28	3.35	4.05	3.22	2.79	3.62
Residual Fuel Oil	10.82	11.64	10.48	7.76	6.98	8.37	8.41	8.42	8.62	9.53	9.52	10.03	10.36	8.01	9.41
Distillate Fuel Oil	15.61	15.17	13.19	11.74	9.57	11.70	11.86	12.74	13.47	13.62	14.18	15.67	14.43	11.44	14.19
Retail Prices (cents per kilowatthour)															
Residential Sector	12.24	12.85	12.99	12.59	12.16	12.83	12.92	12.40	12.35	13.11	13.28	12.80	12.67	12.59	12.89
Commercial Sector	10.46	10.54	10.95	10.36	10.09	10.49	10.86	10.31	10.21	10.67	11.12	10.59	10.59	10.46	10.67
Industrial Sector	6.79	6.81	7.32	6.63	6.40	6.61	7.20	6.62	6.46	6.73	7.34	6.75	6.90	6.72	6.83

- = 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 - May 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	113	142	119	141	113	141	120	130	127	129
Middle Atlantic	423	321	423	306	369	319	423	321	394	319	419	325	368	358	364
E. N. Central	587	428	556	434	526	438	576	464	557	437	565	471	501	501	507
W. N. Central	325	232	309	243	298	234	314	259	322	236	308	265	277	276	283
S. Atlantic	1,078	889	1,137	809	977	864	1,148	866	1,038	867	1,151	886	978	964	986
E. S. Central	390	275	384	254	343	274	388	281	366	281	389	287	326	322	331
W. S. Central	602	503	782	479	544	513	757	492	570	537	792	506	592	577	602
Mountain	235	240	333	237	243	242	345	239	254	247	344	244	261	268	272
Pacific contiguous	396	337	425	400	405	335	411	390	426	345	417	393	389	385	395
AK and HI	13	12	13	14	13	12	12	13	13	12	12	13	13	13	13
Total	4,202	3,349	4,505	3,288	3,853	3,343	4,517	3,445	4,081	3,394	4,538	3,511	3,835	3,790	3,881
Commercial Sector															
New England	147	139	159	137	142	139	158	138	141	139	157	137	146	144	144
Middle Atlantic	444	417	478	404	424	414	480	407	429	414	481	408	436	431	433
E. N. Central	509	490	544	471	489	499	565	485	502	505	569	491	503	509	517
W. N. Central	281	269	305	265	271	274	315	271	277	279	319	275	280	283	287
S. Atlantic	805	859	939	795	786	858	959	811	796	867	974	823	850	854	866
E. S. Central	235	239	279	222	226	238	287	228	231	242	290	230	244	245	248
W. S. Central	499	534	630	506	487	543	637	513	504	556	649	523	542	545	558
Mountain	240	256	289	246	240	262	301	252	248	270	307	258	258	264	271
Pacific contiguous	424	433	479	449	420	442	481	452	425	444	486	455	447	449	453
AK and HI	16	16	17	17	16	16	17	17	16	16	17	17	16	16	16
Total	3,603	3,651	4,119	3,511	3,503	3,686	4,199	3,572	3,571	3,732	4,249	3,618	3,722	3,741	3,794
Industrial Sector															
New England	49	50	52	49	47	49	52	48	48	49	52	48	50	49	49
Middle Atlantic	198	196	204	188	194	197	204	192	202	200	207	195	197	197	201
E. N. Central	520	525	531	493	501	518	528	496	514	520	529	497	517	511	515
W. N. Central	237	240	252	231	225	242	257	239	239	246	260	242	240	241	247
S. Atlantic	375	406	406	379	364	396	399	376	376	402	405	381	391	384	391
E. S. Central	279	287	290	265	267	282	286	276	288	287	285	275	280	278	284
W. S. Central	433	462	492	458	457	477	498	465	449	478	495	462	461	474	471
Mountain	217	235	251	223	213	240	257	227	225	249	265	235	232	235	244
Pacific contiguous	227	251	266	234	211	252	272	243	234	255	275	246	245	244	252
AK and HI	13	13	15	14	13	14	14	14	14	14	14	14	14	14	14
Total	2,546	2,666	2,757	2,535	2,493	2,666	2,768	2,578	2,589	2,699	2,788	2,596	2,626	2,627	2,668
Total All Sectors (a)															
New England	350	302	357	299	324	303	353	306	331	302	351	307	327	321	323
Middle Atlantic	1,077	944	1,115	909	998	942	1,118	931	1,037	944	1,118	940	1,011	997	1,010
E. N. Central	1,618	1,444	1,632	1,399	1,518	1,456	1,670	1,447	1,576	1,464	1,664	1,461	1,523	1,523	1,541
W. N. Central	844	742	866	739	795	750	886	769	837	762	887	782	797	800	817
S. Atlantic	2,262	2,158	2,486	1,986	2,132	2,121	2,510	2,057	2,215	2,140	2,535	2,094	2,223	2,206	2,246
E. S. Central	904	801	953	741	837	794	961	784	885	810	964	792	850	844	863
W. S. Central	1,535	1,499	1,904	1,444	1,490	1,533	1,893	1,470	1,524	1,572	1,937	1,492	1,596	1,597	1,632
Mountain	692	731	874	707	697	745	904	719	727	766	918	738	752	767	787
Pacific contiguous	1,050	1,023	1,172	1,085	1,038	1,031	1,167	1,088	1,088	1,047	1,180	1,097	1,083	1,081	1,103
AK and HI	43	41	44	44	42	41	44	44	43	41	44	44	43	43	43
Total	10,374	9,685	11,402	9,354	9,871	9,716	11,506	9,615	10,265	9,846	11,597	9,747	10,204	10,179	10,366

- = 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 - May 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	19.26	18.48	17.62	17.91	18.97	18.46	17.87	18.37	19.43	18.31	18.41
Middle Atlantic	15.77	16.07	16.47	16.04	15.27	16.05	16.59	15.94	15.73	16.68	17.35	16.68	16.09	15.99	16.62
E. N. Central	12.22	13.21	13.16	13.09	12.47	13.55	13.41	13.13	12.95	14.13	14.02	13.73	12.88	13.13	13.69
W. N. Central	10.24	12.16	12.46	11.22	10.58	12.42	12.89	11.30	10.81	12.74	13.23	11.57	11.48	11.80	12.06
S. Atlantic	11.37	11.91	12.14	11.70	11.34	11.75	11.83	11.31	11.45	11.95	12.08	11.62	11.79	11.57	11.78
E. S. Central	10.34	11.15	10.89	10.95	10.35	11.09	10.93	10.87	10.60	11.32	11.22	11.16	10.79	10.80	11.06
W. S. Central	10.67	11.35	11.03	10.81	10.32	11.12	10.77	10.40	10.33	11.35	11.21	10.91	10.96	10.66	10.97
Mountain	11.31	12.21	12.33	11.34	11.01	12.11	12.49	11.51	11.24	12.39	12.81	11.81	11.85	11.85	12.13
Pacific	13.69	13.47	15.76	13.89	14.04	14.08	15.72	13.85	14.12	14.20	15.91	14.13	14.26	14.45	14.62
U.S. Average	12.24	12.85	12.99	12.59	12.16	12.83	12.92	12.40	12.35	13.11	13.28	12.80	12.67	12.59	12.89
Commercial Sector															
New England	16.92	15.21	14.91	14.86	15.30	15.09	14.87	14.59	15.30	15.15	15.17	15.02	15.47	14.96	15.16
Middle Atlantic	13.07	13.04	13.72	12.57	11.87	12.37	13.33	12.26	11.99	12.62	13.72	12.65	13.13	12.49	12.78
E. N. Central	9.72	9.96	10.04	9.81	9.64	9.94	9.99	9.83	9.83	10.13	10.17	10.01	9.89	9.86	10.04
W. N. Central	8.57	9.52	9.95	8.89	8.87	9.55	9.99	8.83	9.10	9.83	10.29	9.07	9.25	9.34	9.60
S. Atlantic	9.66	9.45	9.59	9.35	9.44	9.61	9.57	9.35	9.56	9.81	9.84	9.68	9.52	9.50	9.73
E. S. Central	10.21	10.38	10.27	10.17	10.02	10.28	10.26	10.33	10.27	10.52	10.53	10.61	10.26	10.22	10.49
W. S. Central	8.05	7.89	7.94	7.72	7.68	7.90	7.86	7.61	7.59	7.98	8.11	7.91	7.90	7.77	7.91
Mountain	9.37	9.95	10.21	9.37	9.02	9.77	10.17	9.52	9.08	9.88	10.33	9.67	9.75	9.65	9.78
Pacific	12.23	13.30	15.61	13.44	12.10	13.44	15.54	13.37	12.35	13.70	15.83	13.67	13.71	13.68	13.96
U.S. Average	10.46	10.54	10.95	10.36	10.09	10.49	10.86	10.31	10.21	10.67	11.12	10.59	10.59	10.46	10.67
Industrial Sector															
New England	13.18	11.85	11.87	11.85	12.10	12.02	12.23	11.70	12.34	12.19	12.37	11.79	12.17	12.02	12.18
Middle Atlantic	7.90	7.22	7.36	7.06	7.07	6.99	7.23	6.96	7.18	7.14	7.42	7.10	7.39	7.06	7.21
E. N. Central	6.87	6.77	7.06	6.76	6.73	6.73	7.04	6.82	6.83	6.83	7.15	6.93	6.87	6.83	6.94
W. N. Central	6.49	6.88	7.51	6.48	6.62	6.91	7.55	6.55	6.70	7.01	7.66	6.64	6.85	6.92	7.02
S. Atlantic	6.55	6.38	6.90	6.26	6.24	6.48	6.85	6.39	6.35	6.62	7.01	6.52	6.53	6.50	6.63
E. S. Central	5.78	5.95	6.58	5.74	5.45	6.02	6.72	5.77	5.56	6.19	6.93	5.95	6.02	6.00	6.16
W. S. Central	5.69	5.53	5.73	5.27	4.96	4.97	5.42	5.12	4.99	5.07	5.59	5.31	5.56	5.12	5.25
Mountain	6.16	6.65	7.17	6.00	5.84	6.29	7.09	6.13	5.96	6.45	7.29	6.30	6.52	6.37	6.53
Pacific	8.00	8.94	10.46	9.21	7.92	8.43	9.90	8.99	7.52	8.42	9.89	8.98	9.21	8.87	8.75
U.S. Average	6.79	6.81	7.32	6.63	6.40	6.61	7.20	6.62	6.46	6.73	7.34	6.75	6.90	6.72	6.83
All Sectors (a)															
New England	17.90	16.51	15.83	15.74	16.44	15.84	15.56	15.39	16.40	15.88	15.81	15.80	16.51	15.80	15.97
Middle Atlantic	13.17	12.85	13.58	12.58	12.19	12.48	13.43	12.42	12.46	12.81	13.89	12.87	13.08	12.66	13.04
E. N. Central	9.71	9.76	10.13	9.75	9.66	9.88	10.23	9.85	9.95	10.15	10.51	10.16	9.84	9.92	10.20
W. N. Central	8.63	9.50	10.14	8.89	8.87	9.60	10.31	8.95	9.07	9.82	10.54	9.17	9.30	9.46	9.67
S. Atlantic	9.96	9.89	10.31	9.71	9.76	9.90	10.17	9.63	9.90	10.07	10.40	9.92	9.99	9.88	10.09
E. S. Central	8.90	9.06	9.40	8.85	8.69	9.04	9.48	8.92	8.87	9.27	9.74	9.19	9.07	9.05	9.28
W. S. Central	8.41	8.33	8.64	7.96	7.81	8.07	8.38	7.76	7.85	8.24	8.73	8.12	8.36	8.03	8.27
Mountain	9.02	9.63	10.14	8.96	8.74	9.41	10.18	9.11	8.87	9.57	10.38	9.31	9.48	9.41	9.59
Pacific	11.85	12.28	14.48	12.68	12.00	12.41	14.28	12.55	11.99	12.56	14.46	12.77	12.88	12.85	12.99
U.S. Average	10.27	10.31	10.88	10.13	9.97	10.23	10.78	10.07	10.11	10.43	11.05	10.36	10.42	10.28	10.51

- = 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 - May 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	3,213	3,094	4,037	3,289	3,682	3,194	4,014	3,366	3,715	3,410	3,564
Natural Gas	3,248	3,477	4,392	3,503	3,425	3,731	4,538	3,506	3,361	3,630	4,496	3,453	3,658	3,801	3,737
Petroleum (a)	124	61	72	57	71	67	76	67	82	70	78	68	78	70	74
Other Gases	38	34	40	30	38	34	41	31	39	35	42	32	36	36	37
Nuclear	2,248	2,133	2,286	2,070	2,240	2,083	2,250	2,116	2,226	2,055	2,290	2,146	2,184	2,173	2,179
Renewable Energy Sources:	1,590	1,528	1,373	1,533	1,760	1,818	1,539	1,540	1,683	1,971	1,668	1,637	1,506	1,664	1,739
Conventional Hydropower	803	691	617	644	815	838	713	628	709	878	757	638	688	748	745
Wind	506	534	442	610	654	655	479	609	663	712	520	670	523	599	641
Wood Biomass	118	112	122	112	114	109	121	114	115	110	123	117	116	114	117
Waste Biomass	58	59	61	62	59	59	61	60	59	59	60	60	60	60	59
Geothermal	48	46	45	45	46	46	47	48	48	47	47	47	46	47	47
Solar	57	87	86	60	71	110	119	83	89	166	160	104	73	96	130
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	34	37	39	36	35	37	39	37	36	37	37
Total Generation	11,355	10,770	12,460	10,207	10,769	10,854	12,504	10,573	11,094	10,980	12,612	10,725	11,198	11,177	11,355
Northeast Census Region															
Coal	292	175	203	139	181	133	172	172	265	148	195	195	202	164	200
Natural Gas	483	534	714	543	517	591	735	564	527	567	704	551	569	602	588
Petroleum (a)	46	2	5	2	9	4	6	5	10	4	6	5	14	6	7
Other Gases	2	2	2	1	2	2	2	1	2	2	2	1	2	2	2
Nuclear	545	499	542	499	542	475	530	497	507	468	522	489	521	511	497
Hydropower (c)	93	99	98	102	110	107	100	95	98	116	105	96	98	103	104
Other Renewables (d)	76	65	58	73	78	65	60	70	74	66	62	74	68	68	69
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	1,450	1,389	1,617	1,418	1,496	1,384	1,608	1,424	1,485	1,469	1,478
South Census Region															
Coal	1,716	1,539	1,908	1,167	1,326	1,301	1,724	1,268	1,428	1,359	1,735	1,290	1,582	1,406	1,453
Natural Gas	1,971	2,075	2,465	1,975	1,990	2,276	2,623	1,953	1,957	2,231	2,601	1,938	2,122	2,211	2,183
Petroleum (a)	42	24	29	22	29	27	31	24	33	29	32	24	29	28	29
Other Gases	15	13	15	14	14	13	15	14	14	13	15	15	14	14	14
Nuclear	974	956	1,001	872	950	938	995	940	997	920	1,026	961	951	956	976
Hydropower (c)	122	108	94	145	189	123	104	134	151	132	109	134	117	137	132
Other Renewables (d)	231	267	255	287	321	328	273	320	345	376	310	363	260	311	348
Other Nonrenewable Fuels (b)	14	15	16	15	14	16	16	14	14	15	16	14	15	15	15
Total Generation	5,084	4,999	5,783	4,497	4,835	5,022	5,782	4,669	4,937	5,076	5,843	4,740	5,091	5,077	5,151
Midwest Census Region															
Coal	1,578	1,302	1,578	1,166	1,243	1,169	1,528	1,261	1,384	1,216	1,525	1,275	1,405	1,301	1,350
Natural Gas	300	257	340	285	355	377	427	330	323	335	407	318	296	372	346
Petroleum (a)	12	11	13	9	11	11	13	10	12	11	13	10	11	11	11
Other Gases	14	13	16	8	15	14	17	9	16	15	18	9	13	14	14
Nuclear	553	529	570	547	570	516	560	525	558	515	574	538	550	543	546
Hydropower (c)	44	47	42	37	45	49	43	34	44	53	44	34	43	43	44
Other Renewables (d)	251	218	168	277	278	248	178	263	280	267	192	282	228	242	255
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	2,520	2,389	2,771	2,436	2,621	2,416	2,777	2,471	2,550	2,529	2,571
West Census Region															
Coal	505	496	587	517	462	491	613	588	606	471	560	606	526	539	560
Natural Gas	494	611	874	699	563	488	753	658	554	497	784	646	671	616	621
Petroleum (a)	23	22	25	23	23	25	26	27	27	26	27	28	23	25	27
Other Gases	7	6	7	7	7	6	7	7	7	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	459	547	451	351	403	565	484	360	416	452	453
Other Renewables (d)	230	287	276	252	268	339	315	260	275	383	347	279	261	295	321
Other Nonrenewable Fuels (b)	4	5	5	5	4	5	5	5	5	5	6	5	5	5	5
Total Generation	1,967	2,002	2,311	2,002	1,964	2,055	2,335	2,051	2,041	2,104	2,383	2,090	2,071	2,102	2,155

(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 - May 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	1,751	1,689	2,211	1,814	1,984	1,735	2,194	1,851	2,030	1,867	1,941
Natural Gas (million cf/d)	24,017	26,265	33,602	26,144	25,250	28,321	34,642	25,889	24,839	27,548	34,318	25,502	27,530	28,535	28,071
Petroleum (thousand b/d)	215	108	126	100	125	120	134	119	145	125	138	121	137	125	132
Residual Fuel Oil	76	26	33	26	34	29	33	30	36	31	34	30	40	31	33
Distillate Fuel Oil	66	25	24	25	30	28	29	29	38	28	30	29	35	29	31
Petroleum Coke (a)	61	52	65	46	56	59	67	56	64	61	68	56	56	59	62
Other Petroleum Liquids (b)	13	4	4	3	6	5	5	5	8	5	5	5	6	5	6
Northeast Census Region															
Coal (thousand st/d)	133	82	99	68	88	63	83	83	123	70	94	94	95	79	95
Natural Gas (million cf/d)	3,638	4,102	5,595	4,107	3,932	4,555	5,757	4,284	4,012	4,358	5,505	4,173	4,365	4,634	4,515
Petroleum (thousand b/d)	75	5	9	4	15	8	11	9	18	8	12	10	23	11	12
South Census Region															
Coal (thousand st/d)	888	819	1,023	638	698	691	919	682	747	721	928	696	842	748	773
Natural Gas (million cf/d)	14,399	15,637	18,741	14,727	14,524	17,166	19,848	14,300	14,318	16,832	19,690	14,190	15,885	16,463	16,267
Petroleum (thousand b/d)	79	45	53	41	55	52	59	46	62	55	60	46	54	53	56
Midwest Census Region															
Coal (thousand st/d)	880	742	895	668	702	660	864	715	774	682	859	719	796	736	759
Natural Gas (million cf/d)	2,329	2,014	2,725	2,211	2,699	2,956	3,459	2,530	2,470	2,645	3,312	2,450	2,320	2,912	2,721
Petroleum (thousand b/d)	24	23	26	18	19	20	23	20	21	20	22	20	23	21	21
West Census Region															
Coal (thousand st/d)	285	280	331	293	264	275	344	334	341	262	314	342	297	304	315
Natural Gas (million cf/d)	3,651	4,513	6,541	5,100	4,095	3,644	5,578	4,774	4,039	3,713	5,811	4,689	4,960	4,526	4,568
Petroleum (thousand b/d)	37	36	39	37	36	39	42	44	43	42	44	45	37	40	44
End-of-period U.S. Fuel Inventories Held by Electric Power Sector															
Coal (million short tons)	155.0	167.0	162.7	197.1	188.4	186.4	168.5	176.1	169.7	167.8	150.8	153.4	197.1	176.1	153.4
Residual Fuel Oil (mmb)	10.2	10.5	10.6	12.4	12.7	12.5	12.2	12.5	12.5	12.2	11.9	12.0	12.4	12.5	12.0
Distillate Fuel Oil (mmb)	16.7	16.7	17.2	17.4	17.1	17.0	16.9	17.2	17.3	17.2	17.1	17.3	17.4	17.2	17.3
Petroleum Coke (mmb)	4.1	5.2	5.5	6.7	6.5	6.4	6.2	6.1	5.9	5.8	5.7	5.5	6.7	6.1	5.5

(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 - May 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	0.702	0.722	0.621	0.546	0.604	0.757	0.660	0.556	2.376	2.592	2.576
Wood Biomass (b)	0.063	0.057	0.067	0.060	0.062	0.057	0.071	0.064	0.065	0.060	0.074	0.067	0.246	0.254	0.265
Waste Biomass (c)	0.067	0.066	0.070	0.071	0.069	0.068	0.071	0.069	0.067	0.068	0.071	0.068	0.274	0.276	0.273
Wind	0.433	0.462	0.387	0.534	0.566	0.567	0.419	0.532	0.567	0.616	0.455	0.586	1.815	2.084	2.224
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	0.164	0.163
Solar	0.047	0.073	0.074	0.052	0.060	0.094	0.102	0.072	0.075	0.142	0.139	0.090	0.246	0.328	0.445
Subtotal	1.335	1.292	1.174	1.315	1.500	1.549	1.325	1.324	1.418	1.683	1.439	1.408	5.117	5.698	5.948
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	0.012	0.012
Wood Biomass (b)	0.324	0.320	0.324	0.321	0.314	0.306	0.314	0.315	0.307	0.303	0.314	0.316	1.290	1.250	1.239
Waste Biomass (c)	0.046	0.049	0.050	0.049	0.047	0.047	0.049	0.048	0.048	0.047	0.049	0.049	0.195	0.191	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	0.198	0.199	0.197	0.197	0.198	0.199	0.196	0.776	0.787	0.790
Subtotal	0.568	0.570	0.576	0.578	0.561	0.559	0.570	0.568	0.559	0.556	0.570	0.569	2.292	2.258	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	0.011	0.011	0.011	0.010	0.012	0.011	0.045	0.044	0.044
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	0.036	0.035	0.037	0.037	0.036	0.036	0.037	0.037	0.148	0.145	0.147
Residential Sector															
Wood Biomass (b)	0.106	0.108	0.109	0.109	0.100	0.104	0.105	0.105	0.106	0.106	0.106	0.106	0.432	0.415	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	0.080	0.077	0.078	0.078	0.093	0.091	0.092	0.092	0.298	0.314	0.367
Subtotal	0.190	0.192	0.194	0.194	0.191	0.193	0.195	0.195	0.211	0.208	0.209	0.209	0.770	0.773	0.838
Transportation Sector															
Ethanol (e)	0.266	0.284	0.293	0.285	0.272	0.292	0.296	0.290	0.277	0.294	0.296	0.290	1.128	1.150	1.157
Biomass-based Diesel (e)	0.034	0.058	0.064	0.058	0.051	0.068	0.079	0.078	0.067	0.071	0.081	0.080	0.214	0.276	0.300
Subtotal	0.300	0.342	0.357	0.343	0.322	0.360	0.375	0.368	0.344	0.365	0.377	0.370	1.342	1.426	1.456
All Sectors Total															
Hydroelectric Power (a)	0.687	0.598	0.540	0.563	0.705	0.725	0.625	0.549	0.607	0.760	0.664	0.559	2.389	2.605	2.589
Wood Biomass (b)	0.512	0.503	0.518	0.508	0.494	0.487	0.510	0.504	0.498	0.489	0.513	0.509	2.040	1.994	2.009
Waste Biomass (c)	0.126	0.125	0.130	0.132	0.126	0.125	0.131	0.128	0.125	0.125	0.132	0.128	0.514	0.510	0.510
Wind	0.433	0.462	0.387	0.534	0.566	0.567	0.419	0.532	0.567	0.616	0.455	0.586	1.815	2.084	2.224
Geothermal	0.057	0.056	0.056	0.056	0.057	0.057	0.059	0.059	0.058	0.058	0.058	0.058	0.224	0.232	0.233
Solar	0.122	0.149	0.151	0.128	0.134	0.172	0.182	0.151	0.169	0.234	0.232	0.183	0.550	0.639	0.817
Ethanol (e)	0.271	0.289	0.298	0.290	0.285	0.294	0.301	0.295	0.281	0.299	0.301	0.295	1.147	1.176	1.176
Biomass-based Diesel (e)	0.034	0.058	0.064	0.058	0.051	0.068	0.079	0.078	0.067	0.071	0.081	0.080	0.214	0.276	0.300
Biofuel Losses and Co-products (f)	0.189	0.192	0.195	0.200	0.193	0.198	0.199	0.197	0.197	0.198	0.199	0.196	0.776	0.787	0.790
Total Consumption	2.431	2.432	2.337	2.469	2.569	2.695	2.503	2.492	2.568	2.848	2.633	2.593	9.669	10.259	10.643

- = no data available

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

(b) Wood and wood-derived fuels.

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

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

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

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

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

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

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

Projections: EIA Regional Short-Term Energy Model.

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

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

	2015 1st	2015 2nd	2015 3rd	2015 4th	2016 1st	2016 2nd	2016 3rd	2016 4th	2017 1st	2017 2nd	2017 3rd	2017 4th	Year 2015	Year 2016	Year 2017
Macroeconomic															
Real Gross Domestic Product															
(billion chained 2009 dollars - SAAR)	16,177	16,334	16,414	16,471	16,515	16,613	16,715	16,841	16,965	17,103	17,234	17,345	16,349	16,671	17,162
Real Personal Consumption Expend.															
(billion chained 2009 dollars - SAAR)	11,081	11,179	11,262	11,331	11,375	11,451	11,531	11,626	11,727	11,822	11,915	12,003	11,213	11,496	11,867
Real Fixed Investment															
(billion chained 2009 dollars - SAAR)	2,701	2,736	2,761	2,763	2,760	2,799	2,836	2,869	2,915	2,969	3,022	3,068	2,740	2,816	2,993
Business Inventory Change															
(billion chained 2009 dollars - SAAR)	127	128	95	87	81	35	20	25	28	45	54	60	109	40	47
Real Government Expenditures															
(billion chained 2009 dollars - SAAR)	2,839	2,857	2,870	2,871	2,903	2,917	2,921	2,926	2,924	2,930	2,934	2,928	2,859	2,917	2,929
Real Exports of Goods & Services															
(billion chained 2009 dollars - SAAR)	2,091	2,118	2,121	2,110	2,102	2,124	2,151	2,179	2,204	2,225	2,248	2,272	2,110	2,139	2,237
Real Imports of Goods & Services															
(billion chained 2009 dollars - SAAR)	2,633	2,652	2,667	2,662	2,678	2,691	2,723	2,765	2,813	2,869	2,921	2,968	2,653	2,714	2,893
Real Disposable Personal Income															
(billion chained 2009 dollars - SAAR)	12,115	12,194	12,290	12,360	12,456	12,515	12,609	12,718	12,831	12,943	13,049	13,148	12,240	12,574	12,993
Non-Farm Employment															
(millions)	140.8	141.5	142.2	142.9	143.5	144.1	144.7	145.3	145.9	146.3	146.8	147.1	141.8	144.4	146.5
Civilian Unemployment Rate															
(percent)	5.6	5.4	5.2	5.0	4.9	4.9	4.9	4.8	4.8	4.7	4.7	4.6	5.3	4.9	4.7
Housing Starts															
(millions - SAAR)	0.98	1.16	1.16	1.14	1.15	1.17	1.19	1.26	1.33	1.38	1.42	1.47	1.11	1.19	1.40
Industrial Production Indices (Index, 2012=100)															
Total Industrial Production	105.8	105.1	105.5	104.6	104.0	103.7	103.4	104.4	105.9	106.6	107.8	108.9	105.2	103.9	107.3
Manufacturing	103.2	103.4	103.9	103.8	103.9	103.5	103.3	104.1	105.7	106.3	107.4	108.6	103.6	103.7	107.0
Food	103.1	102.6	103.4	103.2	104.5	105.0	105.4	106.0	106.6	107.2	107.8	108.4	103.1	105.2	107.5
Paper	98.9	98.5	97.0	96.6	96.6	96.0	95.7	95.5	95.6	95.4	95.6	95.7	97.7	95.9	95.6
Petroleum and Coal Products	102.4	104.7	105.7	106.9	106.9	107.2	107.8	108.6	109.4	110.0	110.5	110.8	104.9	107.6	110.2
Chemicals	97.9	97.9	97.7	98.6	99.3	99.3	99.7	100.3	101.2	102.0	103.1	104.4	98.0	99.6	102.7
Nonmetallic Mineral Products	111.3	111.7	113.0	116.1	116.3	116.4	117.2	118.2	119.5	120.7	122.1	123.4	113.0	117.0	121.4
Primary Metals	98.2	97.1	96.6	95.0	95.1	92.7	91.8	92.0	92.9	92.6	93.3	93.7	96.7	92.9	93.1
Coal-weighted Manufacturing (a)	102.0	102.1	102.2	102.5	102.9	102.2	102.3	102.8	103.6	104.0	104.8	105.6	102.2	102.6	104.5
Distillate-weighted Manufacturing (a)	104.4	104.5	105.3	106.0	106.3	106.2	106.5	107.3	108.4	109.2	110.2	111.1	105.0	106.6	109.7
Electricity-weighted Manufacturing (a)	102.9	103.1	103.3	103.3	103.6	103.2	103.3	104.0	105.2	105.7	106.8	107.9	103.1	103.5	106.4
Natural Gas-weighted Manufacturing (a)	102.3	103.4	103.5	104.2	104.5	104.2	104.6	105.3	106.6	107.3	108.6	110.0	103.3	104.7	108.1
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	2.46	2.37	2.39	2.44
Producer Price Index: All Commodities															
(index, 1982=1.00)	1.92	1.92	1.90	1.87	1.84	1.85	1.86	1.87	1.90	1.91	1.92	1.94	1.90	1.85	1.92
Producer Price Index: Petroleum															
(index, 1982=1.00)	1.71	1.96	1.85	1.53	1.25	1.49	1.50	1.44	1.50	1.63	1.70	1.74	1.76	1.42	1.64
GDP Implicit Price Deflator															
(index, 2009=100)	109.1	109.7	110.0	110.3	110.7	111.2	111.6	112.2	112.8	113.3	113.8	114.4	109.8	111.4	113.6
Miscellaneous															
Vehicle Miles Traveled (b)															
(million miles/day)	7,957	8,940	8,862	8,538	8,147	9,223	9,038	8,689	8,316	9,279	9,126	8,753	8,577	8,775	8,870
Air Travel Capacity															
(Available ton-miles/day, thousands)	517	574	584	560	534	568	579	556	535	571	583	560	559	559	562
Aircraft Utilization															
(Revenue ton-miles/day, thousands)	322	356	365	343	327	354	365	348	332	357	370	352	347	349	353
Airline Ticket Price Index															
(index, 1982-1984=100)	286.4	313.0	283.3	286.2	281.8	296.3	278.6	296.6	299.5	310.4	291.1	311.5	292.2	288.3	303.1
Raw Steel Production															
(million short tons per day)	0.247	0.242	0.248	0.226	0.238	0.244	0.235	0.204	0.202	0.211	0.188	0.158	0.241	0.230	0.190
Carbon Dioxide (CO₂) Emissions (million metric tons)															
Petroleum	562	568	584	572	556	569	579	574	559	573	584	578	2,285	2,277	2,294
Natural Gas	470	314	328	369	443	330	338	392	456	329	339	395	1,480	1,501	1,519
Coal	393	351	428	315	334	314	408	340	361	322	404	345	1,486	1,395	1,431
Total Energy (c)	1,426	1,234	1,341	1,257	1,334	1,214	1,326	1,307	1,378	1,226	1,328	1,319	5,258	5,181	5,251

- = 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 - May 2016

	2015 1st	2015 2nd	2015 3rd	2015 4th	2016 1st	2016 2nd	2016 3rd	2016 4th	2017 1st	2017 2nd	2017 3rd	2017 4th	Year 2015	Year 2016	Year 2017
Real Gross State Product (Billion $2009)															
New England	854	863	868	868	869	874	879	885	890	896	901	906	863	877	899
Middle Atlantic	2,409	2,437	2,446	2,457	2,461	2,474	2,486	2,501	2,514	2,531	2,545	2,558	2,437	2,480	2,537
E. N. Central	2,198	2,220	2,234	2,241	2,242	2,252	2,263	2,277	2,291	2,306	2,320	2,331	2,223	2,259	2,312
W. N. Central	1,028	1,038	1,049	1,052	1,054	1,059	1,066	1,073	1,080	1,088	1,095	1,101	1,042	1,063	1,091
S. Atlantic	2,868	2,899	2,913	2,929	2,942	2,963	2,984	3,010	3,033	3,059	3,083	3,103	2,902	2,975	3,069
E. S. Central	736	742	746	749	751	756	760	766	771	777	782	787	743	758	779
W. S. Central	2,021	2,025	2,028	2,031	2,034	2,043	2,054	2,070	2,090	2,112	2,135	2,156	2,027	2,051	2,123
Mountain	1,043	1,053	1,058	1,062	1,067	1,075	1,084	1,094	1,104	1,116	1,127	1,136	1,054	1,080	1,121
Pacific	2,919	2,954	2,969	2,979	2,992	3,013	3,034	3,059	3,085	3,112	3,137	3,159	2,955	3,024	3,123
Industrial Output, Manufacturing (Index, Year 2012=100)															
New England	99.4	99.6	99.9	99.6	99.8	99.4	99.1	99.8	101.1	101.6	102.6	103.6	99.6	99.5	102.2
Middle Atlantic	99.8	99.9	100.3	99.9	99.9	99.4	99.0	99.7	101.1	101.5	102.5	103.6	100.0	99.5	102.2
E. N. Central	105.1	105.4	106.0	106.3	106.1	105.6	105.3	106.3	107.8	108.4	109.5	110.6	105.7	105.8	109.1
W. N. Central	103.3	103.2	103.4	103.2	103.1	102.8	102.6	103.5	105.0	105.6	106.7	107.9	103.3	103.0	106.3
S. Atlantic	104.3	104.9	105.9	106.3	106.8	106.5	106.3	107.2	108.7	109.2	110.3	111.3	105.3	106.7	109.9
E. S. Central	105.5	106.1	107.2	107.6	108.4	108.2	108.0	108.9	110.4	111.1	112.2	113.3	106.6	108.4	111.8
W. S. Central	102.9	101.6	101.0	99.7	99.2	98.3	97.8	98.5	100.0	100.7	101.9	103.3	101.3	98.5	101.5
Mountain	104.7	105.2	106.2	106.8	107.5	107.4	107.3	108.3	110.3	111.1	112.5	113.8	105.7	107.6	111.9
Pacific	103.6	104.1	104.7	104.2	104.2	103.7	103.5	104.4	106.0	106.6	107.9	109.1	104.1	104.0	107.4
Real Personal Income (Billion $2009)															
New England	740	748	751	756	763	766	771	777	783	789	795	800	749	769	792
Middle Atlantic	1,895	1,913	1,928	1,938	1,950	1,959	1,971	1,985	1,998	2,013	2,026	2,038	1,919	1,966	2,019
E. N. Central	2,011	2,023	2,040	2,057	2,075	2,084	2,096	2,111	2,127	2,144	2,159	2,171	2,033	2,091	2,150
W. N. Central	972	974	978	982	991	996	1,002	1,010	1,018	1,025	1,032	1,039	977	1,000	1,029
S. Atlantic	2,620	2,642	2,667	2,686	2,711	2,727	2,749	2,775	2,802	2,828	2,852	2,873	2,654	2,740	2,839
E. S. Central	759	764	771	777	782	786	791	798	804	811	817	822	768	789	814
W. S. Central	1,711	1,706	1,719	1,727	1,741	1,748	1,760	1,777	1,795	1,815	1,833	1,849	1,716	1,757	1,823
Mountain	922	930	936	943	953	959	967	977	987	998	1,007	1,016	933	964	1,002
Pacific	2,218	2,253	2,271	2,288	2,307	2,320	2,339	2,359	2,381	2,402	2,422	2,441	2,258	2,331	2,412
Households (Thousands)															
New England	5,831	5,838	5,843	5,849	5,858	5,866	5,871	5,877	5,884	5,892	5,900	5,910	5,849	5,877	5,910
Middle Atlantic	15,986	16,005	16,015	16,028	16,048	16,068	16,080	16,090	16,102	16,117	16,135	16,153	16,028	16,090	16,153
E. N. Central	18,606	18,613	18,622	18,639	18,660	18,684	18,701	18,719	18,738	18,757	18,780	18,804	18,639	18,719	18,804
W. N. Central	8,448	8,464	8,478	8,493	8,513	8,534	8,552	8,570	8,590	8,610	8,631	8,652	8,493	8,570	8,652
S. Atlantic	24,611	24,700	24,787	24,879	24,984	25,089	25,182	25,275	25,368	25,462	25,558	25,657	24,879	25,275	25,657
E. S. Central	7,517	7,524	7,532	7,543	7,558	7,575	7,589	7,603	7,617	7,633	7,649	7,666	7,543	7,603	7,666
W. S. Central	14,319	14,373	14,421	14,471	14,529	14,589	14,645	14,698	14,751	14,805	14,861	14,919	14,471	14,698	14,919
Mountain	8,783	8,817	8,850	8,885	8,926	8,965	9,004	9,042	9,081	9,121	9,162	9,205	8,885	9,042	9,205
Pacific	18,402	18,459	18,508	18,560	18,622	18,686	18,739	18,794	18,848	18,904	18,962	19,021	18,560	18,794	19,021
Total Non-farm Employment (Millions)															
New England	7.2	7.2	7.2	7.2	7.3	7.3	7.3	7.3	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	19.2	19.3	19.3	19.4	19.4	19.4	19.5	19.0	19.3	19.4
E. N. Central	21.4	21.4	21.5	21.6	21.7	21.8	21.8	21.9	21.9	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	10.6	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	27.7	27.9	28.0	28.1	28.2	28.3	27.0	27.6	28.1
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	10.4	10.5	10.5	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 - May 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	3,852	819	58	1,788	2,843	859	122	2,197	3,065	810	131	2,150	6,518	6,020	6,156
Middle Atlantic	3,581	613	40	1,543	2,670	678	72	1,989	2,850	648	90	1,989	5,777	5,408	5,578
E. N. Central	3,690	659	75	1,741	2,867	738	107	2,233	3,104	721	129	2,268	6,164	5,945	6,222
W. N. Central	3,375	652	95	1,964	2,892	657	134	2,402	3,223	688	155	2,462	6,086	6,086	6,528
South Atlantic	1,672	155	8	663	1,388	209	12	970	1,443	208	16	981	2,498	2,580	2,648
E. S. Central	2,147	184	14	881	1,760	238	18	1,293	1,847	263	22	1,313	3,226	3,308	3,445
W. S. Central	1,400	70	2	615	1,052	86	4	767	1,199	101	5	748	2,086	1,908	2,053
Mountain	1,900	704	122	1,867	2,074	607	124	1,783	2,248	677	134	1,850	4,593	4,588	4,909
Pacific	1,078	524	77	1,189	1,293	394	73	1,100	1,498	534	87	1,265	2,869	2,861	3,385
U.S. Average	2,340	443	49	1,251	1,948	451	64	1,508	2,120	476	76	1,549	4,083	3,971	4,221
Heating Degree Days, Prior 10-year Average															
New England	3,166	838	134	2,147	3,212	824	132	2,104	3,201	826	127	2,132	6,285	6,273	6,286
Middle Atlantic	2,935	666	90	1,976	2,983	651	90	1,926	2,983	654	84	1,949	5,667	5,650	5,669
E. N. Central	3,192	694	123	2,262	3,246	689	125	2,205	3,254	699	120	2,217	6,272	6,266	6,290
W. N. Central	3,273	691	150	2,433	3,298	693	150	2,392	3,302	707	145	2,406	6,546	6,533	6,560
South Atlantic	1,481	196	14	1,013	1,502	185	14	975	1,506	189	13	979	2,704	2,676	2,686
E. S. Central	1,853	236	19	1,358	1,899	225	19	1,308	1,906	231	17	1,306	3,466	3,451	3,460
W. S. Central	1,188	86	5	834	1,221	83	5	814	1,227	89	4	814	2,113	2,123	2,134
Mountain	2,258	730	150	1,873	2,231	724	147	1,880	2,215	726	138	1,869	5,012	4,981	4,949
Pacific	1,534	621	92	1,205	1,494	609	88	1,211	1,459	589	86	1,198	3,453	3,402	3,333
U.S. Average	2,183	493	77	1,567	2,199	483	76	1,534	2,192	484	72	1,537	4,319	4,293	4,286
Cooling Degree Days															
New England	0	71	487	0	0	109	448	1	0	99	444	0	558	557	543
Middle Atlantic	0	185	612	3	0	189	590	6	0	177	577	5	799	785	759
E. N. Central	0	221	500	9	4	229	578	9	0	221	553	8	729	820	782
W. N. Central	3	266	660	13	9	276	714	13	3	275	688	11	942	1,013	977
South Atlantic	136	761	1,155	333	134	668	1,168	237	114	632	1,167	234	2,385	2,206	2,147
E. S. Central	23	580	1,018	98	41	513	1,073	74	27	507	1,069	69	1,719	1,701	1,672
W. S. Central	51	856	1,571	268	121	862	1,510	217	72	863	1,609	227	2,746	2,710	2,770
Mountain	45	433	923	88	35	446	992	89	19	439	973	88	1,489	1,562	1,520
Pacific	54	229	682	123	36	204	611	76	32	211	613	77	1,089	927	933
U.S. Average	47	434	875	133	53	414	878	100	40	405	882	100	1,488	1,445	1,427
Cooling Degree Days, Prior 10-year Average															
New England	0	85	420	1	0	81	420	1	0	84	424	1	506	501	509
Middle Atlantic	0	168	557	5	0	168	548	5	0	173	552	6	731	722	731
E. N. Central	3	234	545	6	3	229	528	6	3	234	530	7	787	766	774
W. N. Central	7	282	683	9	7	279	674	9	7	277	673	10	981	969	967
South Atlantic	110	635	1,154	210	113	659	1,143	221	116	665	1,146	225	2,108	2,137	2,152
E. S. Central	33	526	1,053	52	32	541	1,038	56	33	542	1,038	60	1,663	1,667	1,673
W. S. Central	94	883	1,519	184	90	890	1,518	191	90	879	1,519	194	2,679	2,689	2,682
Mountain	17	423	930	75	21	429	931	76	23	423	942	79	1,445	1,457	1,467
Pacific	26	170	601	65	29	180	612	72	31	178	611	74	863	894	894
U.S. Average	40	396	849	83	42	404	845	88	43	405	848	91	1,369	1,379	1,387

- = 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).