Independent Statistics & Analysis
U.S. Energy Information Administration

September 2016

Short-Term Energy Outlook (STEO)

Highlights

- Benchmark North Sea Brent crude oil spot prices averaged $46/barrel (b) in August, a $1/b increase from July. This was the fourth consecutive month in which Brent spot crude oil prices averaged between $44/b and $49/b.

- Brent crude oil prices are forecast to average $43/b in 2016 and $52/b in 2017. West Texas Intermediate (WTI) crude oil prices are forecast to average $1/b less than Brent in 2016 and 2017. 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 December 2016 of $44/b should be considered in the context of Nymex contract values for December 2016 delivery. Contracts traded during the five-day period ending September 1 (*Market Prices and Uncertainty Report*) suggest the market expects WTI prices could range from $34/b to $65/b (at the 95% confidence interval) in December 2016.

- U.S. regular gasoline retail prices are expected to decline from an average of $2.18/gallon (gal) in August to $1.92/gal in December. For the year, U.S. regular gasoline retail prices are forecast to average $2.08/gal in 2016 and $2.26/gal in 2017.

- U.S. crude oil production averaged 9.4 million barrels per day (b/d) in 2015. Production is forecast to average 8.8 million b/d in 2016 and 8.5 million b/d in 2017. Production levels in 2017 for this forecast are 0.2 million b/d higher than in the August STEO. The upward revisions to production largely reflect an assumption of higher drilling activity, rig efficiency, and well-level productivity than assumed in previous forecasts.

- Natural gas working inventories were 3,401 billion cubic feet (Bcf) on August 26. This level is 8% higher than last year during the same week, and 11% higher than the previous five-year (2011–15) average for that week. EIA projects that natural gas inventories will be 4,042 Bcf at the end of October 2016, which would be the highest end-of-October level on record.

Global Petroleum and Other Liquid Fuels

EIA estimates that global petroleum and other liquid fuels inventory builds averaged 1.8 million b/d in 2015. The pace of inventory builds is expected to slow to an average of 0.8 million b/d in 2016. Inventory builds are expected to continue into early 2017, and then consistent inventory draws are forecast to begin in June 2017.

Global Petroleum and Other Liquid Fuels Consumption. Global consumption of petroleum and other liquid fuels is estimated to have grown by 1.4 million b/d in 2015. EIA expects global consumption to increase by 1.5 million b/d in 2016 and by 1.4 million b/d in 2017, mostly driven by growth in countries outside of the Organization for Economic Cooperation and Development (OECD). Non-OECD consumption growth was 0.9 million b/d in 2015, and it is expected to be 1.2 million b/d in 2016 and 1.3 million b/d in 2017.

India and China are expected to be the largest contributors to non-OECD petroleum consumption growth, with each country's consumption forecast to increase between 0.3 million and 0.4 million b/d annually in both 2016 and 2017. In India, consumption growth is mainly a result of increased use of transportation fuels and of naphtha for new petrochemical projects. China's growth in consumption of petroleum and other liquid fuels is driven by increased use of gasoline, jet fuel, and hydrocarbon gas liquids (HGL), which more than offsets decreases in diesel consumption. Last year's significant rise in the use of HGL in China will continue through the forecast period, as new propane dehydrogenation (PDH) plants increase the use of propane.

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.

Non-OPEC Petroleum and Other Liquid Fuels Supply. EIA estimates that petroleum and other liquid fuels production in countries outside the Organization of the Petroleum Exporting Countries (OPEC) grew by 1.5 million b/d in 2015, with more than half of the growth occurring in North America. However, EIA expects non-OPEC production to decline by 0.4 million b/d in 2016 and by 0.2 million b/d in 2017.

Changes in non-OPEC production are significantly affected by changes in U.S. tight oil production, which has high decline rates for production and relatively short investment horizons, making it among the most price-sensitive oil-producing areas. Forecast total U.S. production of liquid fuels declines by 290,000 b/d in 2016 and remains flat in 2017, as declining onshore crude oil production is partially offset by expected growth in HGL production, Gulf of Mexico crude oil production, and liquid biofuels production. Outside the United States, non-OPEC production declines by 120,000 b/d in 2016 and by 220,000 b/d in 2017.

Among non-OPEC producers outside the United States, the largest decline in 2016 is forecast to be in China. EIA expects China's output to fall by 190,000 b/d in 2016 and by an additional 70,000 b/d in 2017 because of continued investment cuts and fewer new offshore developments. In 2017, the largest non-OPEC declines are in the North Sea and in Russia, which are forecast to decline by 210,000 b/d and 220,000 b/d, respectively, following forecast production growth in both areas this year.

Canadian production is expected to grow in both 2016 and 2017, although annual growth in 2016 will be only 30,000 b/d because of production lost to wildfires in Alberta that resulted in oil sands outages in May and June, and to a lesser extent in July. However, Canadian production is expected to increase by 250,000 b/d in 2017.

Non-OPEC unplanned supply outages in August were about 0.4 million b/d, a decrease of about 0.1 million b/d from the July level.

OPEC Petroleum and Other Liquid Fuels Supply. OPEC crude oil production averaged 31.8 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 0.7 million b/d in 2016, with Iran accounting for most of the increase, and by an additional 0.5 million b/d in 2017. The forecast does not assume a collaborative production cut among OPEC members and other producers, 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 is forecast to increase by 0.2 million b/d in 2016 and by 0.3 million b/d in 2017, led by increases in Iran and Qatar.

OPEC unplanned crude oil supply disruptions averaged 2.4 million b/d in August, 0.1 million b/d higher than the July level. Nigeria's outages decreased slightly in August, but they remain at roughly 0.7 million b/d, as major crude oil streams (Bonny Light, Forcados, Brass River, and Qua Iboe) all continue to experience production disruptions. In Libya, export volumes at the Hariga terminal were halted for a short time in July, which led to an outage at the Sarir field, increasing Libya's disruptions by 0.1 million b/d. Although the Hariga terminal reopened at the end of July, the outage at the Sarir field persisted into August, leaving Libya's total disrupted volumes at more than 1.0 million b/d.

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

OECD Petroleum Inventories. EIA estimates that OECD commercial crude oil and other liquid fuels inventories were 3.00 billion barrels at the end of 2015, equivalent to roughly 66 days of consumption. Forecast OECD inventories rise to 3.09 billion barrels at the end of 2016 and then fall to 3.06 billion barrels at the end of 2017.

Crude Oil Prices. The monthly average spot price of Brent crude oil increased by $1/b in August to $46/b. Despite continued increases in global oil inventories and U.S. oil rig counts, market reactions to a potential OPEC deal to freeze production at current levels put upward pressure on prices in August.

EIA expects global oil inventory builds to continue in the near future, averaging 0.6 million b/d in the second half of 2016, but the builds are forecast to remain well below the levels that occurred in 2015 and early 2016. Although the pace of inventory builds is slowing, continuing builds and high inventory levels will likely contribute to Brent prices maintaining the recent $40/b to $50/b trading range during the next two quarters. EIA forecasts Brent prices to average $45/b during the fourth quarter of 2016 and first quarter of 2017, acknowledging that global

economic developments and geopolitical events in the coming months have the potential to push oil prices near the top or bottom of the $40/b to $50/b range.

EIA expects global oil inventory draws to begin in mid-2017. The expectation of inventory draws contributes to rising prices in the second quarter of 2017, with price increases continuing later in 2017. Brent prices are forecast to average $52/b in 2017. Forecast Brent prices average $58/b in the fourth quarter of 2017, reflecting the potential for more significant inventory draws beyond the forecast period.

Average West Texas Intermediate (WTI) crude oil prices are forecast to be $1/b lower than Brent prices in 2016 and 2017. The slight price discount of WTI to Brent in the forecast is based on the assumption of competition between the two crudes in the U.S. Gulf Coast refinery market.

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 December 2016 delivery that were traded during the five-day period ending September 1 averaged $47/b, and implied volatility averaged 37%. These levels established the lower and upper limits of the 95% confidence interval for the market's expectations of monthly average WTI prices in December 2016 at $34/b and $65/b, respectively. The 95% confidence interval for market expectations widens over time, with lower and upper limits of $25/b and $104/b for prices in December 2017. At this time in 2015, WTI for December 2015 delivery averaged $48/b, and implied volatility averaged 47%, with the corresponding lower and upper limits of the 95% confidence interval at $32/b and $73/b.

U.S. Petroleum and Other Liquid Fuels

Refinery wholesale gasoline margins (the difference between the wholesale price of gasoline and the price of Brent crude oil) averaged 42 cents/gal in August. This level was lower than the 73 cents/gal average in August 2015, but similar to the previous five-year average for August. Higher U.S. gasoline production and inventory levels in 2016 have contributed to lower gasoline margins than in 2015. Margins have been lower despite gasoline consumption being 2.3% higher through the first eight months of 2016 compared with the same period in 2015.

The U.S. average regular gasoline retail price decreased to $2.18/gal in August, 6 cents/gal lower than in July. Monthly average retail gasoline prices for August 2016 ranged from a low of $1.96/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 forecasts that the monthly average price of U.S. regular gasoline reached an annual peak in June of $2.37/gal, with lower prices expected in the second half of 2016.

Consumption. Total U.S. liquid fuels consumption increased by an estimated 290,000 b/d (1.5%) in 2015. Liquid fuels consumption is forecast to increase by 200,000 b/d (1.1%) in 2016 and by an additional 140,000 b/d (0.7%) in 2017.

Motor gasoline consumption is forecast to increase by 170,000 b/d (1.9%) to 9.33 million b/d in 2016, which would be the highest annual average gasoline consumption on record, surpassing the previous record set in 2007. The increase in gasoline consumption reflects a forecast 1.9% increase in highway travel (because of employment growth and lower retail gasoline prices) that is partially offset by increases in vehicle fleet fuel economy. EIA forecasts that gasoline consumption will fall by 10,000 b/d (0.1%) in 2017, as an increase in forecast highway travel (albeit at a slower rate than in 2016) is more than offset by expected growth in fleet-wide fuel economy.

Jet fuel consumption is forecast to increase by 40,000 b/d (2.8%) in 2016, and then fall by 10,000 b/d (0.6%) in 2017, as improvements in average airline fleet fuel economy more than offset growth in freight and passenger travel.

Consumption of distillate fuel, which includes diesel fuel and heating oil, is expected to fall by 100,000 b/d (2.5%) in 2016, after falling by 60,000 b/d (1.5%) in 2015. Falling distillate consumption in 2016 is the result of relatively warm winter temperatures, reduced oil and natural gas drilling (which uses diesel fuel in its operations), and declining 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 80,000 b/d (2.1%).

Hydrocarbon gas liquids (HGL) consumption is forecast to increase by 10,000 b/d (0.6%) in 2016 and by 90,000 b/d (3.7%) in 2017, as increased ethane consumption offsets reduced consumption of other HGL. Ethane consumption is forecast to increase by 70,000 b/d (6.5%) in 2016, as expansion projects at ethylene-producing petrochemical plants increase feedstock demand for ethane. In 2017, forecast ethane consumption increases by an additional 90,000 b/d (8.2%), as five new petrochemical plants and a previously deactivated plant begin operations.

Supply. U.S. crude oil production is projected to decrease from an average of 9.4 million b/d in 2015 to 8.8 million b/d in 2016 and to 8.5 million b/d in 2017. Production levels in 2017 for this forecast are 0.2 million b/d higher than in the August STEO. The upward revisions to production largely reflect an assumption of higher drilling activity, drilling efficiency, and well-level productivity than assumed in previous forecasts.

EIA estimates that total U.S. crude oil production has fallen by 1.2 million b/d since April 2015 to an average of 8.5 million b/d in August 2016. Almost all of the production decline was in the Lower 48 onshore.

The forecast reflects declining Lower 48 onshore production that is partly offset by growing production in the federal Gulf of Mexico. Based on the current oil price forecast, EIA expects oil production to continue declining in most Lower 48 onshore oil production regions through 2017. However, EIA expects the rate of decline to slow significantly from an average month-over-month decline of 100,000 b/d in the second and third quarters of 2016 to an average month-over-month decline of only 20,000 b/d in 2017. The current price outlook is expected to limit onshore drilling and well completions. However, that is expected to be partially offset by continued increases in rig and well productivity and falling drilling and completion costs. Plays in

the Permian basin appear to hold the most promising potential for production increases. Overall, EIA forecasts Lower 48 crude oil production to average 6.2 million b/d in 2017, which is down from a forecast average of 6.5 million b/d in the third quarter of 2016 and from an annual average of 6.7 million b/d for all of 2016.

Projected crude oil production in the Gulf of Mexico increases from an average of 1.5 million b/d in 2015 to 1.9 million b/d in the fourth quarter of 2017. In the Gulf of Mexico, the April 2016 start of the Julia field and the July 2016 start of the Gunflint field, along with other projects that will begin operations later in 2016 and in 2017, are expected to contribute to an increase in the region's production. Some projects may start production later than expected, potentially shifting some of the anticipated production gains from late 2017 into early 2018.

EIA expects U.S. crude oil production to decline from 9.2 million b/d in the first quarter of 2016 to an average of 8.6 million b/d in the fourth quarter of 2016. For most of 2017, production is expected to be relatively stable between 8.5 million b/d and 8.6 million b/d, except during the third quarter when EIA assumes some production declines because of hurricane-related outages. Production is expected to stabilize in 2017 because of 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.

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

Product Prices. EIA expects the retail price of regular gasoline to average $2.22/gal during the 2016 summer driving season (April through September), 3 cents/gal higher than projected in last month's STEO and 41 cents/gal lower than the price in summer 2015. EIA expects that the U.S. average retail price of regular gasoline reached a peak of $2.37/gal in June and will fall to an average of $2.13/gal in September and to an average of $1.92/gal in December. The U.S. regular gasoline retail price, which averaged $2.43/gal in 2015, is forecast to average $2.08/gal in 2016 and $2.26/gal in 2017.

The diesel fuel retail price averaged $2.71/gal in 2015. The diesel price is forecast to average $2.31/gal in 2016 and $2.70/gal in 2017.

Natural Gas

Working natural gas inventories were 3,401 billion cubic feet (Bcf) as of August 26, which is 8% higher than the same time last year. Injections during the refill season have been below the five-year (2011-15) average levels in most weeks because of the high use of natural gas for electricity generation. However, because warm weather last winter left inventories at record-high levels

going into the injection season, current natural gas stock levels remain substantially higher than year-ago and five-year-average levels.

Natural Gas Consumption. EIA's forecast of total natural gas consumption averages 76.4 Bcf/d in 2016 and 77.1 Bcf/d in 2017, compared with 75.2 Bcf/d in 2015. In 2016, increases in total natural gas consumption are mainly because of electric power sector use of natural gas, which is expected to increase by 5.4%. Forecast natural gas use in the electric power sector declines by 2.3% in 2017, as rising natural gas prices contribute to increasing coal use for electricity generation. Forecast industrial sector consumption of natural gas increases by 2.3% in 2016 and by 1.0% in 2017, as new fertilizer and chemical projects come online.

Natural Gas Production and Trade. EIA's natural gas marketed production in June, the month of the most recent survey data, averaged 77.5 Bcf/d, which is down 2.7 Bcf/d from the record-high daily average production in February 2016. However, more recent preliminary daily data from third-party sources indicate production increased in July and August. EIA forecasts production increases in the second half of 2016 and through 2017 in response to forecast increases in prices and in liquefied natural gas (LNG) exports. Forecast natural gas production rises by 0.6% in 2016 and by 3.0% in 2017.

Natural gas pipeline exports to Mexico have risen in 2016. EIA expects that growth to continue because of growing demand from Mexico's electric power sector and because of flat natural gas production in Mexico. Gross pipeline exports are expected to increase by 0.7 Bcf/d in 2016 to an average of 5.6 Bcf/d before declining slightly in 2017.

EIA projects that LNG gross exports will rise to an average of 0.5 Bcf/d in 2016, with the startup of Cheniere's Sabine Pass LNG liquefaction plant in Louisiana, which sent out its first cargo in February 2016. Sabine's second train is currently in the commissioning process. EIA projects that gross LNG exports will average 1.5 Bcf/d in 2017, as Sabine Pass ramps up capacity.

With expected growth in gross exports, net imports of natural gas decline from 2.6 Bcf/d in 2015 to 0.2 Bcf/d in 2017. The United States is expected to become a net exporter of natural gas beginning in the second quarter of 2017.

Natural Gas Inventories. Natural gas inventories in March ended at 2,496 Bcf, the highest end-of-withdrawal-season level on record. As of August 26, natural gas inventories were at 3,401 Bcf. Despite lower-than-average storage injections, EIA forecasts natural gas inventories to be 4,042 Bcf at the end of October 2016, which would be a record-high level for that time of year.

Natural Gas Prices. The Henry Hub natural gas spot price averaged $2.82/million British thermal units (MMBtu) in August, unchanged from the July average. A hot summer and production declines have put some upward pressure on natural gas prices, although prices remain low enough to support significant natural gas-fired generation. EIA expects natural gas prices to gradually rise through the forecast period. Forecast Henry Hub prices average $2.42/MMBtu in 2016 and $2.87/MMBtu in 2017.

Natural gas futures contracts for December 2016 delivery that were traded during the five-day period ending September 1 averaged $3.18/MMBtu. Current options and futures prices indicate that market participants place the lower and upper bounds for the 95% confidence interval for December 2016 contracts at $2.25/MMBtu and $4.51/MMBtu, respectively. In early September 2015, the natural gas futures contracts for December 2015 delivery averaged $2.91/MMBtu, and the corresponding lower and upper limits of the 95% confidence interval were $2.08/MMBtu and $4.06/MMBtu.

Coal

Coal Supply. U.S. coal production in August was 71 million short tons (MMst), which is 6 MMst (9%) higher than in the previous month and 12 MMst (14%) lower than in August 2015. In 2016, coal production is expected to decrease by 164 MMst (18%), which would be the largest annual decline in terms of both tons and percentage based on data going back to 1949. In 2017, total U.S. coal production is expected to increase by 32 MMst (4%), with the majority of the increase coming from the Appalachian and Interior regions. Coal produced in these two regions has the advantage of lower transportation costs and higher heat content per ton than coal produced in the Western region.

Electric power sector coal stockpiles were 185 MMst in June (the most recent available data), a 5% decline from May. The end-of-June coal stocks were 18 MMst (11%) higher than the June 2015 level and 20 MMst (12%) higher than the previous 10-year average for the month. U.S. coal stockpiles are still at relatively high levels because of the mild winter earlier in the year and also because coal continues to lose market share to natural gas for use in electricity generation in most regions of the country. EIA expects the level of coal stocks will decrease over the summer, and power sector inventories will end 2016 at 158 MMst.

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 67 MMst (9%) in 2016. The decline is a result of competition with low-priced natural gas and the relatively mild weather in the first half of 2016 that reduced overall electricity demand. Retirements of coal-fired power plants reduce coal-fired generation capacity in the forecast period, primarily in 2016. The retirements are the result of increased competition with natural gas generation and the industry response to the implementation of the U.S. Environmental Protection Agency's (EPA) Mercury and Air Toxics Standards (MATS). Coal consumption in the electric power sector is forecast to increase by 18 MMst (3%) in 2017, mostly because of rising natural gas prices and increasing electricity generation.

Coal Trade. Coal exports in June 2016 were 1 MMst (29%) higher than in the previous month, but exports for the first six months of 2016 were 32% (13 MMst) lower than the amount exported in the first half of 2015. EIA forecasts U.S. coal exports for all of 2016 to decline by 15 MMst (21%) to 59 MMst, the lowest annual level since 2006. Exports are expected to decline by 6 MMst (10%) in 2017.

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

Coal Prices. EIA estimates the delivered coal price averaged $2.23/MMBtu in 2015. Forecast coal prices are $2.18/MMBtu in 2016 and $2.24/MMBtu in 2017.

Electricity

The power industry on the West Coast has benefited from improved water supply conditions and from new capacity additions that use renewable energy sources (especially solar and wind). Summer (June-August) electricity generation from hydropower in the area served by the California Independent System Operator (CAISO) is up 3.2 terawatthours (TWh) from last summer, and generation from other renewable energy sources is up 2.3 TWh. Partially offsetting this summer-over-summer increase in renewables is a 5.8 TWh decline in thermal generation, almost all of which is fueled by natural gas.

Electricity Consumption. A mild winter earlier in the year led to reduced use of electricity for residential space heating, particularly in the southeastern states. Total U.S. retail sales of electricity to the residential sector during the first half of this year are estimated to have been 4.9% lower than sales in the first half of 2015. Warmer summer temperatures contribute to EIA's forecast of a 4.5% year-over-year increase in residential electricity sales during the third quarter of 2016. For all of 2016, EIA projects residential electricity sales will be just 0.1% lower than in 2015. Forecast residential sales grow by 0.9% in 2017. Sales of electricity to the commercial sector are relatively unchanged in 2016 but grow by 1.0% in 2017. Forecast industrial electricity sales decline by 1.2% in 2016, then rise by 1.3% in 2017.

Electricity Generation. The price of natural gas delivered to electric generators averaged $2.23/MMBtu in March of this year, which was the lowest price (in nominal terms) since 1999. Low natural gas prices have encouraged the power industry to use more of the fuel for electricity generation. In 2016, natural gas is expected to supply 34.5% of electricity generation, up from 32.7% last year. Coal is forecast to supply 30.1% of electricity generation this year, compared with 33.2% in 2015. Natural gas prices have increased in recent months, and EIA expects this trend to continue through the forecast horizon, with the delivered natural gas price reaching almost $4.00/MMBtu by the end of 2017. These higher prices should encourage more electricity generation from coal-fired power plants during 2017. The natural gas share of electricity generation in 2017 is forecast to fall to 33.3%, and the coal share of generation is expected to rise to 31.0%.

Electricity Retail Prices. The U.S. residential electricity price averaged 12.7 cents per kilowatthour (kWh) in June 2016, the latest available data. This price is 1.5% lower than the U.S. residential price in June 2015. EIA expects the annual average U.S. residential electricity price to fall by 0.6% in 2016 and then rise by 3.0% 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 9.5% in 2016 and by 5.8% in 2017. Forecast hydropower generation in the electric power sector increases by 6.9% in 2016 and then falls by 0.6% in 2017. Consumption of renewable energy other than hydropower in the electric power sector is forecast to grow by 11.8% in 2016 and by 11.1% in 2017.

EIA expects that utility-scale solar capacity will grow by about 13.3 gigawatts (GW) in 2016 and 2017 combined. This projected increase would bring the amount of solar capacity at the end of 2017 to 26.8 GW, almost double the total amount of capacity existing at the end of 2015 (13.5 GW). States leading in utility-scale solar capacity additions are California, Nevada, North Carolina, Texas, and Georgia. Forecast utility-scale solar generation averages 1% of total U.S. electricity generation in 2017.

U.S. wind capacity totaled 72.5 GW at the end of 2015, more than five times the amount of solar capacity. Wind capacity is expected to increase by 7.8 GW (11%) in 2016 and by 8.8 GW (11%) in 2017. Forecast wind generation accounts for almost 6% of total generation next year.

Liquid Biofuels. On November 30, 2015, the U.S. Environmental Protection Agency (EPA) finalized a rule setting Renewable Fuel Standard (RFS) volumes for 2014 through 2016. On May 18, 2016, EPA released the proposed RFS volumes for 2017 along with finalized biomass-based diesel volumes for 2017. EIA used both the final and proposed volumes to develop the current STEO forecast through 2017. Ethanol production averaged almost 970,000 b/d in 2015, and it is forecast to average about 990,000 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 expects that the largest effect of the RFS targets will be on biomass-based diesel consumption, which includes biodiesel and renewable diesel and helps to meet the RFS targets for use of biomass-based diesel, advanced biofuel, and total renewable fuel. Biodiesel production averaged 82,000 b/d in 2015, and it is forecast to average 99,000 b/d in 2016 and 102,000 b/d in 2017. Net imports of biomass-based diesel are expected to rise from 29,000 b/d in 2015 to 43,000 b/d in 2016 and to 47,000 b/d in 2017. EIA assumes about 10,000 b/d of domestic renewable diesel consumption will be used to help meet the biomass-based diesel and advanced biofuel RFS targets in 2016 and 2017.

Energy-Related Carbon Dioxide Emissions. EIA estimates that energy-related emissions of carbon dioxide decreased by 2.8% in 2015. Emissions are forecast to decrease by 1.5% in 2016 and then increase by 1.0% 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 1.1% in the second quarter of 2016. Real GDP grew by 0.8% in the first quarter of 2016. The increase in real GDP in the second quarter reflected positive contributions from personal consumption expenditures and exports that were partly offset by private inventory investment, nonresidential and residential fixed investment, and state and local government spending.

Production, Income, and Employment. EIA used the August 2016 version of the IHS macroeconomic model with EIA's energy price forecasts as model inputs to develop the economic projections in the STEO.

Forecast real GDP grows by 1.5% in 2016—down from 1.9% forecast in last month's STEO—and by 2.6% in 2017. Real disposable income grows by 2.6% in 2016 and by 2.7% in 2017. Total industrial production falls by 1.0% in 2016, but rises by 1.6% in 2017. Projected growth in nonfarm employment averages 1.7% in 2016 and 1.3% in 2017.

Expenditures. Forecast private real fixed investment growth averages 1.0% and 5.1% in 2016 and 2017, respectively. Real consumption expenditures grow faster than real GDP at 2.7% in both years. Exports fall by 0.3% and rise by 3.1% over the same two years, while import growth is 1.2% in 2016 and 5.1% in 2017. Total government expenditures rise 1.2% in 2016 and 0.8% in 2017.

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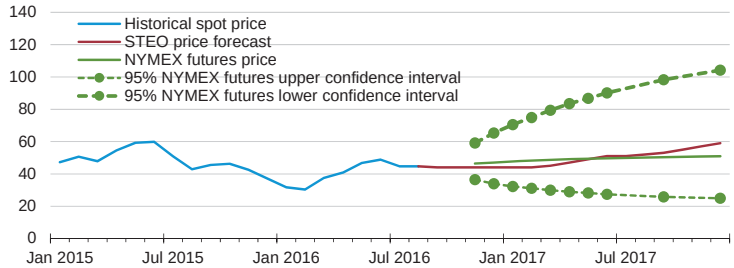
Chart Gallery for September 2016

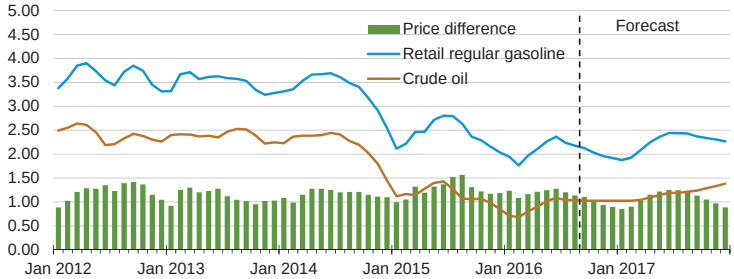
West texas intermediate (WTI) crude oil price
dollars per barrel



Note: Confidence interval derived from options market information for the 5 trading days ending Sep 1, 2016. Intervals not calculated for months with sparse trading in near-the-money options contracts.

Source: Short-Term Energy Outlook, September 2016.

U.S. gasoline and crude oil prices
dollars per gallon

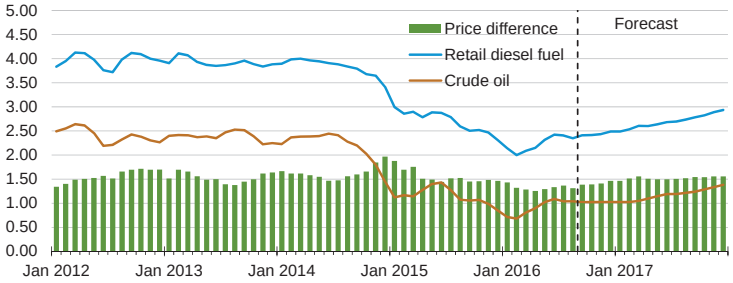


Crude oil price is composite refiner acquisition cost. Retail prices include state and federal taxes.

Source: Short-Term Energy Outlook, September 2016.

U.S. diesel fuel and crude oil prices

dollars per gallon

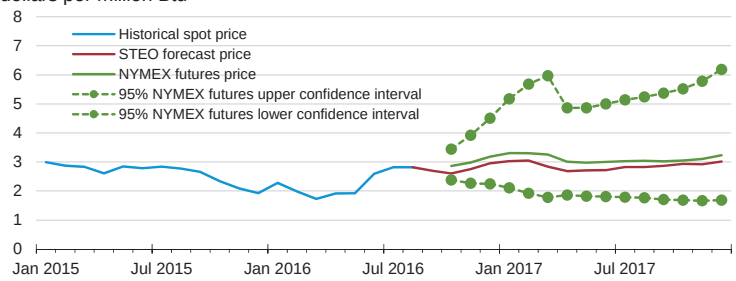


Crude oil price is composite refiner acquisition cost. Retail prices include state and federal taxes.

Source: Short-Term Energy Outlook, September 2016.

Henry hub natural gas price

dollars per million Btu

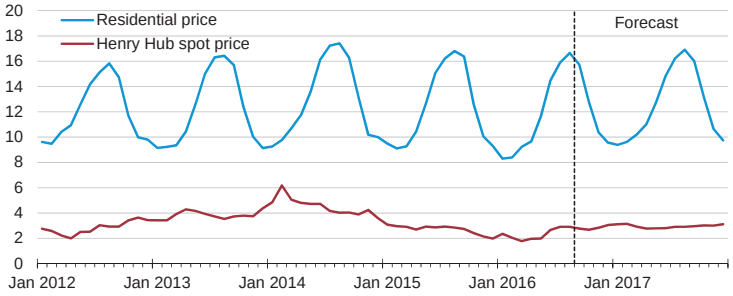


Note: Confidence interval derived from options market information for the 5 trading days ending Sep 1, 2016. Intervals not calculated for months with sparse trading in near-the-money options contracts.

Source: Short-Term Energy Outlook, September 2016.

U.S. natural gas prices

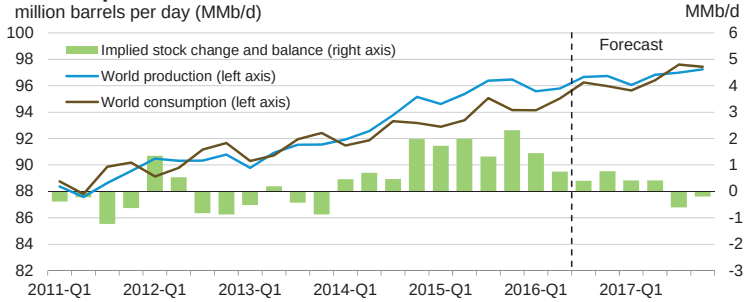
dollars per thousand cubic feet



Source: Short-Term Energy Outlook, September 2016.

World liquid fuels production and consumption balance

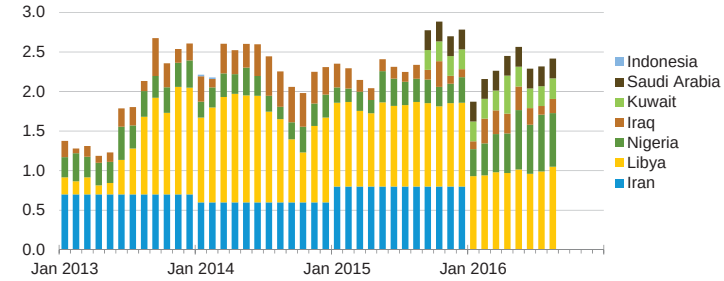
million barrels per day (MMb/d)



Source: Short-Term Energy Outlook, September 2016.

Estimated historical unplanned OPEC crude oil production outages

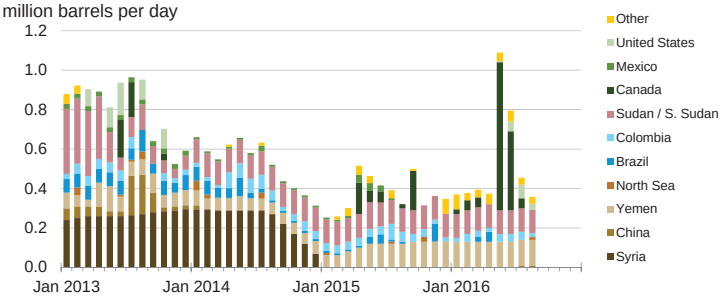
million barrels per day



Source: Short-Term Energy Outlook, September 2016.

Estimated historical unplanned non-OPEC liquid fuels production outages

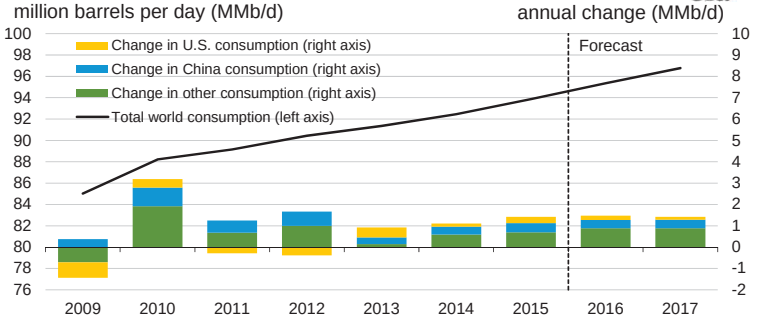
million barrels per day



Source: Short-Term Energy Outlook, September 2016.

World liquid fuels consumption

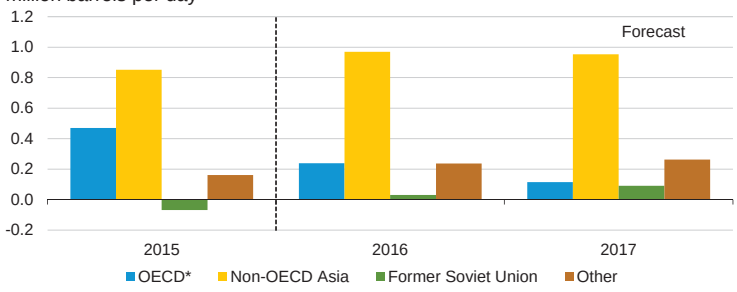
million barrels per day (MMb/d) — annual change (MMb/d)



Source: Short-Term Energy Outlook, September 2016.

World liquid fuels consumption growth

million barrels per day

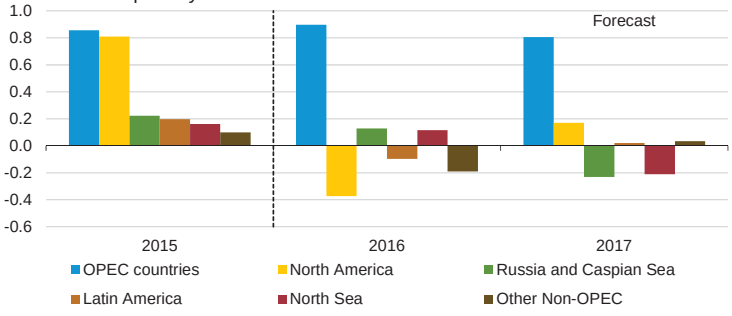


* Countries belonging to the Organization for Economic Cooperation and Development

Source: Short-Term Energy Outlook, September 2016.

World crude oil and liquid fuels production growth

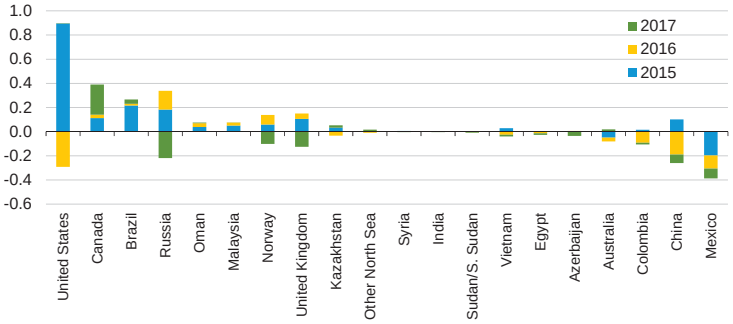
million barrels per day



Source: Short-Term Energy Outlook, September 2016.

Non-OPEC crude oil and liquid fuels production growth

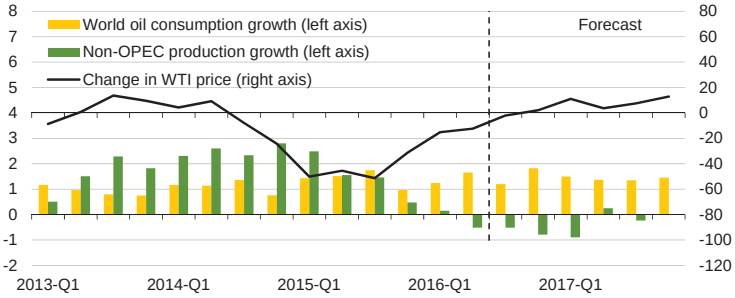
million barrels per day



Source: Short-Term Energy Outlook, September 2016.

World consumption and non-OPEC production growth

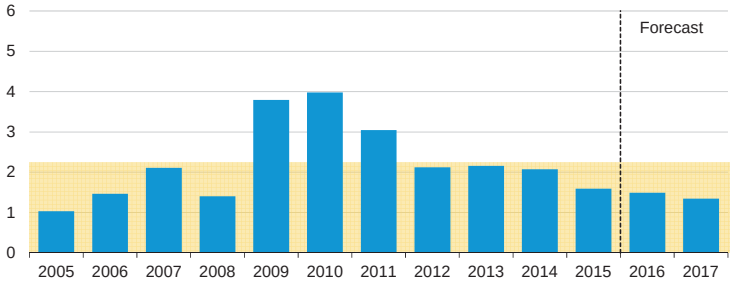
million barrels per day | dollars per barrel



Source: Short-Term Energy Outlook, September 2016.

OPEC surplus crude oil production capacity

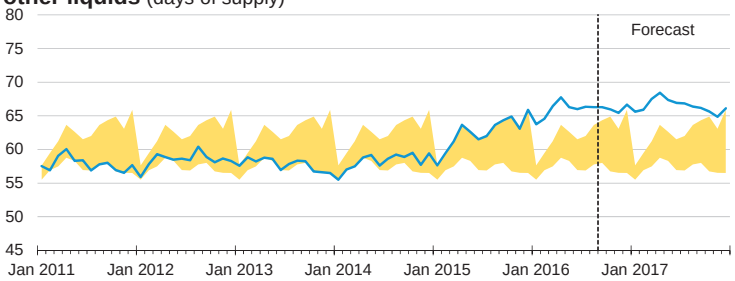
million barrels per day



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

Source: Short-Term Energy Outlook, September 2016.

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

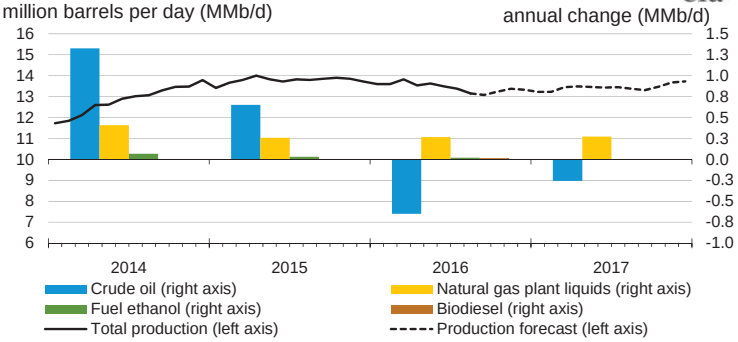


Note: Colored band around days of supply of crude oil and other liquids stocks represents the range between the minimum and maximum from Jan. 2011 - Dec. 2015.

Source: Short-Term Energy Outlook, September 2016.

U.S. crude oil and liquid fuels production

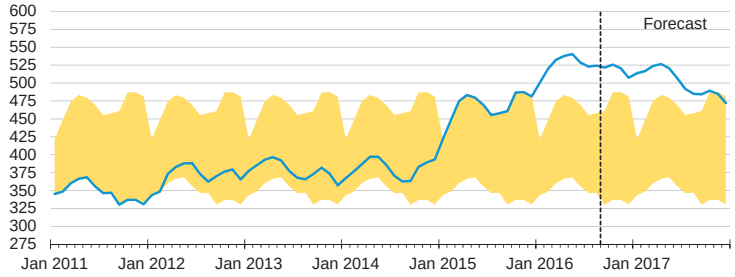
million barrels per day (MMb/d) | annual change (MMb/d)



Source: Short-Term Energy Outlook, September 2016.

U.S. commercial crude oil stocks

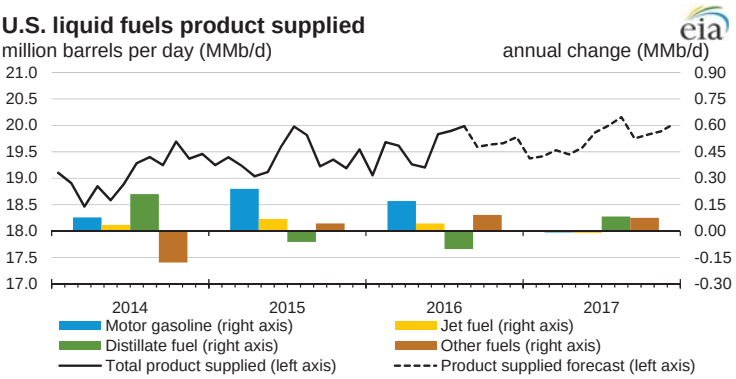
million barrels



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

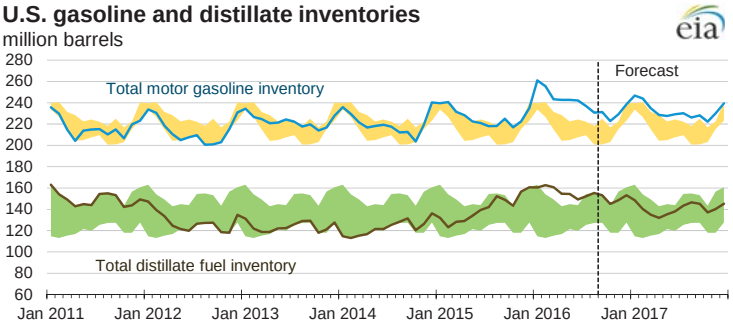
Source: Short-Term Energy Outlook, September 2016.

U.S. liquid fuels product supplied



Source: Short-Term Energy Outlook, September 2016.

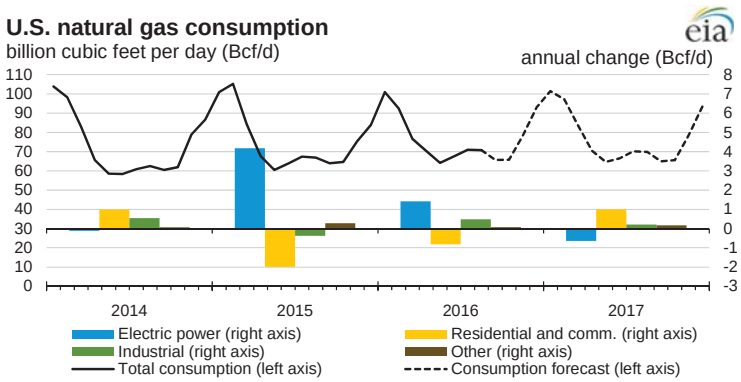
U.S. gasoline and distillate inventories



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

Source: Short-Term Energy Outlook, September 2016.

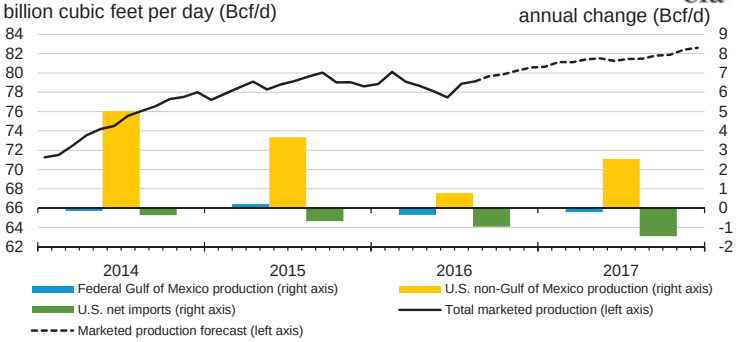
U.S. natural gas consumption



Source: Short-Term Energy Outlook, September 2016.

U.S. natural gas production and imports

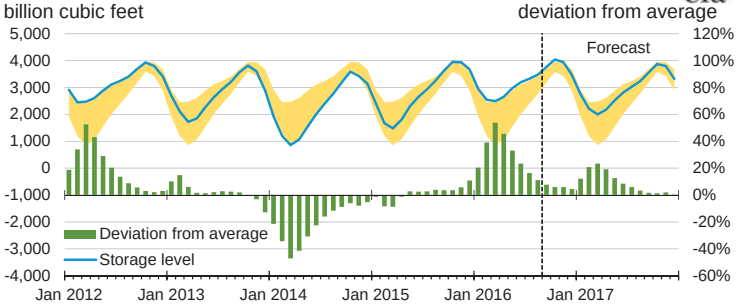
billion cubic feet per day (Bcf/d) | annual change (Bcf/d)



Source: Short-Term Energy Outlook, September 2016.

U.S. working natural gas in storage

billion cubic feet | deviation from average

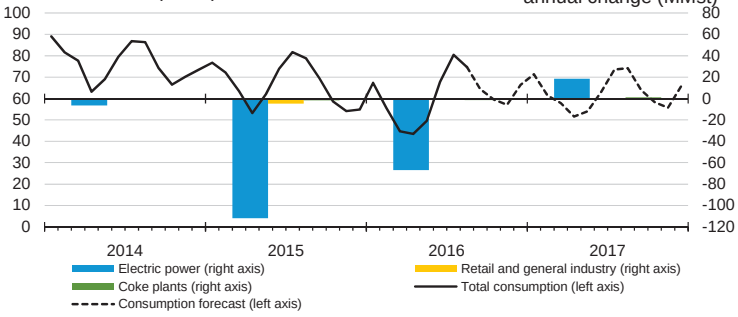


Note: Colored band around storage levels represents the range between the minimum and maximum from Jan. 2011 - Dec. 2015.

Source: Short-Term Energy Outlook, September 2016.

U.S. coal consumption

million short tons (MMst) | annual change (MMst)

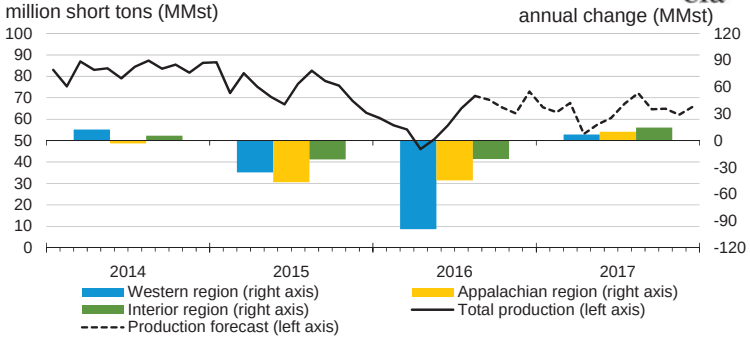


Source: Short-Term Energy Outlook, September 2016.

U.S. coal production

million short tons (MMst)

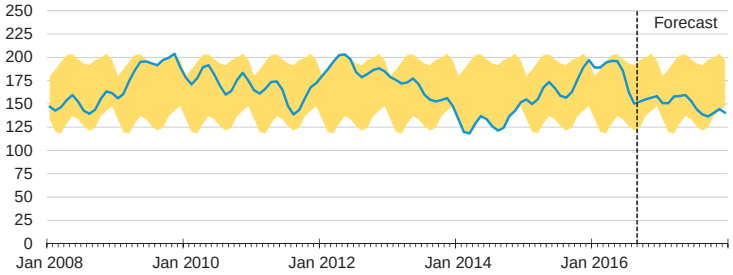
annual change (MMst)



Source: Short-Term Energy Outlook, September 2016.

U.S. electric power coal stocks

million short tons



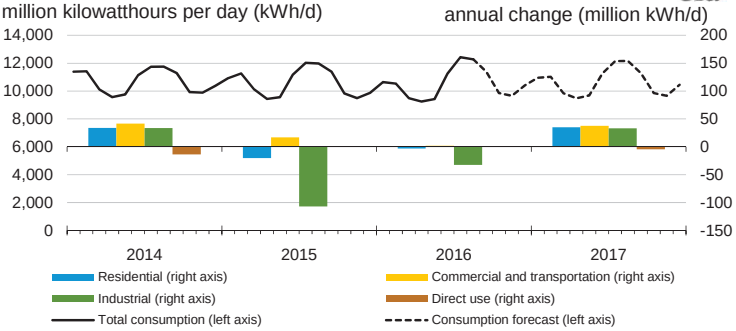
Note: Colored band around stock levels represents the range between the minimum and maximum from Jan. 2008 - Dec. 2015.

Source: Short-Term Energy Outlook, September 2016.

U.S. electricity consumption

million kilowatthours per day (kWh/d)

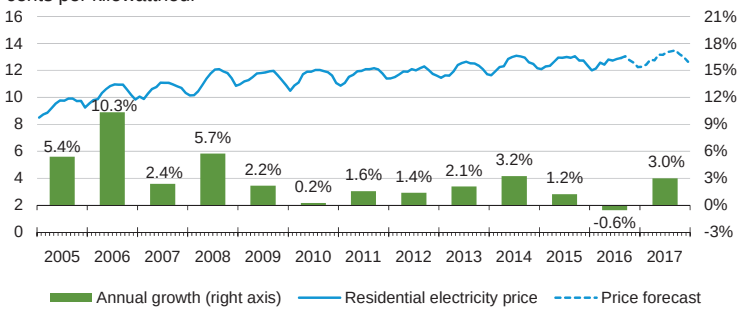
annual change (million kWh/d)



Source: Short-Term Energy Outlook, September 2016.

U.S. residential electricity price

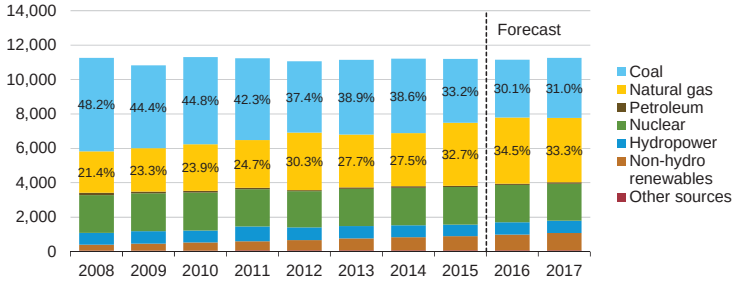
cents per kilowatthour



Source: Short-Term Energy Outlook, September 2016.

U.S. electricity generation by fuel, all sectors

thousand megawatthours per day

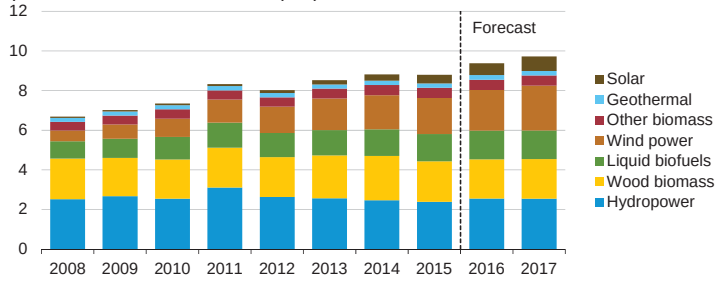


Note: Labels show percentage share of total generation provided by coal and natural gas.

Source: Short-Term Energy Outlook, September 2016.

U.S. renewable energy supply

quadrillion British thermal units (Btu)

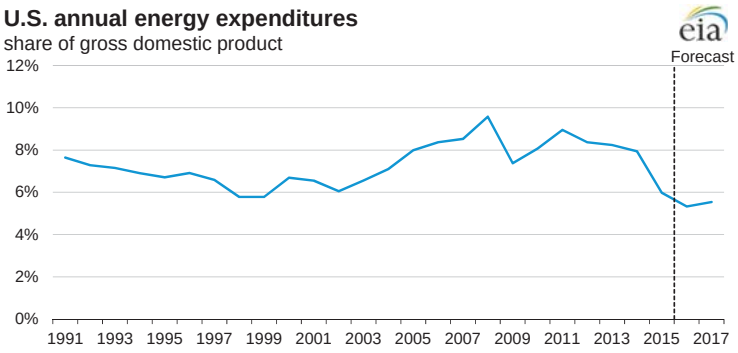


Note: Hydropower excludes pumped storage generation. Liquid biofuels include ethanol and biodiesel. Other biomass includes municipal waste from biogenic sources, landfill gas, and other non-wood waste.

Source: Short-Term Energy Outlook, September 2016.

U.S. annual energy expenditures

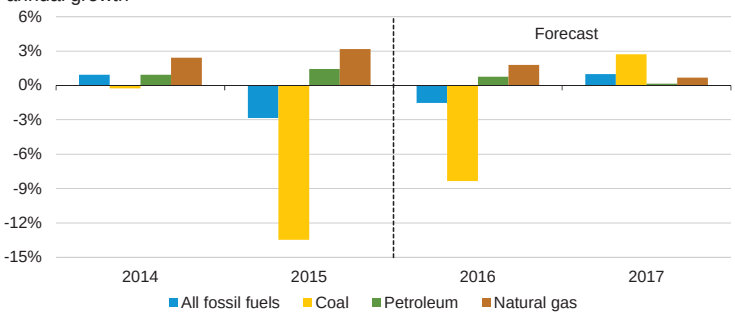
share of gross domestic product



Source: Short-Term Energy Outlook, September 2016.

U.S. energy-related carbon dioxide emissions

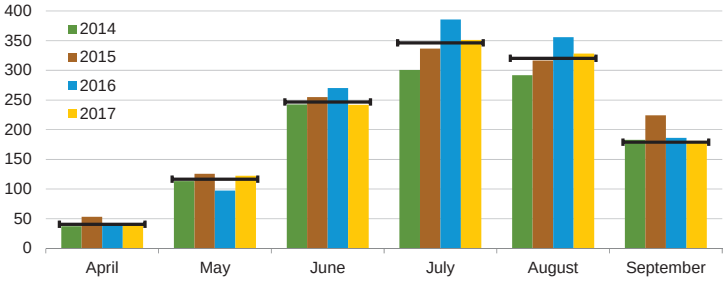
annual growth



Source: Short-Term Energy Outlook, September 2016.

U.S. summer cooling degree days

population-weighted

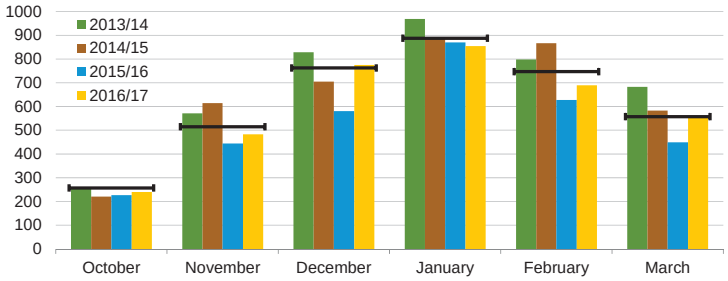


Note: EIA calculations based on from the National Oceanic and Atmospheric Administration data. Horizontal lines indicate each month's prior 10-year average (2006-2015). Projections reflect NOAA's 14-16 month outlook.

Source: Short-Term Energy Outlook, September 2016.

U.S. winter heating degree days

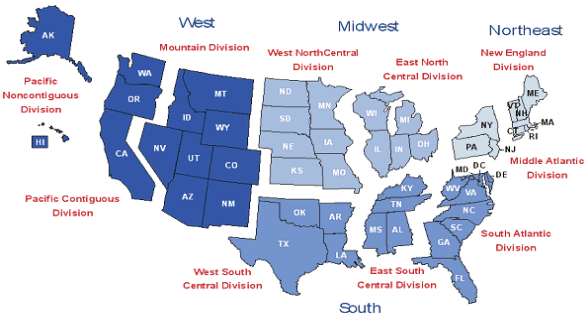
population-weighted



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, September 2016.

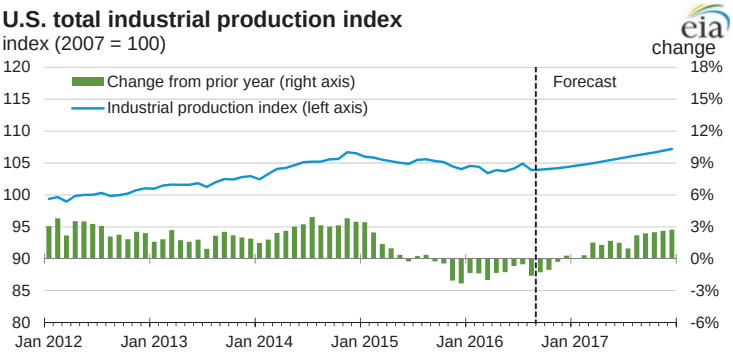
U.S. census regions and divisions



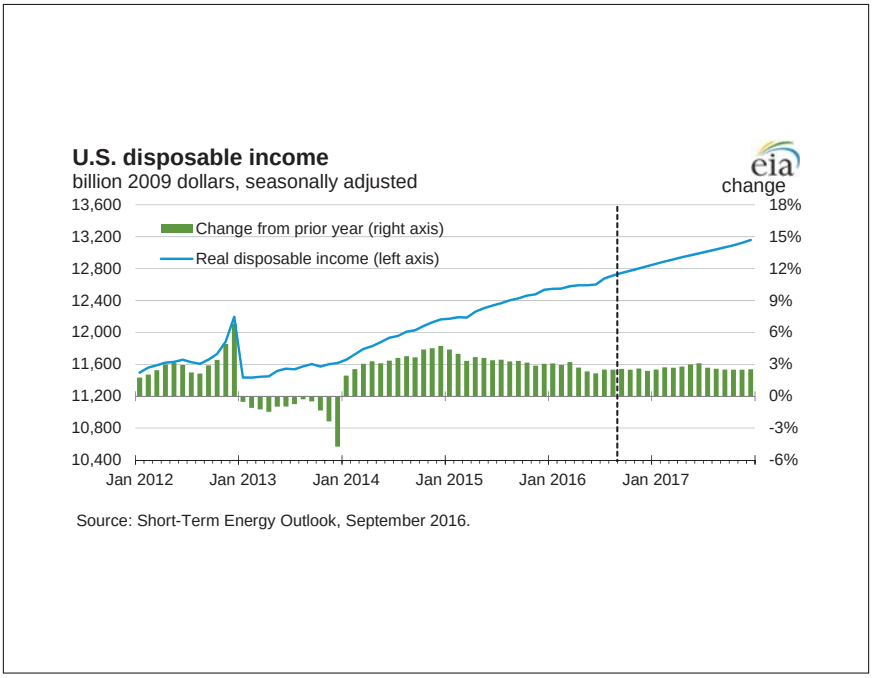
Source: Short-Term Energy Outlook, September 2016.

U.S. total industrial production index

index (2007 = 100)



Source: Short-Term Energy Outlook, September 2016.



Source: Short-Term Energy Outlook, September 2016.

Table SF01. U.S. Motor Gasoline Summer Outlook

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

	2015			2016			Year-over-year Change (percent)		
	Q2	Q3	Season	Q2	Q3	Season	Q2	Q3	Season
Nominal Prices (dollars per gallon)									
WTI Crude Oil (Spot) [a]	**1.38**	**1.11**	**1.24**	*1.08*	*1.06*	*1.07*	*-21.4*	*-4.5*	*-13.7*
Brent Crude Oil Price (Spot)	**1.47**	**1.20**	**1.33**	*1.08*	*1.08*	*1.08*	*-26.1*	*-10.2*	*-18.8*
U.S. Refiner Average Crude Oil Cost	**1.37**	**1.14**	**1.25**	*1.00*	*1.03*	*1.02*	*-26.6*	*-8.8*	*-18.5*
Wholesale Gasoline Price [b]	**2.01**	**1.84**	**1.93**	*1.58*	*1.46*	*1.52*	*-21.6*	*-20.6*	*-21.1*
Wholesale Diesel Fuel Price [b]	**1.89**	**1.61**	**1.75**	*1.41*	*1.43*	*1.42*	*-25.4*	*-11.4*	*-18.8*
Regular Gasoline Retail Price [c]	**2.67**	**2.60**	**2.63**	*2.25*	*2.18*	*2.22*	*-15.5*	*-16.1*	*-15.8*
Diesel Fuel Retail Price [c]	**2.85**	**2.63**	**2.74**	*2.30*	*2.39*	*2.34*	*-19.3*	*-9.2*	*-14.4*
Gasoline Consumption/Supply (million barrels per day)									
Total Consumption	**9.260**	**9.395**	**9.328**	*9.438*	*9.531*	*9.485*	*1.9*	*1.5*	*1.7*
Total Refinery and Blender Net Supply [d]	**8.022**	**8.305**	**8.164**	*8.313*	*8.409*	*8.361*	*3.6*	*1.3*	*2.4*
Fuel Ethanol Blending	**0.919**	**0.935**	**0.927**	*0.936*	*0.952*	*0.944*	*1.9*	*1.9*	*1.9*
Total Stock Withdrawal [e]	**0.115**	**-0.044**	**0.035**	*0.014*	*0.118*	*0.066*			
Net Imports [e]	**0.204**	**0.200**	**0.202**	*0.175*	*0.052*	*0.113*	*-14.4*	*-73.9*	*-43.9*
Refinery Utilization (percent)	**92.8**	**93.2**	**93.0**	*89.9*	*92.0*	*90.9*			
Gasoline Stocks, Including Blending Components (million barrels)									
Beginning	**231.5**	**221.0**	**231.5**	*243.3*	*242.1*	*243.3*			
Ending	**221.0**	**225.1**	**225.1**	*242.1*	*231.3*	*231.3*			
Economic Indicators (annualized billion 2000 dollars)									
Real GDP	**16,374**	**16,455**	**16,415**	*16,575*	*16,698*	*16,637*	*1.2*	*1.5*	*1.4*
Real Income	**12,300**	**12,399**	**12,349**	*12,594*	*12,712*	*12,653*	*2.4*	*2.5*	*2.5*

[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 - September 2016

	2011	2012	2013	2014	2015	Forecast 2016	Change from 2015
United States							
Usage (kWh)	3,444	3,354	3,129	3,037	3,151	**3,302**	4.8%
Price (cents/kWh)	12.06	12.09	12.58	13.04	12.95	**12.84**	-0.9%
Expenditures	$415	$405	$393	$396	$408	**$424**	3.9%
New England							
Usage (kWh)	2,122	2,188	2,173	1,930	1,992	**2,082**	4.5%
Price (cents/kWh)	15.85	15.50	16.04	17.63	18.64	**18.37**	-1.5%
Expenditures	$336	$339	$348	$340	$371	**$382**	3.0%
Mid-Atlantic							
Usage (kWh)	2,531	2,548	2,447	2,234	2,371	**2,497**	5.3%
Price (cents/kWh)	16.39	15.63	16.39	16.90	16.52	**16.24**	-1.7%
Expenditures	$415	$398	$401	$378	$392	**$406**	3.6%
East North Central							
Usage (kWh)	2,975	3,048	2,618	2,505	2,555	**2,863**	12.0%
Price (cents/kWh)	12.17	12.08	12.57	13.24	13.20	**13.25**	0.4%
Expenditures	$362	$368	$329	$332	$337	**$379**	12.5%
West North Central							
Usage (kWh)	3,517	3,547	3,098	3,040	3,056	**3,298**	7.9%
Price (cents/kWh)	11.16	11.50	12.25	12.42	12.66	**12.94**	2.2%
Expenditures	$393	$408	$380	$378	$387	**$427**	10.3%
South Atlantic							
Usage (kWh)	4,277	4,001	3,771	3,776	3,958	**4,085**	3.2%
Price (cents/kWh)	11.48	11.65	11.76	12.09	12.10	**11.83**	-2.2%
Expenditures	$491	$466	$443	$457	$479	**$483**	1.0%
East South Central							
Usage (kWh)	4,750	4,467	4,078	4,033	4,297	**4,484**	4.4%
Price (cents/kWh)	10.28	10.36	10.71	11.09	10.90	**10.80**	-1.0%
Expenditures	$488	$463	$437	$447	$468	**$484**	3.3%
West South Central							
Usage (kWh)	5,231	4,781	4,507	4,253	4,494	**4,629**	3.0%
Price (cents/kWh)	10.64	10.27	10.94	11.46	11.05	**10.69**	-3.2%
Expenditures	$557	$491	$493	$487	$496	**$495**	-0.3%
Mountain							
Usage (kWh)	3,322	3,440	3,380	3,228	3,305	**3,465**	4.8%
Price (cents/kWh)	11.29	11.55	11.97	12.32	12.36	**12.27**	-0.7%
Expenditures	$375	$397	$405	$398	$408	**$425**	4.1%
Pacific							
Usage (kWh)	2,022	2,079	2,036	2,090	2,055	**2,051**	-0.2%
Price (cents/kWh)	13.22	13.78	14.47	15.17	15.34	**15.85**	3.4%
Expenditures	$267	$286	$295	$317	$315	**$325**	3.2%

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 2. Energy Prices

U.S. Energy Information Administration | Short-Term Energy Outlook - September 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**	**45.46**	*44.46*	*44.00*	*44.37*	*49.06*	*52.00*	*56.94*	**48.67**	*41.92*	*50.58*
Brent Spot Average	**53.91**	**61.65**	**50.43**	**43.55**	**33.89**	**45.57**	*45.29*	*45.00*	*45.37*	*50.06*	*53.00*	*57.94*	**52.32**	*42.54*	*51.58*
U.S. Imported Average	**46.38**	**56.07**	**45.59**	**37.88**	**28.83**	**40.11**	*40.97*	*40.50*	*40.86*	*45.49*	*48.50*	*53.51*	**46.35**	*37.61*	*47.25*
U.S. Refiner Average Acquisition Cost	**47.94**	**57.46**	**47.68**	**40.48**	**30.84**	**42.16**	*43.47*	*43.00*	*43.35*	*48.02*	*50.98*	*56.04*	**48.40**	*39.94*	*49.71*
U.S. Liquid Fuels (cents per gallon)															
Refiner Prices for Resale															
Gasoline	**159**	**201**	**184**	**145**	**119**	**158**	*146*	*124*	*128*	*163*	*167*	*156*	**173**	*137*	*154*
Diesel Fuel	**176**	**189**	**161**	**141**	**109**	**141**	*143*	*147*	*152*	*165*	*174*	*188*	**167**	*135*	*170*
Heating Oil	**178**	**180**	**151**	**129**	**99**	**125**	*134*	*141*	*149*	*154*	*165*	*182*	**157**	*120*	*161*
Refiner Prices to End Users															
Jet Fuel	**172**	**186**	**156**	**138**	**107**	**134**	*138*	*143*	*149*	*159*	*169*	*184*	**162**	*131*	*166*
No. 6 Residual Fuel Oil (a)	**137**	**154**	**123**	**101**	**69**	**89**	*107*	*108*	*109*	*115*	*125*	*136*	**125**	*92*	*122*
Retail Prices Including Taxes															
Gasoline Regular Grade (b)	**227**	**267**	**260**	**216**	**190**	**225**	*218*	*197*	*197*	*235*	*241*	*230*	**243**	*208*	*226*
Gasoline All Grades (b)	**236**	**275**	**269**	**226**	**200**	**235**	*229*	*208*	*207*	*246*	*252*	*241*	**252**	*218*	*237*
On-highway Diesel Fuel	**292**	**285**	**263**	**243**	**208**	**230**	*239*	*244*	*254*	*264*	*274*	*288*	**271**	*231*	*270*
Heating Oil	**288**	**276**	**247**	**224**	**195**	**205**	*218*	*234*	*247*	*249*	*260*	*278*	**265**	*211*	*258*
Natural Gas															
Henry Hub Spot (dollars per thousand cubic feet)	**2.99**	**2.83**	**2.84**	**2.18**	**2.06**	**2.21**	*2.86*	*2.86*	*3.06*	*2.79*	*2.92*	*3.04*	**2.71**	*2.50*	*2.95*
Henry Hub Spot (dollars per million Btu)	**2.90**	**2.75**	**2.76**	**2.12**	**2.00**	**2.14**	*2.78*	*2.77*	*2.97*	*2.70*	*2.84*	*2.96*	**2.63**	*2.42*	*2.87*
U.S. Retail Prices (dollars per thousand cubic feet)															
Industrial Sector	**4.68**	**3.75**	**3.72**	**3.43**	**3.43**	**2.93**	*3.73*	*4.00*	*4.47*	*3.73*	*3.86*	*4.22*	**3.92**	*3.54*	*4.08*
Commercial Sector	**7.94**	**8.13**	**8.43**	**7.38**	**6.84**	**7.24**	*8.29*	*7.71*	*7.92*	*8.27*	*8.74*	*8.12*	**7.88**	*7.34*	*8.13*
Residential Sector	**9.30**	**11.97**	**16.45**	**10.11**	**8.54**	**11.17**	*16.07*	*10.34*	*9.69*	*12.22*	*16.37*	*10.56*	**10.36**	*10.06*	*10.79*
U.S. Electricity															
Power Generation Fuel Costs (dollars per million Btu)															
Coal	**2.27**	**2.25**	**2.22**	**2.15**	**2.13**	**2.14**	*2.22*	*2.20*	*2.21*	*2.24*	*2.28*	*2.24*	**2.23**	*2.18*	*2.24*
Natural Gas	**4.09**	**3.12**	**3.09**	**2.72**	**2.65**	**2.51**	*3.08*	*3.56*	*3.86*	*3.18*	*3.16*	*3.70*	**3.22**	*2.96*	*3.44*
Residual Fuel Oil (c)	**10.82**	**11.64**	**10.48**	**7.76**	**6.15**	**8.78**	*9.20*	*8.94*	*8.71*	*9.62*	*9.86*	*10.27*	**10.36**	*8.24*	*9.60*
Distillate Fuel Oil	**15.61**	**15.17**	**13.19**	**11.74**	**9.02**	**10.76**	*11.11*	*11.76*	*12.35*	*13.00*	*13.57*	*14.90*	**14.43**	*10.62*	*13.39*
Retail Prices (cents per kilowatthour)															
Industrial Sector	**6.79**	**6.81**	**7.32**	**6.63**	**6.42**	**6.66**	*7.31*	*6.71*	*6.56*	*6.84*	*7.46*	*6.85*	**6.90**	*6.79*	*6.94*
Commercial Sector	**10.46**	**10.54**	**10.95**	**10.36**	**10.08**	**10.32**	*10.91*	*10.40*	*10.28*	*10.58*	*11.23*	*10.67*	**10.59**	*10.45*	*10.71*
Residential Sector	**12.24**	**12.85**	**12.99**	**12.59**	**12.21**	**12.67**	*12.93*	*12.50*	*12.47*	*13.04*	*13.41*	*12.92*	**12.67**	*12.60*	*12.98*

- = 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 - September 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**	**26.40**	**26.79**	**27.05**	**26.97**	**26.00**	*26.31*	*26.47*	*26.43*	*26.40*	*26.26*	*26.64*	**26.72**	*26.44*	*26.43*
U.S. (50 States)	**14.81**	**15.08**	**15.11**	**15.10**	**14.96**	**14.88**	*14.50*	*14.60*	*14.55*	*14.75*	*14.70*	*14.94*	**15.03**	*14.73*	*14.74*
Canada	**4.69**	**4.16**	**4.56**	**4.62**	**4.73**	**4.04**	*4.64*	*4.72*	*4.78*	*4.75*	*4.78*	*4.82*	**4.51**	*4.53*	*4.78*
Mexico	**2.68**	**2.58**	**2.62**	**2.62**	**2.57**	**2.52**	*2.50*	*2.48*	*2.46*	*2.45*	*2.42*	*2.41*	**2.62**	*2.52*	*2.43*
North Sea (b)	**3.00**	**3.10**	**2.95**	**3.20**	**3.24**	**3.11**	*3.18*	*3.17*	*3.14*	*2.95*	*2.84*	*2.94*	**3.06**	*3.18*	*2.97*
Other OECD	**1.46**	**1.49**	**1.55**	**1.52**	**1.47**	**1.46**	*1.48*	*1.50*	*1.50*	*1.51*	*1.52*	*1.53*	**1.50**	*1.48*	*1.51*
Non-OECD	**67.98**	**68.97**	**69.58**	**69.42**	**68.62**	**69.79**	*70.35*	*70.26*	*69.62*	*70.42*	*70.74*	*70.60*	**68.99**	*69.76*	*70.35*
OPEC	**37.59**	**38.30**	**38.77**	**38.60**	**38.40**	**39.23**	*39.56*	*39.66*	*39.77*	*40.01*	*40.14*	*40.16*	**38.32**	*39.22*	*40.02*
Crude Oil Portion	**31.06**	**31.74**	**32.20**	**32.03**	**31.79**	**32.40**	*32.70*	*32.74*	*32.78*	*32.98*	*33.03*	*33.00*	**31.76**	*32.41*	*32.95*
Other Liquids (c)	**6.53**	**6.56**	**6.57**	**6.57**	**6.61**	**6.82**	*6.87*	*6.92*	*6.99*	*7.03*	*7.10*	*7.16*	**6.56**	*6.80*	*7.07*
Eurasia	**14.18**	**14.02**	**14.01**	**14.17**	**14.37**	**14.26**	*14.17*	*14.13*	*14.09*	*14.02*	*13.92*	*13.96*	**14.10**	*14.23*	*14.00*
China	**4.68**	**4.76**	**4.73**	**4.72**	**4.59**	**4.47**	*4.50*	*4.57*	*4.44*	*4.46*	*4.46*	*4.49*	**4.72**	*4.53*	*4.46*
Other Non-OECD	**11.53**	**11.90**	**12.07**	**11.93**	**11.27**	**11.84**	*12.12*	*11.90*	*11.33*	*11.94*	*12.23*	*11.98*	**11.86**	*11.78*	*11.87*
Total World Supply	**94.62**	**95.37**	**96.38**	**96.47**	**95.59**	**95.79**	*96.66*	*96.74*	*96.06*	*96.83*	*97.00*	*97.24*	**95.72**	*96.20*	*96.79*
Non-OPEC Supply	**57.03**	**57.08**	**57.61**	**57.87**	**57.19**	**56.57**	*57.09*	*57.08*	*56.29*	*56.82*	*56.86*	*57.08*	**57.40**	*56.98*	*56.76*
Consumption (million barrels per day) (d)															
OECD	**46.48**	**45.38**	**46.73**	**46.37**	**46.68**	**45.66**	*46.59*	*46.99*	*46.80*	*45.79*	*46.67*	*47.13*	**46.24**	*46.48*	*46.60*
U.S. (50 States)	**19.29**	**19.25**	**19.68**	**19.36**	**19.45**	**19.43**	*19.83*	*19.69*	*19.44*	*19.63*	*19.97*	*19.91*	**19.40**	*19.60*	*19.74*
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**	**2.31**	**2.24**	*2.35*	*2.33*	*2.27*	*2.22*	*2.32*	*2.30*	**2.34**	*2.31*	*2.28*
Europe	**13.42**	**13.53**	**14.11**	**13.66**	**13.59**	**13.48**	*13.94*	*13.87*	*13.66*	*13.42*	*13.88*	*13.81*	**13.68**	*13.72*	*13.69*
Japan	**4.79**	**3.89**	**3.94**	**4.23**	**4.52**	**3.80**	*3.83*	*4.19*	*4.42*	*3.72*	*3.75*	*4.11*	**4.21**	*4.08*	*4.00*
Other OECD	**6.25**	**6.08**	**6.24**	**6.41**	**6.41**	**6.31**	*6.25*	*6.50*	*6.58*	*6.38*	*6.32*	*6.57*	**6.25**	*6.37*	*6.46*
Non-OECD	**46.41**	**48.00**	**48.33**	**47.78**	**47.46**	**49.38**	*49.66*	*48.98*	*48.84*	*50.62*	*50.94*	*50.31*	**47.64**	*48.88*	*50.18*
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	**0.72**	**0.74**	**0.76**	**0.76**	**0.74**	**0.75**	*0.78*	*0.77*	*0.75*	*0.77*	*0.79*	*0.79*	**0.74**	*0.76*	*0.77*
China	**10.87**	**11.46**	**11.42**	**11.37**	**11.25**	**11.87**	*11.77*	*11.77*	*11.62*	*12.26*	*12.21*	*12.15*	**11.28**	*11.67*	*12.06*
Other Asia	**12.22**	**12.44**	**11.97**	**12.30**	**12.80**	**13.03**	*12.52*	*12.93*	*13.38*	*13.61*	*13.07*	*13.45*	**12.24**	*12.82*	*13.38*
Other Non-OECD	**17.89**	**18.71**	**19.26**	**18.45**	**17.94**	**19.07**	*19.66*	*18.60*	*18.28*	*19.26*	*19.86*	*18.92*	**18.58**	*18.82*	*19.08*
Total World Consumption	**92.90**	**93.39**	**95.06**	**94.15**	**94.14**	**95.04**	*96.26*	*95.98*	*95.64*	*96.41*	*97.60*	*97.43*	**93.88**	*95.36*	*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**	**-0.41**	**-0.27**	*-0.22*	*0.56*	*0.25*	*-0.26*	*-0.04*	*0.57*	**-0.43**	*-0.09*	*0.13*
Other OECD	**-0.31**	**-0.36**	**-0.42**	**-0.29**	**-0.03**	**-0.16**	*-0.06*	*-0.48*	*-0.24*	*-0.05*	*0.22*	*-0.13*	**-0.34**	*-0.18*	*-0.05*
Other Stock Draws and Balance	**-0.87**	**-0.93**	**-0.58**	**-1.88**	**-1.01**	**-0.31**	*-0.12*	*-0.85*	*-0.43*	*-0.11*	*0.42*	*-0.25*	**-1.07**	*-0.57*	*-0.09*
Total Stock Draw	**-1.73**	**-1.98**	**-1.32**	**-2.32**	**-1.45**	**-0.75**	*-0.40*	*-0.76*	*-0.42*	*-0.41*	*0.61*	*0.19*	**-1.84**	*-0.84*	*-0.01*
End-of-period Commercial Crude Oil and Other Liquids Inventories															
U.S. Commercial Inventory	**1,217**	**1,277**	**1,306**	**1,320**	**1,357**	**1,382**	*1,403*	*1,351*	*1,329*	*1,352*	*1,355*	*1,304*	**1,320**	*1,351*	*1,304*
OECD Commercial Inventory	**2,797**	**2,889**	**2,964**	**2,997**	**3,032**	**3,072**	*3,099*	*3,090*	*3,090*	*3,118*	*3,101*	*3,062*	**2,997**	*3,090*	*3,062*

- = 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, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, Venezuela.

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

(b) Includes offshore supply from Denmark, Germany, the Netherlands, Norway, and the United Kingdom.

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

(d) Consumption of petroleum by the OECD countries is synonymous with "petroleum product supplied," defined in the glossary of the EIA *Petroleum Supply Monthly*, DOE/EIA-0109. Consumption of petroleum by the non-OECD countries is "apparent consumption," which includes internal consumption, refinery fuel and loss, and bunkering.

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

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

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

Projections: EIA Regional Short-Term Energy Model.

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

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

	2015				2016				2017				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2015	2016	2017
North America	**22.18**	**21.82**	**22.29**	**22.33**	**22.26**	**21.43**	*21.64*	*21.80*	*21.79*	*21.95*	*21.91*	*22.17*	**22.16**	*21.78*	*21.95*
Canada	**4.69**	**4.16**	**4.56**	**4.62**	**4.73**	**4.04**	*4.64*	*4.72*	*4.78*	*4.75*	*4.78*	*4.82*	**4.51**	*4.53*	*4.78*
Mexico	**2.68**	**2.58**	**2.62**	**2.62**	**2.57**	**2.52**	*2.50*	*2.48*	*2.46*	*2.45*	*2.42*	*2.41*	**2.62**	*2.52*	*2.43*
United States	**14.81**	**15.08**	**15.11**	**15.10**	**14.96**	**14.88**	*14.50*	*14.60*	*14.55*	*14.75*	*14.70*	*14.94*	**15.03**	*14.73*	*14.74*
Central and South America	**4.95**	**5.42**	**5.65**	**5.43**	**4.76**	**5.37**	*5.60*	*5.35*	*4.80*	*5.38*	*5.61*	*5.36*	**5.37**	*5.27*	*5.29*
Argentina	**0.70**	**0.71**	**0.72**	**0.72**	**0.70**	**0.70**	*0.73*	*0.72*	*0.71*	*0.70*	*0.73*	*0.72*	**0.71**	*0.71*	*0.72*
Brazil	**2.75**	**3.23**	**3.50**	**3.24**	**2.65**	**3.31**	*3.54*	*3.29*	*2.73*	*3.33*	*3.56*	*3.31*	**3.18**	*3.20*	*3.23*
Colombia	**1.06**	**1.05**	**1.00**	**1.02**	**0.99**	**0.93**	*0.92*	*0.92*	*0.95*	*0.92*	*0.92*	*0.91*	**1.03**	*0.94*	*0.93*
Other Central and S. America	**0.45**	**0.43**	**0.43**	**0.45**	**0.42**	**0.43**	*0.41*	*0.42*	*0.41*	*0.42*	*0.40*	*0.42*	**0.44**	*0.42*	*0.41*
Europe	**3.95**	**4.05**	**3.91**	**4.15**	**4.19**	**4.06**	*4.14*	*4.14*	*4.10*	*3.91*	*3.80*	*3.91*	**4.02**	*4.13*	*3.93*
Norway	**1.94**	**1.94**	**1.92**	**2.03**	**2.04**	**1.95**	*2.09*	*2.06*	*2.02*	*1.91*	*1.91*	*1.91*	**1.96**	*2.04*	*1.93*
United Kingdom (offshore)	**0.88**	**0.97**	**0.85**	**0.99**	**1.05**	**0.99**	*0.92*	*0.93*	*0.93*	*0.85*	*0.74*	*0.85*	**0.93**	*0.97*	*0.84*
Other North Sea	**0.18**	**0.18**	**0.18**	**0.17**	**0.15**	**0.18**	*0.18*	*0.19*	*0.19*	*0.19*	*0.19*	*0.19*	**0.18**	*0.17*	*0.19*
Eurasia	**14.20**	**14.03**	**14.03**	**14.19**	**14.38**	**14.27**	*14.18*	*14.15*	*14.10*	*14.03*	*13.93*	*13.98*	**14.11**	*14.25*	*14.01*
Azerbaijan	**0.89**	**0.85**	**0.85**	**0.83**	**0.87**	**0.87**	*0.85*	*0.85*	*0.84*	*0.83*	*0.82*	*0.81*	**0.86**	*0.86*	*0.83*
Kazakhstan	**1.80**	**1.76**	**1.70**	**1.75**	**1.79**	**1.68**	*1.71*	*1.69*	*1.71*	*1.70*	*1.74*	*1.80*	**1.75**	*1.72*	*1.74*
Russia	**11.00**	**10.96**	**11.01**	**11.14**	**11.27**	**11.22**	*11.13*	*11.13*	*11.07*	*11.02*	*10.89*	*10.89*	**11.03**	*11.18*	*10.97*
Turkmenistan	**0.29**	**0.27**	**0.28**	**0.27**	**0.27**	**0.29**	*0.29*	*0.28*	*0.29*	*0.29*	*0.29*	*0.29*	**0.28**	*0.28*	*0.29*
Other Eurasia	**0.20**	**0.19**	**0.19**	**0.18**	**0.18**	**0.21**	*0.20*	*0.20*	*0.20*	*0.20*	*0.19*	*0.19*	**0.19**	*0.20*	*0.19*
Middle East	**1.18**	**1.13**	**1.13**	**1.13**	**1.14**	**1.14**	*1.14*	*1.14*	*1.14*	*1.14*	*1.14*	*1.13*	**1.14**	*1.14*	*1.14*
Oman	**0.97**	**0.98**	**1.00**	**1.00**	**1.02**	**1.03**	*1.02*	*1.02*	*1.03*	*1.03*	*1.03*	*1.02*	**0.99**	*1.02*	*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**	**8.51**	**8.35**	**8.19**	*8.27*	*8.35*	*8.21*	*8.23*	*8.25*	*8.29*	**8.48**	*8.29*	*8.25*
Australia	**0.39**	**0.39**	**0.45**	**0.43**	**0.39**	**0.37**	*0.39*	*0.40*	*0.40*	*0.40*	*0.40*	*0.42*	**0.42**	*0.39*	*0.41*
China	**4.68**	**4.76**	**4.73**	**4.72**	**4.59**	**4.47**	*4.50*	*4.57*	*4.44*	*4.46*	*4.46*	*4.49*	**4.72**	*4.53*	*4.46*
India	**1.01**	**1.00**	**1.01**	**1.02**	**1.00**	**1.01**	*1.03*	*1.01*	*1.01*	*1.00*	*1.03*	*1.01*	**1.01**	*1.01*	*1.01*
Malaysia	**0.77**	**0.74**	**0.69**	**0.73**	**0.76**	**0.74**	*0.76*	*0.77*	*0.76*	*0.76*	*0.76*	*0.76*	**0.74**	*0.76*	*0.76*
Vietnam	**0.36**	**0.34**	**0.35**	**0.36**	**0.33**	**0.33**	*0.32*	*0.32*	*0.32*	*0.31*	*0.31*	*0.31*	**0.35**	*0.33*	*0.31*
Africa	**2.12**	**2.12**	**2.12**	**2.12**	**2.11**	**2.11**	*2.12*	*2.15*	*2.14*	*2.18*	*2.21*	*2.23*	**2.12**	*2.12*	*2.19*
Egypt	**0.71**	**0.70**	**0.71**	**0.70**	**0.70**	**0.69**	*0.69*	*0.69*	*0.68*	*0.68*	*0.68*	*0.67*	**0.71**	*0.69*	*0.68*
Equatorial Guinea	**0.27**	**0.27**	**0.27**	**0.27**	**0.24**	**0.25**	*0.25*	*0.25*	*0.23*	*0.23*	*0.23*	*0.24*	**0.27**	*0.25*	*0.23*
Sudan and South Sudan	**0.26**	**0.26**	**0.26**	**0.26**	**0.26**	**0.26**	*0.26*	*0.26*	*0.25*	*0.25*	*0.25*	*0.25*	**0.26**	*0.26*	*0.25*
Total non-OPEC liquids	**57.03**	**57.08**	**57.61**	**57.87**	**57.19**	**56.57**	*57.09*	*57.08*	*56.29*	*56.82*	*56.86*	*57.08*	**57.40**	*56.98*	*56.76*
OPEC non-crude liquids	**6.53**	**6.56**	**6.57**	**6.57**	**6.61**	**6.82**	*6.87*	*6.92*	*6.99*	*7.03*	*7.10*	*7.16*	**6.56**	*6.80*	*7.07*
Non-OPEC + OPEC non-crude	**63.57**	**63.63**	**64.17**	**64.44**	**63.80**	**63.39**	*63.96*	*63.99*	*63.28*	*63.85*	*63.97*	*64.24*	**63.96**	*63.79*	*63.84*
Unplanned non-OPEC Production Outages	**0.27**	**0.46**	**0.40**	**0.34**	**0.38**	**0.76**	*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, Gabon, 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 - September 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**	**1.04**	-	-	-	-	-	-	**1.10**	-	-
Angola	**1.75**	**1.77**	**1.82**	**1.78**	**1.78**	**1.79**	-	-	-	-	-	-	**1.78**	-	-
Ecudaor	**0.55**	**0.54**	**0.55**	**0.57**	**0.57**	**0.56**	-	-	-	-	-	-	**0.55**	-	-
Gabon	**0.22**	**0.21**	**0.22**	**0.22**	**0.21**	**0.21**	-	-	-	-	-	-	**0.21**	-	-
Indonesia	**0.67**	**0.69**	**0.69**	**0.69**	**0.73**	**0.74**	-	-	-	-	-	-	**0.68**	-	-
Iran	**2.80**	**2.80**	**2.80**	**2.80**	**3.03**	**3.57**	-	-	-	-	-	-	**2.80**	-	-
Iraq	**3.49**	**3.97**	**4.30**	**4.35**	**4.29**	**4.39**	-	-	-	-	-	-	**4.03**	-	-
Kuwait	**2.57**	**2.53**	**2.50**	**2.45**	**2.48**	**2.43**	-	-	-	-	-	-	**2.51**	-	-
Libya	**0.40**	**0.45**	**0.38**	**0.39**	**0.35**	**0.31**	-	-	-	-	-	-	**0.40**	-	-
Nigeria	**2.00**	**1.83**	**1.86**	**1.90**	**1.77**	**1.56**	-	-	-	-	-	-	**1.90**	-	-
Qatar	**0.68**	**0.68**	**0.68**	**0.68**	**0.66**	**0.68**	-	-	-	-	-	-	**0.68**	-	-
Saudi Arabia	**9.73**	**10.07**	**10.22**	**10.00**	**9.98**	**10.32**	-	-	-	-	-	-	**10.01**	-	-
United Arab Emirates	**2.70**	**2.70**	**2.70**	**2.70**	**2.60**	**2.57**	-	-	-	-	-	-	**2.70**	-	-
Venezuela	**2.40**	**2.40**	**2.40**	**2.40**	**2.30**	**2.23**	-	-	-	-	-	-	**2.40**	-	-
OPEC Total	**31.06**	**31.74**	**32.20**	**32.03**	**31.79**	**32.40**	*32.70*	*32.74*	*32.78*	*32.98*	*33.03*	*33.00*	**31.76**	*32.41*	*32.95*
Other Liquids (a)	**6.53**	**6.56**	**6.57**	**6.57**	**6.61**	**6.82**	*6.87*	*6.92*	*6.99*	*7.03*	*7.10*	*7.16*	**6.56**	*6.80*	*7.07*
Total OPEC Supply	**37.59**	**38.30**	**38.77**	**38.60**	**38.40**	**39.23**	*39.56*	*39.66*	*39.77*	*40.01*	*40.14*	*40.16*	**38.32**	*39.22*	*40.02*
Crude Oil Production Capacity															
Africa	**5.47**	**5.36**	**5.37**	**5.38**	**5.16**	**4.92**	*4.87*	*5.17*	*5.26*	*5.29*	*5.30*	*5.32*	**5.40**	*5.03*	*5.29*
South America	**2.95**	**2.94**	**2.95**	**2.97**	**2.87**	**2.78**	*2.67*	*2.64*	*2.57*	*2.56*	*2.50*	*2.50*	**2.95**	*2.74*	*2.53*
Middle East	**23.89**	**24.28**	**24.53**	**24.58**	**25.00**	**25.43**	*25.55*	*25.63*	*25.67*	*25.71*	*25.76*	*25.80*	**24.32**	*25.40*	*25.74*
Asia	**0.67**	**0.69**	**0.69**	**0.69**	**0.73**	**0.74**	*0.73*	*0.73*	*0.73*	*0.73*	*0.73*	*0.73*	**0.68**	*0.73*	*0.73*
OPEC Total	**32.97**	**33.27**	**33.53**	**33.63**	**33.75**	**33.87**	*33.83*	*34.16*	*34.23*	*34.29*	*34.30*	*34.35*	**33.35**	*33.90*	*34.29*
Surplus Crude Oil Production Capacity															
Africa	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	**0.00**	*0.00*	*0.00*
South America	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	**0.00**	*0.00*	*0.00*
Middle East	**1.92**	**1.53**	**1.33**	**1.60**	**1.96**	**1.47**	*1.13*	*1.42*	*1.45*	*1.32*	*1.27*	*1.35*	**1.59**	*1.49*	*1.35*
Asia	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	**0.00**	*0.00*	*0.00*
OPEC Total	**1.92**	**1.53**	**1.33**	**1.60**	**1.96**	**1.47**	*1.13*	*1.42*	*1.45*	*1.32*	*1.27*	*1.35*	**1.59**	*1.49*	*1.35*
Unplanned OPEC Production Outages	**2.56**	**2.66**	**2.79**	**2.79**	**2.10**	**2.44**	*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, Gabon, Libya, and Nigeria (Africa); Ecuador and Venezuela (South America); Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and the United Arab Emirates (Middle East); Indonesia (Asia).

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

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

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

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

Projections: EIA Regional Short-Term Energy Model.

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

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

	2015				2016				2017						
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2015	2016	2017
North America	**23.57**	**23.46**	**24.11**	**23.73**	**23.72**	**23.66**	*24.13*	*23.99*	*23.68*	*23.83*	*24.24*	*24.18*	**23.72**	*23.88*	*23.98*
Canada	**2.36**	**2.26**	**2.38**	**2.34**	**2.31**	**2.24**	*2.35*	*2.33*	*2.27*	*2.22*	*2.32*	*2.30*	**2.34**	*2.31*	*2.28*
Mexico	**1.91**	**1.95**	**2.04**	**2.02**	**1.95**	**1.97**	*1.94*	*1.95*	*1.95*	*1.97*	*1.94*	*1.95*	**1.98**	*1.95*	*1.95*
United States	**19.29**	**19.25**	**19.68**	**19.36**	**19.45**	**19.43**	*19.83*	*19.69*	*19.44*	*19.63*	*19.97*	*19.91*	**19.40**	*19.60*	*19.74*
Central and South America	**7.09**	**7.34**	**7.36**	**7.36**	**7.05**	**7.37**	*7.40*	*7.38*	*7.09*	*7.36*	*7.39*	*7.37*	**7.29**	*7.30*	*7.30*
Brazil	**3.00**	**3.11**	**3.18**	**3.17**	**2.93**	**3.04**	*3.11*	*3.10*	*2.86*	*2.97*	*3.04*	*3.02*	**3.12**	*3.04*	*2.98*
Europe	**14.14**	**14.26**	**14.87**	**14.42**	**14.33**	**14.23**	*14.71*	*14.65*	*14.41*	*14.19*	*14.68*	*14.60*	**14.43**	*14.48*	*14.47*
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	**7.85**	**8.43**	**8.99**	**8.16**	**7.80**	**8.73**	*9.33*	*8.24*	*8.06*	*8.79*	*9.42*	*8.44*	**8.36**	*8.53*	*8.68*
Asia and Oceania	**31.62**	**31.33**	**30.94**	**31.69**	**32.44**	**32.34**	*31.72*	*32.77*	*33.36*	*33.30*	*32.69*	*33.65*	**31.39**	*32.32*	*33.25*
China	**10.87**	**11.46**	**11.42**	**11.37**	**11.25**	**11.87**	*11.77*	*11.77*	*11.62*	*12.26*	*12.21*	*12.15*	**11.28**	*11.67*	*12.06*
Japan	**4.79**	**3.89**	**3.94**	**4.23**	**4.52**	**3.80**	*3.83*	*4.19*	*4.42*	*3.72*	*3.75*	*4.11*	**4.21**	*4.08*	*4.00*
India	**4.19**	**4.17**	**3.82**	**4.13**	**4.54**	**4.52**	*4.14*	*4.53*	*4.91*	*4.89*	*4.48*	*4.84*	**4.08**	*4.43*	*4.78*
Africa	**3.89**	**3.88**	**3.84**	**3.86**	**4.04**	**4.03**	*3.99*	*4.01*	*4.20*	*4.19*	*4.14*	*4.17*	**3.86**	*4.02*	*4.17*
Total OECD Liquid Fuels Consumption	**46.48**	**45.38**	**46.73**	**46.37**	**46.68**	**45.66**	*46.59*	*46.99*	*46.80*	*45.79*	*46.67*	*47.13*	**46.24**	*46.48*	*46.60*
Total non-OECD Liquid Fuels Consumption	**46.41**	**48.00**	**48.33**	**47.78**	**47.46**	**49.38**	*49.66*	*48.98*	*48.84*	*50.62*	*50.94*	*50.31*	**47.64**	*48.88*	*50.18*
Total World Liquid Fuels Consumption	**92.90**	**93.39**	**95.06**	**94.15**	**94.14**	**95.04**	*96.26*	*95.98*	*95.64*	*96.41*	*97.60*	*97.43*	**93.88**	*95.36*	*96.78*
Oil-weighted Real Gross Domestic Product (a)															
World Index, 2010 Q1 = 100	**116.4**	**117.0**	**117.7**	**118.3**	**118.9**	**119.4**	*120.2*	*121.0*	*121.8*	*122.6*	*123.5*	*124.4*	**117.3**	*119.9*	*123.1*
Percent change from prior year	**2.8**	**2.6**	**2.4**	**2.2**	**2.1**	**2.0**	*2.1*	*2.3*	*2.4*	*2.7*	*2.8*	*2.8*	**2.5**	*2.1*	*2.7*
OECD Index, 2010 Q1 = 100	**109.6**	**110.0**	**110.6**	**111.0**	**111.4**	**111.7**	*112.2*	*112.8*	*113.3*	*114.0*	*114.5*	*115.1*	**110.3**	*112.0*	*114.2*
Percent change from prior year	**2.3**	**2.3**	**2.2**	**1.9**	**1.6**	**1.5**	*1.5*	*1.6*	*1.7*	*2.0*	*2.0*	*2.1*	**2.2**	*1.6*	*2.0*
Non-OECD Index, 2010 Q1 = 100	**125.1**	**125.9**	**126.6**	**127.6**	**128.4**	**129.2**	*130.3*	*131.6*	*132.6*	*133.9*	*135.1*	*136.5*	**126.3**	*129.9*	*134.5*
Percent change from prior year	**3.4**	**3.0**	**2.8**	**2.6**	**2.7**	**2.7**	*2.9*	*3.1*	*3.2*	*3.6*	*3.7*	*3.8*	**2.9**	*2.8*	*3.6*
Real U.S. Dollar Exchange Rate (a)															
Index, January 2010 = 100	**119.42**	**119.72**	**123.05**	**124.95**	**128.77**	**127.69**	*128.82*	*130.73*	*131.90*	*132.28*	*132.41*	*132.28*	**121.78**	*129.00*	*132.22*
Percent change from prior year	**10.3**	**10.8**	**12.7**	**9.8**	**7.8**	**6.7**	*4.7*	*4.6*	*2.4*	*3.6*	*2.8*	*1.2*	**10.9**	*5.9*	*2.5*

- = 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 - September 2016

	2015				2016				2017				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2015	2016	2017
Supply (million barrels per day)															
Crude Oil Supply															
Domestic Production (a)	**9.49**	**9.47**	**9.41**	**9.30**	**9.17**	**8.85**	*8.49*	*8.57*	*8.59*	*8.55*	*8.38*	*8.53*	**9.42**	*8.77*	*8.51*
Alaska	**0.50**	**0.48**	**0.44**	**0.51**	**0.51**	**0.49**	*0.42*	*0.48*	*0.48*	*0.46*	*0.42*	*0.48*	**0.48**	*0.47*	*0.46*
Federal Gulf of Mexico (b)	**1.43**	**1.44**	**1.62**	**1.57**	**1.61**	**1.58**	*1.57*	*1.74*	*1.85*	*1.87*	*1.79*	*1.91*	**1.51**	*1.63*	*1.85*
Lower 48 States (excl GOM)	**7.56**	**7.56**	**7.35**	**7.21**	**7.05**	**6.78**	*6.50*	*6.34*	*6.27*	*6.22*	*6.17*	*6.13*	**7.42**	*6.67*	*6.20*
Crude Oil Net Imports (c)	**6.84**	**6.74**	**6.93**	**7.06**	**7.46**	**7.19**	*7.70*	*7.38*	*7.16*	*7.50*	*7.93*	*7.64*	**6.89**	*7.43*	*7.56*
SPR Net Withdrawals	**0.00**	**-0.03**	**-0.01**	**0.00**	**0.00**	**0.00**	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.01*	**-0.01**	*0.00*	*0.00*
Commercial Inventory Net Withdrawals	**-0.91**	**0.06**	**0.10**	**-0.22**	**-0.56**	**0.04**	*0.08*	*0.15*	*-0.18*	*0.19*	*0.24*	*0.13*	**-0.24**	*-0.07*	*0.10*
Crude Oil Adjustment (d)	**0.11**	**0.24**	**0.15**	**0.10**	**-0.07**	**0.14**	*0.30*	*0.15*	*0.19*	*0.19*	*0.21*	*0.15*	**0.15**	*0.13*	*0.19*
Total Crude Oil Input to Refineries	**15.53**	**16.48**	**16.58**	**16.24**	**16.00**	**16.22**	*16.56*	*16.25*	*15.76*	*16.43*	*16.76*	*16.47*	**16.21**	*16.26*	*16.36*
Other Supply															
Refinery Processing Gain	**0.99**	**1.02**	**1.08**	**1.06**	**1.07**	**1.10**	*1.07*	*1.06*	*1.03*	*1.06*	*1.08*	*1.08*	**1.04**	*1.08*	*1.06*
Natural Gas Plant Liquids Production	**3.09**	**3.27**	**3.31**	**3.41**	**3.38**	**3.57**	*3.57*	*3.63*	*3.59*	*3.78*	*3.88*	*3.99*	**3.27**	*3.54*	*3.81*
Renewables and Oxygenate Production (e)	**1.05**	**1.10**	**1.10**	**1.11**	**1.12**	**1.13**	*1.14*	*1.11*	*1.13*	*1.12*	*1.12*	*1.10*	**1.09**	*1.13*	*1.12*
Fuel Ethanol Production	**0.96**	**0.96**	**0.96**	**0.99**	**0.99**	**0.97**	*1.01*	*0.98*	*1.00*	*0.99*	*0.99*	*0.97*	**0.97**	*0.99*	*0.99*
Petroleum Products Adjustment (f)	**0.20**	**0.21**	**0.21**	**0.22**	**0.21**	**0.22**	*0.23*	*0.23*	*0.22*	*0.23*	*0.24*	*0.24*	**0.21**	*0.22*	*0.23*
Product Net Imports (c)	**-1.89**	**-2.12**	**-2.20**	**-2.75**	**-2.48**	**-2.50**	*-2.45*	*-3.00*	*-2.71*	*-2.55*	*-2.84*	*-3.39*	**-2.24**	*-2.61*	*-2.87*
Hydrocarbon Gas Liquids	**-0.68**	**-0.80**	**-0.93**	**-0.87**	**-1.00**	**-1.10**	*-1.13*	*-1.21*	*-1.27*	*-1.38*	*-1.41*	*-1.44*	**-0.82**	*-1.11*	*-1.38*
Unfinished Oils	**0.26**	**0.28**	**0.38**	**0.19**	**0.30**	**0.41**	*0.32*	*0.28*	*0.30*	*0.32*	*0.34*	*0.29*	**0.28**	*0.33*	*0.31*
Other HC/Oxygenates	**-0.08**	**-0.09**	**-0.06**	**-0.07**	**-0.10**	**-0.08**	*-0.06*	*-0.04*	*-0.08*	*-0.06*	*-0.04*	*-0.04*	**-0.07**	*-0.07*	*-0.05*
Motor Gasoline Blend Comp.	**0.41**	**0.52**	**0.60**	**0.28**	**0.34**	**0.65**	*0.53*	*0.34*	*0.41*	*0.65*	*0.52*	*0.42*	**0.45**	*0.46*	*0.50*
Finished Motor Gasoline	**-0.44**	**-0.32**	**-0.40**	**-0.46**	**-0.56**	**-0.47**	*-0.48*	*-0.59*	*-0.49*	*-0.42*	*-0.46*	*-0.70*	**-0.40**	*-0.53*	*-0.52*
Jet Fuel	**-0.06**	**0.01**	**-0.05**	**-0.06**	**-0.03**	**-0.04**	*0.00*	*-0.08*	*-0.03*	*0.01*	*0.02*	*-0.08*	**-0.04**	*-0.04*	*-0.02*
Distillate Fuel Oil	**-0.67**	**-1.05**	**-1.12**	**-1.10**	**-0.85**	**-1.20**	*-1.07*	*-1.03*	*-0.92*	*-1.03*	*-1.16*	*-1.14*	**-0.99**	*-1.04*	*-1.06*
Residual Fuel Oil	**-0.13**	**-0.21**	**-0.11**	**-0.09**	**-0.06**	**-0.06**	*-0.12*	*-0.11*	*-0.14*	*-0.20*	*-0.17*	*-0.13*	**-0.14**	*-0.09*	*-0.16*
Other Oils (g)	**-0.50**	**-0.46**	**-0.50**	**-0.57**	**-0.52**	**-0.62**	*-0.45*	*-0.54*	*-0.48*	*-0.43*	*-0.48*	*-0.57*	**-0.51**	*-0.53*	*-0.49*
Product Inventory Net Withdrawals	**0.36**	**-0.72**	**-0.41**	**0.08**	**0.15**	**-0.32**	*-0.30*	*0.41*	*0.43*	*-0.44*	*-0.28*	*0.42*	**-0.17**	*-0.01*	*0.03*
Total Supply	**19.32**	**19.25**	**19.68**	**19.36**	**19.45**	**19.43**	*19.83*	*19.69*	*19.44*	*19.63*	*19.97*	*19.91*	**19.40**	*19.60*	*19.74*
Consumption (million barrels per day)															
Hydrocarbon Gas Liquids	**2.72**	**2.27**	**2.29**	**2.58**	**2.73**	**2.25**	*2.30*	*2.63*	*2.68*	*2.32*	*2.46*	*2.83*	**2.47**	*2.48*	*2.57*
Unfinished Oils	**-0.05**	**0.05**	**-0.03**	**-0.01**	**0.01**	**-0.06**	*-0.01*	*0.04*	*0.00*	*-0.01*	*-0.01*	*0.04*	**-0.01**	*0.00*	*0.00*
Motor Gasoline	**8.81**	**9.26**	**9.39**	**9.17**	**9.09**	**9.44**	*9.53*	*9.27*	*9.07*	*9.50*	*9.50*	*9.22*	**9.16**	*9.33*	*9.32*
Fuel Ethanol blended into Motor Gasoline	**0.87**	**0.92**	**0.93**	**0.91**	**0.91**	**0.94**	*0.95*	*0.93*	*0.91*	*0.95*	*0.95*	*0.92*	**0.91**	*0.93*	*0.93*
Jet Fuel	**1.45**	**1.54**	**1.59**	**1.57**	**1.50**	**1.61**	*1.67*	*1.54*	*1.48*	*1.59*	*1.65*	*1.57*	**1.54**	*1.58*	*1.57*
Distillate Fuel Oil	**4.27**	**3.88**	**3.93**	**3.83**	**3.90**	**3.81**	*3.81*	*3.97*	*4.07*	*3.91*	*3.86*	*4.00*	**3.98**	*3.87*	*3.96*
Residual Fuel Oil	**0.24**	**0.19**	**0.31**	**0.30**	**0.31**	**0.41**	*0.29*	*0.28*	*0.26*	*0.23*	*0.26*	*0.27*	**0.26**	*0.32*	*0.26*
Other Oils (g)	**1.85**	**2.06**	**2.20**	**1.92**	**1.89**	**1.98**	*2.23*	*1.97*	*1.88*	*2.09*	*2.25*	*1.99*	**2.01**	*2.02*	*2.06*
Total Consumption	**19.29**	**19.25**	**19.68**	**19.36**	**19.45**	**19.43**	*19.83*	*19.69*	*19.44*	*19.63*	*19.97*	*19.91*	**19.40**	*19.60*	*19.74*
Total Petroleum and Other Liquids Net Imports	**4.95**	**4.61**	**4.74**	**4.31**	**4.97**	**4.69**	*5.25*	*4.38*	*4.45*	*4.95*	*5.09*	*4.25*	**4.65**	*4.82*	*4.69*
End-of-period Inventories (million barrels)															
Commercial Inventory															
Crude Oil (excluding SPR)	**474.8**	**469.5**	**460.8**	**481.4**	**532.5**	**528.6**	*521.6*	*507.4*	*523.7*	*506.6*	*484.5*	*472.1*	**481.4**	*507.4*	*472.1*
Hydrocarbon Gas Liquids	**138.8**	**196.3**	**228.7**	**197.3**	**154.4**	**211.8**	*252.1*	*213.1*	*177.4*	*222.5*	*251.4*	*208.0*	**197.3**	*213.1*	*208.0*
Unfinished Oils	**84.7**	**86.0**	**88.8**	**82.6**	**91.4**	**86.7**	*85.0*	*79.5*	*89.4*	*88.1*	*85.5*	*79.4*	**82.6**	*79.5*	*79.4*
Other HC/Oxygenates	**26.7**	**25.0**	**23.8**	**26.8**	**28.2**	**27.7**	*27.4*	*27.6*	*29.8*	*28.6*	*27.9*	*28.2*	**26.8**	*27.6*	*28.2*
Total Motor Gasoline	**231.5**	**221.0**	**225.1**	**235.0**	**243.3**	**242.1**	*231.3*	*238.7*	*234.7*	*229.3*	*228.1*	*239.4*	**235.0**	*238.7*	*239.4*
Finished Motor Gasoline	**26.9**	**25.7**	**29.0**	**28.5**	**26.5**	**24.9**	*25.7*	*27.8*	*27.1*	*25.7*	*26.6*	*28.0*	**28.5**	*27.8*	*28.0*
Motor Gasoline Blend Comp.	**204.6**	**195.4**	**196.1**	**206.5**	**216.9**	**217.2**	*205.6*	*210.9*	*207.6*	*203.7*	*201.5*	*211.4*	**206.5**	*210.9*	*211.4*
Jet Fuel	**37.2**	**43.7**	**40.4**	**40.3**	**43.8**	**40.4**	*42.7*	*39.3*	*39.2*	*40.8*	*43.2*	*39.6*	**40.3**	*39.3*	*39.6*
Distillate Fuel Oil	**128.3**	**139.4**	**148.8**	**160.7**	**160.6**	**149.2**	*153.2*	*153.2*	*134.9*	*138.2*	*145.3*	*145.2*	**160.7**	*153.2*	*145.2*
Residual Fuel Oil	**38.1**	**41.8**	**41.3**	**42.2**	**44.5**	**40.3**	*39.3*	*39.7*	*41.7*	*42.0*	*39.4*	*39.8*	**42.2**	*39.7*	*39.8*
Other Oils (g)	**57.3**	**54.6**	**48.3**	**53.5**	**58.4**	**55.6**	*50.1*	*52.4*	*57.7*	*55.7*	*49.8*	*52.2*	**53.5**	*52.4*	*52.2*
Total Commercial Inventory	**1,217**	**1,277**	**1,306**	**1,320**	**1,357**	**1,382**	*1,403*	*1,351*	*1,329*	*1,352*	*1,355*	*1,304*	**1,320**	*1,351*	*1,304*
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 - September 2016

	2015				2016				2017				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2015	2016	2017
HGL Production															
Natural Gas Processing Plants															
Ethane	**1.05**	**1.10**	**1.09**	**1.20**	**1.20**	**1.34**	*1.28*	*1.31*	*1.31*	*1.41*	*1.47*	*1.58*	**1.11**	*1.28*	*1.45*
Propane	**1.07**	**1.12**	**1.13**	**1.15**	**1.15**	**1.17**	*1.17*	*1.21*	*1.19*	*1.23*	*1.24*	*1.25*	**1.12**	*1.17*	*1.23*
Butanes	**0.58**	**0.62**	**0.64**	**0.64**	**0.63**	**0.63**	*0.66*	*0.67*	*0.65*	*0.68*	*0.69*	*0.69*	**0.62**	*0.65*	*0.68*
Natural Gasoline (Pentanes Plus)	**0.39**	**0.44**	**0.46**	**0.43**	**0.41**	**0.43**	*0.46*	*0.44*	*0.43*	*0.46*	*0.48*	*0.47*	**0.43**	*0.43*	*0.46*
Refinery and Blender Net Production															
Ethane/Ethylene	**0.01**	**0.01**	**0.01**	**0.01**	**0.00**	**0.00**	*0.01*	*0.00*	*0.00*	*0.01*	*0.00*	*0.00*	**0.01**	*0.00*	*0.00*
Propane/Propylene	**0.54**	**0.58**	**0.56**	**0.55**	**0.58**	**0.60**	*0.58*	*0.57*	*0.57*	*0.60*	*0.60*	*0.59*	**0.56**	*0.58*	*0.59*
Butanes/Butylenes	**-0.08**	**0.27**	**0.19**	**-0.19**	**-0.11**	**0.26**	*0.20*	*-0.17*	*-0.06*	*0.25*	*0.19*	*-0.17*	**0.05**	*0.04*	*0.05*
Renewable Fuels and Oxygenate Plant Net Production															
Natural Gasoline (Pentanes Plus)	**-0.02**	**-0.02**	**-0.02**	**-0.02**	**-0.02**	**-0.02**	*-0.02*	*-0.02*	*-0.02*	*-0.02*	*-0.02*	*-0.02*	**-0.02**	*-0.02*	*-0.02*
HGL Net Imports															
Ethane	**-0.06**	**-0.07**	**-0.06**	**-0.07**	**-0.08**	**-0.09**	*-0.12*	*-0.17*	*-0.22*	*-0.23*	*-0.25*	*-0.29*	**-0.06**	*-0.11*	*-0.25*
Propane/Propylene	**-0.40**	**-0.49**	**-0.56**	**-0.57**	**-0.65**	**-0.68**	*-0.64*	*-0.68*	*-0.68*	*-0.72*	*-0.70*	*-0.75*	**-0.50**	*-0.66*	*-0.72*
Butanes/Butylenes	**-0.06**	**-0.09**	**-0.11**	**-0.08**	**-0.07**	**-0.12**	*-0.15*	*-0.16*	*-0.15*	*-0.22*	*-0.22*	*-0.18*	**-0.08**	*-0.12*	*-0.19*
Natural Gasoline (Pentanes Plus)	**-0.17**	**-0.15**	**-0.21**	**-0.16**	**-0.20**	**-0.21**	*-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**	**0.43**	**0.28**	*0.31*	*0.43*	*0.37*	*0.27*	*0.30*	*0.44*	**0.37**	*0.36*	*0.35*
Natural Gasoline (Pentanes Plus)	**0.15**	**0.14**	**0.16**	**0.15**	**0.14**	**0.15**	*0.16*	*0.16*	*0.15*	*0.16*	*0.16*	*0.16*	**0.15**	*0.15*	*0.16*
HGL Consumption															
Ethane/Ethylene	**1.03**	**1.02**	**1.02**	**1.13**	**1.10**	**1.08**	*1.12*	*1.17*	*1.13*	*1.15*	*1.24*	*1.32*	**1.05**	*1.12*	*1.21*
Propane/Propylene	**1.43**	**0.92**	**0.96**	**1.17**	**1.41**	**0.88**	*0.91*	*1.21*	*1.35*	*0.91*	*0.97*	*1.24*	**1.12**	*1.10*	*1.12*
Butanes/Butylenes	**0.16**	**0.24**	**0.22**	**0.20**	**0.18**	**0.25**	*0.21*	*0.18*	*0.15*	*0.19*	*0.18*	*0.20*	**0.20**	*0.20*	*0.18*
Natural Gasoline (Pentanes Plus)	**0.10**	**0.09**	**0.09**	**0.08**	**0.04**	**0.04**	*0.06*	*0.07*	*0.05*	*0.06*	*0.06*	*0.07*	**0.09**	*0.05*	*0.06*
HGL Inventories (million barrels)															
Ethane/Ethylene	**31.38**	**31.65**	**31.86**	**33.79**	**33.76**	**45.19**	*56.18*	*54.87*	*51.00*	*53.26*	*53.05*	*51.68*	**32.18**	*47.54*	*52.25*
Propane/Propylene	**58.10**	**84.20**	**100.20**	**96.67**	**66.38**	**85.18**	*103.13*	*93.40*	*69.10*	*86.06*	*100.79*	*86.84*	**96.67**	*93.40*	*86.84*
Butanes/Butylenes	**32.46**	**59.42**	**76.52**	**46.14**	**32.39**	**54.10**	*71.88*	*45.89*	*38.79*	*61.38*	*76.32*	*49.46*	**46.14**	*45.89*	*49.46*
Natural Gasoline (Pentanes Plus)	**17.16**	**20.51**	**19.00**	**20.54**	**20.40**	**20.94**	*21.04*	*19.77*	*18.54*	*21.01*	*21.65*	*20.79*	**20.54**	*19.77*	*20.79*
Refinery and Blender Net Inputs															
Crude Oil	**15.53**	**16.48**	**16.58**	**16.24**	**16.00**	**16.22**	*16.56*	*16.25*	*15.76*	*16.43*	*16.76*	*16.47*	**16.21**	*16.26*	*16.36*
Hydrocarbon Gas Liquids	**0.54**	**0.40**	**0.47**	**0.64**	**0.57**	**0.43**	*0.47*	*0.59*	*0.52*	*0.43*	*0.46*	*0.60*	**0.52**	*0.52*	*0.50*
Other Hydrocarbons/Oxygenates	**1.12**	**1.18**	**1.19**	**1.17**	**1.15**	**1.22**	*1.25*	*1.24*	*1.19*	*1.25*	*1.27*	*1.24*	**1.16**	*1.21*	*1.24*
Unfinished Oils	**0.24**	**0.22**	**0.38**	**0.27**	**0.19**	**0.53**	*0.35*	*0.30*	*0.19*	*0.34*	*0.37*	*0.32*	**0.28**	*0.34*	*0.31*
Motor Gasoline Blend Components	**0.72**	**0.91**	**0.75**	**0.39**	**0.31**	**0.82**	*0.81*	*0.48*	*0.66*	*0.91*	*0.74*	*0.51*	**0.69**	*0.61*	*0.71*
Aviation Gasoline Blend Components	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	**0.00**	*0.00*	*0.00*
Total Refinery and Blender Net Inputs	**18.14**	**19.18**	**19.38**	**18.71**	**18.22**	**19.22**	*19.44*	*18.86*	*18.33*	*19.36*	*19.60*	*19.13*	**18.86**	*18.94*	*19.11*
Refinery Processing Gain	**0.99**	**1.02**	**1.08**	**1.06**	**1.07**	**1.10**	*1.07*	*1.06*	*1.03*	*1.06*	*1.08*	*1.08*	**1.04**	*1.08*	*1.06*
Refinery and Blender Net Production															
Hydrocarbon Gas Liquids	**0.47**	**0.86**	**0.76**	**0.37**	**0.47**	**0.86**	*0.78*	*0.40*	*0.52*	*0.86*	*0.79*	*0.42*	**0.61**	*0.63*	*0.64*
Finished Motor Gasoline	**9.48**	**9.83**	**9.97**	**9.83**	**9.68**	**10.06**	*10.16*	*10.07*	*9.76*	*10.12*	*10.15*	*10.12*	**9.78**	*9.99*	*10.04*
Jet Fuel	**1.50**	**1.61**	**1.60**	**1.63**	**1.57**	**1.61**	*1.69*	*1.58*	*1.51*	*1.60*	*1.65*	*1.61*	**1.59**	*1.62*	*1.59*
Distillate Fuel	**4.82**	**4.99**	**5.08**	**5.00**	**4.70**	**4.80**	*4.86*	*4.94*	*4.72*	*4.90*	*5.03*	*5.07*	**4.97**	*4.82*	*4.93*
Residual Fuel	**0.43**	**0.44**	**0.41**	**0.39**	**0.40**	**0.42**	*0.40*	*0.39*	*0.43*	*0.43*	*0.41*	*0.41*	**0.42**	*0.40*	*0.42*
Other Oils (a)	**2.44**	**2.48**	**2.63**	**2.55**	**2.47**	**2.57**	*2.62*	*2.53*	*2.43*	*2.50*	*2.66*	*2.59*	**2.52**	*2.55*	*2.55*
Total Refinery and Blender Net Production	**19.13**	**20.20**	**20.45**	**19.77**	**19.29**	**20.32**	*20.51*	*19.92*	*19.35*	*20.41*	*20.68*	*20.21*	**19.89**	*20.01*	*20.17*
Refinery Distillation Inputs	**15.78**	**16.69**	**16.85**	**16.40**	**16.27**	**16.50**	*16.85*	*16.51*	*16.05*	*16.64*	*17.02*	*16.71*	**16.43**	*16.53*	*16.61*
Refinery Operable Distillation Capacity	**17.88**	**17.98**	**18.08**	**18.16**	**18.31**	**18.36**	*18.32*	*18.39*	*18.44*	*18.44*	*18.44*	*18.44*	**18.03**	*18.35*	*18.44*
Refinery Distillation Utilization Factor	**0.88**	**0.93**	**0.93**	**0.90**	**0.89**	**0.90**	*0.92*	*0.90*	*0.87*	*0.90*	*0.92*	*0.91*	**0.91**	*0.90*	*0.90*

- = no data available

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

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

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

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

Projections: EIA Regional Short-Term Energy Model.

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

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

	2015				2016				2017				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2015	2016	2017
Prices (cents per gallon)															
Refiner Wholesale Price	**159**	**201**	**184**	**145**	**119**	**158**	*146*	*124*	*128*	*163*	*167*	*156*	**173**	*137*	*154*
Gasoline Regular Grade Retail Prices Including Taxes															
PADD 1	**228**	**259**	**247**	**211**	**187**	**220**	*212*	*196*	*199*	*232*	*238*	*232*	**236**	*204*	*226*
PADD 2	**216**	**255**	**253**	**210**	**176**	**221**	*213*	*190*	*190*	*232*	*236*	*224*	**234**	*200*	*221*
PADD 3	**204**	**240**	**228**	**190**	**167**	**201**	*196*	*173*	*177*	*212*	*216*	*206*	**216**	*184*	*203*
PADD 4	**207**	**261**	**276**	**218**	**184**	**221**	*224*	*198*	*183*	*223*	*242*	*229*	**241**	*207*	*220*
PADD 5	**271**	**328**	**327**	**264**	**241**	**265**	*260*	*235*	*225*	*271*	*280*	*261*	**298**	*251*	*260*
U.S. Average	**227**	**267**	**260**	**216**	**190**	**225**	*218*	*197*	*197*	*235*	*241*	*230*	**243**	*208*	*226*
Gasoline All Grades Including Taxes	**236**	**275**	**269**	**226**	**200**	**235**	*229*	*208*	*207*	*246*	*252*	*241*	**252**	*218*	*237*
End-of-period Inventories (million barrels)															
Total Gasoline Inventories															
PADD 1	**64.5**	**61.3**	**62.6**	**60.3**	**65.9**	**73.0**	*65.7*	*63.4*	*62.3*	*64.1*	*62.6*	*64.8*	**60.3**	*63.4*	*64.8*
PADD 2	**52.9**	**50.4**	**47.0**	**53.7**	**56.7**	**53.3**	*49.8*	*51.8*	*52.3*	*49.7*	*49.7*	*52.0*	**53.7**	*51.8*	*52.0*
PADD 3	**78.4**	**74.6**	**78.1**	**84.6**	**83.0**	**80.4**	*79.0*	*83.0*	*81.9*	*79.9*	*80.2*	*82.8*	**84.6**	*83.0*	*82.8*
PADD 4	**6.5**	**6.8**	**7.1**	**7.7**	**8.4**	**7.5**	*6.7*	*7.6*	*7.1*	*7.2*	*7.3*	*7.8*	**7.7**	*7.6*	*7.8*
PADD 5	**29.2**	**28.0**	**30.3**	**28.7**	**29.4**	**27.9**	*30.0*	*32.9*	*31.1*	*28.5*	*28.4*	*32.0*	**28.7**	*32.9*	*32.0*
U.S. Total	**231.5**	**221.0**	**225.1**	**235.0**	**243.3**	**242.1**	*231.3*	*238.7*	*234.7*	*229.3*	*228.1*	*239.4*	**235.0**	*238.7*	*239.4*
Finished Gasoline Inventories															
U.S. Total	**26.9**	**25.7**	**29.0**	**28.5**	**26.5**	**24.9**	*25.7*	*27.8*	*27.1*	*25.7*	*26.6*	*28.0*	**28.5**	*27.8*	*28.0*
Gasoline Blending Components Inventories															
U.S. Total	**204.6**	**195.4**	**196.1**	**206.5**	**216.9**	**217.2**	*205.6*	*210.9*	*207.6*	*203.7*	*201.5*	*211.4*	**206.5**	*210.9*	*211.4*

- = 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 - September 2016

	2015				2016				2017				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2015	2016	2017
Supply (billion cubic feet per day)															
Total Marketed Production	**77.85**	**78.73**	**79.60**	**78.88**	**79.33**	**78.07**	*79.22*	*80.22*	*80.95*	*81.39*	*81.57*	*82.30*	**78.77**	*79.21*	*81.56*
Alaska	**0.99**	**0.93**	**0.86**	**0.98**	**0.98**	**0.86**	*0.76*	*0.92*	*0.97*	*0.82*	*0.75*	*0.92*	**0.94**	*0.88*	*0.87*
Federal GOM (a)	**3.37**	**3.68**	**3.95**	**3.58**	**3.48**	**3.37**	*3.21*	*3.17*	*3.22*	*3.17*	*3.00*	*3.03*	**3.65**	*3.31*	*3.10*
Lower 48 States (excl GOM)	**73.49**	**74.11**	**74.79**	**74.32**	**74.87**	**73.84**	*75.25*	*76.13*	*76.76*	*77.40*	*77.82*	*78.34*	**74.18**	*75.03*	*77.59*
Total Dry Gas Production	**73.41**	**74.03**	**74.85**	**73.96**	**74.43**	**72.92**	*73.97*	*74.89*	*75.57*	*75.99*	*76.15*	*76.83*	**74.06**	*74.06*	*76.14*
LNG Gross Imports	**0.43**	**0.08**	**0.26**	**0.24**	**0.33**	**0.19**	*0.17*	*0.19*	*0.27*	*0.15*	*0.17*	*0.22*	**0.25**	*0.22*	*0.20*
LNG Gross Exports	**0.06**	**0.06**	**0.09**	**0.10**	**0.15**	**0.40**	*0.47*	*1.10*	*1.10*	*1.39*	*1.68*	*1.78*	**0.08**	*0.53*	*1.49*
Pipeline Gross Imports	**8.36**	**6.69**	**6.69**	**7.06**	**8.06**	**7.83**	*6.98*	*7.00*	*7.48*	*6.31*	*6.88*	*7.00*	**7.20**	*7.47*	*6.92*
Pipeline Gross Exports	**4.98**	**4.36**	**4.81**	**5.08**	**5.64**	**5.39**	*5.56*	*5.62*	*5.40*	*5.30*	*5.41*	*5.78*	**4.81**	*5.55*	*5.47*
Supplemental Gaseous Fuels	**0.17**	**0.15**	**0.14**	**0.18**	**0.17**	**0.13**	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	*0.16*	**0.16**	*0.16*	*0.16*
Net Inventory Withdrawals	**18.50**	**-12.99**	**-10.48**	**-0.55**	**13.08**	**-7.79**	*-6.14*	*3.22*	*16.28*	*-8.92*	*-8.10*	*2.48*	**-1.46**	*0.58*	*0.38*
Total Supply	**95.83**	**63.52**	**66.56**	**75.72**	**90.30**	**67.51**	*69.11*	*78.75*	*93.25*	*67.00*	*68.18*	*79.14*	**75.33**	*76.40*	*76.83*
Balancing Item (b)	**0.69**	**0.43**	**-0.45**	**-1.05**	**-0.30**	**-0.21**	*0.09*	*0.33*	*0.73*	*0.20*	*0.21*	*0.01*	**-0.10**	*-0.02*	*0.29*
Total Primary Supply	**96.52**	**63.96**	**66.10**	**74.66**	**90.00**	**67.31**	*69.20*	*79.08*	*93.98*	*67.20*	*68.39*	*79.15*	**75.23**	*76.38*	*77.12*
Consumption (billion cubic feet per day)															
Residential	**27.50**	**6.90**	**3.47**	**12.99**	**22.45**	**7.13**	*3.60*	*15.13*	*24.76*	*7.12*	*3.58*	*15.29*	**12.65**	*12.06*	*12.64*
Commercial	**15.99**	**5.85**	**4.45**	**9.01**	**13.42**	**5.97**	*4.56*	*10.30*	*14.73*	*6.12*	*4.60*	*10.58*	**8.79**	*8.56*	*8.99*
Industrial	**22.61**	**19.52**	**19.15**	**20.83**	**22.58**	**20.13**	*19.79*	*21.49*	*22.69*	*20.40*	*19.95*	*21.78*	**20.52**	*20.99*	*21.20*
Electric Power (c)	**23.05**	**25.28**	**32.50**	**25.07**	**24.27**	**27.58**	*34.63*	*25.16*	*24.26*	*26.88*	*33.53*	*24.38*	**26.50**	*27.92*	*27.28*
Lease and Plant Fuel	**4.27**	**4.32**	**4.37**	**4.33**	**4.35**	**4.28**	*4.35*	*4.40*	*4.44*	*4.47*	*4.48*	*4.52*	**4.32**	*4.35*	*4.48*
Pipeline and Distribution Use	**3.02**	**2.00**	**2.07**	**2.34**	**2.82**	**2.11**	*2.17*	*2.50*	*2.99*	*2.10*	*2.14*	*2.49*	**2.35**	*2.40*	*2.43*
Vehicle Use	**0.09**	**0.09**	**0.10**	**0.10**	**0.11**	**0.11**	*0.11*	*0.11*	*0.11*	*0.11*	*0.11*	*0.11*	**0.09**	*0.11*	*0.11*
Total Consumption	**96.52**	**63.96**	**66.10**	**74.66**	**90.00**	**67.31**	*69.20*	*79.08*	*93.98*	*67.20*	*68.39*	*79.15*	**75.23**	*76.38*	*77.12*
End-of-period Inventories (billion cubic feet)															
Working Gas Inventory	**1,480**	**2,656**	**3,622**	**3,675**	**2,496**	**3,196**	*3,761*	*3,465*	*2,000*	*2,811*	*3,556*	*3,328*	**3,675**	*3,465*	*3,328*
East Region (d)	**239**	**573**	**856**	**853**	**436**	**655**	*897*	*774*	*319*	*586*	*828*	*715*	**853**	*774*	*715*
Midwest Region (d)	**253**	**566**	**973**	**989**	**543**	**763**	*1,041*	*914*	*428*	*672*	*1,010*	*881*	**989**	*914*	*881*
South Central Region (d)	**575**	**1,002**	**1,206**	**1,304**	**1,080**	**1,236**	*1,223*	*1,209*	*840*	*1,019*	*1,099*	*1,143*	**1,304**	*1,209*	*1,143*
Mountain Region (d)	**113**	**155**	**203**	**186**	**145**	**197**	*239*	*211*	*138*	*170*	*221*	*198*	**186**	*211*	*198*
Pacific Region (d)	**276**	**336**	**359**	**320**	**266**	**316**	*336*	*332*	*250*	*334*	*374*	*365*	**320**	*332*	*365*
Alaska	**24**	**24**	**25**	**24**	**25**	**30**	*25*	*24*	*25*	*30*	*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 - September 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**	**2.21**	*2.86*	*2.86*	*3.06*	*2.79*	*2.92*	*3.04*	**2.71**	*2.50*	*2.95*
Residential Retail															
New England	**13.09**	**13.33**	**16.17**	**12.55**	**11.75**	**13.08**	*16.70*	*13.14*	*12.79*	*13.95*	*16.66*	*13.26*	**13.19**	*12.71*	*13.39*
Middle Atlantic	**9.53**	**11.20**	**16.32**	**10.99**	**8.86**	**10.72**	*16.36*	*11.57*	*10.47*	*12.79*	*17.01*	*11.66*	**10.52**	*10.48*	*11.59*
E. N. Central	**7.78**	**10.58**	**16.71**	**7.96**	**6.78**	**9.32**	*16.27*	*8.32*	*7.98*	*11.13*	*16.77*	*8.70*	**8.67**	*8.21*	*9.11*
W. N. Central	**8.66**	**11.94**	**17.74**	**9.38**	**7.38**	**10.78**	*17.26*	*9.40*	*8.52*	*10.93*	*17.26*	*9.52*	**9.79**	*9.05*	*9.66*
S. Atlantic	**10.74**	**16.68**	**22.48**	**14.02**	**10.23**	**15.36**	*22.06*	*13.08*	*11.60*	*16.38*	*22.10*	*12.87*	**12.93**	*12.62*	*13.25*
E. S. Central	**9.34**	**14.36**	**19.42**	**11.83**	**8.54**	**13.15**	*18.84*	*11.13*	*9.62*	*13.58*	*18.98*	*11.48*	**10.92**	*10.48*	*11.12*
W. S. Central	**8.47**	**13.97**	**19.94**	**12.10**	**8.27**	**14.11**	*18.89*	*11.95*	*9.88*	*14.31*	*19.32*	*12.02*	**10.77**	*11.13*	*12.00*
Mountain	**9.57**	**10.87**	**14.57**	**8.56**	**8.19**	**9.62**	*14.16*	*9.49*	*9.39*	*10.75*	*14.33*	*9.84*	**9.77**	*9.30*	*10.15*
Pacific	**11.46**	**11.40**	**12.05**	**10.88**	**10.98**	**11.27**	*11.45*	*10.18*	*10.72*	*10.95*	*11.44*	*10.56*	**11.32**	*10.84*	*10.80*
U.S. Average	**9.30**	**11.97**	**16.45**	**10.11**	**8.54**	**11.17**	*16.07*	*10.34*	*9.69*	*12.22*	*16.37*	*10.56*	**10.36**	*10.06*	*10.79*
Commercial Retail															
New England	**10.77**	**10.13**	**9.69**	**9.13**	**8.75**	**9.56**	*10.13*	*10.16*	*10.50*	*10.17*	*10.14*	*10.25*	**10.21**	*9.44*	*10.35*
Middle Atlantic	**7.91**	**7.48**	**6.62**	**7.01**	**6.87**	**6.45**	*6.60*	*7.53*	*8.08*	*7.63*	*7.38*	*8.17*	**7.49**	*6.95*	*7.95*
E. N. Central	**6.95**	**7.51**	**8.83**	**6.30**	**5.90**	**6.60**	*8.46*	*6.73*	*6.86*	*8.03*	*8.86*	*7.07*	**7.01**	*6.48*	*7.24*
W. N. Central	**7.65**	**8.03**	**9.10**	**6.70**	**6.25**	**6.95**	*8.54*	*7.14*	*7.39*	*7.57*	*8.66*	*7.31*	**7.56**	*6.84*	*7.49*
S. Atlantic	**8.48**	**9.21**	**9.62**	**8.92**	**7.53**	**8.30**	*9.33*	*8.88*	*8.98*	*9.36*	*9.94*	*9.20*	**8.83**	*8.29*	*9.22*
E. S. Central	**8.54**	**9.62**	**10.00**	**8.90**	**7.47**	**8.56**	*9.78*	*8.89*	*8.49*	*9.21*	*9.89*	*9.17*	**8.93**	*8.33*	*8.94*
W. S. Central	**7.16**	**7.17**	**8.00**	**7.26**	**6.23**	**6.82**	*7.78*	*7.30*	*7.21*	*7.54*	*8.01*	*7.50*	**7.31**	*6.87*	*7.46*
Mountain	**8.28**	**8.35**	**9.03**	**7.23**	**6.93**	**7.07**	*8.37*	*7.56*	*7.94*	*8.52*	*9.46*	*8.37*	**8.02**	*7.31*	*8.34*
Pacific	**9.22**	**8.45**	**8.71**	**8.16**	**8.35**	**8.09**	*8.65*	*8.28*	*8.74*	*8.62*	*8.98*	*8.75*	**8.64**	*8.33*	*8.76*
U.S. Average	**7.94**	**8.13**	**8.43**	**7.38**	**6.84**	**7.24**	*8.29*	*7.71*	*7.92*	*8.27*	*8.74*	*8.12*	**7.88**	*7.34*	*8.13*
Industrial Retail															
New England	**9.10**	**7.61**	**6.10**	**6.77**	**7.08**	**6.87**	*7.05*	*8.31*	*8.58*	*7.75*	*7.51*	*8.34*	**7.77**	*7.31*	*8.17*
Middle Atlantic	**8.31**	**7.58**	**7.11**	**7.12**	**7.04**	**6.35**	*7.17*	*7.69*	*7.91*	*7.11*	*7.35*	*7.86*	**7.82**	*7.10*	*7.69*
E. N. Central	**6.41**	**5.63**	**5.52**	**5.15**	**5.08**	**4.76**	*5.43*	*5.77*	*6.32*	*5.94*	*6.04*	*6.10*	**5.88**	*5.29*	*6.16*
W. N. Central	**5.81**	**4.53**	**4.41**	**4.37**	**4.32**	**3.59**	*3.96*	*4.80*	*5.28*	*4.45*	*4.46*	*4.99*	**4.87**	*4.22*	*4.85*
S. Atlantic	**5.46**	**4.51**	**4.52**	**4.28**	**4.37**	**3.79**	*4.85*	*5.02*	*5.26*	*4.76*	*4.89*	*5.15*	**4.72**	*4.51*	*5.03*
E. S. Central	**5.15**	**4.28**	**4.14**	**3.84**	**3.84**	**3.28**	*4.39*	*4.65*	*4.94*	*4.38*	*4.48*	*4.78*	**4.39**	*4.05*	*4.66*
W. S. Central	**3.22**	**2.94**	**3.09**	**2.51**	**2.26**	**2.15**	*3.14*	*3.08*	*3.29*	*2.94*	*3.21*	*3.28*	**2.94**	*2.67*	*3.18*
Mountain	**6.62**	**6.22**	**6.12**	**5.67**	**5.29**	**5.20**	*5.88*	*5.84*	*5.94*	*5.51*	*5.79*	*5.79*	**6.18**	*5.55*	*5.78*
Pacific	**7.29**	**6.54**	**6.59**	**6.46**	**6.62**	**6.00**	*6.37*	*6.43*	*6.72*	*6.09*	*6.38*	*6.51*	**6.74**	*6.37*	*6.45*
U.S. Average	**4.68**	**3.75**	**3.72**	**3.43**	**3.43**	**2.93**	*3.73*	*4.00*	*4.47*	*3.73*	*3.86*	*4.22*	**3.92**	*3.54*	*4.08*

- = 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 - September 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	**240.3**	**212.5**	**237.0**	**207.2**	**173.0**	**153.7**	*205.1*	*201.1*	*196.3*	*171.2*	*204.1*	*192.8*	**897.0**	*732.8*	*764.4*
Appalachia	**62.4**	**54.7**	**56.7**	**48.2**	**44.3**	**36.9**	*47.6*	*48.7*	*48.4*	*44.9*	*48.8*	*45.3*	**222.0**	*177.6*	*187.4*
Interior	**45.2**	**39.8**	**45.1**	**37.5**	**36.9**	**28.6**	*39.9*	*41.6*	*40.1*	*36.1*	*43.2*	*42.3*	**167.6**	*146.9*	*161.7*
Western	**132.7**	**118.0**	**135.3**	**121.5**	**91.8**	**88.2**	*117.5*	*110.8*	*107.7*	*90.2*	*112.1*	*105.2*	**507.4**	*408.3*	*415.2*
Primary Inventory Withdrawals	**-0.7**	**0.3**	**3.1**	**-1.6**	**-1.0**	**3.2**	*0.4*	*-1.6*	*0.2*	*1.9*	*-1.3*	*0.2*	**1.1**	*1.0*	*1.1*
Imports	**3.0**	**2.6**	**3.0**	**2.7**	**2.7**	**2.3**	*3.0*	*2.8*	*2.2*	*2.4*	*3.3*	*2.9*	**11.3**	*10.7*	*10.7*
Exports	**22.0**	**19.8**	**16.9**	**15.3**	**14.2**	**14.2**	*14.7*	*15.6*	*12.0*	*13.4*	*13.3*	*14.2*	**74.0**	*58.7*	*52.9*
Metallurgical Coal	**13.5**	**12.7**	**10.3**	**9.4**	**10.2**	**10.1**	*9.5*	*9.8*	*8.4*	*9.2*	*7.9*	*9.0*	**46.0**	*39.6*	*34.6*
Steam Coal	**8.5**	**7.0**	**6.6**	**5.9**	**4.0**	**4.2**	*5.2*	*5.8*	*3.6*	*4.2*	*5.4*	*5.1*	**28.0**	*19.1*	*18.3*
Total Primary Supply	**220.6**	**195.6**	**226.1**	**193.0**	**160.6**	**145.0**	*193.6*	*186.6*	*186.7*	*162.2*	*192.7*	*181.7*	**835.4**	*685.8*	*723.2*
Secondary Inventory Withdrawals	**-2.4**	**-12.8**	**3.5**	**-33.8**	**3.1**	**8.2**	*32.4*	*-6.0*	*1.4*	*3.8*	*16.4*	*-4.3*	**-45.4**	*37.7*	*17.4*
Waste Coal (a)	**2.7**	**2.1**	**2.9**	**2.2**	**2.5**	**2.5**	*2.5*	*2.5*	*2.6*	*2.6*	*2.6*	*2.6*	**9.9**	*9.8*	*10.2*
Total Supply	**220.9**	**185.0**	**232.6**	**161.4**	**166.1**	**155.6**	*228.5*	*183.0*	*190.7*	*168.6*	*211.6*	*180.0*	**800.0**	*733.3*	*750.8*
Consumption (million short tons)															
Coke Plants	**5.2**	**5.0**	**5.0**	**4.5**	**4.2**	**4.0**	*5.1*	*5.1*	*4.6*	*4.5*	*5.3*	*4.9*	**19.7**	*18.3*	*19.3*
Electric Power Sector (b)	**196.3**	**174.6**	**215.5**	**153.3**	**152.4**	**147.4**	*205.0*	*168.0*	*175.6*	*154.3*	*196.6*	*164.9*	**739.7**	*672.9*	*691.3*
Retail and Other Industry	**11.0**	**9.6**	**9.6**	**9.9**	**11.0**	**9.3**	*9.5*	*10.0*	*10.5*	*9.7*	*9.7*	*10.2*	**40.0**	*39.8*	*40.1*
Residential and Commercial	**0.6**	**0.3**	**0.3**	**0.4**	**0.8**	**0.4**	*0.2*	*0.3*	*0.5*	*0.3*	*0.3*	*0.4*	**1.5**	*1.8*	*1.5*
Other Industrial	**10.4**	**9.3**	**9.3**	**9.5**	**10.2**	**8.9**	*9.3*	*9.7*	*10.0*	*9.4*	*9.4*	*9.8*	**38.5**	*38.1*	*38.6*
Total Consumption	**212.4**	**189.2**	**230.0**	**167.7**	**167.6**	**160.8**	*219.6*	*183.0*	*190.7*	*168.6*	*211.6*	*180.0*	**799.4**	*731.0*	*750.8*
Discrepancy (c)	**8.5**	**-4.2**	**2.6**	**-6.3**	**-1.5**	**-5.2**	*8.9*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	**0.6**	*2.3*	*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**	**174.0**	**170.4**	**204.2**	**201.1**	**193.0**	*160.5*	*166.5*	*165.1*	*161.3*	*144.9*	*149.2*	**204.2**	*166.5*	*149.2*
Electric Power Sector	**155.0**	**167.0**	**162.7**	**197.1**	**194.3**	**185.5**	*152.5*	*158.2*	*157.8*	*153.4*	*136.5*	*140.6*	**197.1**	*158.2*	*140.6*
Retail and General Industry	**3.7**	**3.9**	**4.3**	**4.4**	**4.8**	**5.1**	*5.7*	*6.0*	*5.2*	*5.4*	*6.0*	*6.3*	**4.4**	*6.0*	*6.3*
Coke Plants	**2.1**	**2.6**	**3.0**	**2.2**	**1.5**	**1.9**	*1.8*	*1.8*	*1.5*	*1.9*	*1.9*	*1.8*	**2.2**	*1.8*	*1.8*
Coal Market Indicators															
Coal Miner Productivity (Tons per hour)	**6.11**	**6.11**	**6.11**	**6.11**	**5.95**	**5.95**	*5.95*	*5.95*	*5.80*	*5.80*	*5.80*	*5.80*	**6.11**	*5.95*	*5.80*
Total Raw Steel Production (Million short tons per day)	**0.247**	**0.242**	**0.248**	**0.226**	**0.238**	**0.247**	*0.239*	*0.215*	*0.217*	*0.229*	*0.208*	*0.177*	**0.241**	*0.235*	*0.208*
Cost of Coal to Electric Utilities (Dollars per million Btu)	**2.27**	**2.25**	**2.22**	**2.15**	**2.13**	**2.14**	*2.22*	*2.20*	*2.21*	*2.24*	*2.28*	*2.24*	**2.23**	*2.18*	*2.24*

- = 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 - September 2016

	2015				2016				2017				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2015	2016	2017
Electricity Supply (billion kilowatthours per day)															
Electricity Generation	**11.36**	**10.77**	**12.46**	**10.21**	**10.67**	**10.77**	*12.62*	*10.55*	*11.05*	*10.91*	*12.49*	*10.58*	**11.20**	*11.16*	*11.26*
Electric Power Sector (a)	**10.93**	**10.36**	**12.01**	**9.78**	**10.24**	**10.35**	*12.18*	*10.14*	*10.63*	*10.49*	*12.05*	*10.16*	**10.77**	*10.73*	*10.83*
Comm. and Indus. Sectors (b)	**0.43**	**0.41**	**0.45**	**0.43**	**0.43**	**0.43**	*0.44*	*0.42*	*0.42*	*0.42*	*0.44*	*0.42*	**0.43**	*0.43*	*0.42*
Net Imports	**0.17**	**0.20**	**0.20**	**0.16**	**0.18**	**0.18**	*0.22*	*0.15*	*0.16*	*0.15*	*0.19*	*0.13*	**0.18**	*0.18*	*0.16*
Total Supply	**11.52**	**10.97**	**12.66**	**10.37**	**10.85**	**10.95**	*12.84*	*10.70*	*11.21*	*11.06*	*12.68*	*10.71*	**11.38**	*11.34*	*11.42*
Losses and Unaccounted for (c)	**0.77**	**0.92**	**0.86**	**0.63**	**0.64**	**0.99**	*0.81*	*0.72*	*0.62*	*0.92*	*0.80*	*0.72*	**0.80**	*0.79*	*0.77*
Electricity Consumption (billion kilowatthours per day unless noted)															
Retail Sales	**10.37**	**9.69**	**11.40**	**9.35**	**9.83**	**9.59**	*11.65*	*9.61*	*10.22*	*9.77*	*11.49*	*9.62*	**10.20**	*10.17*	*10.28*
Residential Sector	**4.20**	**3.35**	**4.51**	**3.29**	**3.81**	**3.37**	*4.71*	*3.44*	*4.06*	*3.38*	*4.56*	*3.48*	**3.84**	*3.83*	*3.87*
Commercial Sector	**3.60**	**3.65**	**4.12**	**3.51**	**3.51**	**3.63**	*4.19*	*3.57*	*3.59*	*3.71*	*4.17*	*3.57*	**3.72**	*3.72*	*3.76*
Industrial Sector	**2.55**	**2.67**	**2.76**	**2.53**	**2.49**	**2.57**	*2.73*	*2.58*	*2.55*	*2.66*	*2.74*	*2.56*	**2.63**	*2.59*	*2.63*
Transportation Sector	**0.02**	**0.02**	**0.02**	**0.02**	**0.02**	**0.02**	*0.02*	*0.02*	*0.02*	*0.02*	*0.02*	*0.02*	**0.02**	*0.02*	*0.02*
Direct Use (d)	**0.38**	**0.36**	**0.40**	**0.38**	**0.38**	**0.38**	*0.39*	*0.37*	*0.37*	*0.37*	*0.39*	*0.37*	**0.38**	*0.38*	*0.38*
Total Consumption	**10.75**	**10.05**	**11.80**	**9.73**	**10.21**	**9.97**	*12.04*	*9.98*	*10.59*	*10.14*	*11.88*	*9.99*	**10.58**	*10.55*	*10.65*
Average residential electricity usage per customer (kWh)	**2,922**	**2,349**	**3,188**	**2,321**	**2,656**	**2,341**	*3,303*	*2,405*	*2,772*	*2,330*	*3,168*	*2,411*	**10,779**	*10,705*	*10,680*
Prices															
Power Generation Fuel Costs (dollars per million Btu)															
Coal	**2.27**	**2.25**	**2.22**	**2.15**	**2.13**	**2.14**	*2.22*	*2.20*	*2.21*	*2.24*	*2.28*	*2.24*	**2.23**	*2.18*	*2.24*
Natural Gas	**4.09**	**3.12**	**3.09**	**2.72**	**2.65**	**2.51**	*3.08*	*3.56*	*3.86*	*3.18*	*3.16*	*3.70*	**3.22**	*2.96*	*3.44*
Residual Fuel Oil	**10.82**	**11.64**	**10.48**	**7.76**	**6.15**	**8.78**	*9.20*	*8.94*	*8.71*	*9.62*	*9.86*	*10.27*	**10.36**	*8.24*	*9.60*
Distillate Fuel Oil	**15.61**	**15.17**	**13.19**	**11.74**	**9.02**	**10.76**	*11.11*	*11.76*	*12.35*	*13.00*	*13.57*	*14.90*	**14.43**	*10.62*	*13.39*
Retail Prices (cents per kilowatthour)															
Residential Sector	**12.24**	**12.85**	**12.99**	**12.59**	**12.21**	**12.67**	*12.93*	*12.50*	*12.47*	*13.04*	*13.41*	*12.92*	**12.67**	*12.60*	*12.98*
Commercial Sector	**10.46**	**10.54**	**10.95**	**10.36**	**10.08**	**10.32**	*10.91*	*10.40*	*10.28*	*10.58*	*11.23*	*10.67*	**10.59**	*10.45*	*10.71*
Industrial Sector	**6.79**	**6.81**	**7.32**	**6.63**	**6.42**	**6.66**	*7.31*	*6.71*	*6.56*	*6.84*	*7.46*	*6.85*	**6.90**	*6.79*	*6.94*

- = 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 - September 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**	**109**	*149*	*118*	*141*	*112*	*141*	*121*	**130**	*127*	*129*
Middle Atlantic	**423**	**321**	**423**	**306**	**367**	**309**	*443*	*321*	*393*	*313*	*422*	*325*	**368**	*360*	*363*
E. N. Central	**587**	**428**	**556**	**434**	**522**	**447**	*606*	*465*	*559*	*444*	*584*	*470*	**501**	*510*	*514*
W. N. Central	**325**	**232**	**309**	**243**	**298**	**243**	*320*	*258*	*321*	*239*	*317*	*262*	**277**	*280*	*285*
S. Atlantic	**1,078**	**889**	**1,137**	**809**	**969**	**874**	*1,203*	*868*	*1,042*	*875*	*1,161*	*880*	**978**	*979*	*989*
E. S. Central	**390**	**275**	**384**	**254**	**337**	**274**	*412*	*282*	*365*	*280*	*394*	*286*	**326**	*326*	*331*
W. S. Central	**602**	**503**	**782**	**479**	**525**	**512**	*797*	*488*	*555*	*521*	*769*	*490*	**592**	*581*	*584*
Mountain	**235**	**240**	**333**	**237**	**240**	**251**	*347*	*238*	*250*	*247*	*347*	*241*	**261**	*269*	*271*
Pacific contiguous	**396**	**337**	**425**	**400**	**406**	**336**	*418*	*386*	*419*	*338*	*409*	*387*	**389**	*387*	*388*
AK and HI	**13**	**12**	**13**	**14**	**13**	**12**	*13*	*13*	*13*	*11*	*12*	*13*	**13**	*13*	*12*
Total	**4,202**	**3,349**	**4,505**	**3,288**	**3,811**	**3,368**	*4,708*	*3,437*	*4,056*	*3,380*	*4,555*	*3,475*	**3,835**	*3,832*	*3,867*
Commercial Sector															
New England	**147**	**139**	**159**	**137**	**141**	**137**	*157*	*138*	*142*	*137*	*155*	*135*	**146**	*143*	*142*
Middle Atlantic	**444**	**417**	**478**	**404**	**424**	**408**	*484*	*406*	*430*	*414*	*473*	*404*	**436**	*431*	*430*
E. N. Central	**509**	**490**	**544**	**471**	**489**	**493**	*557*	*485*	*507*	*500*	*552*	*486*	**503**	*506*	*511*
W. N. Central	**281**	**269**	**305**	**265**	**272**	**271**	*311*	*271*	*283*	*277*	*310*	*274*	**280**	*281*	*286*
S. Atlantic	**805**	**859**	**939**	**795**	**792**	**843**	*956*	*808*	*803*	*865*	*950*	*805*	**850**	*850*	*856*
E. S. Central	**235**	**239**	**279**	**222**	**226**	**242**	*289*	*227*	*235*	*245*	*285*	*227*	**244**	*246*	*248*
W. S. Central	**499**	**534**	**630**	**506**	**485**	**530**	*642*	*513*	*497*	*548*	*645*	*520*	**542**	*543*	*553*
Mountain	**240**	**256**	**289**	**246**	**240**	**258**	*295*	*252*	*249*	*268*	*300*	*255*	**258**	*261*	*268*
Pacific contiguous	**424**	**433**	**479**	**449**	**418**	**428**	*483*	*452*	*430*	*437*	*484*	*445*	**447**	*446*	*449*
AK and HI	**16**	**16**	**17**	**17**	**16**	**16**	*17*	*17*	*17*	*16*	*16*	*17*	**16**	*16*	*16*
Total	**3,603**	**3,651**	**4,119**	**3,511**	**3,505**	**3,627**	*4,191*	*3,567*	*3,592*	*3,707*	*4,169*	*3,568*	**3,722**	*3,723*	*3,760*
Industrial Sector															
New England	**49**	**50**	**52**	**49**	**46**	**46**	*51*	*48*	*47*	*47*	*50*	*46*	**50**	*48*	*48*
Middle Atlantic	**198**	**196**	**204**	**188**	**193**	**191**	*200*	*193*	*199*	*197*	*204*	*192*	**197**	*194*	*198*
E. N. Central	**520**	**525**	**531**	**493**	**504**	**504**	*514*	*498*	*508*	*513*	*522*	*491*	**517**	*505*	*508*
W. N. Central	**237**	**240**	**252**	**231**	**223**	**228**	*253*	*240*	*233*	*241*	*254*	*237*	**240**	*236*	*241*
S. Atlantic	**375**	**406**	**406**	**379**	**362**	**384**	*393*	*377*	*371*	*396*	*400*	*376*	**391**	*379*	*386*
E. S. Central	**279**	**287**	**290**	**265**	**266**	**269**	*284*	*271*	*284*	*282*	*281*	*271*	**280**	*272*	*280*
W. S. Central	**433**	**462**	**492**	**458**	**456**	**471**	*493*	*468*	*449*	*478*	*495*	*462*	**461**	*472*	*471*
Mountain	**217**	**235**	**251**	**223**	**214**	**232**	*250*	*228*	*218*	*240*	*256*	*226*	**232**	*231*	*235*
Pacific contiguous	**227**	**251**	**266**	**234**	**215**	**236**	*274*	*244*	*227*	*248*	*267*	*239*	**245**	*242*	*245*
AK and HI	**13**	**13**	**15**	**14**	**13**	**14**	*15*	*14*	*14*	*14*	*15*	*14*	**14**	*14*	*14*
Total	**2,546**	**2,666**	**2,757**	**2,535**	**2,492**	**2,574**	*2,726*	*2,582*	*2,550*	*2,657*	*2,744*	*2,556*	**2,626**	*2,594*	*2,627*
Total All Sectors (a)															
New England	**350**	**302**	**357**	**299**	**322**	**294**	*359*	*306*	*332*	*297*	*348*	*304*	**327**	*320*	*320*
Middle Atlantic	**1,077**	**944**	**1,115**	**909**	**995**	**918**	*1,138*	*931*	*1,034*	*936*	*1,111*	*933*	**1,011**	*996*	*1,004*
E. N. Central	**1,618**	**1,444**	**1,632**	**1,399**	**1,516**	**1,446**	*1,679*	*1,449*	*1,575*	*1,458*	*1,659*	*1,449*	**1,523**	*1,523*	*1,535*
W. N. Central	**844**	**742**	**866**	**739**	**793**	**742**	*884*	*769*	*837*	*758*	*881*	*773*	**797**	*797*	*812*
S. Atlantic	**2,262**	**2,158**	**2,486**	**1,986**	**2,127**	**2,106**	*2,555*	*2,056*	*2,220*	*2,141*	*2,514*	*2,064*	**2,223**	*2,212*	*2,235*
E. S. Central	**904**	**801**	**953**	**741**	**830**	**785**	*985*	*779*	*884*	*807*	*960*	*784*	**850**	*845*	*859*
W. S. Central	**1,535**	**1,499**	**1,904**	**1,444**	**1,467**	**1,514**	*1,932*	*1,470*	*1,502*	*1,548*	*1,910*	*1,473*	**1,596**	*1,596*	*1,609*
Mountain	**692**	**731**	**874**	**707**	**695**	**741**	*893*	*719*	*716*	*755*	*904*	*722*	**752**	*762*	*775*
Pacific contiguous	**1,050**	**1,023**	**1,172**	**1,085**	**1,042**	**1,003**	*1,177*	*1,085*	*1,078*	*1,025*	*1,162*	*1,073*	**1,083**	*1,077*	*1,085*
AK and HI	**43**	**41**	**44**	**44**	**42**	**41**	*44*	*44*	*43*	*41*	*43*	*44*	**43**	*43*	*43*
Total	**10,374**	**9,685**	**11,402**	**9,354**	**9,829**	**9,589**	*11,646*	*9,608*	*10,221*	*9,766*	*11,491*	*9,620*	**10,204**	*10,170*	*10,276*

- = 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 - September 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**	**19.11**	**19.25**	*18.39*	*18.88*	*19.47*	*19.63*	*19.05*	*19.29*	**19.43**	*18.88*	*19.34*
Middle Atlantic	**15.77**	**16.07**	**16.47**	**16.04**	**15.28**	**15.88**	*16.38*	*15.99*	*15.81*	*16.50*	*17.14*	*16.65*	**16.09**	*15.91*	*16.54*
E. N. Central	**12.22**	**13.21**	**13.16**	**13.09**	**12.51**	**13.25**	*13.35*	*13.16*	*13.02*	*13.91*	*14.04*	*13.79*	**12.88**	*13.07*	*13.68*
W. N. Central	**10.24**	**12.16**	**12.46**	**11.22**	**10.62**	**12.31**	*12.92*	*11.35*	*10.87*	*12.71*	*13.28*	*11.66*	**11.48**	*11.82*	*12.11*
S. Atlantic	**11.37**	**11.91**	**12.14**	**11.70**	**11.42**	**11.75**	*11.87*	*11.40*	*11.58*	*12.02*	*12.28*	*11.76*	**11.79**	*11.63*	*11.92*
E. S. Central	**10.34**	**11.15**	**10.89**	**10.95**	**10.36**	**10.94**	*10.73*	*10.75*	*10.56*	*11.34*	*11.17*	*11.06*	**10.79**	*10.68*	*11.02*
W. S. Central	**10.67**	**11.35**	**11.03**	**10.81**	**10.35**	**10.71**	*10.81*	*10.66*	*10.57*	*11.11*	*11.36*	*11.07*	**10.96**	*10.65*	*11.06*
Mountain	**11.31**	**12.21**	**12.33**	**11.34**	**11.03**	**11.91**	*12.36*	*11.52*	*11.28*	*12.19*	*12.68*	*11.81*	**11.85**	*11.77*	*12.06*
Pacific	**13.69**	**13.47**	**15.76**	**13.89**	**14.13**	**13.95**	*16.09*	*13.94*	*14.20*	*13.93*	*16.31*	*14.26*	**14.26**	*14.58*	*14.72*
U.S. Average	**12.24**	**12.85**	**12.99**	**12.59**	**12.21**	**12.67**	*12.93*	*12.50*	*12.47*	*13.04*	*13.41*	*12.92*	**12.67**	*12.60*	*12.98*
Commercial Sector															
New England	**16.92**	**15.21**	**14.91**	**14.86**	**15.30**	**15.00**	*16.12*	*15.85*	*16.15*	*15.59*	*16.72*	*16.31*	**15.47**	*15.59*	*16.21*
Middle Atlantic	**13.07**	**13.04**	**13.72**	**12.57**	**11.92**	**12.48**	*13.38*	*12.32*	*12.11*	*12.77*	*13.69*	*12.60*	**13.13**	*12.56*	*12.82*
E. N. Central	**9.72**	**9.96**	**10.04**	**9.81**	**9.63**	**9.88**	*9.88*	*9.77*	*9.82*	*10.15*	*10.12*	*9.99*	**9.89**	*9.79*	*10.03*
W. N. Central	**8.57**	**9.52**	**9.95**	**8.89**	**8.86**	**9.70**	*9.92*	*8.79*	*9.07*	*9.97*	*10.23*	*9.03*	**9.25**	*9.34*	*9.59*
S. Atlantic	**9.66**	**9.45**	**9.59**	**9.35**	**9.38**	**9.27**	*9.80*	*9.47*	*9.56*	*9.55*	*10.17*	*9.83*	**9.52**	*9.49*	*9.79*
E. S. Central	**10.21**	**10.38**	**10.27**	**10.17**	**9.98**	**9.99**	*10.04*	*10.14*	*10.15*	*10.41*	*10.42*	*10.44*	**10.26**	*10.04*	*10.36*
W. S. Central	**8.05**	**7.89**	**7.94**	**7.72**	**7.65**	**7.74**	*8.10*	*7.92*	*7.79*	*7.88*	*8.31*	*8.06*	**7.90**	*7.87*	*8.03*
Mountain	**9.37**	**9.95**	**10.21**	**9.37**	**9.00**	**9.75**	*10.11*	*9.48*	*9.06*	*9.84*	*10.25*	*9.62*	**9.75**	*9.61*	*9.73*
Pacific	**12.23**	**13.30**	**15.61**	**13.44**	**12.21**	**13.08**	*15.08*	*13.24*	*12.34*	*13.26*	*15.50*	*13.72*	**13.71**	*13.46*	*13.77*
U.S. Average	**10.46**	**10.54**	**10.95**	**10.36**	**10.08**	**10.32**	*10.91*	*10.40*	*10.28*	*10.58*	*11.23*	*10.67*	**10.59**	*10.45*	*10.71*
Industrial Sector															
New England	**13.18**	**11.85**	**11.87**	**11.85**	**12.20**	**11.79**	*13.23*	*12.86*	*13.35*	*12.56*	*13.85*	*13.32*	**12.17**	*12.54*	*13.28*
Middle Atlantic	**7.90**	**7.22**	**7.36**	**7.06**	**7.04**	**7.01**	*7.43*	*7.02*	*7.18*	*7.13*	*7.47*	*7.11*	**7.39**	*7.13*	*7.23*
E. N. Central	**6.87**	**6.77**	**7.06**	**6.76**	**6.74**	**6.83**	*7.05*	*6.81*	*6.85*	*7.00*	*7.15*	*6.91*	**6.87**	*6.86*	*6.98*
W. N. Central	**6.49**	**6.88**	**7.51**	**6.48**	**6.65**	**7.08**	*7.52*	*6.50*	*6.73*	*7.19*	*7.66*	*6.62*	**6.85**	*6.95*	*7.07*
S. Atlantic	**6.55**	**6.38**	**6.90**	**6.26**	**6.16**	**6.34**	*6.96*	*6.44*	*6.29*	*6.54*	*7.07*	*6.55*	**6.53**	*6.48*	*6.62*
E. S. Central	**5.78**	**5.95**	**6.58**	**5.74**	**5.48**	**5.72**	*6.70*	*5.88*	*5.64*	*5.96*	*6.92*	*6.03*	**6.02**	*5.96*	*6.14*
W. S. Central	**5.69**	**5.53**	**5.73**	**5.27**	**5.06**	**5.03**	*5.90*	*5.54*	*5.38*	*5.41*	*6.14*	*5.76*	**5.56**	*5.39*	*5.68*
Mountain	**6.16**	**6.65**	**7.17**	**6.00**	**5.81**	**6.29**	*7.14*	*6.17*	*5.96*	*6.47*	*7.35*	*6.36*	**6.52**	*6.38*	*6.57*
Pacific	**8.00**	**8.94**	**10.46**	**9.21**	**7.98**	**9.08**	*9.58*	*8.69*	*7.67*	*8.79*	*9.75*	*8.84*	**9.21**	*8.88*	*8.81*
U.S. Average	**6.79**	**6.81**	**7.32**	**6.63**	**6.42**	**6.66**	*7.31*	*6.71*	*6.56*	*6.84*	*7.46*	*6.85*	**6.90**	*6.79*	*6.94*
All Sectors (a)															
New England	**17.90**	**16.51**	**15.83**	**15.74**	**16.39**	**16.04**	*16.62*	*16.51*	*17.13*	*16.59*	*17.22*	*17.00*	**16.51**	*16.40*	*17.00*
Middle Atlantic	**13.17**	**12.85**	**13.58**	**12.58**	**12.21**	**12.47**	*13.48*	*12.47*	*12.54*	*12.81*	*13.84*	*12.85*	**13.08**	*12.70*	*13.04*
E. N. Central	**9.71**	**9.76**	**10.13**	**9.75**	**9.66**	**9.85**	*10.27*	*9.84*	*9.99*	*10.18*	*10.56*	*10.18*	**9.84**	*9.92*	*10.24*
W. N. Central	**8.63**	**9.50**	**10.14**	**8.89**	**8.90**	**9.75**	*10.32*	*8.93*	*9.10*	*9.95*	*10.59*	*9.18*	**9.30**	*9.50*	*9.73*
S. Atlantic	**9.96**	**9.89**	**10.31**	**9.71**	**9.76**	**9.77**	*10.34*	*9.73*	*9.96*	*10.00*	*10.65*	*10.05*	**9.99**	*9.92*	*10.19*
E. S. Central	**8.90**	**9.06**	**9.40**	**8.85**	**8.69**	**8.86**	*9.37*	*8.88*	*8.87*	*9.18*	*9.70*	*9.14*	**9.07**	*8.97*	*9.24*
W. S. Central	**8.41**	**8.33**	**8.64**	**7.96**	**7.81**	**7.90**	*8.66*	*8.07*	*8.10*	*8.20*	*8.98*	*8.34*	**8.36**	*8.15*	*8.44*
Mountain	**9.02**	**9.63**	**10.14**	**8.96**	**8.72**	**9.40**	*10.15*	*9.11*	*8.89*	*9.54*	*10.36*	*9.33*	**9.48**	*9.40*	*9.58*
Pacific	**11.85**	**12.28**	**14.48**	**12.68**	**12.08**	**12.42**	*14.15*	*12.46*	*12.07*	*12.39*	*14.45*	*12.81*	**12.88**	*12.82*	*12.97*
U.S. Average	**10.27**	**10.31**	**10.88**	**10.13**	**9.98**	**10.16**	*10.88*	*10.16*	*10.22*	*10.41*	*11.19*	*10.46*	**10.42**	*10.32*	*10.60*

- = 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 - September 2016

	2015				2016				2017				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2015	2016	2017
United States															
Coal	**4,091**	**3,512**	**4,276**	**2,988**	**3,066**	**2,972**	*4,084*	*3,322*	*3,626*	*3,137*	*3,916*	*3,262*	**3,715**	*3,363*	*3,485*
Natural Gas	**3,248**	**3,477**	**4,392**	**3,503**	**3,427**	**3,777**	*4,661*	*3,534*	*3,402*	*3,668*	*4,507*	*3,428*	**3,658**	*3,851*	*3,753*
Petroleum (a)	**124**	**61**	**72**	**57**	**69**	**63**	*75*	*65*	*79*	*69*	*76*	*65*	**78**	*68*	*72*
Other Gases	**38**	**34**	**40**	**30**	**40**	**35**	*41*	*31*	*41*	*36*	*41*	*31*	**36**	*37*	*37*
Nuclear	**2,248**	**2,133**	**2,286**	**2,070**	**2,245**	**2,155**	*2,250*	*2,057*	*2,214*	*2,036*	*2,254*	*2,112*	**2,184**	*2,177*	*2,154*
Renewable Energy Sources:	**1,590**	**1,528**	**1,373**	**1,533**	**1,802**	**1,747**	*1,487*	*1,523*	*1,670*	*1,934*	*1,675*	*1,660*	**1,506**	*1,639*	*1,734*
Conventional Hydropower	**803**	**691**	**617**	**644**	**846**	**814**	*673*	*602*	*685*	*834*	*758*	*647*	**688**	*733*	*731*
Wind	**506**	**534**	**442**	**610**	**665**	**613**	*471*	*620*	*678*	*722*	*528*	*688*	**523**	*592*	*653*
Wood Biomass	**118**	**112**	**122**	**112**	**114**	**103**	*117*	*111*	*113*	*107*	*121*	*115*	**116**	*111*	*114*
Waste Biomass	**58**	**59**	**61**	**62**	**59**	**60**	*60*	*59*	*58*	*58*	*59*	*59*	**60**	*59*	*58*
Geothermal	**48**	**46**	**45**	**45**	**46**	**45**	*47*	*48*	*48*	*47*	*47*	*47*	**46**	*46*	*47*
Solar	**57**	**87**	**86**	**60**	**74**	**112**	*119*	*83*	*88*	*166*	*161*	*104*	**73**	*97*	*130*
Pumped Storage Hydropower	**-16**	**-11**	**-18**	**-11**	**-12**	**-14**	*-18*	*-14*	*-13*	*-12*	*-16*	*-14*	**-14**	*-15*	*-14*
Other Nonrenewable Fuels (b)	**33**	**37**	**39**	**37**	**35**	**37**	*39*	*36*	*35*	*37*	*39*	*36*	**36**	*37*	*37*
Total Generation	**11,355**	**10,770**	**12,460**	**10,207**	**10,671**	**10,772**	*12,620*	*10,554*	*11,054*	*10,905*	*12,491*	*10,579*	**11,198**	*11,157*	*11,259*
Northeast Census Region															
Coal	**292**	**175**	**203**	**139**	**163**	**142**	*176*	*174*	*247*	*157*	*173*	*171*	**202**	*164*	*187*
Natural Gas	**483**	**534**	**714**	**543**	**515**	**603**	*759*	*573*	*526*	*576*	*701*	*548*	**569**	*613*	*588*
Petroleum (a)	**46**	**2**	**5**	**2**	**7**	**3**	*6*	*5*	*10*	*5*	*6*	*5*	**14**	*5*	*6*
Other Gases	**2**	**2**	**2**	**1**	**2**	**2**	*2*	*1*	*2*	*2*	*2*	*1*	**2**	*2*	*2*
Nuclear	**545**	**499**	**542**	**499**	**543**	**461**	*517*	*483*	*522*	*482*	*537*	*504*	**521**	*501*	*511*
Hydropower (c)	**93**	**99**	**98**	**102**	**115**	**99**	*106*	*96*	*98*	*104*	*105*	*96*	**98**	*104*	*101*
Other Renewables (d)	**76**	**65**	**58**	**73**	**77**	**63**	*61*	*72*	*76*	*67*	*64*	*78*	**68**	*68*	*71*
Other Nonrenewable Fuels (b)	**11**	**12**	**12**	**12**	**11**	**12**	*13*	*12*	*12*	*12*	*12*	*12*	**12**	*12*	*12*
Total Generation	**1,548**	**1,388**	**1,634**	**1,373**	**1,435**	**1,384**	*1,639*	*1,417*	*1,493*	*1,405*	*1,600*	*1,414*	**1,485**	*1,469*	*1,478*
South Census Region															
Coal	**1,716**	**1,539**	**1,908**	**1,167**	**1,272**	**1,350**	*1,823*	*1,301*	*1,424*	*1,394*	*1,709*	*1,256*	**1,582**	*1,437*	*1,446*
Natural Gas	**1,971**	**2,075**	**2,465**	**1,975**	**2,004**	**2,239**	*2,630*	*1,934*	*1,966*	*2,242*	*2,576*	*1,910*	**2,122**	*2,202*	*2,174*
Petroleum (a)	**42**	**24**	**29**	**22**	**30**	**31**	*33*	*24*	*32*	*29*	*31*	*23*	**29**	*29*	*29*
Other Gases	**15**	**13**	**15**	**14**	**15**	**13**	*16*	*15*	*15*	*13*	*16*	*15*	**14**	*15*	*15*
Nuclear	**974**	**956**	**1,001**	**872**	**951**	**998**	*995*	*914*	*988*	*912*	*1,017*	*953*	**951**	*964*	*968*
Hydropower (c)	**122**	**108**	**94**	**145**	**191**	**85**	*108*	*135*	*160*	*91*	*109*	*134*	**117**	*130*	*124*
Other Renewables (d)	**231**	**267**	**255**	**287**	**326**	**303**	*264*	*321*	*348*	*378*	*311*	*367*	**260**	*303*	*351*
Other Nonrenewable Fuels (b)	**14**	**15**	**16**	**15**	**15**	**16**	*16*	*14*	*14*	*16*	*16*	*14*	**15**	*15*	*15*
Total Generation	**5,084**	**4,999**	**5,783**	**4,497**	**4,804**	**5,035**	*5,885*	*4,657*	*4,948*	*5,076*	*5,784*	*4,673*	**5,091**	*5,096*	*5,121*
Midwest Census Region															
Coal	**1,578**	**1,302**	**1,578**	**1,166**	**1,203**	**1,111**	*1,494*	*1,245*	*1,338*	*1,159*	*1,492*	*1,258*	**1,405**	*1,264*	*1,312*
Natural Gas	**300**	**257**	**340**	**285**	**361**	**371**	*449*	*352*	*365*	*361*	*457*	*335*	**296**	*383*	*379*
Petroleum (a)	**12**	**11**	**13**	**9**	**10**	**9**	*12*	*10*	*12*	*11*	*13*	*10*	**11**	*10*	*11*
Other Gases	**14**	**13**	**16**	**8**	**15**	**13**	*16*	*8*	*16*	*14*	*16*	*9*	**13**	*13*	*14*
Nuclear	**553**	**529**	**570**	**547**	**573**	**543**	*569*	*510*	*541*	*491*	*532*	*498*	**550**	*549*	*515*
Hydropower (c)	**44**	**47**	**42**	**37**	**45**	**40**	*44*	*34*	*38*	*43*	*44*	*34*	**43**	*41*	*40*
Other Renewables (d)	**251**	**218**	**168**	**277**	**281**	**245**	*183*	*271*	*289*	*274*	*196*	*292*	**228**	*245*	*262*
Other Nonrenewable Fuels (b)	**4**	**5**	**5**	**5**	**4**	**4**	*5*	*4*	*4*	*4*	*5*	*5*	**5**	*4*	*4*
Total Generation	**2,757**	**2,382**	**2,731**	**2,335**	**2,494**	**2,336**	*2,772*	*2,435*	*2,602*	*2,357*	*2,755*	*2,440*	**2,550**	*2,510*	*2,539*
West Census Region															
Coal	**505**	**496**	**587**	**517**	**427**	**370**	*592*	*602*	*616*	*427*	*543*	*576*	**526**	*498*	*540*
Natural Gas	**494**	**611**	**874**	**699**	**546**	**563**	*823*	*675*	*546*	*489*	*773*	*634*	**671**	*652*	*611*
Petroleum (a)	**23**	**22**	**25**	**23**	**21**	**21**	*23*	*26*	*26*	*25*	*26*	*27*	**23**	*23*	*26*
Other Gases	**7**	**6**	**7**	**7**	**7**	**7**	*7*	*7*	*8*	*7*	*7*	*6*	**7**	*7*	*7*
Nuclear	**176**	**149**	**172**	**152**	**178**	**152**	*169*	*150*	*163*	*150*	*168*	*157*	**162**	*162*	*159*
Hydropower (c)	**527**	**426**	**365**	**348**	**482**	**577**	*398*	*323*	*377*	*585*	*485*	*369*	**416**	*444*	*454*
Other Renewables (d)	**230**	**287**	**276**	**252**	**273**	**322**	*306*	*256*	*272*	*380*	*345*	*276*	**261**	*289*	*318*
Other Nonrenewable Fuels (b)	**4**	**5**	**5**	**5**	**5**	**5**	*5*	*5*	*5*	*5*	*5*	*5*	**5**	*5*	*5*
Total Generation	**1,967**	**2,002**	**2,311**	**2,002**	**1,938**	**2,017**	*2,323*	*2,044*	*2,011*	*2,068*	*2,352*	*2,052*	**2,071**	*2,081*	*2,122*

(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 - September 2016

	2015				2016				2017				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2015	2016	2017
Fuel Consumption for Electricity Generation, All Sectors															
United States															
Coal (thousand st/d)	**2,185**	**1,922**	**2,347**	**1,667**	**1,678**	**1,622**	*2,233*	*1,830*	*1,955*	*1,700*	*2,142*	*1,796*	**2,030**	*1,842*	*1,899*
Natural Gas (million cf/d)	**24,017**	**26,265**	**33,602**	**26,144**	**25,305**	**28,659**	*35,673*	*26,158*	*25,199*	*27,875*	*34,518*	*25,380*	**27,530**	*28,960*	*28,261*
Petroleum (thousand b/d)	**215**	**108**	**126**	**100**	**122**	**114**	*132*	*115*	*139*	*122*	*134*	*116*	**137**	*121*	*128*
Residual Fuel Oil	**76**	**26**	**33**	**26**	**30**	**23**	*32*	*29*	*35*	*29*	*33*	*29*	**40**	*29*	*32*
Distillate Fuel Oil	**66**	**25**	**24**	**25**	**30**	**24**	*30*	*27*	*34*	*28*	*29*	*27*	**35**	*28*	*29*
Petroleum Coke (a)	**61**	**52**	**65**	**46**	**57**	**64**	*65*	*54*	*63*	*60*	*67*	*55*	**56**	*60*	*61*
Other Petroleum Liquids (b)	**13**	**4**	**4**	**3**	**5**	**3**	*5*	*5*	*8*	*4*	*5*	*5*	**6**	*4*	*6*
Northeast Census Region															
Coal (thousand st/d)	**133**	**82**	**99**	**68**	**82**	**68**	*85*	*84*	*115*	*74*	*84*	*83*	**95**	*80*	*89*
Natural Gas (million cf/d)	**3,638**	**4,102**	**5,595**	**4,107**	**3,888**	**4,605**	*5,895*	*4,314*	*3,970*	*4,389*	*5,437*	*4,115*	**4,365**	*4,678*	*4,481*
Petroleum (thousand b/d)	**75**	**5**	**9**	**4**	**13**	**5**	*11*	*8*	*17*	*8*	*11*	*9*	**23**	*9*	*11*
South Census Region															
Coal (thousand st/d)	**888**	**819**	**1,023**	**638**	**672**	**719**	*970*	*698*	*744*	*737*	*913*	*678*	**842**	*765*	*768*
Natural Gas (million cf/d)	**14,399**	**15,637**	**18,741**	**14,727**	**14,714**	**16,939**	*20,070*	*14,272*	*14,472*	*16,999*	*19,643*	*14,093*	**15,885**	*16,502*	*16,310*
Petroleum (thousand b/d)	**79**	**45**	**53**	**41**	**56**	**57**	*62*	*45*	*60*	*54*	*59*	*44*	**54**	*55*	*54*
Midwest Census Region															
Coal (thousand st/d)	**880**	**742**	**895**	**668**	**680**	**627**	*845*	*707*	*749*	*651*	*841*	*710*	**796**	*715*	*738*
Natural Gas (million cf/d)	**2,329**	**2,014**	**2,725**	**2,211**	**2,729**	**2,936**	*3,665*	*2,720*	*2,805*	*2,857*	*3,741*	*2,599*	**2,320**	*3,014*	*3,002*
Petroleum (thousand b/d)	**24**	**23**	**26**	**18**	**19**	**20**	*22*	*20*	*21*	*20*	*22*	*20*	**23**	*20*	*21*
West Census Region															
Coal (thousand st/d)	**285**	**280**	**331**	**293**	**244**	**209**	*332*	*341*	*346*	*238*	*304*	*326*	**297**	*282*	*303*
Natural Gas (million cf/d)	**3,651**	**4,513**	**6,541**	**5,100**	**3,973**	**4,179**	*6,042*	*4,852*	*3,952*	*3,629*	*5,697*	*4,573*	**4,960**	*4,765*	*4,468*
Petroleum (thousand b/d)	**37**	**36**	**39**	**37**	**34**	**32**	*37*	*41*	*42*	*39*	*42*	*43*	**37**	*36*	*42*
End-of-period U.S. Fuel Inventories Held by Electric Power Sector															
Coal (million short tons)	**155.0**	**167.0**	**162.7**	**197.1**	**194.3**	**185.5**	*152.5*	*158.2*	*157.8*	*153.4*	*136.5*	*140.6*	**197.1**	*158.2*	*140.6*
Residual Fuel Oil (mmb)	**10.2**	**10.5**	**10.6**	**12.4**	**11.9**	**12.1**	*11.9*	*12.7*	*13.3*	*12.9*	*12.4*	*12.9*	**12.4**	*12.7*	*12.9*
Distillate Fuel Oil (mmb)	**16.7**	**16.7**	**17.2**	**17.4**	**16.9**	**17.2**	*17.1*	*17.5*	*17.6*	*17.4*	*17.3*	*17.6*	**17.4**	*17.5*	*17.6*
Petroleum Coke (mmb)	**4.1**	**5.2**	**5.5**	**6.7**	**6.2**	**4.5**	*4.5*	*4.5*	*4.4*	*4.4*	*4.3*	*4.2*	**6.7**	*4.5*	*4.2*

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

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

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

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

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

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

Projections: EIA Regional Short-Term Energy Model.

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

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

	2015				2016				2017				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2015	2016	2017
Electric Power Sector															
Hydroelectric Power (a)	**0.684**	**0.594**	**0.538**	**0.560**	**0.728**	**0.701**	*0.587*	*0.524*	*0.583*	*0.719*	*0.661*	*0.563*	**2.376**	*2.540*	*2.525*
Wood Biomass (b)	**0.063**	**0.057**	**0.067**	**0.060**	**0.062**	**0.048**	*0.064*	*0.060*	*0.062*	*0.057*	*0.071*	*0.065*	**0.246**	*0.234*	*0.256*
Waste Biomass (c)	**0.067**	**0.066**	**0.070**	**0.071**	**0.069**	**0.071**	*0.071*	*0.069*	*0.067*	*0.068*	*0.070*	*0.068*	**0.274**	*0.279*	*0.272*
Wind	**0.433**	**0.462**	**0.386**	**0.533**	**0.575**	**0.530**	*0.412*	*0.542*	*0.579*	*0.624*	*0.461*	*0.601*	**1.814**	*2.058*	*2.266*
Geothermal	**0.041**	**0.040**	**0.039**	**0.040**	**0.040**	**0.039**	*0.041*	*0.042*	*0.041*	*0.040*	*0.041*	*0.041*	**0.159**	*0.162*	*0.164*
Solar	**0.047**	**0.073**	**0.074**	**0.052**	**0.062**	**0.095**	*0.102*	*0.071*	*0.074*	*0.142*	*0.139*	*0.090*	**0.246**	*0.331*	*0.444*
Subtotal	**1.335**	**1.292**	**1.174**	**1.315**	**1.536**	**1.485**	*1.276*	*1.307*	*1.405*	*1.650*	*1.444*	*1.428*	**5.116**	*5.604*	*5.928*
Industrial Sector															
Hydroelectric Power (a)	**0.004**	**0.003**	**0.002**	**0.003**	**0.004**	**0.003**	*0.003*	*0.003*	*0.003*	*0.003*	*0.003*	*0.003*	**0.013**	*0.014*	*0.013*
Wood Biomass (b)	**0.324**	**0.320**	**0.324**	**0.321**	**0.316**	**0.308**	*0.319*	*0.316*	*0.306*	*0.303*	*0.313*	*0.316*	**1.290**	*1.259*	*1.238*
Waste Biomass (c)	**0.046**	**0.049**	**0.050**	**0.049**	**0.047**	**0.047**	*0.049*	*0.048*	*0.048*	*0.048*	*0.049*	*0.048*	**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**	**0.196**	**0.192**	*0.200*	*0.198*	*0.198*	*0.198*	*0.199*	*0.196*	**0.776**	*0.786*	*0.791*
Subtotal	**0.568**	**0.570**	**0.576**	**0.578**	**0.567**	**0.556**	*0.576*	*0.570*	*0.560*	*0.557*	*0.570*	*0.568*	**2.292**	*2.269*	*2.254*
Commercial Sector															
Wood Biomass (b)	**0.018**	**0.018**	**0.018**	**0.018**	**0.018**	**0.018**	*0.019*	*0.019*	*0.020*	*0.020*	*0.020*	*0.020*	**0.073**	*0.076*	*0.078*
Waste Biomass (c)	**0.013**	**0.010**	**0.010**	**0.012**	**0.012**	**0.012**	*0.012*	*0.012*	*0.011*	*0.011*	*0.012*	*0.011*	**0.045**	*0.047*	*0.046*
Geothermal	**0.005**	**0.005**	**0.005**	**0.005**	**0.005**	**0.005**	*0.005*	*0.005*	*0.005*	*0.005*	*0.005*	*0.005*	**0.020**	*0.020*	*0.020*
Subtotal	**0.050**	**0.053**	**0.054**	**0.050**	**0.052**	**0.050**	*0.037*	*0.037*	*0.037*	*0.037*	*0.038*	*0.037*	**0.207**	*0.177*	*0.149*
Residential Sector															
Wood Biomass (b)	**0.106**	**0.108**	**0.109**	**0.109**	**0.096**	**0.099**	*0.105*	*0.105*	*0.106*	*0.106*	*0.106*	*0.106*	**0.432**	*0.405*	*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)	**0.022**	**0.035**	**0.037**	**0.026**	**0.028**	**0.053**	*0.078*	*0.078*	*0.033*	*0.062*	*0.091*	*0.091*	**0.120**	*0.238*	*0.277*
Subtotal	**0.139**	**0.152**	**0.156**	**0.145**	**0.135**	**0.163**	*0.195*	*0.195*	*0.150*	*0.180*	*0.209*	*0.209*	**0.592**	*0.687*	*0.748*
Transportation Sector															
Ethanol (e)	**0.266**	**0.284**	**0.293**	**0.285**	**0.282**	**0.289**	*0.298*	*0.292*	*0.277*	*0.294*	*0.297*	*0.289*	**1.128**	*1.160*	*1.158*
Biomass-based Diesel (e)	**0.034**	**0.058**	**0.064**	**0.058**	**0.050**	**0.066**	*0.080*	*0.077*	*0.065*	*0.069*	*0.079*	*0.077*	**0.214**	*0.272*	*0.290*
Subtotal	**0.300**	**0.342**	**0.357**	**0.343**	**0.332**	**0.355**	*0.378*	*0.368*	*0.342*	*0.364*	*0.376*	*0.366*	**1.342**	*1.433*	*1.448*
All Sectors Total															
Hydroelectric Power (a)	**0.687**	**0.598**	**0.540**	**0.563**	**0.732**	**0.705**	*0.590*	*0.527*	*0.586*	*0.722*	*0.665*	*0.566*	**2.389**	*2.554*	*2.539*
Wood Biomass (b)	**0.512**	**0.503**	**0.518**	**0.508**	**0.492**	**0.475**	*0.508*	*0.501*	*0.494*	*0.486*	*0.511*	*0.507*	**2.040**	*1.975*	*1.998*
Waste Biomass (c)	**0.126**	**0.125**	**0.130**	**0.132**	**0.128**	**0.130**	*0.131*	*0.128*	*0.126*	*0.127*	*0.131*	*0.128*	**0.514**	*0.517*	*0.511*
Wind	**0.433**	**0.462**	**0.386**	**0.533**	**0.575**	**0.530**	*0.412*	*0.542*	*0.579*	*0.624*	*0.461*	*0.601*	**1.814**	*2.058*	*2.266*
Geothermal	**0.057**	**0.056**	**0.056**	**0.056**	**0.057**	**0.057**	*0.058*	*0.059*	*0.058*	*0.058*	*0.059*	*0.059*	**0.224**	*0.230*	*0.233*
Solar	**0.083**	**0.127**	**0.130**	**0.092**	**0.106**	**0.164**	*0.182*	*0.151*	*0.108*	*0.206*	*0.232*	*0.182*	**0.431**	*0.602*	*0.727*
Ethanol (e)	**0.271**	**0.289**	**0.298**	**0.290**	**0.287**	**0.295**	*0.304*	*0.297*	*0.282*	*0.299*	*0.302*	*0.294*	**1.147**	*1.182*	*1.177*
Biomass-based Diesel (e)	**0.034**	**0.058**	**0.064**	**0.058**	**0.050**	**0.066**	*0.080*	*0.077*	*0.065*	*0.069*	*0.079*	*0.077*	**0.214**	*0.272*	*0.290*
Biofuel Losses and Co-products (f)	**0.189**	**0.192**	**0.195**	**0.200**	**0.196**	**0.192**	*0.200*	*0.198*	*0.198*	*0.198*	*0.199*	*0.196*	**0.776**	*0.786*	*0.791*
Total Consumption	**2.392**	**2.409**	**2.316**	**2.432**	**2.622**	**2.625**	*2.462*	*2.478*	*2.495*	*2.788*	*2.637*	*2.609*	**9.549**	*10.186*	*10.528*

- = no data available

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

(b) Wood and wood-derived fuels.

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

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

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

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

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

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

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

Projections: EIA Regional Short-Term Energy Model.

Table 9a. U.S. Macroeconomic Indicators and CO_2 Emissions

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

	2015				2016				2017				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2015	2016	2017
Macroeconomic															
Real Gross Domestic Product															
(billion chained 2009 dollars - SAAR)	**16,269**	**16,374**	**16,455**	**16,491**	**16,525**	**16,575**	*16,698*	*16,807*	*16,935*	*17,042*	*17,135*	*17,221*	**16,397**	*16,651*	*17,083*
Real Personal Consumption Expend.															
(billion chained 2009 dollars - SAAR)	**11,102**	**11,181**	**11,256**	**11,319**	**11,365**	**11,483**	*11,582*	*11,658*	*11,734*	*11,808*	*11,875*	*11,933*	**11,215**	*11,522*	*11,838*
Real Fixed Investment															
(billion chained 2009 dollars - SAAR)	**2,727**	**2,756**	**2,795**	**2,793**	**2,787**	**2,764**	*2,798*	*2,833*	*2,876*	*2,922*	*2,959*	*2,994*	**2,768**	*2,796*	*2,938*
Business Inventory Change															
(billion chained 2009 dollars - SAAR)	**129**	**105**	**77**	**63**	**42**	**-13**	*-9*	*2*	*21*	*30*	*27*	*32*	**93**	*5*	*28*
Real Government Expenditures															
(billion chained 2009 dollars - SAAR)	**2,858**	**2,881**	**2,894**	**2,902**	**2,913**	**2,907**	*2,924*	*2,933*	*2,939*	*2,944*	*2,946*	*2,947*	**2,884**	*2,919*	*2,944*
Real Exports of Goods & Services															
(billion chained 2009 dollars - SAAR)	**2,121**	**2,136**	**2,120**	**2,106**	**2,102**	**2,109**	*2,113*	*2,130*	*2,147*	*2,167*	*2,189*	*2,213*	**2,121**	*2,114*	*2,179*
Real Imports of Goods & Services															
(billion chained 2009 dollars - SAAR)	**2,642**	**2,660**	**2,668**	**2,672**	**2,668**	**2,665**	*2,697*	*2,738*	*2,769*	*2,815*	*2,850*	*2,886*	**2,661**	*2,692*	*2,830*
Real Disposable Personal Income															
(billion chained 2009 dollars - SAAR)	**12,183**	**12,300**	**12,399**	**12,491**	**12,558**	**12,594**	*12,712*	*12,803*	*12,889*	*12,967*	*13,041*	*13,124*	**12,343**	*12,667*	*13,006*
Non-Farm Employment															
(millions)	**140.8**	**141.5**	**142.2**	**142.9**	**143.5**	**144.0**	*144.6*	*145.1*	*145.7*	*146.1*	*146.4*	*146.7*	**141.8**	*144.3*	*146.2*
Civilian Unemployment Rate															
(percent)	**5.6**	**5.4**	**5.2**	**5.0**	**4.9**	**4.9**	*4.9*	*4.8*	*4.7*	*4.7*	*4.7*	*4.7*	**5.3**	*4.9*	*4.7*
Housing Starts															
(millions - SAAR)	**0.99**	**1.16**	**1.16**	**1.13**	**1.15**	**1.16**	*1.19*	*1.22*	*1.28*	*1.37*	*1.41*	*1.45*	**1.11**	*1.18*	*1.38*
Industrial Production Indices (Index, 2012=100)															
Total Industrial Production	**105.8**	**105.1**	**105.5**	**104.6**	**104.1**	**103.9**	*104.3*	*104.2*	*104.8*	*105.5*	*106.2*	*106.9*	**105.2**	*104.1*	*105.8*
Manufacturing	**103.2**	**103.4**	**103.9**	**103.7**	**103.9**	**103.7**	*103.9*	*104.1*	*105.1*	*105.7*	*106.2*	*107.0*	**103.6**	*103.9*	*106.0*
Food	**103.1**	**102.6**	**103.4**	**103.2**	**104.4**	**104.7**	*105.2*	*105.7*	*106.3*	*106.9*	*107.4*	*107.9*	**103.1**	*105.0*	*107.1*
Paper	**98.9**	**98.5**	**97.0**	**96.6**	**96.4**	**95.7**	*95.6*	*95.1*	*95.1*	*95.4*	*95.6*	*95.5*	**97.7**	*95.7*	*95.4*
Petroleum and Coal Products	**102.4**	**104.7**	**105.7**	**106.9**	**106.5**	**105.4**	*106.3*	*106.6*	*107.4*	*108.1*	*108.6*	*109.0*	**104.9**	*106.2*	*108.3*
Chemicals	**97.9**	**97.9**	**97.7**	**98.5**	**99.1**	**98.4**	*98.7*	*98.9*	*99.7*	*100.8*	*101.8*	*102.8*	**98.0**	*98.8*	*101.3*
Nonmetallic Mineral Products	**111.3**	**111.7**	**113.0**	**116.1**	**117.1**	**115.6**	*116.4*	*117.3*	*118.4*	*119.5*	*120.5*	*121.8*	**113.0**	*116.6*	*120.0*
Primary Metals	**98.2**	**97.1**	**96.6**	**95.0**	**94.8**	**95.5**	*94.7*	*94.3*	*95.0*	*95.3*	*95.2*	*94.5*	**96.7**	*94.8*	*95.0*
Coal-weighted Manufacturing (a)	**102.0**	**102.1**	**102.2**	**102.5**	**102.8**	**102.1**	*102.3*	*102.3*	*103.0*	*103.7*	*104.2*	*104.6*	**102.2**	*102.4*	*103.9*
Distillate-weighted Manufacturing (a)	**104.4**	**104.5**	**105.3**	**106.0**	**106.2**	**105.5**	*105.9*	*106.2*	*107.1*	*108.0*	*108.8*	*109.4*	**105.0**	*106.0*	*108.3*
Electricity-weighted Manufacturing (a)	**102.9**	**103.1**	**103.3**	**103.3**	**103.5**	**102.9**	*103.1*	*103.1*	*103.9*	*104.7*	*105.3*	*105.9*	**103.1**	*103.2*	*105.0*
Natural Gas-weighted Manufacturing (a)	**102.3**	**103.4**	**103.5**	**104.1**	**104.4**	**103.6**	*104.1*	*104.1*	*105.1*	*106.2*	*107.1*	*107.9*	**103.3**	*104.0*	*106.6*
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**	*2.40*	*2.41*	*2.43*	*2.45*	*2.46*	*2.48*	**2.37**	*2.40*	*2.45*
Producer Price Index: All Commodities															
(index, 1982=1.00)	**1.92**	**1.92**	**1.90**	**1.87**	**1.83**	**1.84**	*1.87*	*1.88*	*1.89*	*1.90*	*1.92*	*1.94*	**1.90**	*1.86*	*1.91*
Producer Price Index: Petroleum															
(index, 1982=1.00)	**1.71**	**1.96**	**1.85**	**1.52**	**1.21**	**1.45**	*1.54*	*1.44*	*1.47*	*1.68*	*1.75*	*1.77*	**1.76**	*1.41*	*1.67*
GDP Implicit Price Deflator															
(index, 2009=100)	**109.3**	**109.9**	**110.3**	**110.5**	**110.6**	**111.2**	*111.8*	*112.3*	*113.0*	*113.5*	*114.1*	*114.7*	**110.0**	*111.5*	*113.8*
Miscellaneous															
Vehicle Miles Traveled (b)															
(million miles/day)	**7,957**	**8,940**	**8,862**	**8,538**	**8,195**	**9,103**	*9,007*	*8,641*	*8,289*	*9,231*	*9,043*	*8,658*	**8,577**	*8,737*	*8,807*
Air Travel Capacity															
(Available ton-miles/day, thousands)	**517**	**574**	**584**	**560**	**548**	**596**	*603*	*549*	*526*	*589*	*609*	*553*	**559**	*574*	*570*
Aircraft Utilization															
(Revenue ton-miles/day, thousands)	**322**	**356**	**365**	**343**	**326**	**365**	*380*	*340*	*318*	*371*	*384*	*342*	**347**	*353*	*354*
Airline Ticket Price Index															
(index, 1982-1984=100)	**286.4**	**313.0**	**283.3**	**286.2**	**281.8**	**303.8**	*288.4*	*294.7*	*288.7*	*313.9*	*302.2*	*309.4*	**292.2**	*292.2*	*303.6*
Raw Steel Production															
(million short tons per day)	**0.247**	**0.242**	**0.248**	**0.226**	**0.238**	**0.247**	*0.239*	*0.215*	*0.217*	*0.229*	*0.208*	*0.177*	**0.241**	*0.235*	*0.208*
Carbon Dioxide (CO_2) Emissions (million metric tons)															
Petroleum	**561**	**567**	**584**	**572**	**571**	**568**	*583*	*579*	*563*	*576*	*585*	*582*	**2,284**	*2,302*	*2,306*
Natural Gas	**469**	**313**	**328**	**370**	**442**	**330**	*343*	*392*	*456*	*329*	*339*	*392*	**1,480**	*1,506*	*1,517*
Coal	**394**	**351**	**426**	**311**	**312**	**299**	*408*	*340*	*354*	*314*	*393*	*334*	**1,483**	*1,359*	*1,396*
Total Energy (c)	**1,427**	**1,234**	**1,340**	**1,256**	**1,327**	**1,200**	*1,337*	*1,315*	*1,376*	*1,222*	*1,320*	*1,311*	**5,258**	*5,179*	*5,230*

- = 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 - September 2016

	2015				2016				2017				Year		
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2015	2016	2017
Real Gross State Product (Billion $2009)															
New England	**863**	**871**	**866**	**868**	**869**	**872**	*878*	*883*	*889*	*893*	*896*	*900*	**867**	*876*	*895*
Middle Atlantic	**2,412**	**2,441**	**2,456**	**2,458**	**2,460**	**2,468**	*2,487*	*2,499*	*2,510*	*2,522*	*2,532*	*2,541*	**2,442**	*2,479*	*2,526*
E. N. Central	**2,248**	**2,255**	**2,275**	**2,279**	**2,279**	**2,284**	*2,298*	*2,310*	*2,325*	*2,335*	*2,345*	*2,352*	**2,264**	*2,293*	*2,339*
W. N. Central	**1,054**	**1,057**	**1,059**	**1,059**	**1,061**	**1,064**	*1,072*	*1,078*	*1,085*	*1,091*	*1,097*	*1,101*	**1,057**	*1,069*	*1,093*
S. Atlantic	**2,865**	**2,884**	**2,909**	**2,920**	**2,932**	**2,942**	*2,965*	*2,988*	*3,012*	*3,032*	*3,048*	*3,064*	**2,895**	*2,957*	*3,039*
E. S. Central	**737**	**743**	**748**	**751**	**752**	**754**	*758*	*763*	*768*	*773*	*777*	*780*	**745**	*757*	*775*
W. S. Central	**2,014**	**1,997**	**2,005**	**2,005**	**2,007**	**2,010**	*2,024*	*2,038*	*2,059*	*2,077*	*2,095*	*2,113*	**2,005**	*2,020*	*2,086*
Mountain	**1,039**	**1,045**	**1,048**	**1,050**	**1,054**	**1,058**	*1,067*	*1,076*	*1,087*	*1,096*	*1,104*	*1,112*	**1,046**	*1,064*	*1,100*
Pacific	**2,935**	**2,979**	**2,986**	**2,996**	**3,007**	**3,020**	*3,044*	*3,066*	*3,094*	*3,115*	*3,133*	*3,150*	**2,974**	*3,034*	*3,123*
Industrial Output, Manufacturing (Index, Year 2012=100)															
New England	**99.4**	**99.6**	**99.9**	**99.5**	**99.7**	**100.2**	*100.4*	*100.5*	*101.4*	*101.9*	*102.3*	*103.0*	**99.6**	*100.2*	*102.2*
Middle Atlantic	**99.8**	**99.9**	**100.2**	**99.8**	**100.0**	**99.6**	*99.9*	*100.0*	*100.9*	*101.4*	*101.9*	*102.6*	**99.9**	*99.9*	*101.7*
E. N. Central	**105.2**	**105.4**	**106.0**	**106.2**	**106.3**	**105.9**	*105.9*	*106.2*	*107.1*	*107.6*	*107.9*	*108.4*	**105.7**	*106.1*	*107.7*
W. N. Central	**103.3**	**103.2**	**103.4**	**103.1**	**102.9**	**102.7**	*103.0*	*103.2*	*104.2*	*104.8*	*105.2*	*105.9*	**103.2**	*103.0*	*105.0*
S. Atlantic	**104.3**	**104.9**	**105.8**	**106.2**	**106.5**	**106.6**	*106.9*	*107.1*	*108.1*	*108.6*	*109.0*	*109.6*	**105.3**	*106.8*	*108.8*
E. S. Central	**105.5**	**106.0**	**107.2**	**107.5**	**108.3**	**108.7**	*108.9*	*109.1*	*110.1*	*110.6*	*111.0*	*111.6*	**106.6**	*108.7*	*110.8*
W. S. Central	**102.9**	**101.6**	**100.9**	**99.7**	**99.0**	**97.7**	*97.7*	*97.9*	*98.9*	*99.5*	*100.1*	*101.1*	**101.3**	*98.1*	*99.9*
Mountain	**104.7**	**105.2**	**106.1**	**106.7**	**107.5**	**107.3**	*107.8*	*108.3*	*109.6*	*110.5*	*111.2*	*112.3*	**105.7**	*107.7*	*110.9*
Pacific	**103.6**	**104.1**	**104.7**	**104.2**	**104.1**	**103.7**	*104.0*	*104.3*	*105.3*	*106.0*	*106.6*	*107.5*	**104.1**	*104.0*	*106.4*
Real Personal Income (Billion $2009)															
New England	**745**	**754**	**756**	**766**	**769**	**771**	*777*	*782*	*788*	*793*	*797*	*802*	**755**	*775*	*795*
Middle Atlantic	**1,905**	**1,927**	**1,942**	**1,952**	**1,957**	**1,960**	*1,977*	*1,989*	*2,000*	*2,012*	*2,022*	*2,033*	**1,932**	*1,971*	*2,017*
E. N. Central	**2,025**	**2,042**	**2,058**	**2,081**	**2,087**	**2,092**	*2,110*	*2,123*	*2,137*	*2,150*	*2,163*	*2,173*	**2,051**	*2,103*	*2,156*
W. N. Central	**977**	**982**	**985**	**991**	**991**	**997**	*1,006*	*1,013*	*1,019*	*1,025*	*1,031*	*1,038*	**984**	*1,001*	*1,028*
S. Atlantic	**2,631**	**2,658**	**2,681**	**2,706**	**2,716**	**2,725**	*2,752*	*2,774*	*2,798*	*2,819*	*2,838*	*2,858*	**2,669**	*2,742*	*2,828*
E. S. Central	**765**	**772**	**778**	**785**	**787**	**786**	*792*	*799*	*805*	*810*	*816*	*820*	**775**	*791*	*813*
W. S. Central	**1,720**	**1,719**	**1,731**	**1,735**	**1,736**	**1,734**	*1,749*	*1,763*	*1,780*	*1,797*	*1,813*	*1,828*	**1,726**	*1,746*	*1,804*
Mountain	**930**	**940**	**945**	**951**	**954**	**958**	*967*	*976*	*985*	*994*	*1,002*	*1,010*	**941**	*964*	*998*
Pacific	**2,224**	**2,263**	**2,281**	**2,297**	**2,305**	**2,313**	*2,334*	*2,352*	*2,371*	*2,389*	*2,405*	*2,422*	**2,266**	*2,326*	*2,397*
Households (Thousands)															
New England	**5,831**	**5,838**	**5,843**	**5,849**	**5,858**	**5,865**	*5,869*	*5,875*	*5,883*	*5,890*	*5,899*	*5,909*	**5,849**	*5,875*	*5,909*
Middle Atlantic	**15,986**	**16,005**	**16,015**	**16,028**	**16,049**	**16,066**	*16,075*	*16,084*	*16,098*	*16,113*	*16,130*	*16,148*	**16,028**	*16,084*	*16,148*
E. N. Central	**18,606**	**18,613**	**18,622**	**18,639**	**18,662**	**18,682**	*18,696*	*18,713*	*18,734*	*18,753*	*18,775*	*18,799*	**18,639**	*18,713*	*18,799*
W. N. Central	**8,448**	**8,464**	**8,478**	**8,493**	**8,514**	**8,533**	*8,549*	*8,567*	*8,589*	*8,608*	*8,628*	*8,650*	**8,493**	*8,567*	*8,650*
S. Atlantic	**24,611**	**24,700**	**24,787**	**24,879**	**24,986**	**25,086**	*25,175*	*25,267*	*25,363*	*25,457*	*25,552*	*25,650*	**24,879**	*25,267*	*25,650*
E. S. Central	**7,517**	**7,524**	**7,532**	**7,543**	**7,558**	**7,574**	*7,586*	*7,600*	*7,616*	*7,631*	*7,647*	*7,663*	**7,543**	*7,600*	*7,663*
W. S. Central	**14,319**	**14,373**	**14,421**	**14,471**	**14,530**	**14,587**	*14,640*	*14,693*	*14,747*	*14,802*	*14,857*	*14,914*	**14,471**	*14,693*	*14,914*
Mountain	**8,783**	**8,817**	**8,850**	**8,885**	**8,926**	**8,964**	*9,001*	*9,040*	*9,079*	*9,119*	*9,160*	*9,203*	**8,885**	*9,040*	*9,203*
Pacific	**18,402**	**18,459**	**18,508**	**18,560**	**18,624**	**18,682**	*18,731*	*18,785*	*18,841*	*18,898*	*18,955*	*19,013*	**18,560**	*18,785*	*19,013*
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*	*19.4*	**19.0**	*19.3*	*19.4*
E. N. Central	**21.4**	**21.4**	**21.5**	**21.6**	**21.7**	**21.7**	*21.8*	*21.9*	*21.9*	*22.0*	*22.0*	*22.0*	**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*	*27.8*	*28.0*	*28.1*	*28.1*	*28.2*	**27.0**	*27.6*	*28.1*
E. S. Central	**7.8**	**7.8**	**7.8**	**7.9**	**7.9**	**7.9**	*8.0*	*8.0*	*8.0*	*8.0*	*8.1*	*8.1*	**7.8**	*7.9*	*8.0*
W. S. Central	**16.6**	**16.6**	**16.7**	**16.7**	**16.8**	**16.8**	*16.9*	*16.9*	*17.0*	*17.1*	*17.1*	*17.2*	**16.6**	*16.8*	*17.1*
Mountain	**9.9**	**10.0**	**10.0**	**10.1**	**10.2**	**10.2**	*10.3*	*10.3*	*10.4*	*10.4*	*10.5*	*10.5*	**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 - September 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**	**820**	**58**	**1,791**	**2,839**	**901**	*124*	*2,172*	*3,196*	*876*	*135*	*2,184*	**6,521**	*6,037*	*6,391*
Middle Atlantic	**3,578**	**610**	**40**	**1,544**	**2,661**	**747**	*78*	*1,968*	*2,931*	*687*	*85*	*1,978*	**5,771**	*5,454*	*5,681*
E. N. Central	**3,692**	**660**	**75**	**1,742**	**2,868**	**754**	*98*	*2,216*	*3,156*	*720*	*116*	*2,221*	**6,169**	*5,936*	*6,214*
W. N. Central	**3,376**	**654**	**95**	**1,968**	**2,896**	**662**	*125*	*2,396*	*3,237*	*676*	*144*	*2,399*	**6,093**	*6,079*	*6,456*
South Atlantic	**1,666**	**154**	**8**	**658**	**1,381**	**210**	*12*	*967*	*1,439*	*199*	*14*	*974*	**2,486**	*2,570*	*2,625*
E. S. Central	**2,142**	**184**	**14**	**878**	**1,754**	**232**	*17*	*1,294*	*1,833*	*245*	*20*	*1,308*	**3,217**	*3,296*	*3,406*
W. S. Central	**1,400**	**70**	**2**	**614**	**1,052**	**78**	*3*	*762*	*1,133*	*79*	*4*	*786*	**2,086**	*1,895*	*2,002*
Mountain	**1,901**	**705**	**123**	**1,869**	**2,075**	**676**	*121*	*1,777*	*2,147*	*648*	*135*	*1,801*	**4,597**	*4,649*	*4,731*
Pacific	**1,085**	**525**	**77**	**1,193**	**1,297**	**464**	*77*	*1,089*	*1,374*	*518*	*80*	*1,084*	**2,880**	*2,928*	*3,057*
U.S. Average	**2,340**	**442**	**49**	**1,251**	**1,946**	**480**	*63*	*1,498*	*2,102*	*472*	*71*	*1,504*	**4,083**	*3,987*	*4,149*
Heating Degree Days, Prior 10-year Average															
New England	**3,166**	**838**	**134**	**2,147**	**3,212**	**824**	*133*	*2,105*	*3,201*	*831*	*127*	*2,130*	**6,285**	*6,273*	*6,288*
Middle Atlantic	**2,935**	**666**	**90**	**1,976**	**2,982**	**651**	*90*	*1,926*	*2,982*	*660*	*85*	*1,947*	**5,667**	*5,649*	*5,673*
E. N. Central	**3,192**	**694**	**123**	**2,262**	**3,247**	**689**	*125*	*2,205*	*3,254*	*701*	*119*	*2,215*	**6,272**	*6,266*	*6,290*
W. N. Central	**3,273**	**691**	**150**	**2,433**	**3,298**	**693**	*150*	*2,393*	*3,302*	*707*	*144*	*2,406*	**6,546**	*6,534*	*6,560*
South Atlantic	**1,478**	**195**	**14**	**1,010**	**1,498**	**184**	*14*	*972*	*1,502*	*188*	*13*	*976*	**2,696**	*2,668*	*2,678*
E. S. Central	**1,853**	**236**	**19**	**1,358**	**1,898**	**225**	*19*	*1,307*	*1,905*	*231*	*17*	*1,306*	**3,466**	*3,450*	*3,458*
W. S. Central	**1,188**	**86**	**5**	**834**	**1,221**	**83**	*5*	*814*	*1,227*	*88*	*4*	*813*	**2,113**	*2,123*	*2,132*
Mountain	**2,258**	**730**	**150**	**1,873**	**2,231**	**725**	*147*	*1,880*	*2,215*	*733*	*138*	*1,869*	**5,012**	*4,982*	*4,955*
Pacific	**1,534**	**621**	**92**	**1,205**	**1,495**	**609**	*88*	*1,211*	*1,461*	*596*	*86*	*1,197*	**3,453**	*3,404*	*3,341*
U.S. Average	**2,182**	**493**	**77**	**1,567**	**2,198**	**483**	*76*	*1,534*	*2,192*	*487*	*72*	*1,536*	**4,318**	*4,291*	*4,286*
Cooling Degree Days															
New England	**0**	**71**	**486**	**0**	**0**	**82**	*513*	*1*	*0*	*86*	*413*	*1*	**557**	*596*	*499*
Middle Atlantic	**0**	**186**	**616**	**2**	**0**	**145**	*668*	*6*	*0*	*165*	*564*	*6*	**804**	*820*	*735*
E. N. Central	**0**	**221**	**498**	**9**	**3**	**230**	*623*	*9*	*0*	*225*	*562*	*9*	**728**	*865*	*796*
W. N. Central	**3**	**266**	**658**	**13**	**10**	**319**	*690*	*13*	*3*	*282*	*699*	*12*	**939**	*1,031*	*995*
South Atlantic	**136**	**765**	**1,162**	**337**	**136**	**652**	*1,255*	*237*	*120*	*639*	*1,156*	*232*	**2,400**	*2,281*	*2,147*
E. S. Central	**24**	**581**	**1,022**	**98**	**42**	**536**	*1,142*	*73*	*29*	*519*	*1,058*	*69*	**1,724**	*1,792*	*1,676*
W. S. Central	**51**	**854**	**1,573**	**268**	**121**	**836**	*1,562*	*217*	*89*	*875*	*1,506*	*204*	**2,747**	*2,736*	*2,673*
Mountain	**45**	**430**	**919**	**87**	**34**	**466**	*988*	*88*	*23*	*452*	*965*	*84*	**1,482**	*1,577*	*1,524*
Pacific	**52**	**227**	**688**	**122**	**36**	**227**	*637*	*76*	*32*	*197*	*584*	*76*	**1,089**	*976*	*888*
U.S. Average	**46**	**434**	**878**	**134**	**54**	**410**	*928*	*100*	*44*	*406*	*861*	*97*	**1,491**	*1,492*	*1,407*
Cooling Degree Days, Prior 10-year Average															
New England	**0**	**85**	**420**	**1**	**0**	**81**	*420*	*1*	*0*	*81*	*431*	*1*	**506**	*501*	*512*
Middle Atlantic	**0**	**168**	**557**	**5**	**0**	**168**	*549*	*5*	*0*	*169*	*560*	*6*	**731**	*722*	*735*
E. N. Central	**3**	**234**	**545**	**6**	**3**	**229**	*528*	*6*	*3*	*234*	*534*	*7*	**787**	*766*	*779*
W. N. Central	**7**	**282**	**683**	**9**	**7**	**279**	*674*	*9*	*7*	*281*	*670*	*10*	**981**	*969*	*969*
South Atlantic	**110**	**636**	**1,158**	**210**	**113**	**661**	*1,147*	*222*	*116*	*666*	*1,158*	*226*	**2,114**	*2,144*	*2,166*
E. S. Central	**33**	**526**	**1,053**	**52**	**32**	**541**	*1,038*	*56*	*33*	*545*	*1,045*	*60*	**1,663**	*1,668*	*1,682*
W. S. Central	**94**	**883**	**1,519**	**184**	**90**	**890**	*1,518*	*191*	*90*	*876*	*1,525*	*194*	**2,679**	*2,689*	*2,684*
Mountain	**17**	**423**	**930**	**75**	**21**	**429**	*930*	*76*	*23*	*425*	*941*	*78*	**1,445**	*1,456*	*1,467*
Pacific	**26**	**170**	**601**	**65**	**29**	**180**	*613*	*72*	*31*	*180*	*614*	*74*	**863**	*894*	*899*
U.S. Average	**40**	**396**	**850**	**84**	**42**	**404**	*846*	*89*	*43*	*405*	*854*	*91*	**1,370**	*1,380*	*1,393*

- = 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).