Short-Term Energy Outlook (STEO)

Highlights

- North Sea Brent crude oil prices averaged \$57/barrel (b) in July, a \$5/b decrease from June.
 Brent crude oil spot prices fell further in early August, settling at \$48/b on August 7. The
 recent price declines reflect concerns about lower economic growth in emerging markets,
 expectations of higher oil exports from Iran, and continuing actual and expected growth in
 global inventories.
- EIA forecasts that Brent crude oil prices will average \$54/b in 2015 and \$59/b in 2016, \$6/b and \$8/b lower than in last month's STEO, respectively. Forecast West Texas Intermediate (WTI) crude oil prices in both 2015 and 2016 average \$5/b less than the Brent price. The current values of futures and options contracts for November 2015 delivery (Market Prices and Uncertainty Report) suggest the market expects WTI prices to range from \$34/b to \$64/b (at the 95% confidence interval) in November 2015.
- On July 14, the P5+1 (the five permanent members of the United Nations Security Council and Germany) and Iran announced an agreement that could result in relief from United States and European Union nuclear-related sanctions (which include some oil-related sanctions). If the agreement is implemented and sanctions relief occurs, it will put additional Iranian oil supplies on a global market that has already seen oil inventories rise significantly over the past year. This forecast assumes sanctions relief occurs in 2016, contributing to an annual average increase in Iranian crude oil production of 0.3 million b/d from 2015 to 2016, with most of the increase coming in the second half of 2016.
- U.S. regular gasoline monthly average retail prices averaged \$2.79/gallon (gal) in July, a
 decrease of 1 cent/gal from June and 82 cents/gal lower than in July 2014. EIA expects
 monthly average gasoline prices to decline from their July level to an average of \$2.11/gal
 during the fourth quarter of 2015. EIA forecasts U.S. regular gasoline retail prices to average
 \$2.41/gal for all of 2015.
- EIA estimates total U.S. crude oil production declined by 100,000 barrels per day (b/d) in July compared with June. Production is expected to continue decreasing through mid-2016 before growth resumes late in 2016. Projected U.S. crude oil production averages 9.4 million b/d in 2015 and 9.0 million b/d in 2016, 0.1 million b/d and 0.4 million b/d lower, respectively, than in July's STEO.

- Natural gas working inventories were 2,912 billion cubic feet (Bcf) on July 31, which was 23% higher than a year earlier and 2% higher than the previous five-year average (2010-14).
 EIA projects inventories will close the injection season at the end of October at 3,867 Bcf, which would be the second-highest end-of-October level on record.
- U.S. population-weighted cooling degree days through the end of July were 14% more than in the same period last year. The hotter temperatures contribute to an EIA estimate that the typical residential electricity customer will use 3,134 kilowatthours in the months of June, July, and August this year, which is 4% more than during the same period in 2014.

Global Petroleum and Other Liquids

Global liquids production continues to outpace consumption, leading to strong inventory builds throughout the forecast period. Global oil inventory builds in the second quarter of 2015 averaged 2.7 million b/d, rising by 0.8 million b/d compared with the first quarter of the year. The pace of inventory builds is expected to slow in the second half of the year, to roughly 1.8 million b/d. In 2016, inventory builds are expected to slow to an average of 0.9 million b/d.

Global Petroleum and Other Liquids Consumption. EIA estimates global consumption of petroleum and other liquids grew by 1.1 million b/d in 2014, averaging 92.4 million b/d for the year. EIA expects global consumption of petroleum and other liquids to grow by 1.3 million b/d in 2015, unchanged from the previous month's STEO. Growth in 2016 global consumption was revised upward by 0.1 million b/d compared with last month to an average of 1.5 million b/d. Projected real gross domestic product (GDP) weighted for oil consumption, which increased by 2.8% in 2014, is projected to grow by 2.5% in 2015 and by 3.1% in 2016.

Consumption of petroleum and other liquids in countries outside of the Organization for Economic Cooperation and Development (OECD) grew by 1.4 million b/d in 2014 and is projected to grow by 0.8 million b/d in 2015 and by 1.2 million b/d in 2016. Iran is expected to experience an uptick in economic activity and petroleum consumption, assuming implementation of the Joint Comprehensive Plan of Action (JCPOA) between Iran and the P5+1, which was announced on July 14.

Despite the slowdown in economic growth in the second half of 2014 and thus far in 2015, China continues to be the main driver of non-OECD consumption growth. China's consumption growth is expected to average 0.3 million b/d in 2015 and 2016, below the 0.4 million b/d growth in 2014.

After falling by 0.4 million b/d in 2014, OECD petroleum and other liquids consumption is expected to rise by 0.5 million b/d in 2015 and by 0.3 million b/d in 2016, reaching an average of 46.5 million b/d, the highest annual average level of OECD consumption since 2010. The increase in 2015 stems from both economic and weather factors, with the United States contributing most of the annual consumption growth. U.S. consumption is expected to grow by an average of 0.4 million b/d in 2015 and 0.2 million b/d in 2016. Several other OECD countries

saw economic conditions improve as they emerged from recessions, particularly countries in Europe and to a lesser extent in Asia. In addition, colder-than-normal weather early in 2015 across Europe contributes to a projected 0.1 million b/d increase in consumption in OECD Europe in 2015.

Non-OPEC Petroleum and Other Liquids Supply. EIA estimates that petroleum and other liquids production in countries outside of the Organization of the Petroleum Exporting Countries (OPEC) grew by 2.3 million b/d in 2014, which mainly reflects production growth in the United States. EIA expects non-OPEC production to grow by 1.4 million b/d in 2015, but remain roughly flat in 2016. A number of producers will see output decrease amid lower prices, which have reduced investment. Furthermore, the ongoing corruption probe at state-owned Petrobras is expected to hurt Brazil's ability to expand production, limiting growth in 2016 to less than 0.1 million b/d, down from forecast growth of 0.2 million b/d in 2015. Brazil's relatively recent successes in bringing online a number of floating production, storage, and offloading (FPSO) facilities that had been delayed are driving the 2015 growth, with additional FPSOs slated to be delivered in 2016 at the Lula field.

Production growth in Canada is expected to average 0.3 million b/d in 2015 and increase to 0.4 million b/d in 2016, driven by continued expansion in oil sands projects. Although some previously announced oil sands projects have been put on hold, the vast majority continue as planned, including Imperial Oil and Cenovus oil sand projects scheduled to come online by the end of 2016.

Unplanned supply disruptions among non-OPEC producers averaged about 0.7 million b/d in July, about 0.1 million b/d lower compared with the previous month. In Canada, outages decreased and oil sands production returned to normal following the wildfires in western Canada. Additionally, output at Mexico's Abkatun Pol Chuc system continued to recover following an explosion at the offshore facility.

OPEC Petroleum and Other Liquids Supply. EIA estimates that OPEC crude oil production averaged 30.1 million b/d in 2014, unchanged from the previous year. Crude oil production declines in Libya, Angola, Algeria, and Kuwait offset production growth in Iraq and Iran. EIA forecasts OPEC crude oil production to increase by 0.8 million b/d in 2015 and remain relatively flat in 2016. Iraq is expected to be the largest contributor to OPEC production growth in 2015. In 2016, additional OPEC crude oil supply is expected to come from Iran, which is forecast to boost production if international sanctions targeting its oil sector are suspended.

On July 14, the P5+1 and Iran announced an agreement that could result in relief from United States and European Union nuclear-related sanctions (which include some oil-related sanctions). Sanctions relief is contingent on verification by the International Atomic Energy Agency that Iran has complied with key nuclear-related steps. The sanctions relief would put additional Iranian oil supplies on a global market that has already seen oil inventories rise significantly over the past year.

The JCPOA is currently undergoing a congressional review. As of the time of writing, Congress had not voted on the agreement, but for the purposes of this STEO, EIA assumes sanctions relief could occur in mid-2016. If sanctions relief occurs, EIA forecasts Iranian crude oil supplies will increase by about 0.3 million b/d on average in 2016, with most of the growth occurring in the second half of the year. While much uncertainty remains as to the timing of sanctions relief, EIA's updated Iran projection assumes that adoption takes place by the end of October 2015, with implementation occurring in the second quarter of 2016, clearing the way to easing of the sanctions.

Iran produced 3.6 million b/d of crude oil in late 2011, before the recent round of sanctions was enacted. The sanctions forced Iran to shut in a substantial portion of its production, with production currently averaging about 2.8 million b/d. Iran's ability to bring online previously shut-in volumes and increase exports depends on several factors, including the current condition of oil fields and infrastructure that were shut in and the pace of sanctions relief.

Saudi Arabia and other OPEC member countries are not expected to cut production to accommodate additional Iranian volumes, although some producers will see production declines in the near term. For example, Saudi Arabia's production is expected to respond to lower direct crude burn for electric power generation as seasonal power demand abates. However, there is considerable uncertainty regarding Iraq's ability to sustain its higher production and export levels, particularly in light of infrastructure constraints in the southern terminals.

OPEC noncrude liquids production, which averaged 6.3 million b/d in 2014, is expected to increase by 0.2 million b/d in 2015 and by 0.3 million b/d in 2016, led by production increases in Iran, Qatar, and Kuwait.

In July, unplanned crude oil supply disruptions among OPEC producers averaged 2.6 million b/d, remaining roughly unchanged compared with the previous month. Kuwait and Saudi Arabia continue to have a total of 0.5 million b/d disrupted at the Wafra and Khafji fields in the Neutral Zone that straddles the two countries.

EIA expects OPEC surplus crude oil production capacity, which is concentrated in Saudi Arabia, to decrease to an average of 1.6 million b/d in 2015 and increase to 2.1 million b/d in 2016, after averaging 2.0 million b/d in 2014. Surplus capacity is typically an indicator of market conditions, and surplus capacity below 2.5 million b/d indicates a relatively tight oil market, but the current and forecast levels of global inventory builds make the projected low surplus capacity level in 2015 less significant. EIA does not expect any Iranian spare capacity to be available throughout the forecast period despite increases in effective capacity, as Iran is expected to produce crude oil at the maximum available level through the end of 2016 if and when sanctions are lifted.

OECD Petroleum Inventories. EIA estimates that OECD commercial crude oil and other liquids inventories totaled 2.69 billion barrels at the end of 2014, equivalent to roughly 59 days of consumption. Forecast OECD inventories rise to 2.99 billion barrels at the end of 2015 and then to 3.08 billion barrels at the end of 2016.

Crude Oil Prices. Brent crude oil spot prices decreased by \$5/b in July to a monthly average of \$57/b. Prices fell further at the end of July and into early August, with Brent spot prices settling at \$48/b on August 7. Continuing increases in global liquids inventories put significant downward pressure on prices. Inventories rose by an estimated 2.3 million b/d through the first seven months of 2015, compared with an average build of 0.6 million b/d over the same period last year. Inventory builds are projected to moderate somewhat in the coming months, but are expected to remain high compared with previous years. Concerns over the pace of economic growth in emerging markets and the possibility of increasing volumes of Iranian crude oil on the market also contributed to the recent oil price decline.

The monthly average WTI crude oil spot price fell to an average of \$51/b in July, down \$9/b from June. Crude oil inventories at Cushing, Oklahoma, despite having decreased by 5.0 million barrels from their record high of 62.2 million barrels on April 17, remain about 40 million barrels higher than at the same time last year. U.S. crude oil inventories remain elevated compared with historical levels, despite strong U.S. refinery runs, which in recent weeks reached record highs over 17 million b/d.

EIA projects the Brent crude oil price will average \$54/b in 2015 and \$59/b in 2016, \$6/b and \$8/b lower than in July's STEO, respectively. WTI prices in both 2015 and 2016 are expected to average \$5/b less than the Brent crude oil price. EIA's updated projection remains subject to significant uncertainties as the oil market moves toward balance. During this period of price discovery, oil prices could experience periods of heightened volatility. The oil market faces a host of uncertainties heading into 2016 including the pace and volume at which Iranian oil reenters the market, the strength of oil consumption growth, and the responsiveness of non-OPEC production to low oil prices. In the more immediate future, there is potential downward price pressure heading into the fourth quarter if refinery runs drop by more than expected during the fall maintenance season.

The current values of futures and options contracts continue to suggest high uncertainty in the price outlook (*Market Prices and Uncertainty Report*). WTI futures contracts for November 2015 delivery, traded during the five-day period ending August 6, averaged \$47/b, while 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 November 2015 at \$34/b and \$64/b, respectively. The 95% confidence interval for market expectations widens over time, with lower and upper limits of \$27/b and \$103/b for prices in December 2016. Last year at this time, WTI for November 2014 delivery averaged \$96/b, and implied volatility averaged 16%. The corresponding lower and upper limits of the 95% confidence interval were \$84/b and \$111/b.

U.S. Petroleum and Other Liquids

On July 13, U.S. average diesel fuel retail prices fell below average regular gasoline prices for the first time since the week of August 10, 2009, and have remained lower for four consecutive weeks. Ongoing refinery outages in California, as well as strong demand for gasoline in both the

United States and abroad, have kept gasoline prices elevated over the past two months despite falling crude oil prices. Data from the U.S. Federal Highway Administration show Americans drove a record 1.26 trillion miles during the first five months of 2015, compared with the previous record of 1.23 trillion miles driven in the first five months of 2007. As a result, refinery wholesale gasoline margins (the difference between the wholesale price of gasoline and the price of Brent crude oil) have been strong in recent months, leading to record-high refinery runs. U.S. average wholesale gasoline margins averaged 73 cents/gal in July, 42 cents/gal higher than in July of last year and 40 cents/gal higher than the five-year average (2010-14) for July.

Refinery outages on the West Coast have contributed to gasoline prices in that region rising by more than the U.S. average over the past few months, as well as significant price volatility. After declining by 22 cents/gal from May 18 to an average of \$3.30/gal on July 6, regular gasoline prices in Petroleum Administration for Defense District (PADD) 5 increased again to a new 2015 peak of \$3.60/gal on July 20. PADD 5 retail prices have fallen to \$3.36/gal as of August 10.

In July, monthly average regional gasoline retail prices ranged from a low of \$2.49/gal in PADD 3, the Gulf Coast region, to a high of \$3.51/gal in PADD 5. EIA expects gasoline prices to fall from their current levels, with the U.S. regular gasoline price averaging \$2.11/gal in the fourth quarter of 2015.

Liquid Fuels Consumption. Total U.S. liquid fuels consumption rose by an estimated 70,000 b/d (0.4%) in 2014. Total liquid fuels consumption is forecast to grow by 400,000 b/d (2.1%) in 2015 and by 190,000 b/d (1.0%) in 2016. The 2016 consumption forecast is about 70,000 b/d higher than forecast in last month's STEO.

Motor gasoline consumption, which rose by 80,000 b/d in 2014, increases by a projected 210,000 b/d (2.3%) in 2015 as the effects of employment growth and lower gasoline prices outweigh increases in vehicle fleet efficiency. Gasoline consumption is forecast to remain relatively flat in 2016, as a long-term trend toward more-fuel-efficient vehicles offsets the effects of continued economic growth.

Consumption of distillate fuel, which includes diesel fuel and heating oil, is forecast to rise by 40,000 b/d (1.1%) in 2015 and by an additional 100,000 b/d (2.4%) in 2016. This growth is driven by increasing manufacturing output, foreign trade, and marine fuel use.

Hydrocarbon gas liquids (HGL) consumption, which fell by 100,000 b/d (4.0%) in 2014, is projected to increase by 90,000 b/d in both 2015 and 2016, as new petrochemical plant capacity increases the use of HGL as a feedstock. In addition, new HGL export terminal capacity contributes to an increase in HGL net exports from an average of 560,000 b/d in 2014 to 1.1 million b/d in 2016.

Liquid Fuels Supply. U.S. crude oil production is projected to increase from an average of 8.7 million b/d in 2014 to 9.4 million b/d in 2015 and then decrease to 9.0 million b/d in 2016. The forecast is about 0.1 million b/d lower and 0.4 million b/d lower for 2015 and 2016, respectively, than in July's STEO. The decrease in the crude oil production forecast reflects a lower oil price

outlook that will reduce expected oil-directed rig counts and drilling and well-completion activities throughout the forecast period.

EIA estimates that U.S. crude oil production averaged 9.5 million b/d in the first half of 2015. This level is 0.3 million b/d higher than the average production during the fourth quarter of 2014, despite an almost 60% decline in the total U.S. oil-directed rig count since October 2014. The most recent production estimates indicate U.S. crude oil output was 9.5 million b/d in May. EIA estimates that total U.S. production was unchanged in April and began declining in May, falling 180,000 b/d from the April level. Some of this decline reflects outages in the Gulf of Mexico that are expected to be temporary. The decrease in total production was preceded by declines in onshore production, which began in April.

EIA expects U.S. crude oil production declines to continue through the third quarter of 2016, when total crude oil production is forecast to average 8.8 million b/d. Forecast production begins rising in late 2016, returning to an average of 9.1 million b/d in the fourth quarter. A total of 13 projects are scheduled to come online in the Gulf of Mexico in 2015 and 2016, pushing up Gulf of Mexico production from an average of 1.4 million b/d in the fourth quarter of 2014 to more than 1.6 million b/d in the same period of 2016.

Expected crude oil production declines from May 2015 through the third quarter of 2016 are largely attributable to unattractive economic returns in some areas of both emerging and mature onshore oil production regions, as well as seasonal factors such as anticipated hurricane-related production disruptions in the Gulf of Mexico. Reductions in 2015 cash flows and capital expenditures have prompted companies to defer or redirect investment away from marginal exploration and research drilling to focus on core areas of major tight oil plays. Reduced investment has resulted in the lowest count of oil-directed rigs in nearly five years and well completions that are significantly behind 2014 levels.

Oil prices, particularly in the second quarter of 2015, remained high enough to support continued development drilling in the core areas of the Bakken, Eagle Ford, Niobrara, and Permian basins, with July showing the first month-to-month increase in the oil-directed rig count since October 2014. However, the recent fall in crude oil prices and lowered outlook for oil prices over the forecast period are expected to prolong and deepen onshore production declines. Lower crude oil prices are anticipated to slow the rate of recovery in onshore drilling activities and well completion totals, despite continued increases in rig and well productivity and falling drilling and completion costs. The forecast remains sensitive to actual wellhead prices and rapidly changing drilling economics that vary across regions and operators.

While projected oil production in the Gulf of Mexico rises during the forecast period, Alaska oil production falls. Production in these areas is less sensitive to short-term price movements than onshore production in the Lower 48 states and reflects anticipated growth from new projects and declines from legacy fields.

HGL production at natural gas processing plants reached a record level of 3.31 million b/d in April 2015, and it is projected to average 3.28 million b/d in 2015 and 3.53 million b/d in 2016.

EIA expects higher ethane recovery rates in 2016 following planned increases in petrochemical plant feedstock demand. Export terminal expansions will allow for higher quantities of domestically produced ethane, propane, and butanes to reach the international market.

U.S. petroleum product gross exports continue to grow, up almost 0.5 million b/d (13%) in the first five months of 2015 compared with the same period in 2014. More than half of the growth in liquid fuel exports came from HGL. The increase in refined product exports, combined with the growth in domestic liquid fuels consumption, contributed to U.S. refinery utilization rates averaging 89.9% over the first five months, up from 88.1% last year and the highest rate for this period since 2005. Gross inputs to U.S. refineries exceeded 17 million b/d in each of the last four weeks of July, a level that had not previously been reached or exceeded in any week since EIA began publishing the data in 1990.

Petroleum Product Prices. Rising crude oil prices, strong demand for U.S. gasoline, and several refinery outages in the Midwest and West Coast contributed to an increase in U.S. regular gasoline retail prices from a monthly average of \$2.47/gal in April to \$2.79/gal in July. EIA expects monthly average prices to decline in the coming months as refineries continue to produce high levels of gasoline, as demand begins to decrease following the peak in the summer driving season, and as the market transitions to lower-cost winter-grade gasoline. EIA projects regular gasoline retail prices to average \$2.60/gal during the third quarter of 2015 and \$2.11/gal in the fourth quarter.

The U.S. regular gasoline retail price, which averaged \$3.36/gal in 2014, is projected to average \$2.41/gal in 2015, 7 cents/gal lower than in July's STEO, and \$2.40/gal in 2016, which is 15 cents/gal lower than in July's STEO.

The diesel fuel retail price, which averaged \$3.83/gal in 2014, is projected to fall to an average of \$2.73/gal in 2015, 13 cents/gal lower than in July's STEO, and then rise to \$2.81/gal in 2016, 23 cents/gal lower than in last month's STEO.

As with crude oil, the market's expectation of uncertainty in monthly average gasoline prices is reflected in the pricing and implied volatility of futures and options contracts. New York Harbor reformulated blendstock for oxygenate blending (RBOB) futures contracts for November 2015 delivery, traded over the five-day period ending August 6, averaged \$1.45/gal. The probability that the RBOB futures price will exceed \$1.85/gal (consistent with a U.S. average regular gasoline retail price above \$2.50/gal) in November 2015 is about 7%.

Natural Gas

The natural gas storage injection season passed the halfway mark in mid-July, and inventories totaled 2,912 Bcf on July 31, which was 23% higher than a year earlier and 2% higher than the previous five-year average (2010-14). Inventories began the injection season about 173 Bcf lower than the five-year average, but have been greater than the five-year average since the end of May. EIA projects inventories will end October at 3,867 Bcf, which would be the second-highest October level on record. Year-over-year strength in production has boosted storage

injections this summer, despite warmer temperatures, which have increased natural gas use in the power sector to serve air conditioning demand.

Tallgrass Energy brought online the final phase of its east-to-west pipeline reversal on the Rockies Express Pipeline (REX) earlier this month. This expansion allows for 1.8 Bcf/d of Marcellus and Utica natural gas to flow westward from eastern Ohio to Missouri. REX began service in 2009 to move natural gas from the Rockies to Midwestern and Northeastern markets. Over the past several years, however, demand for Rockies natural gas in the east has declined because of exponential growth in Marcellus-area production.

Natural Gas Consumption. EIA's forecast of U.S. total natural gas consumption averages 76.5 Bcf/d in both 2015 and 2016, compared with 73.5 Bcf/d in 2014. EIA projects natural gas consumption in the power sector to increase by 13.9% in 2015 and then decrease by 3.4% in 2016. Relatively low natural gas prices support increased use of natural gas for electricity generation in 2015. Industrial sector consumption increases by 2.3% in 2015 and by 5.0% in 2016, as new industrial projects, particularly in the fertilizer and chemicals sectors, come online later this year and next year, and as industrial consumers continue to take advantage of low natural gas prices. Natural gas consumption in the residential and commercial sectors is projected to decline in both 2015 and 2016.

Natural Gas Production and Trade. EIA expects that marketed natural gas production will increase by 4.0 Bcf/d (5.4%) and by 1.8 Bcf/d (2.3%) in 2015 and 2016, respectively. Despite data showing month-over-month production declines in May and June, natural gas production remains higher than year-ago levels. EIA expects moderate growth through 2016, with increases in the Lower 48 states expected to more than offset long-term production declines in the Gulf of Mexico. Increases in drilling efficiency will continue to support growing natural gas production in the forecast despite relatively low natural gas prices. Most of the growth is expected to come from the Marcellus Shale, as the backlog of uncompleted wells is reduced and as new pipelines come online to deliver Marcellus natural gas to markets in the Northeast.

Increases in domestic natural gas production are expected to reduce demand for natural gas imports from Canada and are expected to support growth in exports to Mexico. EIA expects natural gas exports to Mexico, particularly from the Eagle Ford Shale in South Texas, to increase because of growing demand from Mexico's electric power sector, coupled with flat Mexican natural gas production.

EIA projects LNG gross exports will increase to an average of 0.79 Bcf/d in 2016, with the startup of a major LNG liquefaction plant in the Lower 48 states.

Natural Gas Inventories. On July 31, natural gas working inventories totaled 2,912 Bcf, which was 535 Bcf (23%) above the level at the same time in 2014 and 64 Bcf (2%) above the five-year average for that week. To this point in the injection season, injections have surpassed the five-year average by a wide margin. EIA projects end-of-October 2015 inventories will total 3,867 Bcf, 69 Bcf (1.8%) above the five-year average for that time.

Natural Gas Prices. The Henry Hub natural gas spot price averaged \$2.84/million British thermal units (MMBtu) in July, an increase of 6 cents/MMBtu from the June price. The current STEO lowers the projection for prices slightly from last month's forecast; monthly average spot prices remain lower than \$3/MMBtu through October, and lower than \$4/MMBtu through the remainder of the forecast. The projected Henry Hub natural gas price averages \$2.89/MMBtu in 2015 and \$3.21/MMBtu in 2016.

Natural gas futures contracts for November 2015 delivery traded during the five-day period ending August 6 averaged \$2.91/MMBtu. Current options and futures prices imply that market participants place the lower and upper bounds for the 95% confidence interval for November 2015 contracts at \$2.08/MMBtu and \$4.06/MMBtu, respectively. At this time last year, the natural gas futures contract for November 2014 delivery averaged \$3.96/MMBtu, and the corresponding lower and upper limits of the 95% confidence interval were \$3.03/MMBtu and \$5.16/MMBtu, respectively.

Coal

Recent changes in the global coal market contributed to lower U.S. coal production in the second quarter. Slower growth in world coal demand, lower international coal prices, and higher coal output in other coal-exporting countries have all led to a two-year decline in U.S. coal exports. Australia, the world's second-largest coal exporter, has seen exports continue to increase, but export earnings are expected to fall this year. Lower mining costs, cheaper transportation costs, and favorable exchange rates will continue to provide an advantage to Australian coal producers over their American counterparts in the forecast period. Other major coal-exporting countries (Indonesia, Colombia, Russia, and South Africa) currently have similar advantages compared with U.S. coal producers.

Activities in major coal consuming nations (China and India) have also affected the global coal market. India has seen an upswing in domestically produced coal, causing Indian coal import growth to be nearly flat. Chinese demand for coal and coal imports has fallen as well. Several factors have contributed to these developments, including slower electricity demand and industrial growth and the imposition of more stringent environmental regulations on the power and energy-intensive industries. Imported coal has also been affected by the levying of new taxes and stricter environmental quality testing, which has seen some imported shipments of coal being denied entry.

Coal Trade. EIA projects coal exports will fall by 14 million short tons (MMst), to 83 MMst, in 2015, and remain at that level in 2016. U.S. coal imports, which increased by more than 2 MMst in 2014 to 11 MMst, are expected to remain near that level in 2015 and 2016.

Coal Supply. Lower domestic coal consumption and exports, combined with a slight increase in coal imports, are projected to contribute to an 83 MMst (8%) decline in production for 2015. Coal production is expected to decrease in all coal-producing regions in 2015. However, production is expected to increase by 10 MMst (1%) in 2016, driven by modest production

growth in the Interior region and the Western region, as coal use increases in the electric power sector.

Electric power sector stockpiles increased to 175 MMst in May (the most recent month for which data are available), a 4% increase from the previous month. This monthly increase (April to May) in coal inventories follows the normal spring pattern in which coal stockpiles are usually built up for use in the summer months. Coal inventories were 38 MMst higher than in May 2014 when inventories were still recovering from the effects of colder-than-normal temperatures earlier in the year, and they are only 2 MMst lower than the previous five-year average for the month.

Coal Consumption. EIA expects a 7% decrease in coal consumption in the electric power sector in 2015. Lower natural gas prices and the growth of renewable-based generation are the key factors driving the decrease in coal consumption. Projected low natural gas prices make it more economical to run natural gas-fired generating units at higher utilization rates even in regions of the country that typically rely more heavily on coal-fired generation (Midwest and South). Nonhydropower renewable-based electricity generation is expected to grow by 4% in 2015, with the largest growth occurring in the South (8%). The retirements of coal-fired power plants in response to the implementation of the Mercury and Air Toxics Standards (MATS) also reduces coal-fired capacity in the power sector in 2015, but the full effect of the coal plant retirements on capacity will be felt in 2016.

Projected rising electricity demand and higher natural gas prices next year are expected to contribute to higher utilization rates among the remaining coal-fired fleet. Even with continued implementation of MATS, which the U.S. Supreme Court recently sent back to the U.S. Court of Appeals for the D.C. Circuit for further review, coal consumption in the electric power sector is forecast to increase by 1.9% in 2016.

Coal Prices. The annual average coal price to the electric power sector decreased from \$2.39/MMBtu in 2011 to \$2.36/MMBtu in 2014. EIA expects the delivered coal price to average \$2.28/MMBtu in 2015 and 2016.

Electricity

Monthly data show 4,250 megawatts (MW) of new utility-scale generating capacity has come online in the United States this year through May, about the same amount that came online during the first five months of 2014. Generating units powered by renewable energy sources account for 55% of this year's new capacity, and new natural gas-fired capacity accounts for 44%. Texas is the state with the largest amount of new capacity this year (2,074 MW). Capacity additions in Texas are about evenly split between wind and natural gas.

Electricity Consumption. U.S. population-weighted cooling degree days so far in 2015 (through July) were 14% higher than the same period last year, which is a primary factor in the higher summer consumption of electricity. EIA estimates that the typical residential electricity

customer will use 3,134 kilowatthours of electricity during the months of June, July, and August this year, which is 4% more than in the same months in 2014.

EIA expects U.S. retail sales of electricity to the residential sector during 2015 to grow by 0.4% from 2014 levels. Residential sales of electricity are expected to fall by 1.0% in 2016, reflecting a forecast of milder summer and winter temperatures next year that reduces electricity use for cooling and heating-related demand.

Electricity Generation. U.S. generation of electricity fueled by natural gas exceeded coal-fired generation for the first time on record in April 2015, when the Henry Hub natural gas price hit a recent low of \$2.61/MMBtu. Since then, natural gas prices have risen to an average of \$2.84/MMBtu in July. EIA expects the price to continue increasing slowly through 2016, which contributes to projected coal-fired generation exceeding natural gas-fired generation through the short-term forecast horizon. EIA forecasts coal's share of U.S. total generation will average 35.6% in 2015, down from 38.7% in 2014. The natural gas fuel share averages 31.2% in 2015, up from 27.4% in 2014.

Electricity Retail Prices. The U.S. retail price of electricity to the residential sector is projected to average 12.7 cents per kilowatthour in 2015, which is 1.9% higher than the average price last year. This year-over-year increase in average electricity prices, combined with higher expected summer residential use, leads to a forecast 5.0% (\$20) increase in the typical residential customer's summer electricity expenditures compared with last summer.

Renewables and Carbon Dioxide Emissions

Electricity and Heat Generation from Renewables. EIA expects total renewables used in the electric power sector will decrease by 2.6% in 2015. Conventional hydropower generation is forecast to decrease by 9.9%, and nonhydropower renewable power generation is forecast to increase by 4.5%. The 2015 decrease in hydropower generation reflects the effects of the California drought, which are only partially offset by growth in hydropower use elsewhere. Generation from hydropower in the electric power sector is expected to increase by 12.3% in 2016. Total renewables consumption for electric power and heat generation decreases by 4.0% in 2015 and increases by 7.6% in 2016.

EIA expects continued growth in utility-scale solar power generation, which is projected to average 87 gigawatthours per day (GWh/d) in 2016. Because the growth is from a small base, utility-scale solar power averages only 0.8% of total U.S. electricity generation in 2016. Although solar growth has historically been concentrated in customer-sited distributed generation installations (rooftop panels), EIA expects utility-scale solar capacity will increase by almost 100% (10 GW) between the end of 2014 and the end of 2016, with 3.9 GW of this new capacity being built in California. Other leading states in utility-scale solar capacity include North Carolina and Nevada, which, combined with California, account for almost 70% of the projected utility-scale capacity additions for 2015 and 2016. Power plant developers have notified EIA of plans to construct 13 projects in Georgia (totaling 607 MW) with expected 2015 or 2016 in-service dates. Five of these new projects (166 MW) will be built on U.S. military bases. Georgia currently has

66 MW of utility-scale solar capacity. According to current law, projects coming online after the end of 2016 will see a federal investment tax credit of 10%, below the 30% investment tax credit available for projects that come online before the end of 2016. This impending decline in the tax credit provides a strong incentive for projects to enter service before the end of 2016.

Wind capacity, which grew by 8% in 2014, is forecast to increase by 12% in 2015 and by 14% in 2016. Because wind is starting from a much larger base than solar, even though the growth rate is lower, the absolute increase in wind capacity is twice that of solar: 18 GW of wind compared with 10 GW of utility-scale solar between 2014 and 2016.

Liquid Biofuels. On May 29, the U.S. Environmental Protection Agency (EPA) proposed a rule setting Renewable Fuel Standard (RFS) volumes for 2014 through 2016. Although these volumes could be modified before the final rule is issued, they are used in developing the current STEO. Ethanol production, which averaged 935,000 b/d in 2014, is forecast to remain near current levels in 2015 and 2016. Ethanol consumption, which averaged 878,000 b/d in 2014, is forecast to average about 900,000 b/d in both 2015 and 2016, resulting in an average 9.9% ethanol share of the total gasoline pool those years. EIA does not expect significant increases in E15 or E85 consumption over the forecast period. The proposed RFS targets are expected to encourage imports of Brazilian sugarcane ethanol, which were 3,000 b/d in 2014. Because of the expected increase in ethanol gross imports, net exports of ethanol are forecast to fall from 51,000 b/d in 2014 to 43,000 b/d in 2015, and to 37,000 b/d in 2016.

EIA expects the largest effect of the proposed RFS targets to be on biodiesel consumption, which contributes to meeting the biomass-based diesel, advanced biofuel, and total renewable fuel RFS targets. Biodiesel production averaged an estimated 81,000 b/d in 2014 and is forecast to average 91,000 b/d in 2015 and 98,000 b/d in 2016. Net imports of biomass-based diesel are also expected to increase from 16,000 b/d in 2014 to 24,000 b/d in 2015, and to 35,000 b/d in 2016. EIA expects that a combination of higher biomass-based diesel consumption, higher consumption of domestic and imported ethanol, and banked Renewable Identification Numbers (RINs) will help meet the newly proposed RFS volumes through 2016.

Energy-Related Carbon Dioxide Emissions. EIA estimates that emissions grew by 1.0% in 2014. Emissions are projected to fall by 0.2% in 2015 and then rise by 0.7% in 2016. These forecasts are sensitive to both weather and economic assumptions. Monthly carbon dioxide emissions from the electric power sector were at a 27-year low in April, which is typically the month with the lowest generation level in each year.

U.S. Economic Assumptions

Recent Economic Indicators. The Bureau of Economic Analysis (BEA) reported that real GDP increased at an annual rate of 2.3% in the second quarter of 2015. The growth of real GDP was broad-based and reflected positive contributions from consumption, exports, state and local government spending, and residential fixed investment. The estimate of growth in the first quarter of 2015 was also revised up to 0.6%; the previous estimate was -0.2%.

EIA used the July 2015 version of the IHS macroeconomic model with EIA's energy price forecasts as model inputs to develop the economic projections in the current STEO.

Production, Income, and Employment. Forecast real GDP growth reaches 2.2% in 2015 and rises to 3.0% in 2016. The 2015 growth is above the 2.0% forecast in last month's STEO, and the 2016 growth is also above the 2.8% July forecast. Real disposable income grows by 3.5% in 2015, the same as in the July forecast, and by 2.9% in 2016. Total industrial production grows at 1.8% in 2015 and 3.3% in 2016. Projected growth in nonfarm employment averages 2.1% in 2015 and 1.5% in 2016.

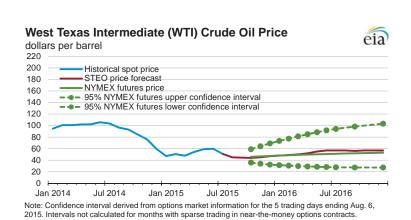
Expenditures. Forecast private real fixed investment growth averages 4.7% and 7.3% in 2015 and 2016, respectively, led by equipment in 2015 and 2016 and by equipment and structures in 2016. Real consumption expenditures grow faster than real GDP in 2015, at 3.0%, and the same as real GDP in 2016 at 3.0%. Durable goods expenditures drive consumption spending in both years. Export growth is 2.2% and 4.6% over the same two years, while import growth is 6.0% in 2015 and 2016. Total government expenditures rise by 0.9% in 2015 and by 0.8% in 2016.

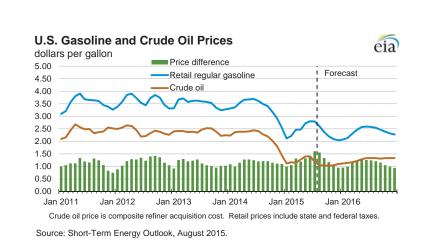
This report was prepared by the U.S. Energy Information Administration (EIA), the statistical and analytical agency within the U.S. Department of Energy. By law, EIA's data, analyses, and forecasts are independent of approval by any other officer or employee of the United States Government. The views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

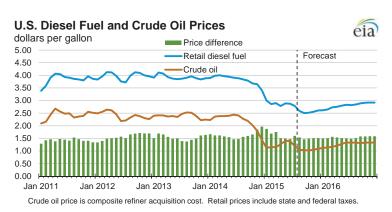


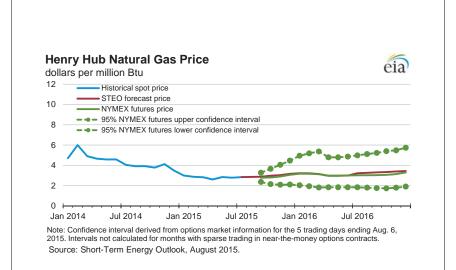
Short-Term Energy Outlook

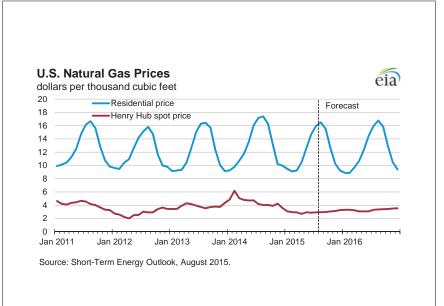
Chart Gallery for August 2015

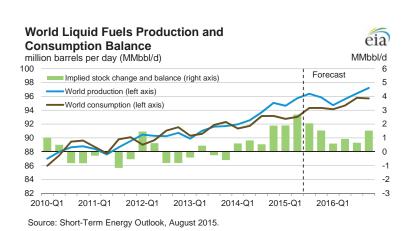


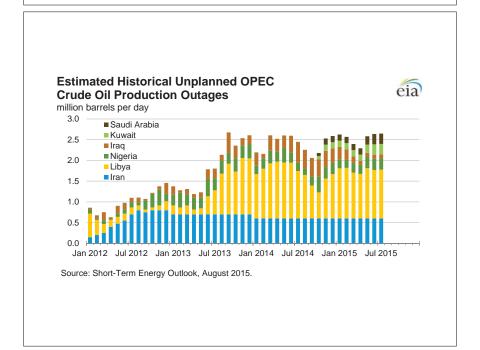


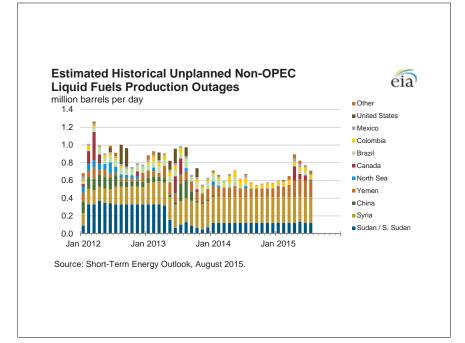


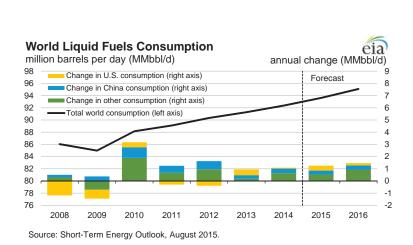


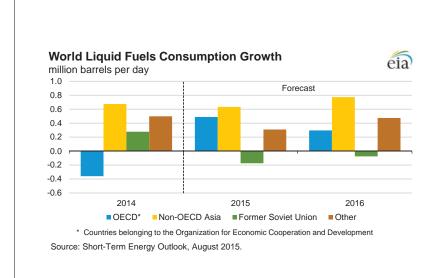


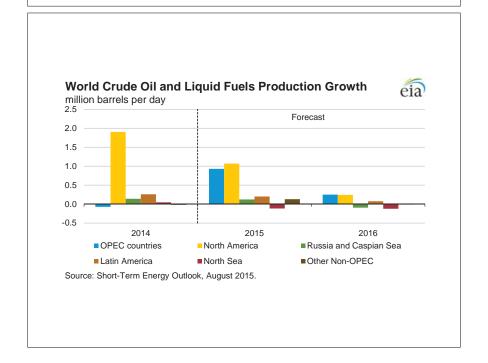


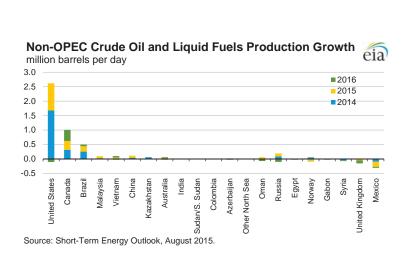


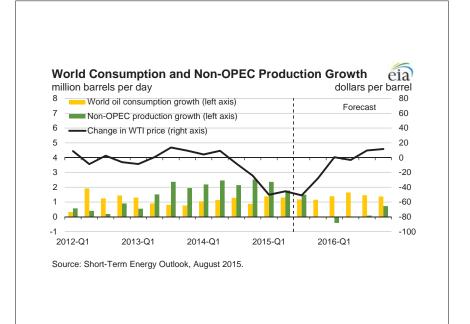


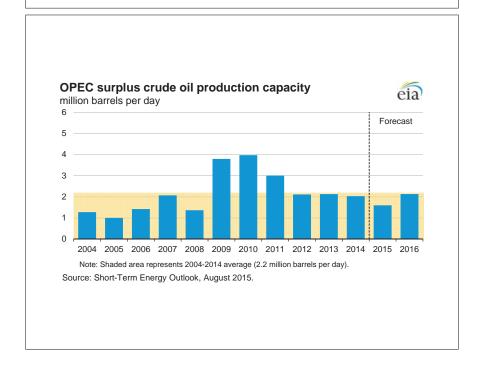


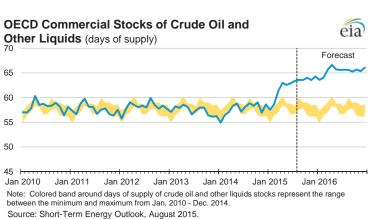


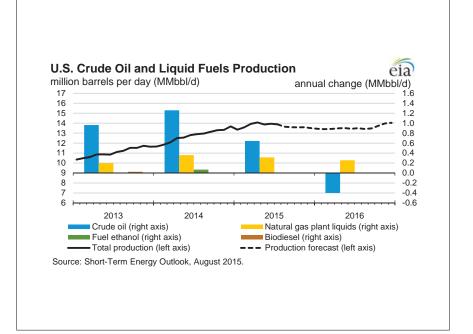


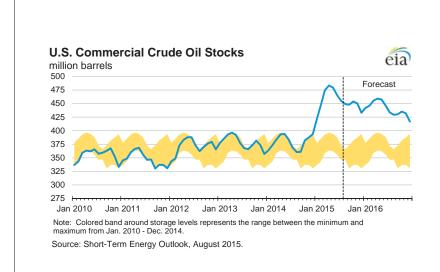


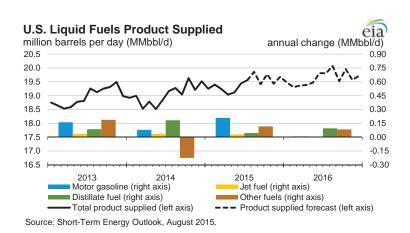


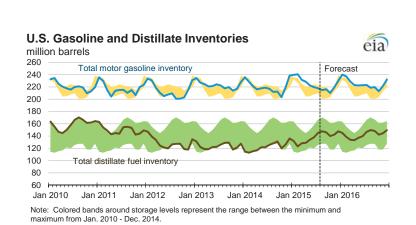


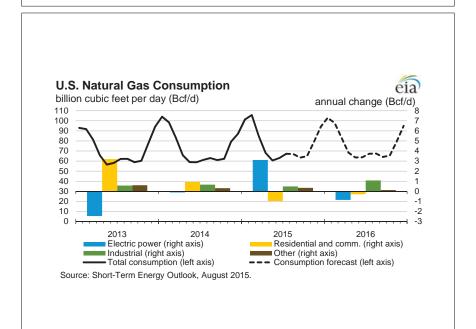


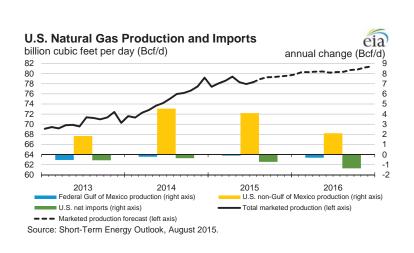


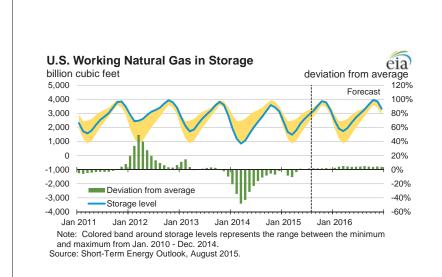


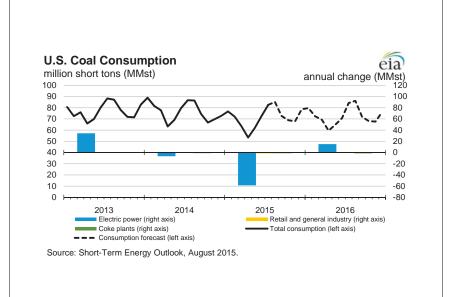


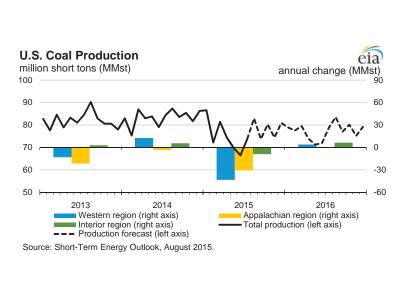


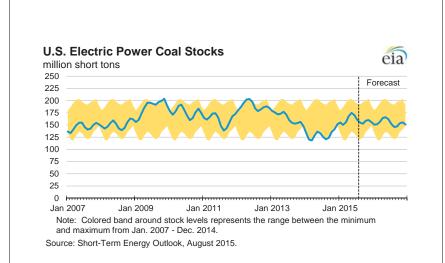


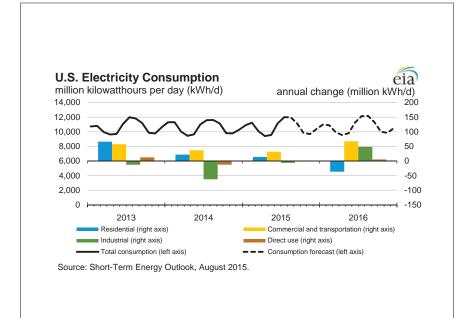


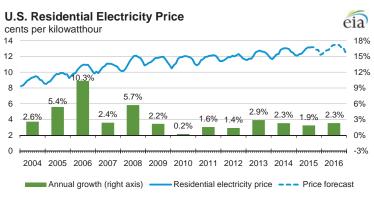






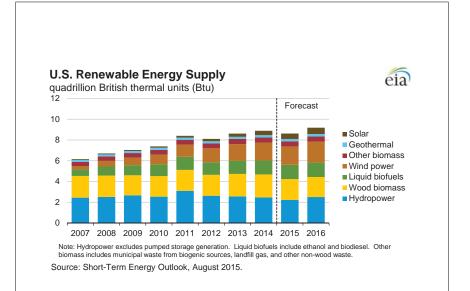


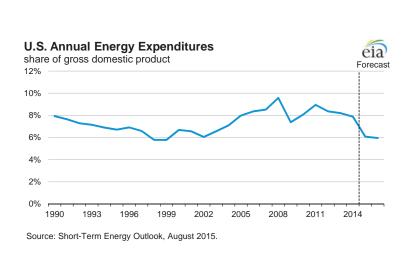


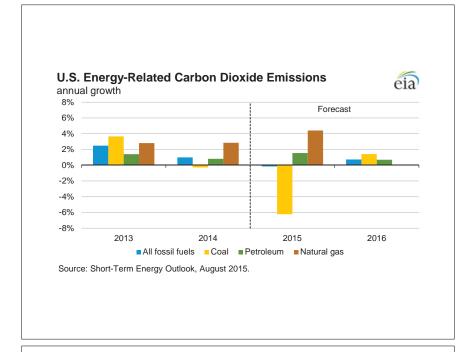


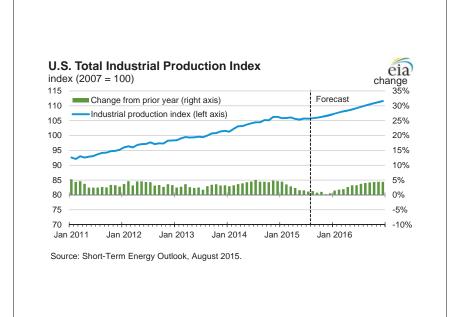
U.S. Electricity Generation by Fuel, All Sectors eia thousand megawatthours per day 14,000 Forecast 12,000 Coal 10,000 Natural gas ■ Petroleum 8.000 ■ Nuclear 6,000 Hydropower ■ Renewables 4.000 Other sources 2,000 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016

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

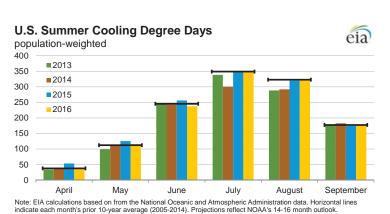




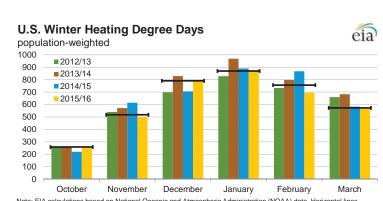








Source: Short-Term Energy Outlook, August 2015.



Note: EIA calculations based on National Oceanic and Atmospheric Administration (NOAA) data. Horizontal lines indicate each month's prior 10-year average (Oct 2005 - Mar 2015). Projections reflect NOAA's 14-16 month outlook. Source: Short-Term Energy Outlook, August 2015.

U.S. Census Regions and Divisions West Midwest Mountain Division West NorthCentral Division Certral Divi West NorthCentral Division Certral Divi Division Certral Divi Division Certral Divi Division Certral Divi Division

Northeast

South

Table SF01. U.S. Motor Gasoline Summer Outlook

U.S. Energy miormation Administration		2014	Outlook - A	<u> </u>	2015		Year-o	ver-year ((percent)	•
	Q2	Q3	Season	Q2	Q3	Season	Q2	Q3	Season
Nominal Prices (dollars per gallon)									
WTI Crude Oil (Spot) ^a	2.46	2.33	2.39	1.38	1.12	1.25	-44.0	-52.1	-48.0
Brent Crude oil Price (Spot)	2.61	2.43	2.52	1.47	1.23	1.35	-43.8	-49.1	-46.4
U.S. Refiner Average Crude Oil Cost	2.41	2.30	2.35	1.36	1.09	1.22	-43.6	-52.5	-48.0
Wholesale Gasoline Price ^b	2.98	2.76	2.87	2.00	1.83	1.91	-32.8	-33.8	-33.3
Wholesale Diesel Fuel Price ^b	3.00	2.88	2.94	1.89	1.60	1.74	-36.9	-44.4	-40.7
Regular Gasoline Retail Price ^c	3.68	3.50	3.59	2.67	2.60	2.63	-27.5	-25.9	-26.7
Diesel Fuel Retail Price ^c	3.94	3.84	3.89	2.85	2.62	2.73	-27.7	-31.6	-29.7
Gasoline Consumption/Supply (million	barrels per	day)							
Total Consumption	9.010	9.098	9.054	9.274	9.294	9.284	2.9	2.2	2.5
Total Refinery and Blender Output ^d	7.872	8.026	7.950	8.048	8.264	8.157	2.2	3.0	2.6
Fuel Ethanol Blending	0.892	0.886	0.889	0.912	0.924	0.918	2.2	4.3	3.3
Total Stock Withdrawal ^e	0.023	0.069	0.046	0.131	0.037	0.084			
Net Imports ^e	0.223	0.116	0.169	0.184	0.069	0.126	-17.6	-40.7	-25.5
Refinery Utilization (percent)	90.4	93.4	91.9	92.9	94.0	93.4			
Gasoline Stocks, Including Blending C	omponents	s (million b	arrels)						
Beginning	220.9	218.8	220.9	231.5	219.6	231.5			
Ending	218.8	212.5	212.5	219.6	216.2	216.2			
Economic Indicators (annualized billion	2000 dollar	rs)							
Real GDP	16,010	16,206	16,108	16,382	16,491	16,437	2.3	1.8	2.0
Real Income	11,900	11,970	11,935	12,317	12,395	12,356	3.5	3.5	3.5

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

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: EIAPetroleum 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.

^b Price product sold by refiners to resellers.

^c Average pump price including taxes.

^d Refinery and blender net production plus finished motor gasoline adjustment.

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

Table SF02 Average Summer Residential Electricity Usage, Prices and Expenditures

						Forecast	Change
	2010	2011	2012	2013	2014	2015	from 2014
United States							
Usage (kWh)	3,471	3,444	3,354	3,126	3,015	3,134	3.9%
Price (cents/kWh)	12.00	12.06	12.09	12.67	13.02	13.15	1.0%
Expenditures	\$416	\$415	\$405	\$396	\$393	\$412	5.0%
New England							
Usage (kWh)	2,227	2,122	2,188	2,173	1,910	1,907	-0.1%
Price (cents/kWh)	16.14	15.85	15.50	16.03	17.61	20.17	14.5%
Expenditures	\$359	\$336	\$339	\$348	\$336	\$385	14.4%
Mid-Atlantic							
Usage (kWh)	2,644	2,531	2,548	2,447	2,211	2,300	4.0%
Price (cents/kWh)	16.66	16.39	15.63	17.10	16.85	16.52	-2.0%
Expenditures	\$440	\$415	\$398	\$418	\$372	\$380	2.0%
East North Central							
Usage (kWh)	3,073	2,975	3,048	2,618	2,492	2,552	2.4%
Price (cents/kWh)	11.94	12.17	12.08	12.59	13.07	13.31	1.8%
Expenditures	\$367	\$362	\$368	\$329	\$326	\$340	4.3%
West North Central							
Usage (kWh)	3,558	3,517	3,547	3,098	3,003	3,106	3.4%
Price (cents/kWh)	10.74	11.16	11.50	12.64	12.45	12.64	1.5%
Expenditures	\$382	\$393	\$408	\$392	\$374	\$393	5.0%
South Atlantic							
Usage (kWh)	4,411	4,277	4,001	3,772	3,730	3,984	6.8%
Price (cents/kWh)	11.39	11.48	11.65	11.75	12.11	12.03	-0.7%
Expenditures	\$502	\$491	\$466	\$443	\$452	\$479	6.1%
East South Central							
Usage (kWh)	4,902	4,750	4,467	4,078	4,020	4,328	7.6%
Price (cents/kWh)	9.90	10.28	10.36	10.71	11.09	11.02	-0.6%
Expenditures	\$485	\$488	\$463	\$437	\$446	\$477	7.0%
West South Central							
Usage (kWh)	4,830	5,231	4,781	4,507	4,250	4,377	3.0%
Price (cents/kWh)	10.86	10.64	10.27	10.94	11.41	11.60	1.6%
Expenditures	\$525	\$557	\$491	\$493	\$485	\$508	4.7%
Mountain	75-5	***	7.52	7	7 .55	7	
Usage (kWh)	3,340	3,322	3,440	3,380	3,225	3,235	0.3%
Price (cents/kWh)	11.25	11.29	11.55	11.97	12.37	12.66	2.4%
Expenditures	\$376	\$375	\$397	\$405	\$399	\$410	2.7%
Pacific	73.0	+ 3,3	, 55,	Ţ 103	4333	V-1-0	2., 70
Usage (kWh)	2,006	2,022	2,079	2,026	2,074	2,078	0.2%
Price (cents/kWh)	12.95	13.22	13.78	14.47	15.20	15.88	4.5%
Expenditures	\$260	\$267	\$286	\$293	\$315	\$330	4.7%

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

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

Table 1. U.S. Energy Markets Summary

		201				201			<u> </u>	20				Year	
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2014	2015	2016
Energy Supply															
Crude Oil Production (a)															
(million barrels per day)	8.14	8.61	8.85	9.25	9.48	9.58	9.27	9.10	8.98	8.91	8.81	9.13	8.71	9.36	8.96
Dry Natural Gas Production															
(billion cubic feet per day)	67.84	69.33	71.30	73.31	73.57	73.88	74.14	74.73	75.37	75.56	75.67	76.32	70.46	74.09	75.73
Coal Production	245	246	255	252	240	044	222	000	000	047	220	224	4 000	047	007
(million short tons)	245	246	255	253	240	211	230	236	236	217	239	234	1,000	917	927
Energy Consumption															
Liquid Fuels															
(million barrels per day)	18.81	18.71	19.16	19.45	19.29	19.20	19.61	19.63	19.38	19.55	19.80	19.75	19.03	19.43	19.62
Natural Gas															
(billion cubic feet per day)	95.10	61.20	61.75	76.19	97.05	63.87	65.91	79.29	94.60	65.24	66.32	79.98	73.48	76.45	76.52
Coal (b)															
million short tons)	248	212	247	209	212	188	240	215	221	195	242	212	917	856	871
							- 10							-	-
Electricity (billion kilowatt hours per day)	10.87	10.04	11.46	9.95	10.73	10.04	11.72	9.97	10.60	10.20	11.88	10.12	10.58	10.62	10.70
omor knowatt riours per day)	10.07	10.04	11.40	3.33	10.75	10.04	11.72	3.37	10.00	10.20	11.00	10.12	10.50	10.02	10.70
Renewables (c)															
(quadrillion Btu)	2.37	2.57	2.28	2.40	2.42	2.47	2.23	2.24	2.43	2.69	2.44	2.41	9.61	9.36	9.96
Total Energy Consumption (d)															
(quadrillion Btu)	26.59	23.01	24.07	24.79	26.39	23.00	24.13	24.70	26.18	23.29	24.51	24.93	98.46	98.22	98.92
Energy Prices															
Crude Oil (e)															
dollars per barrel)	97.60	101.08	96.45	73.48	47.98	57.03	45.86	44.36	48.00	53.70	55.68	56.00	92.05	48.82	53.43
Natural Cae Honny Hub Spot															
Natural Gas Henry Hub Spot dollars per million Btu)	5.21	4.61	3.96	3.80	2.90	2.75	2.86	3.06	3.19	2.98	3.26	3.39	4.39	2.89	3.21
Coal (dollars per million Btu)	2.33	2.39	2.37	2.37	2.26	2.28	2.29	2.26	2.26	2.29	2.30	2.27	2.36	2.28	2.28
(dollars per million blu)	2.33	2.39	2.31	2.31	2.20	2.20	2.29	2.20	2.20	2.29	2.30	2.21	2.30	2.20	2.20
Macroeconomic															
Real Gross Domestic Product															
billion chained 2009 dollars - SAAR)	15,832	16,010	16,206	16,295	16,288	16,382	16,491	16,606	16,739	16,867	17,000	17,121	16,086	16,442	16,932
Percent change from prior year	1.9	2.6	2.7	2.4	2.9	2.3	1.8	1.9	2.8	3.0	3.1	3.1	2.4	2.2	3.0
GDP Implicit Price Deflator															
Index, 2009=100)	107.7	108.3	108.6	108.7	108.7	109.4	109.9	110.5	111.0	111.6	112.1	112.6	108.3	109.6	111.9
Percent change from prior year	1.4	1.7	1.6	1.2	0.9	1.0	1.2	1.6	2.2	2.1	2.0	2.0	1.5	1.2	2.1
Real Disposable Personal Income															
billion chained 2009 dollars - SAAR)	11,810	11,900	11,970	12,093	12,251	12,317	12,395	12,479	12,580	12,652	12,757	12,872	11,943	12,360	12,715
Percent change from prior year	2.4	2.2	2.3	3.3	3.7	3.5	3.5	3.2	2.7	2.7	2.9	3.1	2.5	3.5	2.9
Manufacturing Production Index															
Index, 2007=100)	99.4	101.2	102.4	103.5	103.3	103.6	104.1	105.1	106.4	107.6	108.9	110.1	101.6	104.0	108.3
Percent change from prior year	2.4	3.8	4.6	4.5	3.9	2.4	1.7	1.6	3.0	3.8	4.6	4.8	3.8	2.4	4.1
Weather															
J.S. Heating Degree-Days	2,449	479	81	1,541	2,341	442	76	1,542	2,124	477	75	1,536	4,549	4,402	4,212
U.S. Cooling Degree-Days	34	394	775	96	47	435	842	91	38	391	848	93	1,299	1,414	1,370

^{- =} 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.

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

 $Petroleum\ Supply\ Annual\ , \ DOE/EIA-0340/2;\ Weekly\ Petroleum\ Status\ Report\ , \ DOE/EIA-0208;\ Petroleum\ Marketing\ Monthly\ , \ DOE/EIA-0380;\ Natural\ Gas\ Monthly\ , \ DOE/EIA-0130;\ Electric\ Power\ Monthly\ , \ DOE/EIA-0226;\ Quarterly\ Coal\ Report\ , \ DOE/EIA-0121;\ and\ International\ Petroleum\ Monthly\ , \ DOE/EIA-0520.$

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

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

Weather projections from National Oceanic and Atmospheric Administration.

⁽a) Includes lease condensate.

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

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

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

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

⁽e) Refers to the refiner average acquisition cost (RAC) of crude oil.

Table 2. U.S. Energy Prices

		201	4			201	15			20	16			Year	
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2014	2015	2016
Crude Oil (dollars per barrel)		•	•						•		•				
West Texas Intermediate Spot Average	98.68	103.35	97.87	73.21	48.48	57.85	46.93	45.34	49.05	54.70	56.67	57.00	93.17	49.62	54.42
Brent Spot Average	108.14	109.70	101.90	76.43	53.91	61.65	51.84	50.34	54.05	59.70	61.67	62.00	98.89	54.40	59.42
Imported Average	94.18	98.64	93.85	71.45	46.40	55.09	43.31	41.83	45.51	51.18	53.18	53.50	89.65	46.62	50.95
Refiner Average Acquisition Cost	97.60	101.08	96.45	73.48	47.98	57.03	45.86	44.36	48.00	53.70	55.68	56.00	92.05	48.82	53.43
Liquid Fuels (cents per gallon)															
Refiner Prices for Resale															
Gasoline	272	298	276	203	159	200	183	136	149	184	182	161	262	170	169
Diesel Fuel	303	300	288	240	176	189	160	164	173	184	191	196	282	172	186
Heating Oil	303	289	276	228	178	180	151	161	168	168	177	191	274	167	176
Refiner Prices to End Users															
Jet Fuel	297	295	289	234	172	185	153	158	168	178	184	190	278	167	180
No. 6 Residual Fuel Oil (a)	249	244	243	194	137	150	126	116	120	128	137	138	230	132	131
Retail Prices Including Taxes															
Gasoline Regular Grade (b)	340	368	350	288	227	267	260	211	217	254	253	233	336	241	240
Gasoline All Grades (b)	348	375	358	296	236	275	268	220	226	263	262	242	344	250	248
On-highway Diesel Fuel	396	394	384	358	292	285	262	256	267	279	285	292	383	273	281
Heating Oil	397	382	369	330	288	276	249	255	262	261	262	278	372	273	267
Natural Gas															
Henry Hub Spot (dollars per thousand cubic feet)	5.36	4.75	4.08	3.91	2.99	2.83	2.95	3.15	3.29	3.07	3.36	3.49	4.52	2.98	3.31
Henry Hub Spot (dollars per Million Btu)	5.21	4.61	3.96	3.80	2.90	2.75	2.86	3.06	3.19	2.98	3.26	3.39	4.39	2.89	3.21
End-Use Prices (dollars per thousand cubic feet)															
Industrial Sector	6.17	5.62	5.06	5.16	4.56	3.66	3.79	4.19	4.49	3.95	4.22	4.58	5.53	4.07	4.33
Commercial Sector	8.66	9.64	9.69	8.51	7.95	8.06	8.55	7.89	8.00	8.26	8.94	8.35	8.87	8.01	8.24
Residential Sector	9.82	13.11	16.92	10.52	9.29	11.87	15.98	10.09	9.09	11.89	16.18	10.27	10.94	10.28	10.28
Electricity															
Power Generation Fuel Costs (dollars per million Btu)															
Coal	2.33	2.39	2.37	2.37	2.26	2.28	2.29	2.26	2.26	2.29	2.30	2.27	2.36	2.28	2.28
Natural Gas	6.82	4.93	4.25	4.30	4.09	3.27	3.62	4.03	4.13	3.71	3.97	4.32	4.98	3.73	4.02
Residual Fuel Oil (c)	19.97	20.44	19.75	14.72	10.82	11.87	11.38	10.18	10.25	11.51	11.88	11.82	19.18	10.97	11.35
Distillate Fuel Oil	23.40	22.77	21.88	18.72	15.39	15.21	13.51	14.22	14.73	15.08	15.55	16.69	22.34	14.77	15.46
End-Use Prices (cents per kilowatthour)															
Industrial Sector	6.99	6.92	7.36	6.76	6.76	6.83	7.57	6.84	6.89	6.93	7.66	6.91	7.01	7.01	7.11
Commercial Sector	10.55	10.68	11.11	10.59	10.50	10.65	11.44	10.79	10.76	10.87	11.66	11.00	10.75	10.87	11.10
Residential Sector	11.91	12.73	13.01	12.38	12.24	12.93	13.16	12.60	12.55	13.18	13.46	12.89	12.50	12.74	13.03

^{- =} 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.

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

		201	4		·	201	15		·	201	6		·	Year	· ·
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2014	2015	2016
Supply (million barrels per day) (a)															
OECD	25.09	25.47	25.74	26.69	26.65	26.58	26.67	26.74	26.54	26.64	26.75	27.31	25.75	26.66	26.81
U.S. (50 States)	13.13	13.92	14.31	14.77	14.81	15.22	15.02	14.86	14.68	14.78	14.79	15.24	14.04	14.98	14.87
Canada	4.42	4.27	4.33	4.55	4.68	4.49	4.70	4.90	4.94	5.02	5.12	5.24	4.39	4.70	5.08
Mexico	2.89	2.86	2.79	2.74	2.68	2.59	2.66	2.65	2.63	2.62	2.60	2.59	2.82	2.65	2.61
North Sea (b)	3.08	2.82	2.72	3.03	2.98	2.77	2.68	2.75	2.71	2.66	2.64	2.68	2.91	2.79	2.67
Other OECD	1.58	1.60	1.61	1.59	1.50	1.51	1.60	1.57	1.57	1.57	1.59	1.57	1.59	1.55	1.57
Non-OECD	66.87	67.08	67.95	68.37	68.00	69.15	69.71	69.13	68.19	68.97	69.69	69.92	67.57	69.00	69.20
OPEC	36.26	35.94	36.52	36.66	36.59	37.34	37.71	37.46	37.08	37.25	37.67	38.10	36.35	37.28	37.53
Crude Oil Portion	30.01	29.70	30.28	30.34	30.31	30.94	31.25	30.94	30.48	30.59	30.95	31.30	30.08	30.86	30.83
Other Liquids	6.25	6.24	6.24	6.32	6.27	6.40	6.46	6.53	6.60	6.66	6.72	6.79	6.26	6.42	6.69
Eurasia	13.90	13.84	13.85	13.99	14.11	14.04	14.03	13.93	13.89	13.91	13.93	13.96	13.90	14.03	13.92
China	4.59	4.60	4.52	4.67	4.64	4.72	4.65	4.65	4.63	4.66	4.66	4.67	4.60	4.67	4.65
Other Non-OECD	12.12	12.70	13.05	13.04	12.66	13.05	13.33	13.08	12.60	13.15	13.42	13.20	12.73	13.03	13.09
Total World Supply	91.96	92.55	93.70	95.06	94.65	95.73	96.38	95.86	94.73	95.61	96.43	97.23	93.33	95.66	96.00
Non-OPEC Supply	55.70	56.61	57.18	58.40	58.06	58.39	58.68	58.40	57.65	58.36	58.76	59.13	56.98	58.38	58.48
Consumption (million barrels per day)	(c)														
OECD	45.73	44.77	45.81	46.37	46.51	45.22	46.17	46.73	46.75	45.67	46.45	46.94	45.67	46.16	46.45
U.S. (50 States)	18.81	18.71	19.16	19.45	19.29	19.20	19.61	19.63	19.38	19.55	19.80	19.75	19.03	19.43	19.62
U.S. Territories	0.35	0.35	0.35	0.35	0.37	0.37	0.37	0.37	0.40	0.40	0.40	0.40	0.35	0.37	0.40
Canada	2.43	2.34	2.46	2.43	2.41	2.32	2.43	2.41	2.38	2.32	2.43	2.41	2.41	2.39	2.38
Europe	12.97	13.38	13.84	13.50	13.53	13.27	13.72	13.68	13.59	13.31	13.76	13.71	13.43	13.55	13.59
Japan	5.02	3.88	3.88	4.43	4.59	3.85	3.88	4.25	4.51	3.80	3.83	4.19	4.30	4.14	4.08
Other OECD	6.14	6.11	6.11	6.21	6.32	6.20	6.15	6.39	6.49	6.29	6.24	6.48	6.14	6.27	6.37
Non-OECD	45.63	46.96	47.35	46.81	46.24	47.82	48.16	47.60	47.39	49.01	49.34	48.77	46.69	47.46	48.63
Eurasia	4.82	4.76	4.98	4.96	4.61	4.55	4.82	4.80	4.53	4.47	4.73	4.71	4.88	4.70	4.61
Europe	0.70	0.71	0.73	0.73	0.71	0.72	0.74	0.74	0.72	0.73	0.75	0.75	0.72	0.73	0.73
China	10.45	11.03	10.98	10.94	10.77	11.36	11.32	11.27	11.10	11.71	11.66	11.61	10.85	11.18	11.52
Other Asia	11.80	12.01	11.56	11.88	12.10	12.32	11.86	12.18	12.54	12.76	12.27	12.61	11.81	12.12	12.55
Other Non-OECD	17.86	18.46	19.10	18.31	18.04	18.87	19.43	18.61	18.50	19.35	19.93	19.08	18.43	18.74	19.22
Total World Consumption	91.36	91.73	93.15	93.18	92.75	93.04	94.33	94.33	94.14	94.68	95.79	95.70	92.36	93.62	95.08
Total Crude Oil and Other Liquids Inve	entory Net	Withdrawa	als (millio	n barrels	per day)										
U.S. (50 States)	0.09	-0.67	-0.23	-0.23	-0.58	-0.62	-0.12	0.55	0.14	-0.23	-0.06	0.54	-0.26	-0.19	0.10
Other OECD	-0.31	-0.05	-0.49	0.34	-0.29	-0.73	-0.69	-0.76	-0.27	-0.24	-0.21	-0.74	-0.12	-0.62	-0.36
Other Stock Draws and Balance	-0.38	-0.10	0.18	-1.99	-1.03	-1.34	-1.25	-1.33	-0.47	-0.45	-0.38	-1.32	-0.58	-1.24	-0.66
Total Stock Draw	-0.60	-0.82	-0.54	-1.88	-1.90	-2.69	-2.06	-1.53	-0.59	-0.93	-0.65	-1.52	-0.96	-2.04	-0.92
End-of-period Commercial Crude Oil a	ind Other	Liquids Inv	entories/												
U.S. Commercial Inventory	1,057	1,123	1,144	1,165	1,217	1,271	1,280	1,230	1,217	1,238	1,243	1,193	1,165	1,230	1,193
OECD Commercial Inventory	2,568	2,636	2,705	2,693	2,774	2.894	2,967	2.986	2,997	3,040	3,064	3,083	2,693	2,986	3,083

^{- =} no data available

OECD = Organization for Economic Cooperation and Development: Australia, Austria, Belgium, Canada, Chile, the Czech Republic, Denmark, Estonia, Finland,

France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Slovakia, Slovenia, South Korea, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.

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

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

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.

 $\textbf{Historical data:} \ Latest\ data\ available\ from\ Energy\ Information\ Administration\ international\ energy\ statistics.$

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

 $[\]begin{tabular}{ll} \textbf{(b) Includes offshore supply from Denmark, Germany, the Netherlands, Norway, and the United Kingdom.} \end{tabular}$

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

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

U.S. Energy Information Administration	Short-	Term Ene		look - A	ugust 20			1					Voor			
	4-1	201		441.	4-1	20		411	4-1	20		411.	2011	Year	0040	
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2014	2015	2016	
North America	20.44	21.06	21.42	22.07	22.17	22.30	22.39	22.42	22.26	22.42	22.51	23.06	21.25	22.32	22.56	
Canada	4.42	4.27	4.33	4.55	4.68	4.49	4.70	4.90	4.94	5.02	5.12	5.24	4.39	4.70	5.08	
Mexico	2.89	2.86	2.79	2.74	2.68	2.59	2.66	2.65	2.63	2.62	2.60	2.59	2.82	2.65	2.61	
United States	13.13	13.92	14.31	14.77	14.81	15.22	15.02	14.86	14.68	14.78	14.79	15.24	14.04	14.98	14.87	
Officed Otales	13.13	13.32	14.51	14.77	14.01	10.22	75.02	14.00	14.00	14.70	14.73	10.24	14.04	14.30	14.07	
Central and South America	4.55	5.17	5.56	5.40	4.96	5.41	5.68	5.43	4.98	5.53	5.77	5.51	5.17	5.37	5.45	
Argentina	0.70	0.71	0.73	0.73	0.70	0.72	0.75	0.74	0.70	0.73	0.76	0.75	0.72	0.73	0.74	
Brazil	2.34	2.98	3.32	3.15	2.73	3.21	3.43	3.16	2.74	3.28	3.50	3.23	2.95	3.14	3.19	
Colombia	1.03	0.99	1.02	1.03	1.06	1.02	1.01	1.03	1.05	1.02	1.01	1.02	1.02	1.03	1.02	
Other Central and S. America	0.49	0.49	0.49	0.49	0.48	0.46	0.49	0.49	0.49	0.49	0.50	0.50	0.49	0.48	0.50	
Europe	4.06	3.81	3.70	4.03	3.96	3.74	3.66	3.72	3.67	3.61	3.60	3.64	3.90	3.77	3.63	
Norway	1.97	1.80	1.87	1.98	1.91	1.79	1.77	1.85	1.82	1.80	1.82	1.83	1.90	1.83	1.82	
United Kingdom (offshore)	0.93	0.85	0.66	0.84	0.86	0.81	0.74	0.73	0.72	0.68	0.64	0.66	0.82	0.78	0.67	
Other North Sea	0.18	0.16	0.19	0.21	0.20	0.18	0.17	0.17	0.18	0.18	0.17	0.18	0.19	0.18	0.18	
Outor Notari Osa	0.10	0.10	0.10	0.21	0.20	0.70	0.17	0.17	0.10	0.70	0.11	0.70	0.10	0.70	0.70	
Eurasia	13.91	13.85	13.87	14.01	14.12	14.06	14.04	13.95	13.90	13.92	13.95	13.97	13.91	14.04	13.94	
Azerbaijan	0.85	0.86	0.88	0.84	0.86	0.87	0.88	0.88	0.88	0.88	0.87	0.87	0.86	0.87	0.87	
Kazakhstan	1.73	1.66	1.71	1.78	1.76	1.71	1.70	1.69	1.70	1.71	1.71	1.74	1.72	1.72	1.72	
Russia	10.86	10.83	10.79	10.93	10.99	10.98	10.96	10.88	10.83	10.84	10.87	10.87	10.85	10.95	10.85	
Turkmenistan	0.27	0.28	0.28	0.25	0.29	0.27	0.28	0.27	0.28	0.29	0.29	0.28	0.27	0.28	0.28	
Other Eurasia	0.20	0.21	0.22	0.21	0.21	0.22	0.22	0.21	0.21	0.21	0.20	0.20	0.21	0.22	0.21	
Middle East	1.19	1.17	1.20	1.16	1.19	1.16	1.17	1.15	1.12	1.10	1.10	1.10	1.18	1.17	1.10	
Oman	0.96	0.95	0.96	0.94	0.97	1.00	1.03	1.02	0.94	0.94	0.93	0.93	0.95	1.01	0.94	
Syria	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.01	0.01	0.01	0.00	0.03	0.04	0.01	
Yemen	0.13	0.13	0.13	0.12	0.11	0.05	0.03	0.02	0.10	0.09	0.09	0.08	0.13	0.05	0.09	
	00	00	00	···-	•	0.00	0.00	0.02	00	0.00	0.00	0.00	00	0.00	0.00	
Asia and Oceania	9.24	9.25	9.12	9.40	9.37	9.46	9.49	9.48	9.49	9.55	9.60	9.60	9.25	9.45	9.56	
Australia	0.47	0.48	0.49	0.47	0.40	0.41	0.50	0.46	0.47	0.47	0.49	0.47	0.48	0.44	0.47	
China	4.59	4.60	4.52	4.67	4.64	4.72	4.65	4.65	4.63	4.66	4.66	4.67	4.60	4.67	4.65	
India	1.02	1.01	0.99	1.02	1.01	1.00	1.01	1.03	1.02	1.02	1.03	1.03	1.01	1.01	1.02	
Indonesia	0.92	0.92	0.91	0.90	0.91	0.95	0.94	0.94	0.95	0.96	0.96	0.97	0.91	0.93	0.96	
Malaysia	0.69	0.69	0.66	0.75	0.80	0.75	0.75	0.76	0.75	0.75	0.77	0.77	0.70	0.76	0.76	
Vietnam	0.33	0.32	0.31	0.34	0.36	0.36	0.39	0.40	0.41	0.42	0.43	0.44	0.33	0.38	0.43	
Africa	2.32	2.31	2.31	2.33	2.29	2.27	2.25	2.25	2.22	2.23	2.23	2.25	2.32	2.27	2.23	
Egypt	0.70	0.70	0.70	0.72	0.71	0.71	0.70	0.70	0.69	0.68	0.68	0.67	0.71	0.71	0.68	
Equatorial Guinea	0.29	0.29	0.29	0.29	0.27	0.27	0.27	0.27	0.25	0.25	0.25	0.25	0.29	0.27	0.25	
Gabon	0.22	0.22	0.22	0.22	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.22	0.21	0.21	
Sudan	0.26	0.26	0.26	0.26	0.26	0.25	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	
Total non-OPEC liquids	55.70	56.61	57.18	58.40	58.06	58.39	58.68	58.40	57.65	58.36	58.76	59.13	56.98	58.38	58.48	
OPEC non orudo liquido	c 05	6.24	6 04	6 22	6 27	6.40	6.40	6.50	6.60	6.00	6 70	6.70	6.00	6 40	6.60	
OPEC non-crude liquids	6.25	6.24	6.24	6.32	6.27	6.40	6.46	6.53	6.60	6.66	6.72	6.79	6.26	6.42	6.69	
Non-OPEC + OPEC non-crude	61.95	62.85	63.42	64.72	64.34	64.79	65.14	64.93	64.25	65.02	65.49	65.92	63.24	64.80	65.17	
Unplanned non-OPEC Production Outages	0.66	0.67	0.60	0.57	0.62	0.83	n/a	n/a	n/a	n/a	n/a	n/a	0.62	n/a	n/a	

^{- =} no data available

OPEC = Organization of Petroleum Exporting Countries: Algeria, Angola, Ecuador, 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.

Sudan production represents total production from both north and south.

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

0.3. Energy information Administration	<u> </u>	20	14				015			20	16			Year	
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2014	2015	2016
Crude Oil															
Algeria	1.15	1.15	1.15	1.15	1.10	1.10	-	-	-	-	-	-	1.15	-	-
Angola	1.63	1.63	1.72	1.73	1.77	1.78	-	-	-	-	-	-	1.68	-	-
Ecudaor	0.55	0.56	0.56	0.56	0.55	0.55	-	-	-	-	-	-	0.56	-	-
Iran	2.80	2.80	2.80	2.80	2.80	2.80	-	-	-	-	-	-	2.80	-	-
Iraq	3.26	3.29	3.28	3.53	3.57	3.98	-	-	-	-	-	-	3.34	-	-
Kuwait	2.60	2.60	2.60	2.48	2.57	2.53	-	-	-	-	-	-	2.57	-	-
Libya	0.38	0.23	0.58	0.69	0.40	0.44	-	-	-	-	-	-	0.47	-	-
Nigeria	2.00	1.97	2.07	1.98	2.03	1.90	-	-	-	-	-	-	2.00	-	-
Qatar	0.74	0.73	0.72	0.68	0.68	0.68	-	-	-	-	-	-	0.72	-	-
Saudi Arabia	9.80	9.65	9.70	9.63	9.73	10.07	-	-	-	-	-	-	9.70	-	-
United Arab Emirates	2.70	2.70	2.70	2.70	2.70	2.70	-	-	-	-	-	-	2.70	-	-
Venezuela	2.40	2.40	2.40	2.40	2.40	2.40	-	-	-	-	-	-	2.40	-	-
OPEC Total	30.01	29.70	30.28	30.34	30.31	30.94	31.25	30.94	30.48	30.59	30.95	31.30	30.08	30.86	30.83
Other Liquids	6.25	6.24	6.24	6.32	6.27	6.40	6.46	6.53	6.60	6.66	6.72	6.79	6.26	6.42	6.69
Total OPEC Supply	36.26	35.94	36.52	36.66	36.59	37.34	37.71	37.46	37.08	37.25	37.67	38.10	36.35	37.28	37.53
Crude Oil Production Capacity															
Africa	5.15	4.97	5.51	5.55	5.30	5.20	5.27	5.35	5.42	5.43	5.45	5.46	5.29	5.28	5.44
South America	2.95	2.95	2.95	2.95	2.95	2.94	2.96	2.96	2.86	2.86	2.87	2.88	2.95	2.95	2.87
Middle East	23.93	23.88	23.86	23.82	23.93	24.26	24.34	24.36	24.34	24.43	24.75	25.09	23.87	24.22	24.65
OPEC Total	32.02	31.80	32.32	32.32	32.17	32.40	32.58	32.67	32.62	32.73	33.08	33.43	32.12	32.46	32.96
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	2.01	2.09	2.04	1.98	1.86	1.46	1.33	1.74	2.13	2.14	2.13	2.13	2.03	1.60	2.13
OPEC Total	2.01	2.09	2.04	1.98	1.86	1.46	1.33	1.74	2.13	2.14	2.13	2.13	2.03	1.60	2.13
Unplanned OPEC Production Outages	2.32	2.57	2.26	2.43	2.53	2.51	n/a	n/a	n/a	n/a	n/a	n/a	2.40	n/a	n/a

^{- -} no data available

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

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

 $\textbf{Historical data:} \ Latest \ data \ available \ from \ Energy \ Information \ Administration \ international \ energy \ statistics.$

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

 $\textbf{Projections:} \ \mathsf{EIA} \ \mathsf{Regional} \ \mathsf{Short}\text{-}\mathsf{Term} \ \mathsf{Energy} \ \mathsf{Model}.$

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

U.S. Energy Information Administration S	non-rei	•	gy Outloc	JK - Augi	JSI 2013		4.5			20	16				
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2014	2015	2016
	۷.	٣-	40	۷.	٠.		40	•	٠,	42	40	•	2017	20.0	2010
North America	. 23.20	23.03	23.59	23.87	23.62	23.47	23.98	23.98	23.71	23.83	24.17	24.10	23.42	23.76	23.95
Canada	. 2.43	2.34	2.46	2.43	2.41	2.32	2.43	2.41	2.38	2.32	2.43	2.41	2.41	2.39	2.38
Mexico	. 1.95	1.97	1.96	1.98	1.91	1.95	1.92	1.93	1.93	1.95	1.92	1.93	1.97	1.93	1.93
United States	18.81	18.71	19.16	19.45	19.29	19.20	19.61	19.63	19.38	19.55	19.80	19.75	19.03	19.43	19.62
Central and South America	7.05	7.30	7.33	7.31	7.09	7.37	7.41	7.38	7.17	7.44	7.47	7.45	7.25	7.31	7.38
Brazil	3.03	3.14	3.21	3.20	3.03	3.14	3.21	3.20	3.06	3.18	3.24	3.23	3.15	3.15	3.18
Europe	. 13.67	14.09	14.57	14.23	14.24	13.99	14.46	14.42	14.31	14.04	14.50	14.46	14.14	14.28	14.33
Eurasia	. 4.85	4.79	5.01	4.99	4.65	4.58	4.85	4.83	4.56	4.50	4.76	4.75	4.91	4.73	4.64
Russia	. 3.49	3.45	3.65	3.63	3.29	3.25	3.44	3.42	3.14	3.10	3.28	3.26	3.56	3.35	3.20
Middle East	. 7.97	8.33	8.98	8.17	8.04	8.64	9.22	8.37	8.33	8.93	9.53	8.65	8.36	8.57	8.86
Asia and Oceania	. 30.88	30.48	29.99	30.91	31.23	31.11	30.58	31.49	32.02	31.92	31.37	32.29	30.56	31.10	31.90
China	. 10.45	11.03	10.98	10.94	10.77	11.36	11.32	11.27	11.10	11.71	11.66	11.61	10.85	11.18	11.52
Japan	5.02	3.88	3.88	4.43	4.59	3.85	3.88	4.25	4.51	3.80	3.83	4.19	4.30	4.14	4.08
India	3.88	3.86	3.54	3.83	4.08	4.06	3.72	4.02	4.29	4.27	3.92	4.24	3.78	3.97	4.18
Africa	. 3.73	3.73	3.68	3.70	3.89	3.88	3.84	3.86	4.04	4.03	3.99	4.01	3.71	3.86	4.02
Total OECD Liquid Fuels Consumption	45.73	44.77	45.81	46.37	46.51	45.22	46.17	46.73	46.75	45.67	46.45	46.94	45.67	46.16	46.45
Total non-OECD Liquid Fuels Consumption	45.63	46.96	47.35	46.81	46.24	47.82	48.16	47.60	47.39	49.01	49.34	48.77	46.69	47.46	48.63
Total World Liquid Fuels Consumption	91.36	91.73	93.15	93.18	92.75	93.04	94.33	94.33	94.14	94.68	95.79	95.70	92.36	93.62	95.08
Oil-weighted Real Gross Domestic Product (a)															
World Index, 2010 Q1 = 100	113.4	114.3	115.1	115.9	116.4	117.1	117.8	118.7	119.7	120.7	121.7	122.7	114.7	117.5	121.2
Percent change from prior year	2.9	2.9	2.7	2.7	2.7	2.5	2.4	2.4	2.8	3.1	3.3	3.3	2.8	2.5	3.1
OECD Index, 2010 Q1 = 100	110.1	110.6	111.3	111.9	112.3	112.8	113.4	114.2	114.9	115.6	116.4	117.2	111.0	113.2	116.0
Percent change from prior year	. 1.9	1.9	1.9	1.8	2.0	2.0	1.9	2.0	2.3	2.5	2.6	2.6	1.9	2.0	2.5
Non-OECD Index, 2010 Q1 = 100	117.5	118.8	119.7	120.9	121.6	122.4	123.3	124.4	125.7	127.0	128.3	129.6	119.2	122.9	127.6
Percent change from prior year	4.0	4.0	3.8	3.7	3.5	3.1	3.0	3.0	3.3	3.7	4.1	4.2	3.9	3.1	3.8
Real U.S. Dollar Exchange Rate (a)															
Index, January 2010 = 100		108.01	109.13	113.76	119.37	119.64	121.09	122.14	122.40	122.25	122.01	121.94	109.79	120.56	122.15
Percent change from prior year	3.8	2.1	1.9	6.7	10.2	10.8	11.0	7.4	2.5	2.2	0.8	-0.2	3.6	9.8	1.3

^{- =} 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,

 $Slovakia,\,Slovenia,\,South\,Korea,\,Spain,\,Sweden,\,Switzerland,\,Turkey,\,the\,\,United\,\,Kingdom,\,and\,\,the\,\,United\,\,States.$

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

 $\textbf{Historical data:} \ Latest\ data\ available\ from\ Energy\ Information\ Administration\ international\ energy\ statistics.$

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

 $\begin{picture}(100,0)\put(0,0){\line(1,0){100}} \put(0,0){\line(1,0){100}} \put(0,0){\line(1,0){100$

⁽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.

Table 4a. U.S. Petroleum and Other Liquids Supply, Consumption, and Inventories

U.S. Energy Information Administration St		20		Augu	31 2013	20	15			20	16			Year	
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2014	2015	2016
Supply (million barrels per day)															
Crude Oil Supply															
Domestic Production (a)	8.14	8.61	8.85	9.25	9.48	9.58	9.27	9.10	8.98	8.91	8.81	9.13	8.71	9.36	8.96
Alaska	0.53	0.52	0.43	0.51	0.50	0.48	0.42	0.49	0.48	0.47	0.42	0.47	0.50	0.47	0.46
Federal Gulf of Mexico (b)	1.32	1.42	1.43	1.42	1.43	1.48	1.49	1.57	1.61	1.61	1.51	1.64	1.40	1.49	1.59
Lower 48 States (excl GOM)	6.29	6.68	6.99	7.32	7.55	7.62	7.36	7.05	6.89	6.83	6.89	7.02	6.82	7.39	6.91
Crude Oil Net Imports (c)	7.11	6.94	7.15	6.76	6.84	6.63	6.97	6.52	6.57	7.21	7.47	6.64	6.99	6.74	6.97
SPR Net Withdrawals	0.00	0.05	0.00	0.00	0.00	-0.03	-0.01	0.00	0.00	0.00	0.00	0.00	0.01	-0.01	0.00
Commercial Inventory Net Withdrawals	-0.30	0.00	0.25	-0.36	-0.90	0.10	0.19	0.16	-0.25	0.10	0.17	0.14	-0.10	-0.11	0.04
Crude Oil Adjustment (d)	0.23	0.28	0.10	0.29	0.11	0.13	0.19	0.13	0.19	0.19	0.20	0.13	0.23	0.14	0.18
Total Crude Oil Input to Refineries	15.18	15.88	16.35	15.95	15.53	16.41	16.61	15.91	15.49	16.40	16.66	16.04	15.84	16.12	16.15
Other Supply															
Refinery Processing Gain	1.07	1.08	1.09	1.10	0.99	1.05	1.10	1.09	1.05	1.09	1.11	1.09	1.09	1.06	1.09
Natural Gas Plant Liquids Production	2.71	2.95	3.09	3.11	3.09	3.29	3.36	3.37	3.35	3.49	3.58	3.71	2.96	3.28	3.53
Renewables and Oxygenate Production (e)	1.01	1.06	1.06	1.07	1.05	1.09	1.07	1.08	1.08	1.07	1.07	1.07	1.05	1.07	1.07
Fuel Ethanol Production	0.91	0.94	0.93	0.96	0.96	0.95	0.94	0.94	0.96	0.94	0.94	0.93	0.94	0.95	0.94
Petroleum Products Adjustment (f)	0.20	0.22	0.22	0.24	0.20	0.21	0.22	0.22	0.21	0.23	0.23	0.23	0.22	0.21	0.23
Product Net Imports (c)	-1.73	-1.76	-2.17	-2.14	-1.89	-2.16	-2.45	-2.43	-2.20	-2.39	-2.60	-2.80	-1.95	-2.24	-2.50
Hydrocarbon Gas Liquids	-0.37	-0.58	-0.66	-0.64	-0.68	-0.84	-0.96	-1.00	-0.97	-1.07	-1.16	-1.31	-0.56	-0.87	-1.13
Unfinished Oils	0.46	0.49	0.32	0.35	0.26	0.34	0.41	0.38	0.38	0.43	0.44	0.38	0.40	0.35	0.41
Other HC/Oxygenates	-0.09	-0.09	-0.08	-0.09	-0.08	-0.09	-0.05	-0.04	-0.08	-0.06	-0.03	-0.03	-0.09	-0.06	-0.05
Motor Gasoline Blend Comp	0.29	0.58	0.45	0.42	0.41	0.48	0.43	0.42	0.42	0.61	0.44	0.39	0.44	0.43	0.47
Finished Motor Gasoline	-0.41	-0.36	-0.34	-0.47	-0.44	-0.29	-0.36	-0.42	-0.37	-0.48	-0.40	-0.41	-0.39	-0.38	-0.42
Jet Fuel	-0.07	-0.02	-0.09	-0.09	-0.06	-0.02	-0.04	-0.06	-0.06	-0.04	-0.02	-0.07	-0.07	-0.05	-0.05
Distillate Fuel Oil	-0.67	-1.01	-1.08	-0.92	-0.67	-1.04	-1.06	-0.96	-0.72	-0.93	-1.02	-0.97	-0.92	-0.93	-0.91
Residual Fuel Oil	-0.24	-0.18	-0.18	-0.16	-0.13	-0.21	-0.25	-0.22	-0.24	-0.27	-0.26	-0.22	-0.19	-0.20	-0.25
Other Oils (g)	-0.64	-0.58	-0.51	-0.53	-0.50	-0.49	-0.56	-0.55	-0.56	-0.59	-0.59	-0.57	-0.57	-0.52	-0.58
Product Inventory Net Withdrawals	0.39	-0.72	-0.48	0.12	0.32	-0.69	-0.30	0.39	0.39	-0.33	-0.23	0.39	-0.17	-0.07	0.05
Total Supply	18.84	18.71	19.16	19.45	19.29	19.20	19.61	19.63	19.38	19.55	19.80	19.75	19.04	19.43	19.62
Consumption (million barrels per day)															
Hydrocarbon Gas Liquids	2.66	2.06	2.26	2.60	2.72	2.25	2.35	2.64	2.79	2.39	2.43	2.70	2.40	2.49	2.58
Unfinished Oils	0.08	0.02	-0.06	-0.04	-0.05	0.01	0.02	0.04	0.00	0.00	0.01	0.02	0.00	0.01	0.01
Motor Gasoline	8.52	9.01	9.10	9.05	8.81	9.27	9.29	9.14	8.88	9.25	9.28	9.14	8.92	9.13	9.14
Fuel Ethanol blended into Motor Gasoline	0.84	0.89	0.89	0.90	0.87	0.91	0.92	0.90	0.88	0.91	0.92	0.91	0.88	0.90	0.90
Jet Fuel	1.40	1.47	1.51	1.50	1.45	1.52	1.57	1.46	1.41	1.54	1.58	1.48	1.47	1.50	1.50
Distillate Fuel Oil	4.17	3.93	3.86	4.09	4.27	3.88	3.93	4.14	4.22	4.10	4.07	4.21	4.01	4.05	4.15
Residual Fuel Oil	0.23	0.26	0.24	0.30	0.24	0.20	0.21	0.22	0.22	0.19	0.19	0.20	0.26	0.22	0.20
Other Oils (g)	1.75	1.96	2.25	1.96	1.85	2.06	2.24	2.00	1.87	2.08	2.24	2.00	1.98	2.04	2.05
Total Consumption	18.81	18.71	19.16	19.45	19.29	19.20	19.61	19.63	19.38	19.55	19.80	19.75	19.03	19.43	19.62
·															
Total Petroleum and Other Liquids Net Imports	5.38	5.18	4.98	4.62	4.95	4.47	4.52	4.08	4.37	4.82	4.87	3.84	5.04	4.50	4.47
End-of-period Inventories (million barrels)															
. ,															
Commercial Inventory	202 -	202.0	200.0	202 -	474.0	165 7	440.0	422.4	AFF F	1100	400.0	447.0	393.7	422.4	447.0
Crude Oil (excluding SPR)	383.7	383.9	360.9	393.7	474.8	465.7	448.0	433.1	455.5	446.2	430.2	417.0		433.1	417.0
Hydrocarbon Gas Liquids	98.1	164.1	209.8	175.4	138.8	195.1	225.6	183.4	144.9	181.6	206.6	163.9	175.4	183.4	163.9
Unfinished Oils	91.3	87.3	84.5	78.5	84.7	86.4	87.7	81.7	91.0	87.7	85.4	80.2	78.5	81.7	80.2
Other HC/Oxygenates	22.6	23.0	22.4	23.2	26.7	25.7	24.4	24.7	26.8	25.6	24.8	25.1	23.2	24.7	25.1
Total Motor Gasoline	220.9	218.8	212.5	238.5	231.5	219.6	216.2	229.9	228.7	222.9	219.8	231.9	238.5	229.9	231.9
Finished Motor Gasoline	34.3	28.9	28.8	30.6	26.9	26.7	26.9	28.7	26.6	26.3	25.6	27.2	30.6	28.7	27.2
Motor Gasoline Blend Comp	186.6	190.0	183.7	207.9	204.6	192.9	189.4	201.2	202.1	196.6	194.1	204.7	207.9	201.2	204.7
Jet Fuel	36.0	36.3	39.6	37.5	37.2	43.8	45.1	41.4	40.8	41.3	43.6	39.9	37.5	41.4	39.9
Distillate Fuel Oil	115.3	121.7	131.3	136.1	128.3	138.0	146.2	147.7	133.9	139.8	148.3	149.5	136.1	147.7	149.5
Residual Fuel Oil	36.4	36.7	36.6	33.7	38.1	40.4	37.9	37.2	37.5	37.4	36.1	36.5	33.7	37.2	36.5
Other Oils (g)	52.8	50.9	46.4	49.0	57.3	56.1	49.3	50.3	57.5	55.2	48.2	49.5	49.0	50.3	49.5
Total Commercial Inventory	1,057	1,123	1,144	1,165	1,217	1,271	1,280	1,230	1,217	1,238	1,243	1,193	1,165	1,230	1,193
Crude Oil in SPR	696	691	691	691	691	694	695	695	695	695	695	695	691	695	695

^{- =} 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.

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.

⁽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.

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	211011-	erm Ene		IUUK - AL	igust 20		16	1		204	16			Voc-	
F	1st	201 2nd	4 3rd	4th	1st	20 ²	3rd	4th	1st	201 2nd	3rd	4th	2014	Year 2015	2016
HGL Production	131	Z IIU	Jiu	701	131	Z::U	Jiu	741	131	ZIIU	Jiu	7111	2014	2013	2010
Natural Gas Processing Plants															
Ethane	1.03	1.09	1.09	1.08	1.05	1.12	1.18	1.22	1.24	1.31	1.33	1.45	1.07	1.14	1.33
Propane	0.87	0.95	1.02	1.04	1.07	1.12	1.13	1.13	1.12	1.14	1.16	1.19	0.97	1.11	1.15
Butanes	0.48	0.52	0.56	0.58	0.58	0.62	0.61	0.61	0.59	0.62	0.63	0.64	0.54	0.60	0.62
Natural Gasoline (Pentanes Plus)	0.33	0.39	0.42	0.41	0.39	0.43	0.44	0.42	0.40	0.43	0.45	0.43	0.39	0.42	0.43
Refinery and Blender Net Production															
Ethane/Ethylene	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Propane/Propylene	0.57	0.60	0.59	0.59	0.54	0.58	0.60	0.59	0.57	0.60	0.60	0.60	0.59	0.58	0.59
Butanes/Butylenes	-0.04	0.27	0.21	-0.18	-0.08	0.26	0.18	-0.15	-0.03	0.25	0.18	-0.15	0.07	0.05	0.06
Renewable Fuels and Oxygenate Plant Net Pro	oduction														
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
HOLD ALCOHOLOGIC															
HGL Net Imports															
Ethane	-0.01	-0.02	-0.05	-0.06	-0.06	-0.07	-0.08	-0.09	-0.10	-0.14	-0.16	-0.26	-0.04	-0.08	-0.17
Propane/Propylene	-0.17	-0.34	-0.36	-0.39	-0.40	-0.52	-0.59	-0.63	-0.57	-0.60	-0.65	-0.70	-0.32	-0.53	-0.63
Butanes/Butylenes	-0.03	-0.06	-0.09	-0.03	-0.06	-0.09	-0.11	-0.10	-0.12	-0.16	-0.16	-0.15	-0.05	-0.09	-0.15
Natural Gasoline (Pentanes Plus)	-0.15	-0.16	-0.16	-0.15	-0.17	-0.15	-0.18	-0.18	-0.18	-0.17	-0.19	-0.20	-0.16	-0.17	-0.18
HGL Refinery and Blender Net Inputs															
Butanes/Butylenes	0.37	0.28	0.30	0.48	0.40	0.26	0.31	0.44	0.37	0.29	0.30	0.42	0.36	0.35	0.35
Natural Gasoline (Pentanes Plus)	0.14	0.15	0.16	0.16	0.15	0.15	0.17	0.18	0.17	0.18	0.19	0.19	0.15	0.16	0.18
1101.0															
HGL Consumption	4.04	0.07	4.00	4.05	4.00	4.05		4.40		4.45	4.40	4.40	4.00	4.00	4.40
Ethane/Ethylene	1.01	0.97	1.08	1.05	1.03	1.05	1.11	1.12	1.14	1.15	1.18	1.18	1.03	1.08	1.16
Propane/Propylene	1.46	0.89	0.97	1.29	1.43	0.89	1.00	1.27	1.42	0.98	1.00	1.27	1.15	1.15	1.17
Butanes/Butylenes	0.16	0.17	0.16	0.22	0.16	0.23	0.18	0.21	0.19	0.22	0.20	0.20	0.18	0.20	0.20
Natural Gasoline (Pentanes Plus)	0.03	0.03	0.05	0.05	0.10	0.08	0.06	0.05	0.04	0.04	0.05	0.04	0.04	0.07	0.04
HGL Inventories (million barrels)															
Ethane/Ethylene	29.90	37.06	38.70	36.37	31.38	31.38	30.62	32.80	32.85	35.36	35.22	36.80	35.53	31.55	35.06
Propane/Propylene	28.32	57.12	82.37	77.95	58.10	84.45	96.89	80.18	52.98	67.00	77.93	61.06	77.95	80.18	61.06
Butanes/Butylenes	25.95	52.24	72.22	41.96	32.46	59.69	77.06	49.87	39.33	58.13	71.80	45.38	41.96	49.87	45.38
Natural Gasoline (Pentanes Plus)	13.04	14.82	17.92	20.59	17.16	19.67	20.60	20.50	19.37	20.52	21.38	20.75	20.59	20.50	20.75
Definery and Blander Net Innuts															
Refinery and Blender Net Inputs Crude Oll	45.40	45.00	46.25	45.05	45.50	16 11	16.61	15.01	15 10	16.40	16.66	16.01	45.04	16 10	16.15
		15.88	16.35	15.95	15.53	16.41	16.61	15.91	15.49	16.40	16.66	16.04	15.84	16.12	16.15
Hydrocarbon Gas Liquids		0.43	0.46	0.64	0.54	0.41	0.48	0.62	0.55	0.48	0.48	0.61	0.51	0.51	0.53
Other Hydrocarbons/Oxygenates	1.08	1.16	1.16	1.14	1.12	1.18	1.20	1.22	1.17	1.21	1.25	1.23	1.14	1.18	1.21
Unfinished Oils	0.24	0.51	0.41	0.45	0.24	0.31	0.37	0.41	0.28	0.47	0.45	0.42	0.40	0.33	0.40
Motor Gasoline Blend Components	0.71	1.06	0.83	0.32	0.72	0.88	0.65	0.46	0.60	0.85	0.63	0.45	0.73	0.68	0.63
Aviation Gasoline Blend Components	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Refinery and Blender Net Inputs	17.73	19.04	19.21	18.51	18.14	19.18	19.31	18.62	18.09	19.41	19.47	18.74	18.62	18.82	18.93
Refinery Processing Gain	1.07	1.08	1.09	1.10	0.99	1.05	1.10	1.09	1.05	1.09	1.11	1.09	1.09	1.06	1.09
Refinery and Blender Net Production	0.54	0.07	0.04	6 44	0.47	0.05	0.70	0.45	0.55	0.00	0.70	0.40	0.00	0.01	0.00
Hydrocarbon Gas Liquids	0.54	0.87	0.81	0.41	0.47	0.85	0.78	0.45	0.55	0.86	0.79	0.46	0.66	0.64	0.66
Finished Motor Gasoline		9.82	9.74	9.68	9.48	9.82	9.81	9.73	9.41	9.89	9.84	9.73	9.63	9.71	9.72
Jet Fuel	1.45	1.49	1.64	1.57	1.50	1.62	1.62	1.48	1.47	1.59	1.62	1.50	1.54	1.56	1.55
Distillate Fuel	4.66	4.96	4.99	5.00	4.82	4.98	5.04	5.07	4.74	5.05	5.14	5.15	4.90	4.98	5.02
Residual Fuel	0.46	0.44	0.42	0.43	0.43	0.43	0.42	0.42	0.46	0.46	0.44	0.42	0.44	0.43	0.44
Other Oils (a)		2.52	2.71	2.52	2.44	2.54	2.73	2.55	2.51	2.64	2.75	2.58	2.55	2.56	2.62
Total Refinery and Blender Net Production	18.80	20.11	20.30	19.61	19.13	20.24	20.40	19.71	19.15	20.49	20.58	19.84	19.71	19.87	20.01
															40.44
Refinery Distillation Inputs	15.51	16.17	16.64	16.25	15.78	16.66	16.89	16.23	15.82	16.63	16.93	16.34	16.15	16.39	16.44
Refinery Distillation InputsRefinery Operable Distillation Capacity	15.51 17.93	16.17 17.89	16.64 17.81	16.25 17.80	15.78 17.88	16.66 17.93	16.89 17.97	16.23 18.01	15.82 18.04	16.63 18.04	16.93 18.20	16.34 18.29	16.15 17.86	16.39 17.95	18.15

^{- =} no data available

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.

⁽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.

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

		201	14			201	15			20	16			Year	
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2014	2015	2016
Prices (cents per gallon)		•													
Refiner Wholesale Price	272	298	276	203	159	200	183	136	149	184	182	161	262	170	169
Gasoline Regular Grade Retail Prices In	cluding Ta	axes													
PADD 1	344	365	348	292	228	259	250	212	220	252	251	236	337	237	240
PADD 2	337	365	343	278	216	256	247	202	212	253	250	225	331	231	235
PADD 3	318	345	329	265	204	240	231	187	197	233	231	210	314	215	218
PADD 4	326	350	363	297	207	261	267	212	201	243	253	230	335	237	232
PADD 5	362	401	386	315	271	328	326	248	243	283	282	261	366	294	268
U.S. Average	340	368	350	288	227	267	260	211	217	254	253	233	336	241	240
Gasoline All Grades Including Taxes	348	375	358	296	236	275	268	220	226	263	262	242	344	250	248
End-of-period Inventories (million barrels	:)														
Total Gasoline Inventories	•														
PADD 1	57.7	63.1	55.6	61.1	64.5	61.3	56.0	59.3	60.5	61.9	57.7	60.0	61.1	59.3	60.0
PADD 2	49.0	49.7	47.2	52.4	52.9	48.5	49.0	50.5	51.2	48.8	49.2	50.6	52.4	50.5	50.6
PADD 3	77.7	72.8	74.9	83.5	78.4	74.9	76.9	81.0	79.6	77.4	78.1	82.1	83.5	81.0	82.1
PADD 4	6.5	6.1	7.4	7.9	6.5	6.9	6.7	7.6	7.1	6.9	6.9	7.7	7.9	7.6	7.7
PADD 5	30.0	27.1	27.3	33.6	29.2	28.1	27.6	31.5	30.2	27.9	27.9	31.6	33.6	31.5	31.6
U.S. Total	220.9	218.8	212.5	238.5	231.5	219.6	216.2	229.9	228.7	222.9	219.8	231.9	238.5	229.9	231.9
Finished Gasoline Inventories															
U.S. Total	34.3	28.9	28.8	30.6	26.9	26.7	26.9	28.7	26.6	26.3	25.6	27.2	30.6	28.7	27.2
Gasoline Blending Components Invento	ories														
U.S. Total	186.6	190.0	183.7	207.9	204.6	192.9	189.4	201.2	202.1	196.6	194.1	204.7	207.9	201.2	204.7

^{- =} 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 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.

Prices are not adjusted for inflation.

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

		201	14			201	15			201	16			Year	
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2014	2015	2016
Supply (billion cubic feet per day)															
Total Marketed Production	71.74	73.55	75.72	77.77	78.02	78.56	78.83	79.46	80.14	80.34	80.46	81.14	74.72	78.72	80.52
Alaska	0.99	0.93	0.85	0.98	0.98	0.89	0.77	0.93	0.97	0.83	0.75	0.91	0.94	0.89	0.87
Federal GOM (a)	3.29	3.42	3.41	3.38	3.38	3.49	3.18	3.05	3.10	3.05	2.87	2.84	3.37	3.27	2.97
Lower 48 States (excl GOM)	67.47	69.21	71.46	73.41	73.66	74.18	74.88	75.48	76.06	76.45	76.84	77.39	70.41	74.56	76.69
Total Dry Gas Production	67.84	69.33	71.30	73.31	73.57	73.88	74.14	74.73	75.37	75.56	75.67	76.32	70.46	74.09	75.73
LNG Gross Imports	0.17	0.17	0.15	0.16	0.43	0.09	0.18	0.17	0.14	0.16	0.17	0.15	0.16	0.21	0.15
LNG Gross Exports	0.03	0.02	0.09	0.03	0.06	0.03	0.16	0.59	0.68	0.69	0.72	1.07	0.04	0.21	0.79
Pipeline Gross Imports	8.44	6.52	6.47	7.47	8.36	6.47	6.57	6.86	7.26	6.22	6.54	6.72	7.22	7.06	6.69
Pipeline Gross Exports	4.67	3.89	3.85	4.02	4.86	4.25	4.33	4.72	4.84	4.70	4.91	5.08	4.10	4.54	4.88
Supplemental Gaseous Fuels	0.17	0.16	0.13	0.16	0.16	0.15	0.15	0.16	0.16	0.16	0.16	0.16	0.15	0.16	0.16
Net Inventory Withdrawals	22.75	-12.71	-12.96	0.55	18.44	-12.58	-9.87	3.14	16.55	-10.71	-9.88	3.21	-0.69	-0.29	-0.23
Total Supply	94.67	59.56	61.15	77.59	96.05	63.73	66.68	79.75	93.96	66.00	67.03	80.40	73.16	76.48	76.83
Balancing Item (b)	0.43	1.64	0.59	-1.40	1.00	0.14	-0.76	-0.46	0.64	-0.76	-0.70	-0.43	0.31	-0.03	-0.31
Total Primary Supply	95.10	61.20	61.75	76.19	97.05	63.87	65.91	79.29	94.60	65.24	66.32	79.98	73.48	76.45	76.52
Consumption (billion cubic feet per	day)											I			
Residential	28.70	7.48	3.68	15.97	27.49	6.68	3.39	16.35	26.15	6.82	3.40	16.41	13.89	13.42	13.18
Commercial	16.46	6.24	4.59	10.74	15.98	5.72	4.16	10.21	14.92	6.19	4.25	10.43	9.48	8.99	8.94
Industrial	22.92	20.03	19.66	21.32	22.71	19.83	20.35	22.95	23.96	21.45	21.33	23.42	20.97	21.46	22.54
Electric Power (c)	19.68	21.12	27.34	21.09	23.10	24.94	31.20	22.45	21.67	23.90	30.44	22.28	22.33	25.44	24.58
Lease and Plant Fuel	4.12	4.22	4.35	4.47	4.48	4.51	4.53	4.56	4.60	4.61	4.62	4.66	4.29	4.52	4.62
Pipeline and Distribution Use	3.14	2.02	2.04	2.51	3.20	2.11	2.19	2.66	3.21	2.16	2.20	2.68	2.42	2.54	2.56
Vehicle Use	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.09	0.09	0.10
Total Consumption	95.10	61.20	61.75	76.19	97.05	63.87	65.91	79.29	94.60	65.24	66.32	79.98	73.48	76.45	76.52
End-of-period Inventories (billion c	ubic feet))													
Working Gas Inventory	857	2,005	3,187	3,141	1,482	2,629	3,537	3,248	1,742	2,717	3,626	3,330	3,141	3,248	3,330
Producing Region (d)	358	691	953	1,070	604	1,040	1,210	1,178	761	1,041	1,211	1,188	1,070	1,178	1,188
East Consuming Region (d)	315	952	1,752	1,607	501	1,148	1,811	1,593	659	1,215	1,864	1,629	1,607	1,593	1,629
West Consuming Region (d)	184	362	483	464	377	440	515	476	322	461	550	513	464	476	513

^{- =} no data available

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.

 $\textbf{Projections:} \ \mathsf{EIA} \ \mathsf{Regional} \ \mathsf{Short}\text{-}\mathsf{Term} \ \mathsf{Energy} \ \mathsf{Model}.$

⁽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 Methodology for EIA Weekly Underground Natural Gas Storage Estimates (http://tonto.eia.doe.gov/oog/info/ngs/methodology.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.

Table 5b. U.S. Regional Natural Gas Prices (dollars per thousand cubic fee

O.O. Energy information		201		TOITH E		20	15			20	16			Year	
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2014	2015	2016
Wholesale/Spot															
Henry Hub Spot Price	5.36	4.75	4.08	3.91	2.99	2.83	2.95	3.15	3.29	3.07	3.36	3.49	4.52	2.98	3.31
Residential															
New England	13.65	15.98	18.01	14.41	13.08	13.35	16.42	13.15	12.56	14.15	16.86	13.41	14.52	13.36	13.34
Middle Atlantic	10.71	13.04	17.25	11.15	9.50	11.10	17.05	11.89	10.64	13.06	17.61	12.14	11.58	10.78	11.86
E. N. Central	8.67	12.96	16.85	8.96	7.79	10.50	16.44	8.63	7.77	11.11	16.71	8.69	9.70	8.86	8.97
W. N. Central	9.10	11.76	18.16	9.83	8.65	11.78	16.81	8.76	7.81	10.66	17.20	9.32	10.10	9.49	9.14
S. Atlantic	11.34	16.37	22.98	12.85	10.68	16.45	22.12	12.70	11.17	16.15	22.34	12.89	13.03	12.52	12.95
E. S. Central	9.63	14.08	19.70	11.14	9.34	14.36	18.44	10.67	9.04	13.22	18.45	11.13	11.02	10.69	10.62
W. S. Central	8.53	14.22	20.25	11.62	8.42	14.16	18.70	10.08	7.52	12.56	18.37	10.37	10.83	10.26	9.67
Mountain	9.07	11.22	15.15	9.86	9.58	10.66	14.07	9.22	8.55	9.63	13.47	8.84	10.13	9.97	9.17
Pacific	10.97	11.66	12.41	11.25	11.47	11.28	10.84	9.59	9.63	10.28	10.91	9.97	11.37	10.73	10.01
U.S. Average	9.82	13.11	16.92	10.52	9.29	11.87	15.98	10.09	9.09	11.89	16.18	10.27	10.94	10.28	10.28
Commercial															
New England	11.35	12.82	11.77	11.36	10.70	10.23	9.94	10.09	10.47	10.14	10.29	10.66	11.64	10.41	10.45
Middle Atlantic	9.30	9.06	8.04	8.05	7.90	7.31	7.26	8.04	8.43	8.01	8.02	8.77	8.78	7.77	8.40
E. N. Central	8.02	9.96	10.18	7.71	6.96	7.71	8.74	7.18	7.34	8.33	9.14	7.55	8.33	7.24	7.66
W. N. Central	8.35	9.10	10.19	8.22	7.65	7.86	8.52	7.08	7.37	7.57	8.80	7.55	8.54	7.56	7.57
S. Atlantic	9.23	10.56	10.90	9.47	8.44	9.16	9.98	9.08	9.10	9.68	10.35	9.52	9.69	8.91	9.47
E. S. Central	8.90	10.71	11.17	9.58	8.58	9.61	9.78	8.82	8.32	9.14	9.90	9.17	9.57	8.91	8.87
W. S. Central	7.49	9.24	9.26	8.25	7.14	7.32	7.79	7.13	7.00	7.56	8.15	7.54	8.23	7.25	7.40
Mountain	7.81	8.74	9.90	8.47	8.29	8.21	8.76	7.58	7.29	7.43	8.68	7.73	8.40	8.09	7.59
Pacific	9.29	9.26	9.56	9.28	9.21	8.37	8.56	8.42	8.37	8.10	8.85	8.83	9.32	8.68	8.53
U.S. Average	8.66	9.64	9.69	8.51	7.95	8.06	8.55	7.89	8.00	8.26	8.94	8.35	8.87	8.01	8.24
Industrial															
New England	10.03	9.97	8.04	9.09	9.04	7.87	7.64	8.63	8.96	8.27	8.10	9.16	9.45	8.50	8.74
Middle Atlantic	9.28	8.87	8.15	7.98	7.87	7.08	7.14	7.91	8.09	7.34	7.70	8.38	8.79	7.66	7.98
E. N. Central	8.03	8.87	7.89	6.94	6.49	5.63	5.79	5.96	6.50	6.12	6.32	6.43	7.84	6.13	6.40
W. N. Central	7.34	6.28	5.91	6.38	5.90	4.53	4.73	5.28	5.51	4.75	4.85	5.35	6.57	5.17	5.15
S. Atlantic	6.91	6.42	5.92	5.99	5.50	4.59	4.82	5.23	5.38	5.08	5.32	5.66	6.34	5.07	5.37
E. S. Central	6.37	6.14	5.31	5.50	5.13	4.31	4.50	4.85	5.17	4.71	4.96	5.30	5.86	4.73	5.05
W. S. Central	5.15	4.91	4.52	4.26	3.21	2.91	3.17	3.30	3.38	3.23	3.63	3.69	4.71	3.15	3.49
Mountain	6.55	6.68	6.95	6.65	6.55	6.07	5.99	5.97	5.57	5.26	5.90	5.99	6.69	6.17	5.68
Pacific	7.84	7.63	7.70	7.54	7.36	6.43	6.32	6.29	6.18	5.98	6.51	6.71	7.68	6.63	6.35
U.S. Average	6.17	5.62	5.06	5.16	4.56	3.66	3.79	4.19	4.49	3.95	4.22	4.58	5.53	4.07	4.33

^{- =} 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.

 $\label{thm:projections:equation} \textbf{Projections:} \ \mathsf{EIA} \ \mathsf{Regional} \ \mathsf{Short-Term} \ \mathsf{Energy} \ \mathsf{Model}.$

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

U.S. Energy Information Administ	ıalıON			rgy Out	iook - Al			1		000	10	1		V	
	1st	201 2nd	14 3rd	4th	1st	201 2nd	3rd	4th	1st	20 ²	3rd	4th	2014	Year 2015	2016
Supply (million short tons)	151	ZIIU	Siu	4111	151	ZIIU	Siu	4111	151	ZIIU	Siu	4111	2014	2015	2010
Production	245.2	245.8	255.3	253.3	240.2	210.7	230.4	235.6	235.9	217.1	239.3	234.4	999.7	916.9	926.7
	67.5	69.7	67.5	63.5	62.3	57.7	59.1	58.6	63.1	59.4	57.7	57.0	268.2	237.6	237.2
AppalachiaInterior	46.3	44.8	49.3	48.3	45.2	39.7	39. 1 46.7	36.0 48.1	46.1	59.4 44.8	48.3	47.0	188.7	237.0 179.7	237.2 186.1
	131.4	131.4	138.5	141.5	132.7	39.7 113.2	40.7 124.6	128.9	46. i 126.7	44.6 112.9	40.3 133.3	130.4	542.8	499.5	503.4
WesternWith drawals			2.4	-1.5	-0.7	0.3	3.1	-1.6	-1.0	0.7	2.9	-1.6	0.9	499.5	1.0
Primary Inventory Withdrawals		0.6										-			
Imports	2.4	3.5	3.2	2.1	3.0	2.8	3.5	2.9	2.2	2.4	3.3	2.9	11.3	12.2	10.8
Exports	27.7	24.6	22.7	22.3	22.0	21.3	19.4	20.7	18.7	22.1	20.3	22.2	97.3	83.4	83.3
Metallurgical Coal	16.9	15.8	15.2	15.2	13.5	13.2	11.3	11.9	11.5	12.1	10.7	12.3	63.0	50.0	46.6
Steam Coal	10.9	8.8	7.5	7.1	8.5	8.0	8.1	8.8	7.2	10.1	9.6	9.8	34.3	33.4	36.7
Total Primary Supply	219.4	225.4	238.2	231.6	220.5	192.5	217.6	216.2	218.4	198.1	225.2	213.5	914.5	846.8	855.2
Secondary Inventory Withdrawals	30.6	-14.8	8.4	-28.0	-3.3	-15.3	17.1	-3.6	0.2	-5.9	14.3	-4.4	-3.8	-5.1	4.3
Waste Coal (a)	3.2	2.8	2.6	2.6	2.7	2.7	2.7	2.7	2.8	2.8	2.8	2.8	11.2	10.8	11.1
Total Supply	253.2	213.3	249.2	206.2	219.9	179.9	237.4	215.3	221.4	195.0	242.3	211.9	921.9	852.5	870.5
Consumption (million short tons)															
Coke Plants	4.8	5.1	5.2	5.2	4.4	4.3	5.3	5.2	4.3	4.1	4.8	4.6	20.4	19.2	17.8
Electric Power Sector (b)	231.3	196.0	231.2	193.0	196.5	173.1	224.5	198.9	205.4	180.1	226.7	195.9	851.4	793.0	808.0
Retail and Other Industry	12.0	10.9	11.0	11.1	11.4	10.4	10.6	11.3	11.7	10.8	10.8	11.3	45.0	43.6	44.6
Residential and Commercial	0.7	0.4	0.4	0.7	0.8	0.6	0.5	0.7	0.8	0.5	0.5	0.7	2.2	2.6	2.5
Other Industrial	11.3	10.5	10.6	10.4	10.6	9.8	10.1	10.6	10.9	10.3	10.3	10.7	42.8	41.0	42.2
Total Consumption	248.2	212.0	247.4	209.3	212.3	187.8	240.4	215.3	221.4	195.0	242.3	211.9	916.9	855.8	870.5
F															
Discrepancy (c)	5.0	1.3	1.9	-3.1	7.7	-8.0	-3.0	0.0	0.0	0.0	0.0	0.0	5.1	-3.3	0.0
End-of-period Inventories (million shor	t tons)														
Primary Inventories (d)	46.2	45.6	43.2	44.7	45.5	45.2	42.1	43.7	44.7	44.0	41.1	42.7	44.7	43.7	42.7
Secondary Inventories	124.0	138.9	130.5	158.4	161.7	177.1	159.9	163.5	163.3	169.2	154.8	159.3	158.4	163.5	159.3
Electric Power Sector	118.3	132.9	123.8	151.4	155.6	170.2	152.5	155.7	156.5	161.8	146.9	151.1	151.4	155.7	151.1
Retail and General Industry	3.5	3.6	4.4	4.8	4.1	4.5	5.1	5.5	4.8	5.0	5.6	5.9	4.8	5.5	5.9
Coke Plants	1.8	1.9	1.8	1.9	1.6	1.9	1.9	1.9	1.6	1.9	1.8	1.8	1.9	1.9	1.8
Coal Market Indicators															
Coal Miner Productivity															
(Tons per hour)	5.47	5.47	5.47	5.47	5.61	5.61	5.61	5.61	5.46	5.46	5.46	5.46	5.47	5.61	5.46
Total Raw Steel Production	****	****			****										
(Million short tons per day)	0.262	0.263	0.271	0.262	0.247	0.242	0.244	0.231	0.236	0.240	0.220	0.204	0.264	0.241	0.225
Cost of Coal to Electric Utilities			1												
(Dollars per million Btu)	2.33	2.39	2.37	2.37	2.26	2.28	2.29	2.26	2.26	2.29	2.30	2.27	2.36	2.28	2.28
(20aro por million bla)			01	2.51	0	2.20	2.20	2.20	2.20	2.20	2.00	L.L/	2.50	2.20	

^{- =} 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.

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.

 $\textbf{Projections:} \ \mathsf{EIA} \ \mathsf{Regional} \ \mathsf{Short}\text{-}\mathsf{Term} \ \mathsf{Energy} \ \mathsf{Model}.$

⁽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.

Table 7a. U.S. Electricity Industry Overview

		201	4			201	15			201	16			Year	
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2014	2015	2016
Electricity Supply (billion kilowatthou	rs per day	')													
Electricity Generation	11.49	10.77	12.06	10.54	11.33	10.76	12.31	10.58	11.08	11.00	12.53	10.74	11.21	11.25	11.34
Electric Power Sector (a)	11.04	10.36	11.62	10.11	10.91	10.35	11.86	10.15	10.66	10.59	12.07	10.30	10.78	10.82	10.90
Comm. and Indus. Sectors (b)	0.44	0.41	0.44	0.42	0.42	0.41	0.45	0.43	0.42	0.41	0.46	0.44	0.43	0.43	0.43
Net Imports	0.11	0.12	0.16	0.14	0.17	0.20	0.18	0.11	0.11	0.11	0.14	0.09	0.13	0.16	0.11
Total Supply	11.59	10.89	12.22	10.68	11.50	10.96	12.49	10.69	11.19	11.11	12.66	10.84	11.35	11.41	11.45
Losses and Unaccounted for (c)	0.72	0.86	0.76	0.73	0.77	0.91	0.77	0.72	0.59	0.91	0.78	0.72	0.77	0.79	0.75
Electricity Consumption (billion kilow	atthours	er day un	less note	d)											
Retail Sales	10.48	9.67	11.07	9.58	10.36	9.69	11.33	9.59	10.23	9.84	11.48	9.73	10.20	10.24	10.32
Residential Sector	4.31	3.36	4.26	3.45	4.19	3.36	4.43	3.45	4.00	3.37	4.44	3.47	3.84	3.86	3.82
Commercial Sector	3.62	3.65	4.06	3.54	3.61	3.68	4.15	3.56	3.63	3.76	4.25	3.63	3.72	3.75	3.82
Industrial Sector	2.52	2.65	2.73	2.57	2.53	2.63	2.72	2.56	2.58	2.69	2.78	2.60	2.62	2.61	2.66
Transportation Sector	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Direct Use (d)	0.39	0.36	0.39	0.37	0.37	0.36	0.39	0.38	0.37	0.36	0.40	0.39	0.38	0.37	0.38
Total Consumption	10.87	10.04	11.46	9.95	10.73	10.04	11.72	9.97	10.60	10.20	11.88	10.12	10.58	10.62	10.70
Average residential electricity															
usage per customer (kWh)	3,019	2,368	3,034	2,450	2,909	2,349	3,128	2,426	2,776	2,335	3,098	2,419	10,871	10,811	10,628
Prices															
Power Generation Fuel Costs (dollar	rs per mil	ion Btu)													
Coal	2.33	2.39	2.37	2.37	2.26	2.28	2.29	2.26	2.26	2.29	2.30	2.27	2.36	2.28	2.28
Natural Gas	6.82	4.93	4.25	4.30	4.09	3.27	3.62	4.03	4.13	3.71	3.97	4.32	4.98	3.73	4.02
Residual Fuel Oil	19.97	20.44	19.75	14.72	10.82	11.87	11.38	10.18	10.25	11.51	11.88	11.82	19.18	10.97	11.35
Distillate Fuel Oil	23.40	22.77	21.88	18.72	15.39	15.21	13.51	14.22	14.73	15.08	15.55	16.69	22.34	14.77	15.46
End-Use Prices (cents per kilowatth	our)														
Residential Sector	11.91	12.73	13.01	12.38	12.24	12.93	13.16	12.60	12.55	13.18	13.46	12.89	12.50	12.74	13.03
Commercial Sector	10.55	10.68	11.11	10.59	10.50	10.65	11.44	10.79	10.76	10.87	11.66	11.00	10.75	10.87	11.10
Industrial Sector	6.99	6.92	7.36	6.76	6.76	6.83	7.57	6.84	6.89	6.93	7.66	6.91	7.01	7.01	7.11

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

Prices are not adjusted for inflation.

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.

 $\textbf{Projections:} \ \mathsf{EIA} \ \mathsf{Regional} \ \mathsf{Short}\text{-}\mathsf{Term} \ \mathsf{Energy} \ \mathsf{Model}.$

⁽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

Table 7b. U.S. Regional Electricity Retail Sales (Million Kilowatthours per Day)

0.5. Lifelgy illioillat		201	•		Lileigy	201	- August IS	2010		201	16			Year	
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2014	2015	2016
Residential Sector				· ·											
New England	153	111	136	118	152	110	134	120	140	111	135	120	129	129	127
Middle Atlantic	423	315	383	323	423	318	396	325	389	315	402	325	361	366	358
E. N. Central	616	446	513	479	588	432	532	475	550	436	545	478	513	507	503
W. N. Central	352	246	293	265	325	231	312	264	321	242	311	269	289	283	286
S. Atlantic	1,080	858	1,088	861	1,072	890	1,164	864	998	863	1,152	866	971	997	970
E. S. Central	404	278	363	288	390	280	389	285	361	283	384	286	333	336	329
W. S. Central	617	501	731	498	602	507	744	497	575	529	742	505	587	588	588
Mountain	238	242	321	226	234	238	330	231	245	244	343	237	257	258	267
Pacific contiguous	419	347	422	378	394	340	419	373	404	338	409	374	391	381	381
AK and HI	14	11	12	13	13	12	12	13	13	12	12	13	13	12	13
Total	4,315	3,355	4,260	3,449	4,194	3,358	4,433	3,446	3,998	3,372	4,437	3,473	3,844	3,857	3,821
Commercial Sector															
New England	148	138	154	139	148	138	155	139	145	138	156	139	145	145	145
Middle Atlantic	442	413	461	409	444	418	469	411	440	415	477	413	431	435	436
E. N. Central	511	490	526	480	510	493	535	481	512	505	561	494	502	505	518
W. N. Central	287	273	298	272	281	269	302	273	286	283	318	281	282	281	292
S. Atlantic	803	842	920	793	805	863	953	798	813	869	969	820	840	855	868
E. S. Central	239	237	271	226	235	242	282	228	234	244	286	230	243	247	249
W. S. Central	494	521	610	504	496	530	625	506	497	546	637	518	532	540	550
Mountain	239	259	287	243	239	254	289	246	247	270	306	254	257	257	269
Pacific contiguous	442	463	514	461	434	456	520	463	439	470	519	466	470	469	474
AK and HI	17	16	17	17	16	16	17	17	16	16	17	17	16	16	16
Total	3,621	3,652	4,056	3,544	3,609	3,679	4,149	3,562	3,629	3,759	4,247	3,632	3,719	3,751	3,817
Industrial Sector															
New England	49	50	52	50	49	50	52	50	48	49	52	48	50	50	49
Middle Atlantic	201	198	205	194	198	193	205	197	203	203	210	198	199	198	204
E. N. Central	525	532	544	519	520	523	530	505	519	527	537	509	530	520	523
W. N. Central	231	240	253	238	237	246	263	246	245	256	270	252	241	248	256
S. Atlantic	372	397	404	383	376	401	396	377	373	400	405	381	389	387	390
E. S. Central	279	287	296	283	279	290	287	279	296	292	290	285	286	284	291
W. S. Central	431	465	471	444	428	450	475	445	440	470	488	453	453	450	463
Mountain	210	235	250	220	217	236	256	225	223	246	263	234	229	233	241
Pacific contiguous	213	228	244	223	216	226	244	226	216	229	245	227	227	228	229
AK and HI		14	14	14	13	13	14	14	13	14	14	14	14	14	14
Total	2,522	2,646	2,734	2,567	2,531	2,628	2,722	2,563	2,577	2,686	2,775	2,601	2,618	2,612	2,660
Total All Sectors (a)															
New England	352	300	344	308	350	300	343	310	335	299	346	309	326	326	322
Middle Atlantic	1,078	936	1,059	936	1,077	938	1,082	945	1,045	945	1,101	948	1,002	1,011	1,010
E. N. Central	1,654	1,469	1,584	1,480	1,620	1,450	1,600	1,463	1,583	1,470	1,645	1,483	1,547	1,533	1,546
W. N. Central	870	760	843	776	843	747	877	782	852	781	900	802	812	812	834
S. Atlantic	2,259	2,100	2,415	2,041	2,256	2,159	2,516	2,042	2,188	2,135	2,529	2,071	2,204	2,243	2,231
E. S. Central	922	803	931	797	904	812	959	791	891	820	961	801	863	866	868
W. S. Central	1,542	1,487	1,812	1,446	1,527	1,487	1,845	1,449	1,512	1,545	1,868	1,476	1,572	1,578	1,601
Mountain	687	737	858	689	690	728	875	702	716	760	912	725	743	749	779
Pacific contiguous	1,076	1,040	1,182	1,064	1,046	1,024	1,186	1,064	1,062	1,040	1,176	1,070	1,091	1,080	1,087
AK and HI		41	43	43	42	41	43	44	43	41	43	44	43	42	43
Total	10,481	9,674	11,072	9,581	10,356	9,685	11,326	9,593	10,227	9,838	11,481	9,728	10,202	10,241	10,320

^{- =} 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.

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.

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

Table 7c. U.S. Regional Electricity Prices (Cents per Kilowatthour)

U.S. Energy Informa		201		10111	i Energy	20				201	16			Year	
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2014	2015	2016
Residential Sector		1	1						I.	<u> </u>					
New England	17.53	18.03	17.60	18.24	20.42	20.52	20.02	19.36	19.50	19.70	19.84	19.87	17.82	20.09	19.72
Middle Atlantic	16.26	16.58	16.66	16.02	15.76	16.09	16.45	16.09	16.15	16.47	16.82	16.50	16.38	16.09	16.49
E. N. Central	11.56	12.96	12.98	12.73	12.22	13.30	13.18	12.91	12.55	13.54	13.41	13.17	12.50	12.87	13.15
W. N. Central	10.04	11.80	12.31	10.65	10.25	12.13	12.47	10.88	10.54	12.35	12.79	11.14	11.14	11.40	11.68
S. Atlantic	11.31	11.98	12.13	11.61	11.39	11.93	12.07	11.69	11.75	12.26	12.38	11.97	11.75	11.78	12.10
E. S. Central	10.30	11.21	10.97	10.66	10.34	11.20	10.94	10.78	10.75	11.50	11.27	11.08	10.75	10.79	11.14
W. S. Central	10.40	11.43	11.39	11.06	10.67	11.58	11.58	11.15	11.00	11.78	11.81	11.30	11.07	11.26	11.50
Mountain	10.93	12.02	12.33	11.31	11.31	12.31	12.61	11.55	11.61	12.65	12.96	11.87	11.71	12.01	12.34
Pacific	12.93	12.78	15.53	13.15	13.68	13.68	16.24	13.80	14.23	14.03	16.70	14.26	13.65	14.42	14.86
U.S. Average	11.91	12.73	13.01	12.38	12.24	12.93	13.16	12.60	12.55	13.18	13.46	12.89	12.50	12.74	13.03
Commercial Sector															
New England	15.62	14.32	14.43	14.33	16.93	15.53	16.02	15.64	18.46	17.01	17.35	16.89	14.68	16.04	17.43
Middle Atlantic	14.29	13.32	13.94	12.94	13.18	13.10	14.72	13.36	13.38	13.38	14.96	13.57	13.64	13.62	13.86
E. N. Central	9.69	9.96	10.00	9.88	9.75	9.96	10.03	9.89	9.87	10.05	10.09	9.95	9.88	9.91	9.99
W. N. Central	8.60	9.39	9.86	8.69	8.57	9.51	10.24	8.91	8.79	9.73	10.48	9.14	9.15	9.33	9.56
S. Atlantic	9.83	9.68	9.70	9.65	9.68	9.55	9.88	9.81	9.85	9.73	10.07	10.00	9.72	9.73	9.92
E. S. Central	10.26	10.51	10.40	10.22	10.22	10.37	10.41	10.46	10.48	10.54	10.56	10.63	10.35	10.37	10.55
W. S. Central	8.13	8.34	8.30	8.15	8.05	7.98	8.38	8.04	8.19	8.10	8.49	8.09	8.24	8.13	8.23
Mountain	9.12	9.89	10.19	9.42	9.39	10.05	10.44	9.62	9.62	10.26	10.67	9.86	9.69	9.90	10.13
Pacific	11.73	13.21	15.67	13.79	12.30	13.61	16.41	14.01	12.81	13.86	16.88	14.46	13.68	14.19	14.60
U.S. Average	10.55	10.68	11.11	10.59	10.50	10.65	11.44	10.79	10.76	10.87	11.66	11.00	10.75	10.87	11.10
Industrial Sector															
New England	12.97	11.47	11.43	11.18	13.18	11.94	13.32	12.26	14.23	12.66	13.97	12.77	11.74	12.68	13.42
Middle Atlantic	8.74	7.36	7.28	7.07	7.87	7.27	7.87	7.25	7.91	7.30	7.90	7.31	7.61	7.57	7.61
E. N. Central	7.01	6.84	7.01	6.85	6.87	6.80	7.16	6.99	7.03	6.95	7.29	7.10	6.93	6.96	7.09
W. N. Central	6.52	6.68	7.32	6.32	6.49	6.80	7.64	6.55	6.67	6.94	7.78	6.67	6.72	6.89	7.03
S. Atlantic	6.80	6.68	6.96	6.49	6.56	6.59	7.08	6.51	6.70	6.72	7.11	6.54	6.73	6.69	6.77
E. S. Central	6.16	6.23	6.76	5.68	5.78	6.03	6.71	5.73	5.79	6.04	6.71	5.74	6.22	6.07	6.07
W. S. Central	5.87	6.04	6.34	5.92	5.65	5.69	6.35	5.67	5.70	5.77	6.42	5.71	6.05	5.85	5.91
Mountain	6.15	6.73	7.38	6.25	6.18	6.72	7.59	6.36	6.35	6.89	7.78	6.50	6.66	6.75	6.92
Pacific	7.70	8.11	9.59	8.63	7.83	8.41	9.94	8.80	8.04	8.46	10.05	8.91	8.54	8.79	8.90
U.S. Average	6.99	6.92	7.36	6.76	6.76	6.83	7.57	6.84	6.89	6.93	7.66	6.91	7.01	7.01	7.11
All Sectors (a)															
New England	16.05	15.19	15.20	15.29	17.90	16.74	17.15	16.50	18.25	17.25	17.78	17.37	15.45	17.10	17.68
Middle Atlantic	14.00	13.15	13.63	12.78	13.20	12.90	14.03	13.00	13.32	13.07	14.26	13.24	13.42	13.31	13.50
E. N. Central	9.53	9.73	9.93	9.74	9.72	9.82	10.12	9.87	9.86	9.97	10.27	10.01	9.73	9.88	10.03
W. N. Central	8.63	9.31	9.95	8.64	8.64	9.43	10.25	8.83	8.84	9.63	10.47	9.03	9.14	9.31	9.51
S. Atlantic	10.04	10.05	10.34	9.88	9.97	9.98	10.45	10.00	10.18	10.19	10.65	10.18	10.09	10.12	10.32
E. S. Central	9.04	9.22	9.47	8.77	8.90	9.11	9.52	8.91	9.03	9.27	9.68	9.05	9.13	9.12	9.27
W. S. Central	8.41	8.66	9.04	8.47	8.41	8.52	9.15	8.38	8.54	8.65	9.27	8.46	8.66	8.64	8.76
Mountain	8.84	9.58	10.17	9.03	9.03	9.71	10.43	9.21	9.28	9.94	10.70	9.43	9.46	9.65	9.89
Pacific	11.39	11.93	14.35	12.47	11.89	12.47	15.00	12.81	12.37	12.71	15.38	13.20	12.59	13.12	13.47
U.S. Average	10.25	10.36	10.92	10.21	10.29	10.41	11.18	10.38	10.48	10.59	11.39	10.58	10.45	10.59	10.78

^{- =} 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 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.

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

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

U.S. Energy information Admit	inotration	201		_norgy t	Juliook -	201				20	16			Year	
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2014	2015	2016
United States														<u> </u>	
Coal	4,864	4,029	4,624	3,869	4,094	3,498	4,478	3,960	4,201	3,668	4,529	3,901	4,344	4,008	4,075
Natural Gas	2,715	2,898	3,725	2,948	3,236	3,413	4,208	3,171	3,051	3,267	4,119	3,159	3,074	3,509	3,400
Petroleum (a)	148	64	66	58	124	64	74	71	84	71	78	69	84	83	76
Other Gases	28	29	35	34	34	31	35	35	34	32	36	36	32	34	35
Nuclear	2,201	2,060	2,289	2,184	2,248	2,136	2,195	2,016	2,115	2,078	2,226	2,065	2,184	2,148	2,121
Renewable Energy Sources:															
Conventional Hydropower	703	849	652	633	797	732	553	482	699	893	699	578	709	640	717
Wind	553	549	367	525	506	558	427	552	602	645	471	610	498	511	582
Wood Biomass	119	114	121	118	117	112	123	116	116	113	127	121	118	117	119
Waste Biomass	56	59	60	59	55	57	62	60	59	60	62	60	58	59	60
Geothermal	45	45	45	46	47	46	45	44	44	43	44	44	46	46	44
Solar	35	61	61	44	56	89	84	49	52	106	114	<i>7</i> 5	50	70	87
Pumped Storage Hydropower	-13	-18	-21	-16	-14	-11	-16	-14	-13	-12	-15	-13	-17	-14	-13
Other Nonrenewable Fuels (b)	32	34	36	35	33	35	36	35	34	37	37	36	34	35	36
Total Generation	11,486	10,773	12,060	10,536	11,333	10,762	12,306	10,578	11,078	11,001	12,527	10,741	11,214	11,246	11,338
Northeast Census Region	,	•	,	•	,							,	,		
Coal	353	244	210	207	293	171	185	248	299	175	185	205	253	224	216
Natural Gas	413	485	632	493	479	547	681	537	494	563	695	545	506	561	574
Petroleum (a)	55	2	3	3	47	3	6	6	10	5	6	5	16	15	6
Other Gases	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Nuclear	542	471	539	531	545	499	516	469	493	482	513	476	521	507	491
Hydropower (c)	94	100	84	91	91	94	86	74	98	112	100	97	92	86	102
Other Renewables (d)	73	64	60	72	76	65	60	69	73	65	61	72	67	68	68
Other Nonrenewable Fuels (b)	11	12	13	12	11	12	12	12	12	12	12	12	12	12	12
Total Generation	1,542	1,381	1,543	1,411	1,543	1,394	1,548	1,416	1,479	1,416	1,573	1,414	1,469	1,475	1,471
South Census Region	-,	1,001	.,	-,	-,	.,	.,	.,	.,	.,	.,	.,	1,100	., •	.,
Coal	2,122	1,849	2,100	1,614	1,713	1,538	1,957	1,558	1,713	1,605	1.970	1,539	1,920	1,692	1,707
Natural Gas	1,544	1,729	2,088	1,637	1,976	2,046	2,395	1,774	1,773	1,993	2.350	1,761	1,751	2,048	1,970
Petroleum (a)	53	28	26	24	42	28	30	27	34	29	31	25	33	32	30
Other Gases	11	11	14	14	13	12	13	14	13	12	14	15	13	13	14
Nuclear	966	882	994	977	974	960	972	893	942	930	1.006	933	955	950	953
Hydropower (c)	150	107	80	107	127	109	76	82	137	128	89	109	111	98	115
Other Renewables (d)	241	257	204	240	228	272	235	280	298	323	270	320	235	254	303
Other Nonrenewable Fuels (b)	13	13	14	14	14	15	14	14	14	15	14	14	13	14	14
Total Generation	5,100	4,875	5,520	4,627	5,089	4,978	5.693	4,643	4,923	5,034	5.744	4,716	5,031	5,101	5,105
Midwest Census Region	-,	.,	-,	-,	-,	.,	-,	.,	.,	-,	-,	.,	-,	-,	-,
Coal	1,801	1,439	1,682	1,492	1,581	1,325	1,671	1,502	1,595	1,396	1,741	1,521	1,603	1,520	1,564
Natural Gas	194	184	203	189	295	245	302	215	254	231	291	213	193	264	247
Petroleum (a)	14	13	12	9	12	10	12	11	12	11	13	11	12	11	12
Other Gases	11	12	14	12	13	12	14	12	13	13	15	13	12	13	13
Nuclear	533	543	586	525	553	527	544	503	521	509	542	503	547	532	519
Hydropower (c)	33	45	44	41	42	43	41	31	44	51	48	40	41	39	46
Other Renewables (d)	253	214	148	244	250	224	163	244	259	247	178	266	214	220	237
Other Nonrenewable Fuels (b)	4	5	5	4	4	5	5	5	4	5	5	5	4	5	5
Total Generation	2,843	2,454	2,693	2,516	2,749	2,393	2,752	2,523	2,702	2,463	2,832	2,570	2,626	2,604	2,642
West Census Region	_,0.0	_,	_,,	_,0.0	_,•	2,000	2,.02	2,020	2,702	2,700	2,002	2,070	_,,	2,00.	2,0.2
Coal	588	497	632	556	506	463	665	653	594	493	634	636	568	572	589
Natural Gas	564	500	802	628	486	575	831	644	530	480	783	641	624	635	609
Petroleum (a)	25	21	24	23	23	23	26	27	27	26	28	28	23	25	28
Other Gases	5	5	6	6	6	6	6	6	7	6	6	6	5	6	6
Nuclear	160	164	170	150	176	150	163	151	159	156	166	154	161	160	159
Hydropower (c)	414	579	423	378	522	475	333	281	407	590	447	318	448	402	441
Other Renewables (d)	240	293	243	236	228	301	283	229	244	332	309	252	253	261	284
Other Nonrenewable Fuels (b)	5	293 5	243 5	4	4	30 i	203 5	4	4	5	5	5	5	5	5
Total Generation	2,001	2,063	2,304	1,982	1,953	1,997	2,313	1,996	1,973	2,088	2,379	2,040	2,088	2,066	2,120
. Juli Contractori	2,001	-,000	-,004	.,502	.,555	1,001	2,010	1,000	1,010	2,000	2,013	=,∪+∪	_,000	2,000	2,120

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

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.

⁽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.

Table 7e. U.S. Regional Fuel Consumption for Electricity Generation, All Sectors

		20	14			20	15			20°	16			Year	
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2014	2015	2016
Fuel Consumption for Electricity Ge	neration,	All Secto	rs												
United States															
Coal (thousand st/d)	2,579	2,161	2,522	2,105	2,190	1,910	2,448	2,169	2,263	1,985	2,472	2,137	2,341	2,180	2,215
Natural Gas (million cf/d)	20,666	22,042	28,356	22,049	23,991	25,835	32,183	23,435	22,592	24,803	31,454	23,322	23,296	26,376	25,553
Petroleum (thousand b/d)	262	111	115	103	216	114	130	127	149	126	137	123	147	146	134
Residual Fuel Oil	86	24	29	24	77	25	29	31	35	30	33	29	41	41	32
Distillate Fuel Oil	87	24	24	25	66	26	29	30	38	28	29	29	40	38	31
Petroleum Coke (a)	69	60	59	50	59	58	66	60	68	63	69	59	59	61	65
Other Petroleum Liquids (b)	20	3	3	4	13	4	5	5	8	5	6	5	7	7	6
Northeast Census Region															
Coal (thousand st/d)	161	113	102	96	132	79	87	114	135	79	85	94	118	103	98
Natural Gas (million cf/d)	3,191	3,701	4,921	3,729	3,614	4,187	5,299	4,035	3,714	4,275	5,359	4,054	3,890	4,288	4,353
Petroleum (thousand b/d)	92	4	6	5	76	5	10	10	17	8	10	9	26	25	11
South Census Region															
Coal (thousand st/d)	1,084	963	1,116	855	889	817	1,040	835	896	848	1,048	825	1,004	895	905
Natural Gas (million cf/d)	11,736	13,138	15,819	12,131	14,453	15,412	18,114	12,956	12,987	15,028	17,778	12,873	13,214	15,238	14,670
Petroleum (thousand b/d)	101	51	49	45	79	51	56	51	65	54	58	47	61	59	56
Midwest Census Region															
Coal (thousand st/d)	1,005	811	952	842	884	754	944	846	894	782	981	857	902	857	879
Natural Gas (million cf/d)	1,574	1,436	1,638	1,513	2,275	1,933	2,509	1,683	1,975	1,844	2,404	1,649	1,540	2,099	1,968
Petroleum (thousand b/d)	28	23	22	17	23	21	22	22	22	21	22	22	23	22	22
West Census Region															
Coal (thousand st/d)	329	274	351	313	286	260	377	373	337	275	358	362	317	324	333
Natural Gas (million cf/d)	4,165	3,767	5,979	4,675	3,649	4,304	6,260	4,762	3,915	3,656	5,913	4,746	4,651	4,751	4,562
Petroleum (thousand b/d)	41	33	38	36	38	37	42	44	44	43	46	46	37	40	45
End-of-period U.S. Fuel Inventories	Held by E	Electric Po	wer Sect	or											
Coal (million short tons)	118.3	132.9	123.8	151.4	155.6	170.2	152.5	155.7	156.5	161.8	146.9	151.1	151.4	155.7	151.1
Residual Fuel Oil (mmb)	10.5	10.6	10.4	12.7	10.2	10.8	11.1	11.6	11.6	11.4	11.2	11.4	12.7	11.6	11.4
Distillate Fuel Oil (mmb)	15.5	15.5	15.5	16.9	15.8	16.0	16.0	16.3	16.3	16.2	16.1	16.3	16.9	16.3	16.3
Petroleum Coke (mmb)	1.7	2.0	1.9	4.2	4.1	5.0	5.0	4.9	4.8	4.7	4.7	4.6	4.2	4.9	4.6

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

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.

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

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

		201			JOK Au	201				201	16			Year	
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2014	2015	2016
Electric Power Sector	•	•	•		•	•		•	•	•	•			•	
Hydroelectric Power (a)	0.596	0.731	0.566	0.549	0.677	0.629	0.478	0.415	0.598	0.768	0.606	0.499	2.443	2.200	2.471
Wood Biomass (b)	0.063	0.056	0.064	0.063	0.063	0.057	0.066	0.060	0.062	0.057	0.070	0.063	0.247	0.245	0.253
Waste Biomass (c)	0.063	0.065	0.066	0.066	0.063	0.063	0.070	0.068	0.066	0.067	0.070	0.068	0.260	0.264	0.272
Wind	0.473	0.475	0.321	0.459	0.433	0.483	0.374	0.483	0.521	0.558	0.412	0.534	1.729	1.773	2.025
Geothermal	0.039	0.039	0.039	0.041	0.040	0.040	0.040	0.039	0.038	0.037	0.038	0.038	0.158	0.159	0.152
Solar	0.029	0.051	0.052	0.037	0.047	0.076	0.073	0.042	0.044	0.090	0.098	0.065	0.170	0.237	0.297
Subtotal	1.263	1.418	1.109	1.215	1.323	1.348	1.100	1.107	1.330	1.577	1.296	1.268	5.006	4.878	5.471
Industrial Sector															
Hydroelectric Power (a)	0.008	0.006	0.006	0.007	0.007	0.006	0.007	0.007	0.006	0.006	0.007	0.007	0.026	0.027	0.026
Wood Biomass (b)	0.318	0.327	0.335	0.336	0.321	0.308	0.306	0.304	0.293	0.289	0.300	0.303	1.317	1.239	1.186
Waste Biomass (c)	0.044	0.046	0.046	0.046	0.045	0.046	0.048	0.047	0.046	0.046	0.048	0.048	0.183	0.185	0.188
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)	0.182	0.190	0.190	0.196	0.189	0.190	0.189	0.191	0.193	0.190	0.191	0.191	0.758	0.759	0.765
Subtotal	0.557	0.574	0.582	0.591	0.567	0.556	0.555	0.554	0.544	0.537	0.552	0.554	2.305	2.232	2.187
Commercial Sector															
Wood Biomass (b)	0.018	0.018	0.018	0.018	0.018	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.071	0.075	0.077
Waste Biomass (c)	0.012	0.011	0.011	0.012	0.012	0.011	0.012	0.012	0.012	0.011	0.013	0.012	0.046	0.047	0.048
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	0.036	0.036	0.036	0.036	0.037	0.036	0.037	0.037	0.036	0.036	0.038	0.037	0.144	0.147	0.147
Residential Sector															
Wood Biomass (b)	0.143	0.145	0.146	0.146	0.110	0.111	0.113	0.113	0.103	0.104	0.105	0.105	0.580	0.447	0.418
Geothermal	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.011	0.011	0.011	0.011	0.040	0.040	0.044
Solar (d)	0.062	0.063	0.063	0.063	0.069	0.070	0.071	0.071	0.077	0.077	0.078	0.078	0.252	0.281	0.311
Subtotal	0.215	0.217	0.220	0.220	0.189	0.192	0.194	0.194	0.191	0.193	0.195	0.195	0.871	0.768	0.773
Transportation Sector															
Ethanol (e)	0.256	0.276	0.277	0.281	0.266	0.281	0.283	0.283	0.271	0.282	0.289	0.283	1.089	1.113	1.125
Biodiesel (e)	0.040	0.048	0.055	0.053	0.034	0.055	0.063	0.070	0.059	0.063	0.069	0.071	0.196	0.222	0.261
Subtotal	0.296	0.324	0.332	0.334	0.299	0.335	0.346	0.353	0.329	0.345	0.358	0.354	1.285	1.333	1.386
All Sectors Total															
Hydroelectric Power (a)	0.604	0.737	0.572	0.555	0.685	0.636	0.485	0.422	0.605	0.774	0.613	0.506	2.469	2.227	2.497
Wood Biomass (b)	0.542	0.546	0.563	0.563	0.512	0.493	0.504	0.495	0.478	0.469	0.495	0.491	2.214	2.005	1.933
Waste Biomass (c)	0.119	0.121	0.124	0.124	0.120	0.122	0.130	0.127	0.124	0.125	0.131	0.128	0.488	0.498	0.508
Wind	0.473	0.475	0.321	0.459	0.433	0.483	0.374	0.483	0.521	0.558	0.412	0.534	1.729	1.773	2.025
Geothermal	0.055	0.055	0.055	0.057	0.056	0.055	0.056	0.055	0.055	0.054	0.055	0.056	0.222	0.222	0.220
Solar	0.092	0.116	0.117	0.102	0.117	0.148	0.145	0.114	0.122	0.168	0.178	0.144	0.427	0.524	0.613
Ethanol (e)	0.260	0.281	0.282	0.286	0.271	0.287	0.295	0.289	0.276	0.287	0.294	0.289	1.109	1.141	1.146
Biodiesel (e)	0.040	0.048	0.055	0.053	0.034	0.055	0.063	0.070	0.059	0.063	0.069	0.071	0.196	0.222	0.261
Biofuel Losses and Co-products (f)	0.182	0.190	0.190	0.196	0.189	0.190	0.189	0.191	0.193	0.190	0.191	0.191	0.758	0.759	0.765
Total Consumption	2.367	2.570	2.279	2.396	2.416	2.470	2.231	2.245	2.431	2.687	2.438	2.408	9.612	9.362	9.964

^{- =} 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.

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.

⁽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 biodiesel consumption in the transportation sector includes production, stock change, and imports less exports. Some biodiesel may be consumed in the residential sector in

⁽f) Losses and co-products from the production of fuel ethanol and biodiesel

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

U.S. Energy information Administration	SHOIL-			100K - AL	igust 20		_			204	16			Veer	
	1st	2014 2nd	3rd	4th	1st	201 2nd	3rd	4th	1st	201 2nd	3rd	4th	2014	Year 2015	2016
Macroeconomic			0.0				0.0				0.0				
Real Gross Domestic Product															
(billion chained 2009 dollars - SAAR) Real Personal Consumption Expend.	15,832	16,010	16,206	16,295	16,288	16,382	16,491	16,606	16,739	16,867	17,000	17,121	16,086	16,442	16,932
(billion chained 2009 dollars - SAAR)	10,844	10,913	11,000	11,120	11,178	11,258	11,340	11,425	11,514	11,592	11,676	11,762	10,969	11,300	11,636
(billion chained 2009 dollars - SAAR)	2,536	2,595	2,643	2,673	2,671	2,705	2,755	2,807	2,857	2,913	2,958	3,008	2,612	2,734	2,934
Business Inventory Change (billion chained 2009 dollars - SAAR)	40	100	95	93	111	70	40	36	39	56	67	75	82	64	59
Real Government Expenditures (billion chained 2009 dollars - SAAR)	2,869	2,881	2,912	2,898	2,893	2,913	2,925	2,930	2,934	2,935	2,943	2,937	2,890	2,915	2,937
Real Exports of Goods & Services (billion chained 2009 dollars - SAAR)	2,027	2,081	2,104	2,127	2,095	2,125	2,141	2,162	2,189	2,216	2,241	2,267	2,085	2,131	2,228
Real Imports of Goods & Services (billion chained 2009 dollars - SAAR)	2,474	2,541	2,535	2,599	2,643	2,675	2,698	2,742	2,782	2,832	2,872	2,914	2,537	2,689	2,850
Real Disposable Personal Income (billion chained 2009 dollars - SAAR)	11,810	11,900	11,970	12,093	12,251	12,317	12,395	12,479	12,580	12,652	12,757	12,872	11,943	12,360	12,715
Non-Farm Employment (millions)	137.8	138.6	139.4	140.2	141.0	141.6	142.2	142.8	143.3	143.8	144.2	144.7	139.0	141.9	144.0
Civilian Unemployment Rate (percent)	6.6	6.2	6.1	5.7	5.6	5.4	5.3	5.2	5.2	5.1	5.0	5.0	6.2	5.4	5.1
Housing Starts (millions - SAAR)	0.93	0.98	1.03	1.06	0.98	1.14	1.16	1.21	1.27	1.30	1.35	1.42	1.00	1.12	1.34
Industrial Production Indices (Index, 2007=100)															
Total Industrial Production	102.2	103.7	104.7	105.9	105.9	105.6	105.8	106.6	107.8	108.8	110.1	111.2	104.1	106.0	109.5
Manufacturing	99.4	101.2	102.4	103.5	103.3	103.6	104.1	105.1	106.4	107.6	108.9	110.1	101.6	104.0	108.3
Food	106.1	106.5	105.6	107.7	108.8	108.5	109.0	109.7	110.5	111.2	112.0	112.8	106.5	109.0	111.6
Paper Petroleum and Coal Products	82.4 97.7	83.3 98.2	82.6 98.9	83.1 98.7	82.2 99.4	82.8 100.6	82.4 101.5	82.1 102.2	82.0 102.6	82.0 103.0	82.1 103.3	82.4 103.7	82.9 98.4	82.4 100.9	82.1 103.2
	87.7	88.4	90.1	91.3	92.0	92.0	92.3	92.7	93.3	94.0	95.0	96.0	89.4	92.3	94.6
Chemicals Nonmetallic Mineral Products	75.5	77.4	79.9	80.2	92.0 80.5	92.0 80.6	92.3 81.8	92.7 83.0	93.3 84.2	94.0 85.4	95.0 86.7	96.0 88.1	78.3	92.3 81.5	94.6 86.1
Primary Metals	101.9	106.2	108.2	105.5	100.9	101.1	100.7	100.5	100.9	100.9	101.8	103.3	105.5	100.8	101.7
Coal-weighted Manufacturing (a)	91.8	93.7	94.6	94.4	93.3	93.6	93.9	94.2	94.7	95.1	95.9	97.0	93.6	93.7	95.7
Distillate-weighted Manufacturing (a)	92.3	93.9	95.0	95.6	95.1	95.2	95.8	96.5	97.4	98.2	99.1	100.1	94.2	95.7	98.7
Electricity-weighted Manufacturing (a)	97.1	99.1	100.1	100.6	99.8	100.2	100.5	101.0	101.8	102.5	103.5	104.8	99.2	100.4	103.1
Natural Gas-weighted Manufacturing (a)	93.6	94.6	95.6	96.2	95.6	96.1	96.5	96.9	97.5	98.1	99.2	100.4	95.0	96.3	98.8
Price Indexes															
Consumer Price Index (all urban consumers)															
(index, 1982-1984=1.00) Producer Price Index: All Commodities	2.35	2.37	2.38	2.37	2.35	2.37	2.38	2.38	2.40	2.41	2.43	2.43	2.37	2.37	2.42
(index, 1982=1.00) Producer Price Index: Petroleum	2.06	2.07	2.06	2.02	1.92	1.92	1.92	1.92	1.94	1.95	1.96	1.96	2.05	1.92	1.95
(index, 1982=1.00)	2.88	2.99	2.90	2.35	1.71	1.95	1.87	1.63	1.70	1.92	1.95	1.87	2.78	1.79	1.86
(index, 2009=100)	107.7	108.3	108.6	108.7	108.7	109.4	109.9	110.5	111.0	111.6	112.1	112.6	108.3	109.6	111.9
Miscellaneous Vehicle Miles Traveled (b)															
(million miles/day)	7,708	8,687	8,604	8,292	7,991	8,943	8,815	8,500	8,165	9,025	8,924	8,592	8,325	8,564	8,677
(Available ton-miles/day, thousands)	503	548	561	535	517	571	579	534	501	564	582	537	537	550	546
(Revenue ton-miles/day, thousands)	310	347	353	332	322	358	371	333	311	359	375	335	336	346	345
(index, 1982-1984=100) Raw Steel Production	297.3	334.3	301.0	298.2	286.4	313.0	303.6	299.4	295.5	320.3	311.7	311.4	307.7	300.6	309.7
(million short tons per day)	0.262	0.263	0.271	0.262	0.247	0.242	0.244	0.231	0.236	0.240	0.220	0.204	0.264	0.241	0.225
Carbon Dioxide (CO ₂) Emissions (million metric	tons)														
Petroleum	547	556	568	577	562	567	577	578	565	572	582	581	2,249	2,284	2,300
Natural Gas	461	298	305	377	471	316	325	392	464	318	327	396	1,441	1,504	1,505
Coal	463	397	461	391	397	356	450	403	414	365	453	396	1,713	1,606	1,629
Total Energy (c)	1,475	1,254	1,337	1,348	1,432	1,243	1,355	1,376	1,446	1,259	1,365	1,375	5,415	5,406	5,445

^{- =} no data available

SAAR = Seasonally-adjusted annual rate

⁽a) Fuel share weights of individual sector indices based on EIAManufacturing 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 Informat								2015							
	4-4	201		441-	4-4	201		441-	4-4	201		441-	2044	Year	0046
Deal Cress State Bradus	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2014	2015	2016
Real Gross State Produc	ג נווווטוז ק. 855	2009) 861	866	878	877	883	889	894	901	907	913	919	865	886	910
New England															
Middle Atlantic E. N. Central	2,393	2,409	2,443	2,468	2,464	2,478	2,496	2,512	2,531	2,547	2,564	2,579	2,428	2,488	2,555
	•	2,215	2,231	2,241	2,239	2,251	2,264	2,278	2,294	2,308	2,324	2,338	2,220	2,258	2,316
W. N. Central	1,020	1,032	1,044	1,045	1,044	1,051	1,057	1,064	1,072	1,079	1,088	1,095	1,035	1,054	1,083
S. Atlantic		2,832	2,859	2,872	2,875	2,897	2,920	2,942	2,969	2,993	3,019	3,043	2,840	2,909	3,006
E. S. Central	726	735	738	741	741	745	750	755	760	766	771	776	735	748	768
W. S. Central	1,949	1,979	2,006	2,006	2,002	2,006	2,014	2,030	2,046	2,066	2,082	2,099	1,985	2,013	2,073
Mountain		1,015	1,028	1,041	1,043	1,050	1,058	1,065	1,075	1,085	1,095	1,104	1,022	1,054	1,090
Pacific	2,808	2,845	2,904	2,915	2,913	2,933	2,954	2,975	3,001	3,026	3,051	3,075	2,868	2,944	3,038
Industrial Output, Manufa				-	00.0	00.0	00.0	400.0	404.0	400.0	400.0	404.0	07.5	00.4	400.0
New England	96.1	97.3	98.0	98.7	98.3	98.9	99.3	100.0	101.3	102.3	103.6	104.6	97.5	99.1	103.0
Middle Atlantic	94.4	95.7	96.4	97.2	96.9	97.4	97.9	98.7	99.8	100.7	101.8	102.8	95.9	97.7	101.3
E. N. Central	101.5	103.4	104.7	106.2	106.5	107.3	108.0	109.0	110.1	111.1	112.4	113.6	104.0	107.7	111.8
W. N. Central		104.5	105.6	106.9	106.5	106.8	107.3	108.3	109.8	111.0	112.5	113.7	104.9	107.2	111.8
S. Atlantic		96.9	98.3	99.4	99.4	99.9	100.7	101.7	103.0	104.0	105.2	106.3	97.4	100.4	104.6
E. S. Central	97.5	99.3	101.0	102.1	102.1	102.1	102.8	103.8	105.1	106.1	107.3	108.3	100.0	102.7	106.7
W. S. Central	104.1	106.2	107.6	108.9	107.8	107.0	107.1	107.9	109.2	110.2	111.6	112.9	106.7	107.5	111.0
Mountain	101.5	103.3	104.5	105.5	106.0	106.5	107.3	108.5	110.2	111.8	113.6	115.2	103.7	107.0	112.7
Pacific	100.7	102.5	103.5	104.4	104.3	105.1	105.4	106.2	107.6	108.9	110.4	111.7	102.8	105.2	109.6
Real Personal Income (B		•													
New England	760	761	766	778	790	795	799	804	811	816	821	828	766	797	819
Middle Atlantic	2,035	2,039	2,054	2,081	2,117	2,125	2,139	2,152	2,169	2,180	2,194	2,212	2,053	2,133	2,189
E. N. Central		1,864	1,871	1,893	1,922	1,935	1,944	1,956	1,971	1,982	1,994	2,008	1,871	1,939	1,989
W. N. Central	872	881	885	894	901	907	914	922	929	934	941	948	883	911	938
S. Atlantic	2,474	2,494	2,508	2,539	2,582	2,601	2,620	2,640	2,665	2,686	2,708	2,734	2,504	2,611	2,698
E. S. Central	653	658	660	668	679	682	686	690	697	701	706	711	660	684	704
W. S. Central	1,542	1,556	1,571	1,589	1,610	1,613	1,621	1,633	1,648	1,662	1,677	1,694	1,564	1,619	1,670
Mountain	869	874	880	894	907	913	919	926	935	943	952	961	879	916	948
Pacific	2,327	2,345	2,373	2,400	2,441	2,461	2,479	2,498	2,521	2,540	2,560	2,584	2,361	2,470	2,551
Households (Thousands)														
New England	5,764	5,765	5,762	5,767	5,771	5,771	5,777	5,783	5,787	5,791	5,796	5,802	5,767	5,783	5,802
Middle Atlantic	15,836	15,838	15,829	15,843	15,850	15,849	15,861	15,873	15,880	15,891	15,903	15,917	15,843	15,873	15,917
E. N. Central	18,576	18,587	18,582	18,596	18,598	18,593	18,605	18,621	18,632	18,647	18,662	18,680	18,596	18,621	18,680
W. N. Central	8,410	8,423	8,429	8,447	8,460	8,468	8,484	8,500	8,512	8,527	8,543	8,561	8,447	8,500	8,561
S. Atlantic	24,217	24,276	24,320	24,398	24,467	24,523	24,603	24,685	24,760	24,840	24,923	25,009	24,398	24,685	25,009
E. S. Central	7,450	7,453	7,452	7,461	7,466	7,468	7,476	7,486	7,496	7,508	7,520	7,533	7,461	7,486	7,533
W. S. Central	14,103	14,148	14,182	14,232	14,275	14,310	14,356	14,403	14,446	14,491	14,539	14,587	14,232	14,403	14,587
Mountain	8,604	8,625	8,642	8,672	8,698	8,720	8,750	8,781	8,810	8,843	8,878	8,913	8,672	8,781	8,913
Pacific	18,186	18,232	18,267	18,323	18,371	18,410	18,460	18,508	18,557	18,608	18,657	18,710	18,323	18,508	18,710
Total Non-farm Employment (Millions)															
New England	7.1	7.1	7.1	7.1	7.2	7.2	7.2	7.3	7.3	7.3	7.3	7.3	7.1	7.2	7.3
Middle Atlantic	18.7	18.8	18.8	18.9	18.9	19.0	19.1	19.1	19.2	19.2	19.3	19.3	18.8	19.1	19.2
E. N. Central	21.0	21.1	21.2	21.3	21.4	21.5	21.5	21.6	21.7	21.7	21.8	21.8	21.1	21.5	21.7
W. N. Central	10.3	10.3	10.4	10.4	10.4	10.4	10.5	10.5	10.5	10.6	10.6	10.6	10.3	10.5	10.6
S. Atlantic	26.1	26.2	26.4	26.6	26.7	26.9	27.1	27.2	27.3	27.5	27.6	27.7	26.3	27.0	27.5
E. S. Central	7.6	7.7	7.7	7.8	7.8	7.8	7.8	7.9	7.9	7.9	7.9	8.0	7.7	7.8	7.9
W. S. Central		16.2	16.4	16.5	16.6	16.6	16.7	16.7	16.8	16.8	16.9	17.0	16.3	16.6	16.9
Mountain		9.7	9.8	9.9	9.9	10.0	10.0	10.1	10.1	10.2	10.2	10.3	9.8	10.0	10.2
Pacific		21.2	21.4	21.6	21.8	21.9	22.0	22.1	22.2	22.3	22.4	22.4	21.3	21.9	22.3

^{- =} 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 - August 2015															
	2014				2015					201	16	Year			
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	2014	2015	2016
Heating Degree Days															
New England	3,563	884	147	2,080	3,854	820	153	2,219	3,197	863	135	2,207	6,675	7,045	6,401
Middle Atlantic	3,436	701	100	1,964	3,583	610	100	2,018	2,932	676	88	2,005	6,202	6,310	5,700
E. N. Central	3,936	727	168	2,366	3,694	661	143	2,246	3,104	725	127	2,240	7,197	6,745	6,195
W. N. Central	3,863	754	178	2,512	3,375	654	156	2,425	3,176	686	153	2,419	7,307	6,610	6,434
South Atlantic	1,713	196	14	1,040	1,674	155	17	1,011	1,494	211	15	1,004	2,963	2,856	2,723
E. S. Central	2,268	228	18	1,411	2,145	184	23	1,345	1,897	267	21	1,339	3,926	3,696	3,525
W. S. Central	1,481	92	4	849	1,399	69	5	883	1,317	102	5	875	2,426	2,356	2,299
Mountain	2,117	715	151	1,762	1,900	706	137	1,859	2,202	668	141	1,851	4,744	4,602	4,862
Pacific	1,245	467	57	985	1,074	521	59	1,058	1,302	501	88	1,074	2,753	2,713	2,964
U.S. Average	2,449	479	81	1,541	2,341	442	76	1,542	2,124	477	75	1,536	4,549	4,402	4,212
Heating Degree Days, Prior 10-year Average															
New England	3,152	836	134	2,167	3,166	838	134	2,147	3,212	824	142	2,147	6,289	6,285	6,325
Middle Atlantic	2,905	660	88	1,983	2,935	666	90	1,976	2,983	651	96	1,974	5,636	5,667	5,703
E. N. Central	3,117	690	120	2,243	3,192	694	123	2,262	3,247	689	132	2,256	6,170	6,272	6,324
W. N. Central	3,209	686	149	2,404	3,273	691	150	2,433	3,298	693	156	2,438	6,449	6,546	6,586
South Atlantic	1,465	194	14	1,006	1,481	196	14	1,013	1,502	185	15	1,010	2,679	2,704	2,712
E. S. Central	1,810	236	19	1,336	1,853	236	19	1,358	1,898	225	20	1,354	3,402	3,466	3,497
W. S. Central	1,157	85	5	827	1,189	86	5	834	1,221	83	5	841	2,075	2,113	2,150
Mountain	2,267	728	156	1,887	2,258	730	150	1,873	2,230	725	148	1,879	5,038	5,011	4,982
Pacific	1,554	625	96	1,236	1,533	621	92	1,205	1,492	609	86	1,197	3,511	3,451	3,385
U.S. Average	2,161	492	77	1,569	2,182	493	77	1,567	2,199	483	79	1,564	4,298	4,319	4,324
Cooling Degree Days															
New England	0	76	341	0	0	72	395	0	0	89	414	1	417	467	503
Middle Atlantic	0	157	434	5	0	186	551	5	0	169	560	6	596	742	735
E. N. Central	0	230	377	3	0	220	497	7	0	217	546	8	610	724	772
W. N. Central	0	262	538	12	3	266	659	10	3	273	684	11	812	938	971
South Atlantic	107	644	1,060	194	137	764	1,152	225	110	620	1,140	228	2,005	2,278	2,098
E. S. Central	6	505	921	66	23	580	1,063	64	25	494	1,042	67	1,498	1,730	1,628
W. S. Central	34	779	1,442	218	51	859	1,486	182	64	815	1,489	191	2,473	2,578	2,560
Mountain	31	438	868	94	46	429	889	79	19	442	958	83	1,432	1,443	1,502
Pacific		227	692	114	54	235	623	76	31	199	578	75	1,075	987	883
U.S. Average	34	394	775	96	47	435	842	91	38	391	848	93	1,299	1,414	1,370
Cooling Degree Days, Prior 10-year Average															
New England		83	417	1	0	85	419	1	0	81	410	1	500	505	492
Middle Atlantic		167	558	5	0	168	557	5	0	168	542	6	730	731	716
E. N. Central		230	546	6	3	234	545	6	3	229	528	6	785	787	765
W. N. Central	7	277	678	9	7	282	683	9	7	279	674	9	972	981	969
South Atlantic	110	636	1,154	213	110	635	1,155	210	113	660	1,143	210	2,112	2,109	2,127
E. S. Central		528	1,045	57	33	526	1,053	52	32	541	1,042	53	1,666	1,664	1,669
W. S. Central		882	1,506	190	94	883	1,519	183	90	890	1,509	182	2,680	2,679	2,672
Mountain		420	922	70	17	423	929	75	21	429	927	75	1,431	1,445	1,453
Pacific		166	589	58	26	170	601	65	29	181	606	68	839	863	884
U.S. Average	41	393	843	83	40	396	849	83	42	404	842	84	1,361	1,369	1,372

^{- =} 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).

 $\textbf{Projections:} \ \textbf{Based on forecasts by the NOAA Climate Prediction Center (http://www.cpc.ncep.noaa.gov/pacdir/DDdir/NHOME3.shtml)}.$