Independent Statistics and Analysis
U.S. Energy Information Administration

Short-Term Energy Outlook

STEO

February



Short-Term Energy Outlook

February 2023

Overview

U.S. energy market indicators	2022	2023	2024
Brent crude oil spot price (dollars per barrel)	**$101**	**$84**	**$78**
Retail gasoline price (dollars per gallon)	**$3.97**	**$3.39**	**$3.10**
U.S. crude oil production (million barrels per day)	**11.90**	**12.49**	**12.65**
Natural gas price at Henry Hub (dollars per million British thermal units)	**$6.42**	**$3.40**	**$4.04**
U.S. liquefied natural gas gross exports (billion cubic feet per day)	**10.6**	**11.8**	**12.6**
Shares of U.S. electricity generation			
Natural gas	39%	39%	37%
Coal	20%	17%	17%
Renewables	22%	24%	26%
Nuclear	19%	20%	19%
U.S. GDP (percentage change)	**2.0%**	**0.8%**	**2.1%**
U.S. CO_2 emissions (billion metric tons)	**4.97**	**4.78**	**4.79**

Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook,* February 2023

- **Natural gas prices.** We forecast that the Henry Hub natural gas spot price will average $3.40 per million British thermal units (MMBtu) in 2023, down almost 50% from last year and about 30% from our January *Short-Term Energy Outlook* (STEO) forecast. We revised our outlook for Henry Hub prices as a result of significantly warmer-than-normal weather in January that led to less-than-normal consumption of natural gas for space heating and pushed inventories above the five-year average.

- **Natural gas storage.** As a result of less-than-normal natural gas consumption in January, natural gas inventories ended the month above their five-year (2018–2022) average. We now expect inventories will close the withdrawal season at the end of March at more than 1.8 trillion cubic feet, 16% more than the five-year average.

- **Global liquid fuels consumption.** We expect global liquid fuels consumption to increase by 1.1 million barrels per day (b/d) in 2023 and by 1.8 million b/d in 2024, driven primarily by growth in China and other non-OECD countries. The outcomes of our demand forecast remain uncertain as China shifts away from its zero-COVID-19 policy and global economic conditions evolve.

- **Global liquid fuels production.** We expect oil production in Russia to average 9.9 million b/d in 2023, down 1.1 million b/d from 2022. Our forecast for Russia's 2023 production is 0.4 million b/d more than in the January STEO because crude oil liftings data suggest that Russia's exports have remained higher than we expected following the EU's ban on seaborne imports of crude oil from Russia that began on December 5. However, we still forecast Russia's oil production to fall

in the coming months, as we expect the EU's ban on seaborne petroleum products from Russia that began February 5 will cause refineries in Russia to reduce crude oil inputs, which will disrupt crude oil production.

- **Electricity generation.** Electricity generation in our forecast falls by 2% in 2023 and then rises by 2% 2024. The generation mix continues to shift away from coal. The share of U.S. electricity generated from coal falls from 20% in 2022 to 17% in 2024. As the share of coal declines, it will be offset by increases in the share of generation from renewable sources of energy, which rises from 22% in 2022 to 26% in 2024.

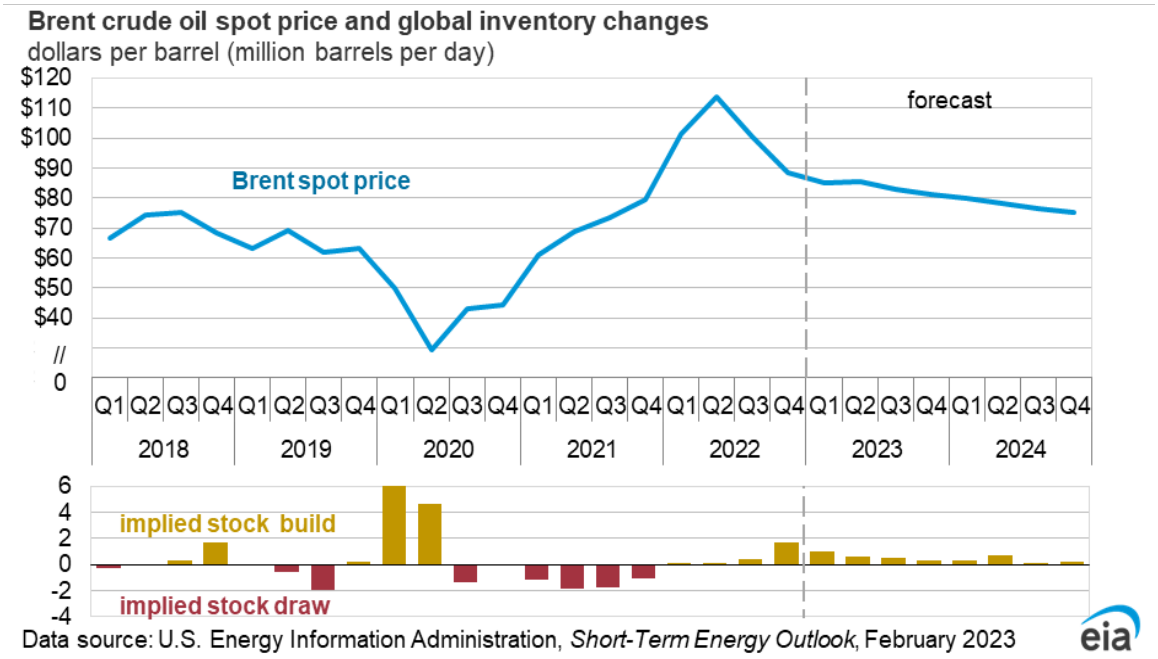
- **U.S. GDP growth.** Based on the S&P Global macroeconomic model, we assume U.S. real GDP will contract slightly in the first half of 2023 (1H23), partly resulting from a decline in residential fixed investment. GDP growth picks up in 2H23 and reaches an annual average of 2.1% in 2024.

Notable forecast changes

Current forecast: February 7, 2023; previous forecast: January 10, 2022	**2023**	**2024**
Natural gas price at Henry Hub (current) (dollars per million British thermal units)	**$3.40**	**$4.04**
Previous forecast	$4.90	$4.80
Percentage change	-30.5%	-15.8%
U.S. coal exports (current) (million short tons)	**88.1**	**96.0**
Previous forecast	83.3	92.6
Percentage change	5.7%	3.7%
Jet fuel margin (current) (dollars per gallon)	**$1.02**	**$0.49**
Previous forecast	$0.86	$0.49
Percentage change	18.7%	0.6%
U.S. crude oil production (current) (million barrels)	**12.5**	**12.6**
Previous forecast	12.4	12.8
Percentage change	0.6%	-1.2%
Russia petroleum and liquid fuels production (current) (million barrels per day)	**9.9**	**9.8**
Previous forecast	9.5	9.4
Percentage change	3.9%	3.8%
China petroleum and liquid fuels consumption (current) (million barrels per day)	**15.8**	**16.2**
Previous forecast	15.7	16.1
Percentage change	1.0%	1.0%
U.S. heating degree days (current)	**4,083**	**4,201**
Previous forecast	4,158	4,265
Percentage change	-1.8%	-1.5%

Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook,* February 2023

Global oil markets



Crude oil prices: The Brent crude oil spot price averaged $82 per barrel (b) in January, about $2/b higher than the average in December 2022. Oil prices rose during January in part because of the expectation of increasing oil demand as a result of relaxing COVID-19 restrictions and increasing mobility in China. Perceptions of a less severe recession and some improving macroeconomic conditions also likely contributed to rising crude oil prices over the past month.

Last month, we highlighted oil demand in China and oil production in Russia as two of the main uncertainties in the oil market this year, and we have revised our outlook for both in this month's forecast. The revisions result from China relaxing COVID restrictions, which have increased our forecast of oil demand growth. At the same time, more oil was produced in Russia than we anticipated during January, and we raised our forecast for Russia's oil production through the end of 2024. We have also lowered our forecast for oil production in OPEC because of rising global oil inventories. These changes have largely offset each other in our forecast global balances, and beyond the first quarter of 2023, we have left our crude oil price forecast largely unchanged from last month's outlook.

We expect that the Brent spot price will average $85/b in the first half of 2023 (1H23). However, we expect global oil production to continue to outpace demand over the forecast period, leading to persistent global oil inventory builds through 2024 and falling oil prices. After increasing by an average of 0.6 million b/d in 2022, we expect global oil inventories to also build by an average of 0.6 million b/d in 2023, with builds moderating to 0.4 million b/d in 2024. Correspondingly, our forecast spot price of Brent crude oil falls to an average of $82/b in 2H23 and $78/b in 2024.

Global oil demand: Global liquids fuel consumption in the forecast increases from an average of 99.4 million barrels per day (b/d) in 2022 to 102.3 million b/d in 2024, driven primarily by growth in China and other non-OECD countries. However, significant uncertainty around our demand forecast remains

based on possible outcomes for the evolving global economic conditions and China's pivot away from a zero-COVID strategy. We forecast that the reversal of restrictions will contribute to oil demand in China increasing by 0.7 million b/d in 2023 and by 0.4 million b/d in 2024. We expect OECD oil demand to remain largely flat over the forecast period, as inflationary economic pressures continue to limit GDP and oil demand growth and as the oil intensity of OECD economies declines.

Global oil supply: Global liquid fuels production averaged about 100.0 million b/d in 2022, and we forecast it will increase by an average of 1.1 million b/d in 2023 and 1.5 million b/d in 2024. Growth in non-OPEC production in both 2023 and 2024, as well as increases in OPEC output in 2024, will mostly offset an approximately 1.1 million b/d decline in Russia's production over the forecast period.

We forecast Russia's production of petroleum and other liquids to decline to 9.9 million b/d in 2023 from more than 10.9 million b/d in 2022 and then average 9.8 million b/d in 2024. For both 2023 and 2024, we forecast about 0.4 million b/d more production in Russia than in last month's STEO. We had previously forecast that the majority of Russia's crude oil exports subject to EU sanctions implemented on December 5 would find new markets, but that the sanctions would lead to some decline in production. However, we assess that Russia's crude oil exports rose in January after a brief decline in December and have since begun to surpass November totals, with little impact to Russia's crude oil production.

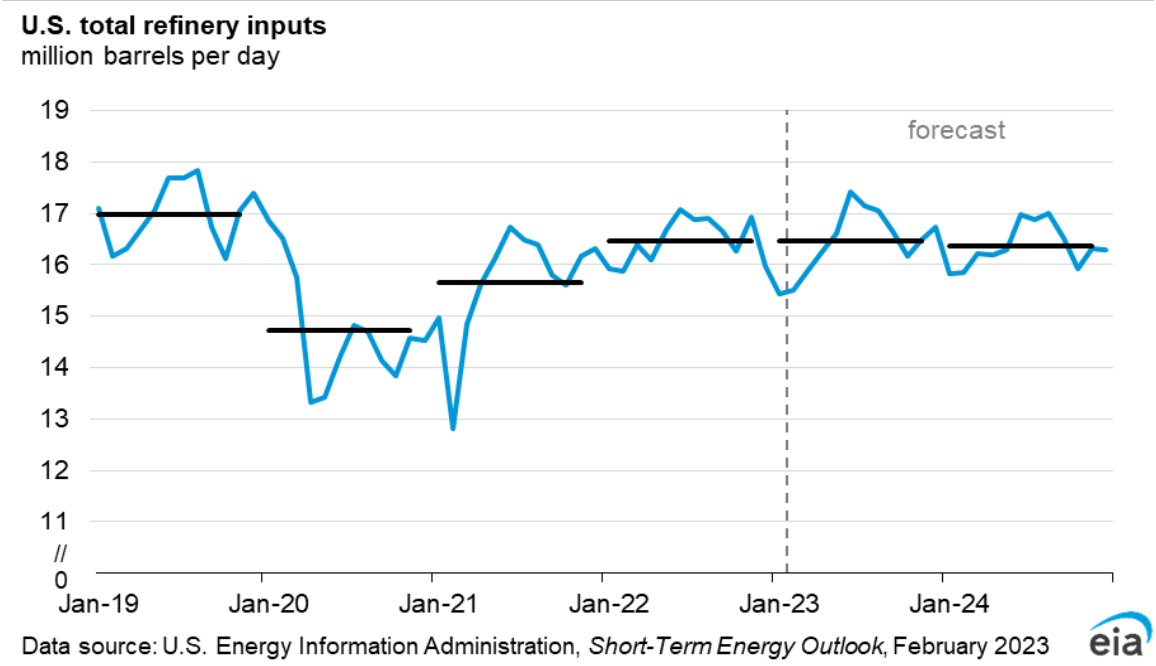
The EU ban on seaborne imports of petroleum products from Russia that began on February 5 could be more disruptive than the ban on crude oil imports implemented in December. We assume Russia will be able to reroute some of its petroleum exports subject to EU sanctions. But we do not expect all of its refined product exports will find new destinations because of limited clean tanker availability, which will cause refiners in Russia to reduce crude oil inputs and for Russia's crude oil production to decline.

Petroleum products

U.S. refinery utilization: We forecast domestic refinery maintenance will contribute to reduced refinery utilization in the United States through April. Refinery utilization dropped because of severe cold weather that swept through the midcontinent in late December, contributing to partial unit shutdowns, reductions in run rates, and a few instances of unit damage. December refinery inputs fell below 16 million barrels per day (b/d), marking the largest month-over-month decline in two years when significant cold weather disrupted refinery operations in February 2021.

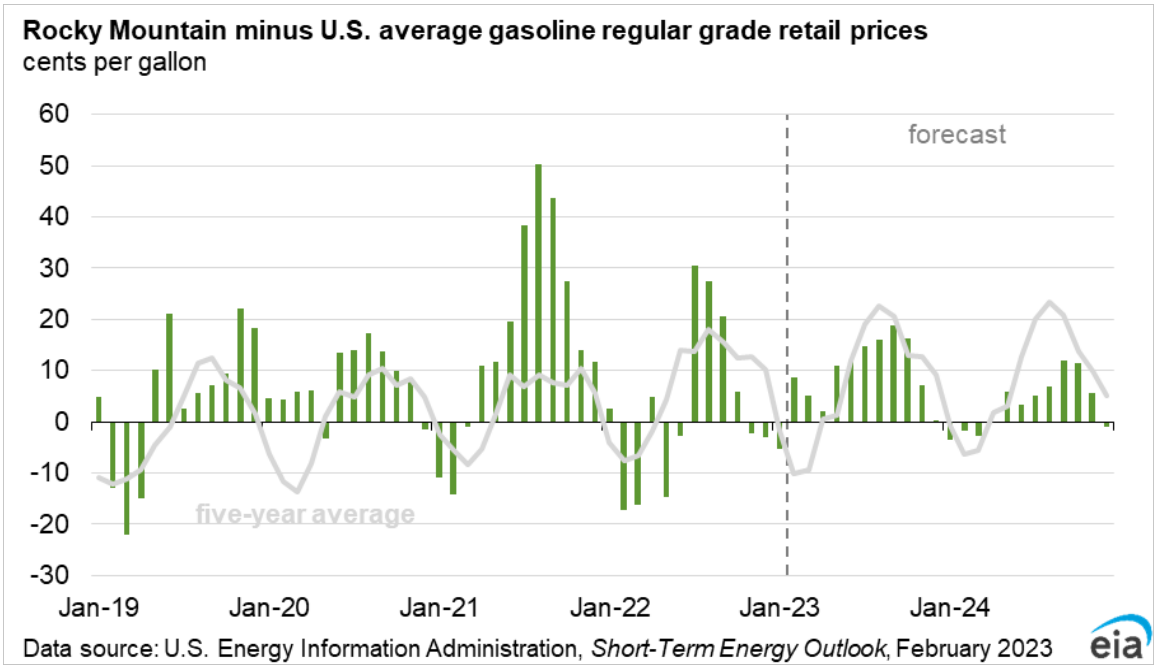
In 2022, many refiners postponed planned maintenance during the spring and fall as low product inventories and high refining margins encouraged refiners to maximize utilization. Although refining margins remain above normal levels, we expect more refiners will undergo deferred maintenance this season. We forecast U.S. distillation inputs will be less than 16 million b/d until April. Utilization remains below 90% until May, which we forecast will keep refining margins for gasoline and diesel above year-ago levels during February and March. However, we expect refinery inputs and utilization to increase after maintenance is completed, and 2023 inputs will likely be similar to 2022 inputs, leading to falling refining margins beginning in the second quarter of 2023. ExxonMobil's planned startup of a 250,000 b/d capacity expansion at its Beaumont refinery in the first half of this year will contribute to the

increase. We expect slightly less 2024 refinery inputs compared with 2023, partly due to the expected closure of LyondellBasell's Houston refinery at the end of 2023.

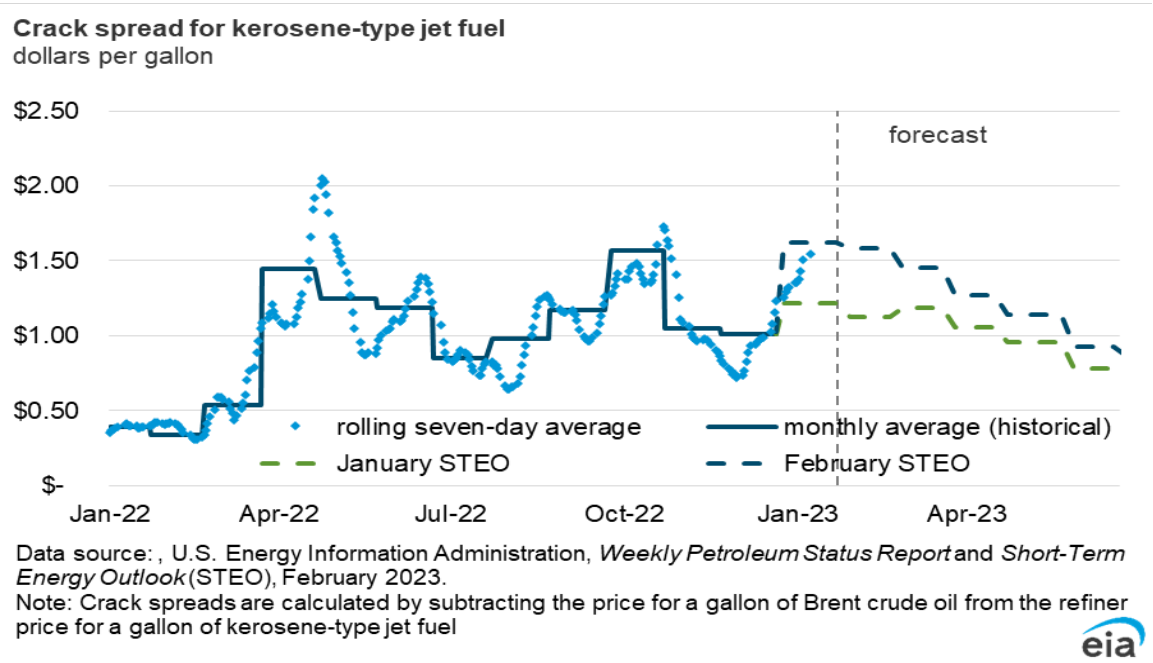


Rocky Mountain retail prices: On December 24, Suncor began repairing its 103,000 b/d Commerce City refinery in Colorado following unit damage related to cold weather. We expect this Colorado refinery will be unavailable until late in the first quarter. This outage will contribute to reduced refinery utilization and gasoline production in the Rocky Mountain region (PADD 4) through March, which we expect will lead to higher retail fuel prices.

We forecast retail gasoline prices in the Rocky Mountains will reach $3.58 per gallon (gal) in February, up from $3.18/gal in December. This increase is more than our forecast increase for the U.S. average retail gasoline price, which rises from $3.21/gal in December to $3.49/gal in February. Rocky Mountain retail fuel prices are normally lower than the U.S. average during the winter months; however, we estimate that they will be at a premium in February and March, compared with averaging a nearly 10 cent/gal discount over the past five years. Although Colorado is more connected to the Midwest and Gulf Coast regions than other parts of the Rocky Mountains, the potential for prolonged refinery outage at the Commerce City refinery could contribute to wider changes in regional retail prices.



Jet fuel prices: The jet fuel crack spread increased significantly in January, leading us to revise our February STEO forecast compared with our January STEO. The increased jet fuel price is a response to low inventories, less refinery production related to recent weather, and increasing international demand. Jet fuel prices increased sharply at several times in 2022, moving in sync with similar increases in the price of distillate fuel. However, distillate fuel prices in January did not increase as much as jet fuel prices, probably because very mild weather limited demand for heating oil (a type of distillate fuel). As China lessens COVID restrictions, leading to increasing jet fuel demand, we expect jet fuel refining margins will be higher than we previously forecast in the coming months.

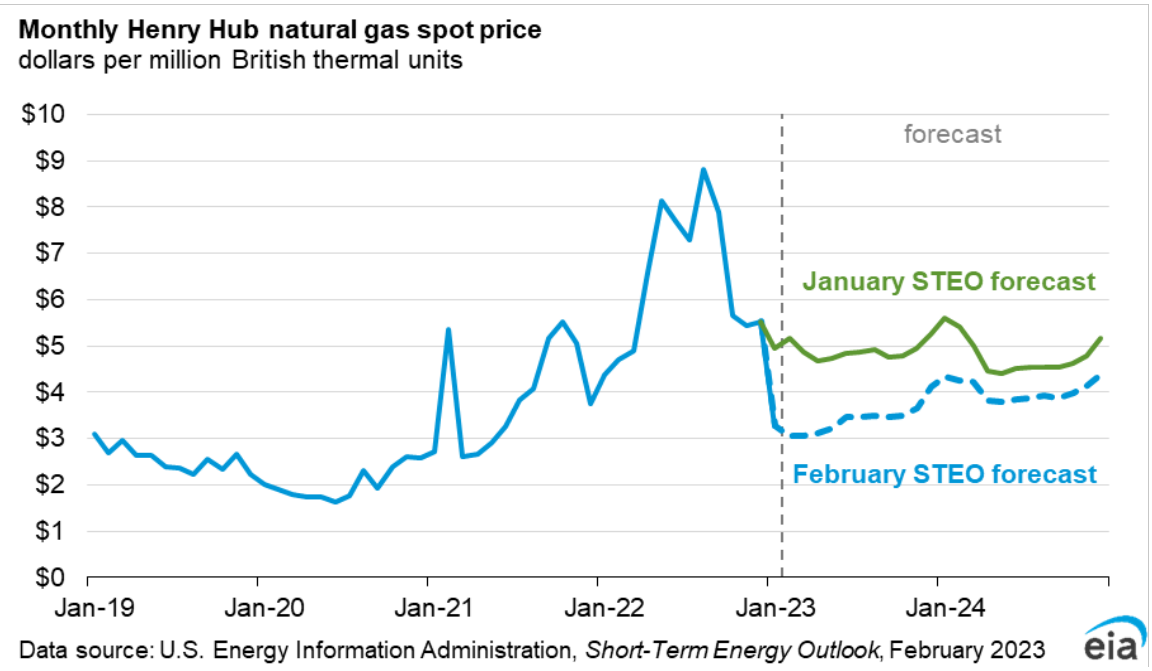


Natural gas

Natural gas prices: Temperatures across the United States in January were the mildest since 2006, which reduced consumption of natural gas for space heating and significantly changed our forecast for natural gas markets in the coming months. The Henry Hub spot price averaged $3.27 per million British thermal units (MMBtu) in January, down more than $2/MMBtu from December. In the United States, there were 16% fewer heating degree days (HDDs) in January than the 10-year average and 9% fewer than forecast in the January STEO. With less-than-expected consumption of natural gas, U.S. stocks of natural gas ended January above our previous forecast.

These developments in January contributed to significant changes in our outlook for the February STEO. We now forecast Henry Hub natural gas prices to average about $3.40/MMBtu for 2023 and to stay below $4.00/MMBtu until December. Our forecast in the January STEO was for Henry Hub prices to average almost $5.00/MMBtu in 2023.

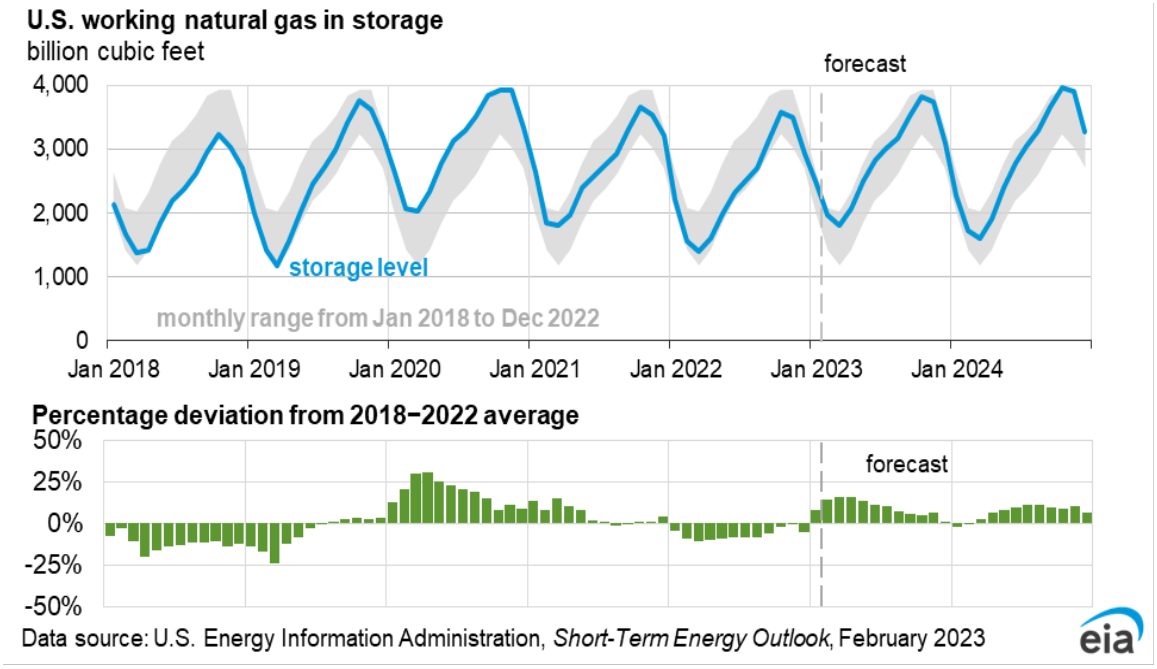
Natural gas prices remain very volatile. Extreme weather events and production freeze-offs could still potentially cause price spikes at both the Henry Hub and in regional markets, but that potential diminishes as spring approaches, particularly now that inventories have moved back above the five-year (2018–2022) average. Although we expect close-to-normal weather for February and March, colder temperatures than expected could put upward pressure on prices. The Freeport LNG export facility, which went offline in June due to a fire, is expected to come back online in the first quarter of 2023 and will likely add over 2 billion cubic feet per day (Bcf/d) of natural gas demand to the U.S. market once fully operational.



Natural gas markets: U.S. natural gas production growth has been outpacing demand growth the past several months, helping reduce natural gas prices. We estimate that dry natural gas production in the United States averaged 100.2 Bcf/d in January. We forecast dry natural gas production to continue to

hover around 100 Bcf/d for most of this year; overall, we expect dry natural gas production to average between 100 Bcf/d and 101 Bcf/d in 2023. U.S. consumption of natural gas was below average in January because very mild weather reduced demand for space heating. We expect less demand for natural gas than last year for most of 2023 due to decreased demand in the electric power sector as more renewable electric generation sources come online throughout the year and due to decreased demand in the industrial sector as a result of an expected drop in manufacturing activity. We expect utilization at U.S. liquefied natural gas (LNG) export facilities to be slightly lower in the next few months compared with our previous forecast because of high natural gas stock levels in Europe. But U.S. LNG exports in our forecast rise once the Freeport facility is back online, and LNG exports increase by 11% (1.2 Bcf/d) on an annual basis in 2023 compared with 2022.

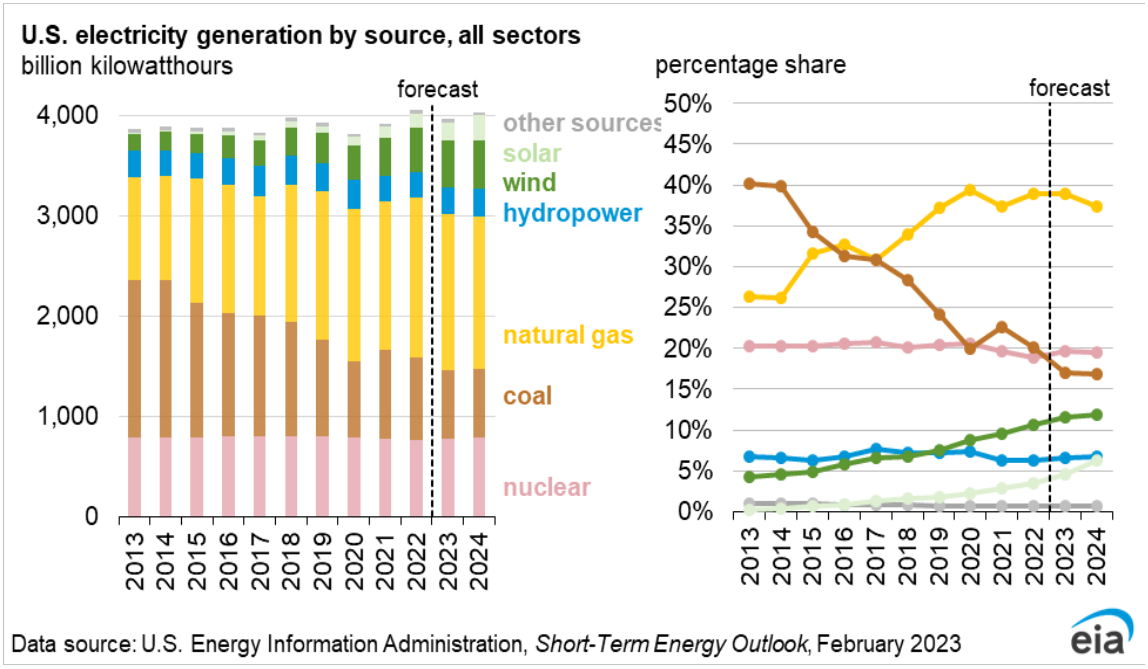
Natural gas storage: We forecast that natural gas storage inventories will end the withdrawal season (November through March) at more than 1.8 trillion cubic feet (Tcf), which would be 16% above the five-year average and 19% more than we had forecast in the January STEO. The warmer-than-normal January temperatures reduced natural gas storage withdrawals below average, causing storage inventories to rise above the five-year (2018–2022) average at the end of January. We expect above-average storage inventories to reduce natural gas prices in 2023 from 2022, when end-of-March storage inventories were 1.4 Tcf, 17% below the previous five-year (2017–2021) average.



Electricity, coal, and renewables

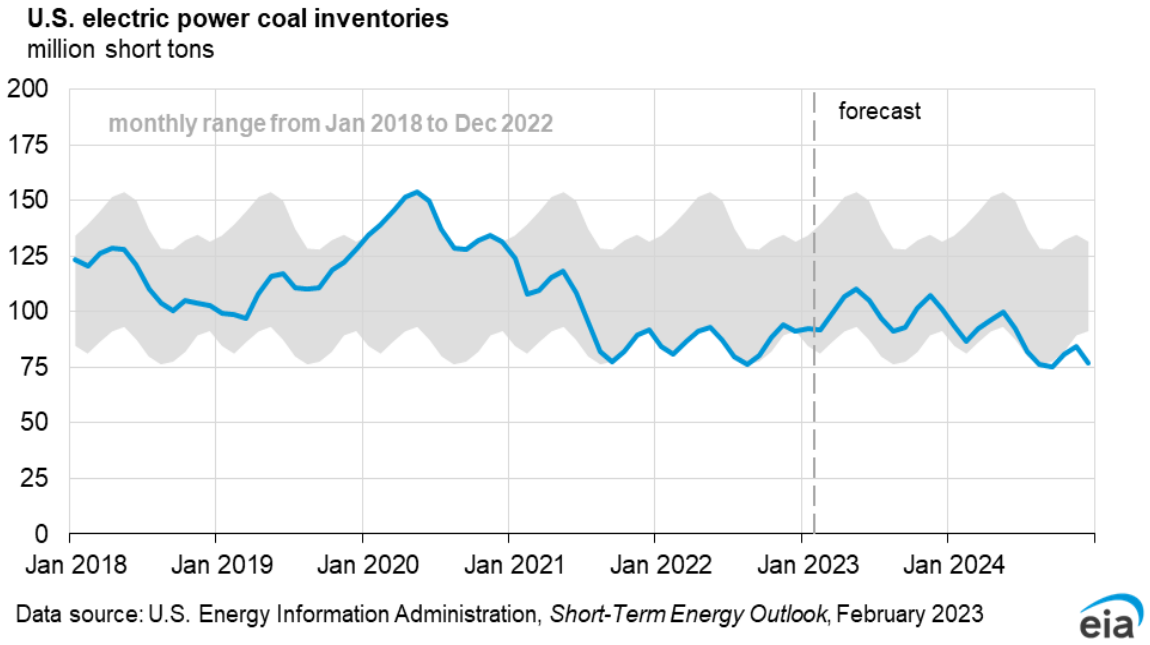
Electricity generation: We expect U.S. electric power generation to decline by 2% in 2023 before rising by a similar amount in 2024. At the same time, the makeup of the power generation mix will slightly shift. In our forecast, electricity produced from renewable sources rises from 22% of total generation in 2022 to 24% in 2023 and to 26% in 2024. The gains in the share of renewable energy generation will be driven by about 63 gigawatts (GW) of utility-scale solar generating capacity that

developers have scheduled to enter service by the end of 2024 and about 13 GW of wind capacity that will come online during the same two years. We expect the new generating capacity from renewable sources to reduce output from fossil fuel-fired power plants. The combined share of U.S. generation provided by natural gas and coal in our forecast falls from 59% in 2022 to 54% in 2024. Coal generation declines the most; coal's share falls from 20% in 2022 to 17% in 2024. Natural gas-fired generation's share drops from 39% in 2022 to 37% in 2024.



More volatility in fuel costs creates uncertainty around how natural gas and coal-fired generation will respond to increased renewable generating capacity. After lowering our February forecast for near-term natural gas prices, the forecast share of natural gas generation for 2023 is now 39%, up from a forecast 2023 share of 38% in the previous STEO. Upcoming renewable capacity additions will limit the variation in natural gas generation to changes in fuel cost.

Coal Markets: Coal stocks increased 4% in January 2023 with less coal-fired electricity generation after warmer-than-average temperatures reduced overall electricity generation and falling natural gas prices increased natural gas-fired electricity generation. At the same time, monthly coal production rose in late 2022.



We expect U.S. coal production to decline by 13% to 518 million short tons (MMst) in 2023, after increasing in both 2021 and 2022, with a further 5% decline to 494 MMst in 2024. Primarily, we forecast a 16% reduction in coal consumption by the electric power sector in 2023 followed by flat consumption in 2024. That decline largely reflects almost 9.6 GW of coal-fired capacity retirements in 2023, followed by another 2.8 GW closing in 2024. Two other factors will be the lower natural gas prices and 19% increase in renewable generation over those two years. Consequently, coal imports in our forecast decline by 47% from 2022 to less than 4 MMst in 2024.

Exports of steam coal in our forecast increase from 39 MMst in 2022 to 45 MMst in 2024, due largely to greater demand in Europe. Coal from the United States is helping supply Europe following the EU's ban of coal imports from Russia. U.S. coal exports also fulfill demand in Asia.

Economy, weather, and CO_2

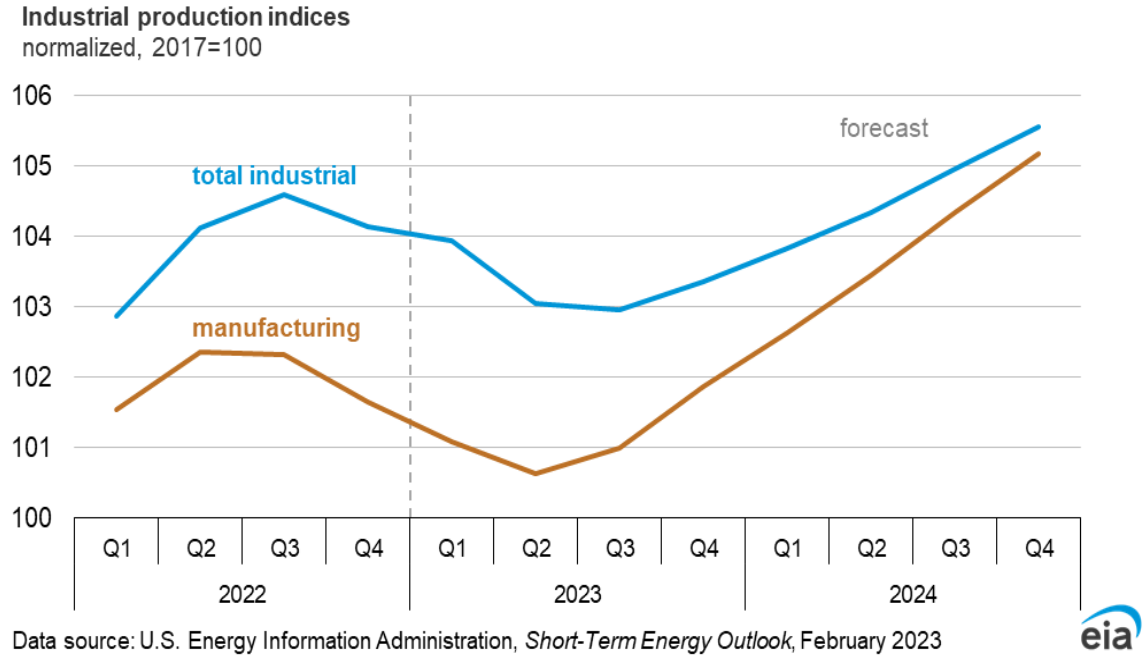
U.S. macroeconomics: Our U.S. macroeconomic forecasts are based on S&P Global's macroeconomic model. We incorporate STEO energy price forecasts into the model to obtain the final macroeconomic assumptions.

S&P Global continues to forecast a mild recession starting in the first quarter of 2023 (1Q23) through 2Q23. Real U.S. GDP in the forecast contracts at an annualized rate of 1.3% in 1Q23 and 0.3% in 2Q23, mostly due to a decline in residential fixed investment, private business inventories of goods, and industrial production. However, we revised our forecast of 2023 real GDP upward by 0.3 percentage points from the January STEO and 2023 GDP growth now averages 0.8%.

U.S. manufacturing production contracted in November 2022. As a result, the 4Q22 estimate of the Manufacturing Production Index was revised lower by 1.0%. The slowing of manufacturing activity is

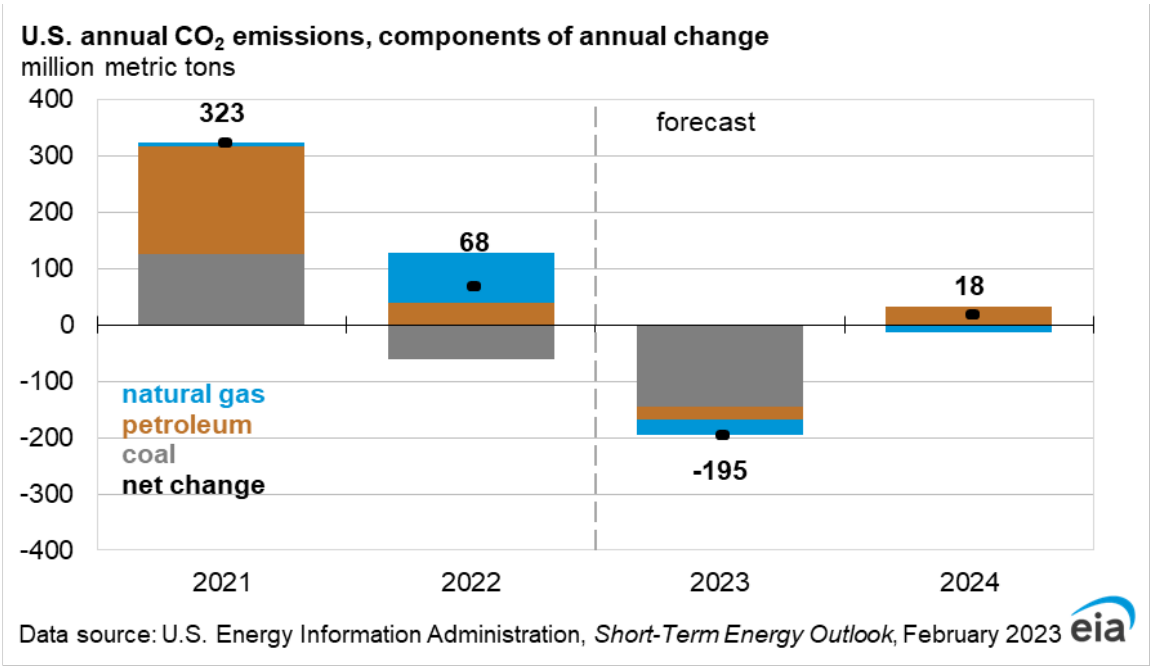
likely the result of a shift in consumer spending away from goods toward services and resulting in a reduction in diesel fuel consumption in our forecast.

S&P Global expects U.S. GDP to grow by 2.1% in 2024 as the economy shifts out of recession and returns to positive GDP growth beginning in 3Q23. In addition, GDP growth is expected to be led by net exports and personal consumption expenditures in 2Q23, with a more broad-based increase occurring later in the year.



Emissions: We expect U.S. energy-related carbon dioxide (CO_2) emissions to decrease slightly more than previously forecast, declining by almost 4% in 2023. The decrease is driven by slow economic growth and a continuing increase in electricity generation from renewable sources, which reduces fossil fuel-fired generation and associated CO_2 emissions. Among the major fossil fuel categories, CO_2 emissions from coal decline by around 15%, mostly from decreasing coal-fired electricity generation. We forecast natural gas emissions to decrease by around 1% as natural gas-fired electricity generation also decreases. Renewable sources displace generation from both fuels. We expect petroleum emissions to fall by 1% in 2023 compared with 2022.

We expect U.S. energy-related CO_2 emissions in 2024 to remain almost unchanged from 2023. Petroleum CO_2 emissions increase slightly as a result of increases in air and road travel. Coal emissions remain flat as coal-fired electricity generation continues to decrease. Natural gas emissions fall slightly. Although natural gas consumption will likely decrease in the industrial and electric power sectors in 2024, it will be partly offset by an increase in the residential and commercial sectors, driven by our expectation of increased demand for space heating.



Weather: In January, weather in the United States was very mild, with 16% fewer population-weighted HDDs than the 10-year average; the mildest January since 2006. Based on forecasts from the National Oceanic and Atmospheric Administration, in 1Q23 we expect 8% fewer HDDs in the United States compared with 1Q22 and 7% fewer than the 10-year average. We have updated our expectations for winter heating fuel expenditures based on the most recent temperature and price forecasts.

The U.S. Energy Information Administration (EIA), the statistical and analytical agency within the U.S. Department of Energy (DOE), prepared this report. By law, our data, analyses, and forecasts are independent of approval by any other officer or employee of the U.S. Government. The views in this report do not represent those of DOE or any other federal agencies.

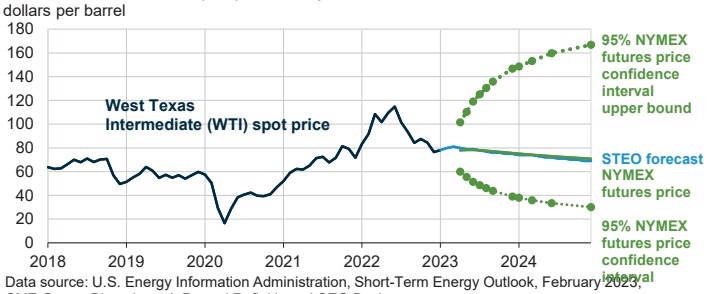
Short-Term Energy Outlook Chart Gallery

February 7, 2023

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West Texas Intermediate (WTI) crude oil price and NYMEX confidence intervals

dollars per barrel



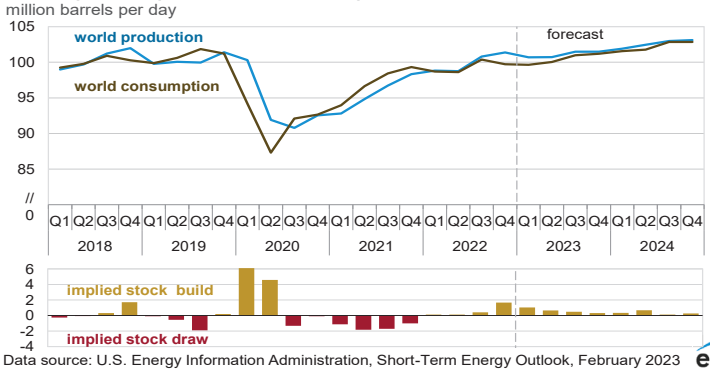
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, February 2023, CME Group, Bloomberg, L.P., and Refinitiv an LSEG Business

Note: Confidence interval derived from options market information for the five trading days ending February 2, 2023. Intervals not calculated for months with sparse trading in near-the-money options contracts.

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World liquid fuels production and consumption balance

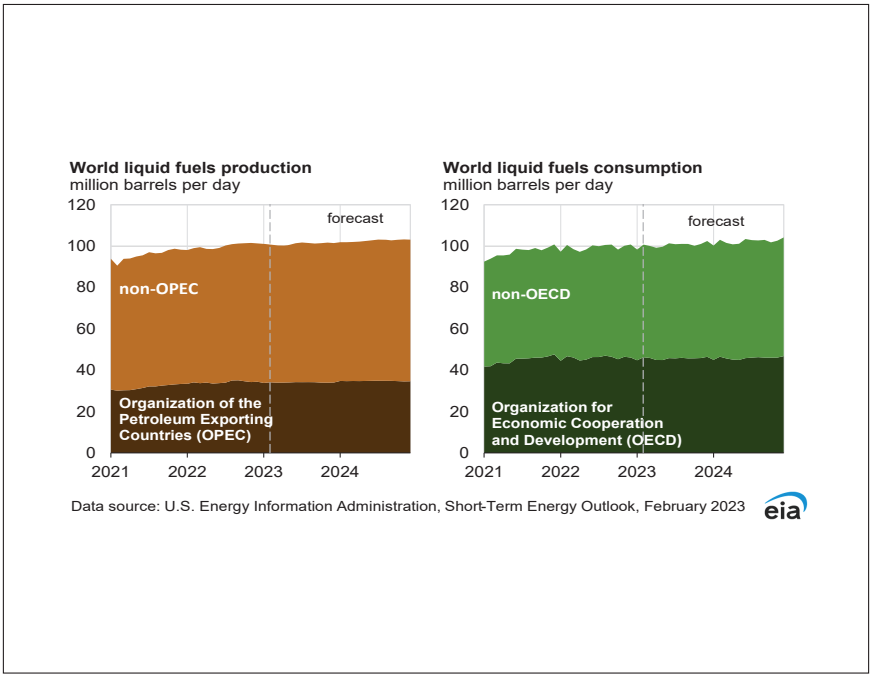
million barrels per day

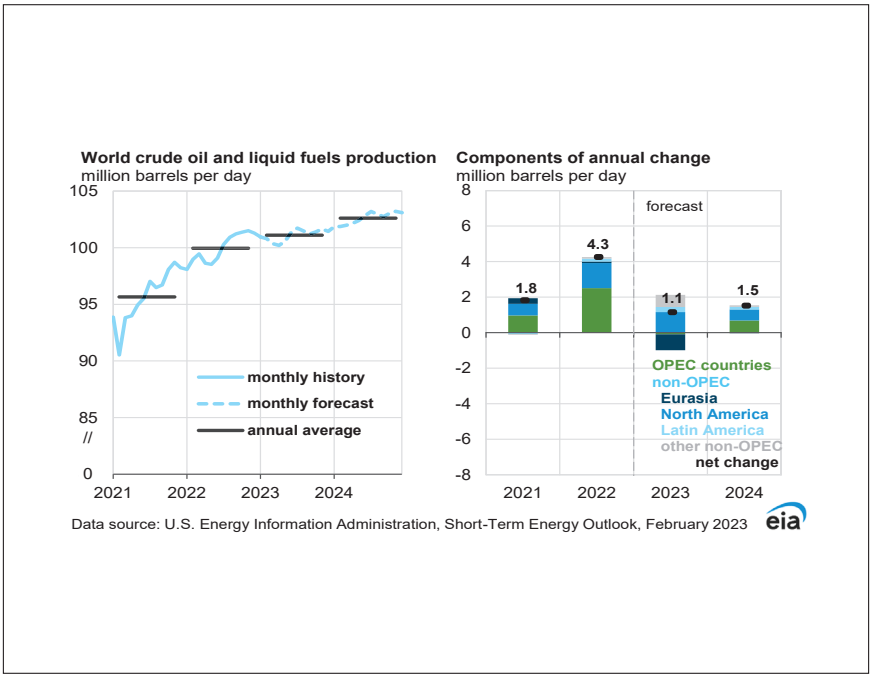


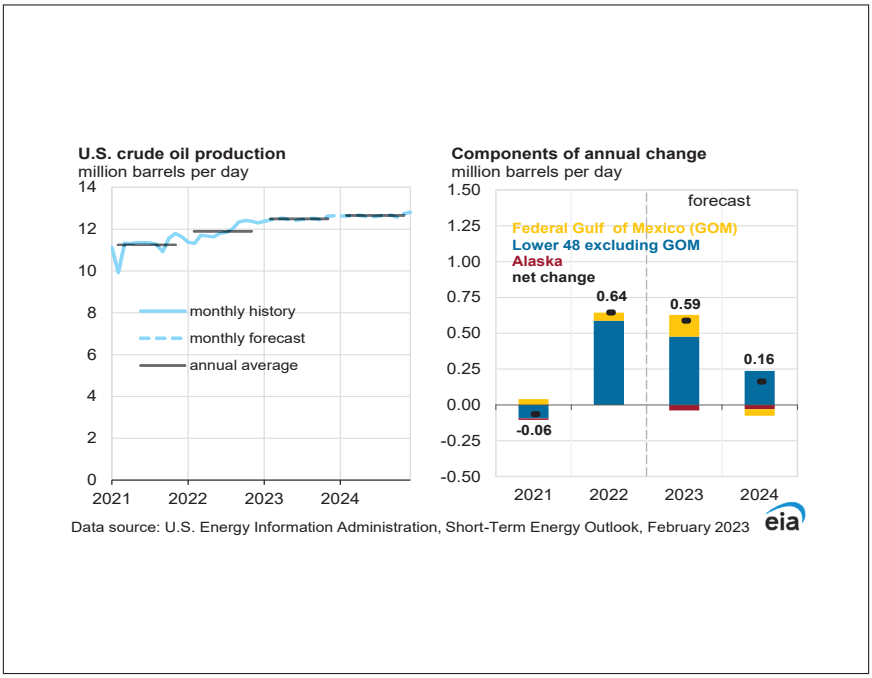
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, February 2023

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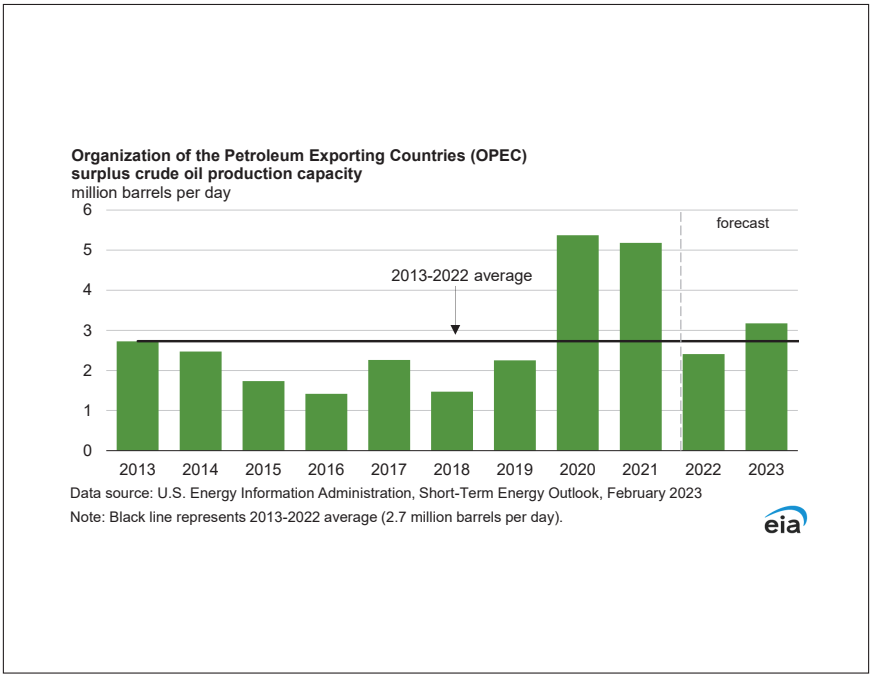
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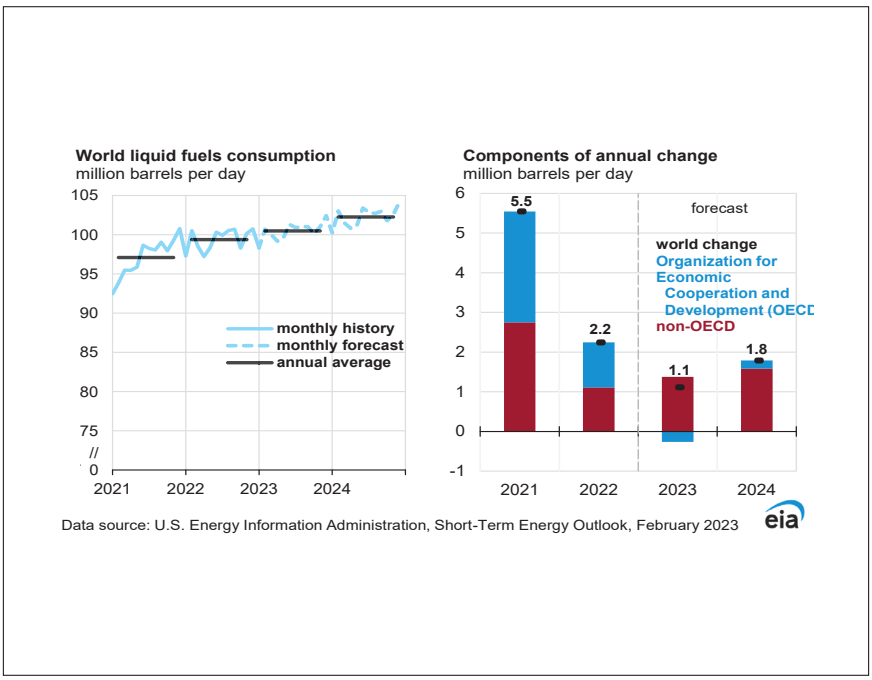


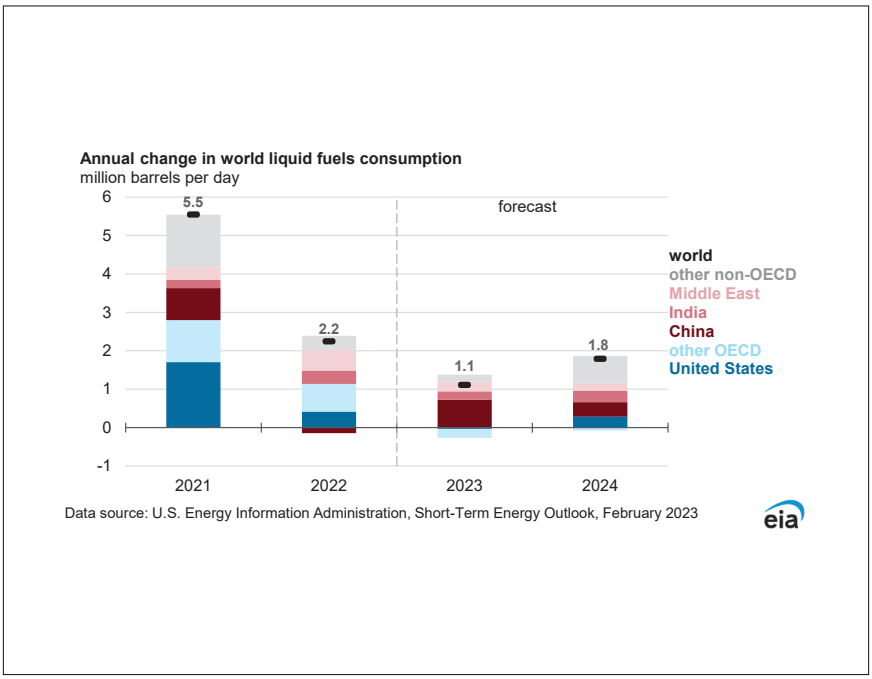




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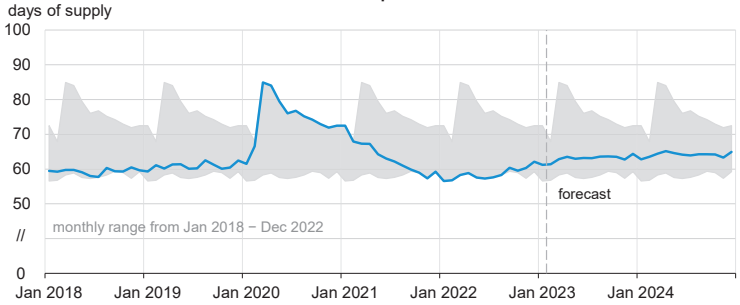






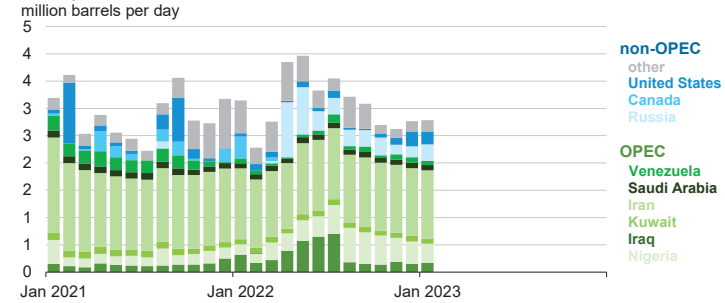
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Organization for Economic Cooperation and Development (OECD) commercial inventories of crude oil and other liquids



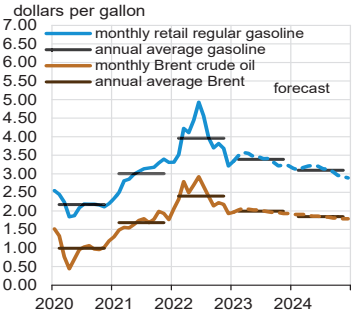
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, February 2023

Estimated unplanned liquid fuels production outages among OPEC and non-OPEC producers

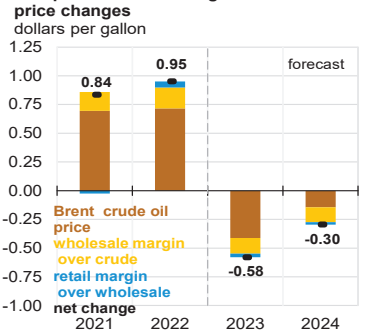


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, February 2023

U.S. gasoline and crude oil prices

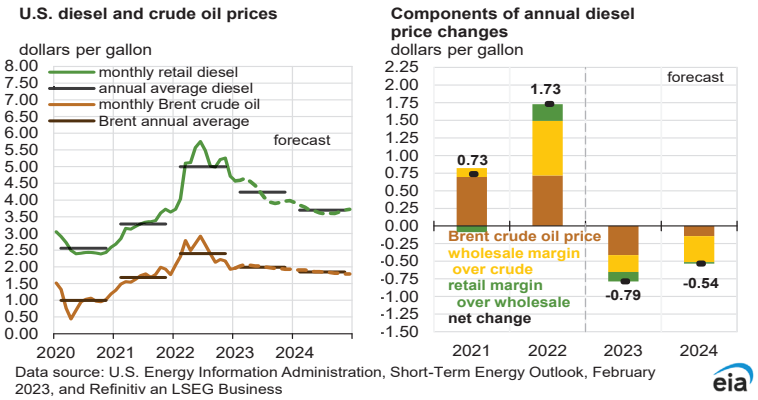


Components of annual gasoline price changes

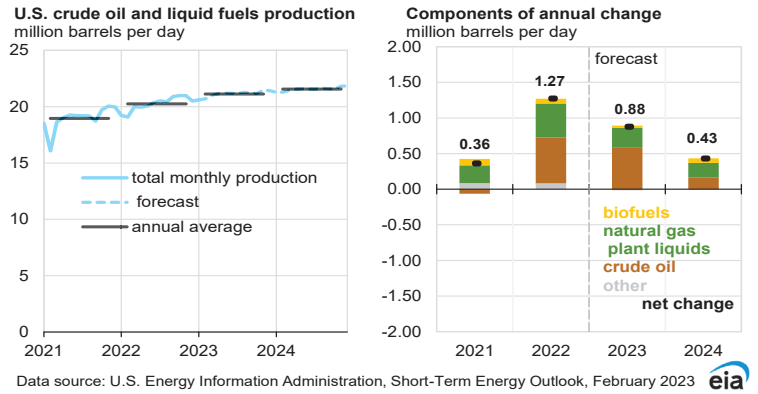


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, February 2023, and Refinitiv an LSEG Business

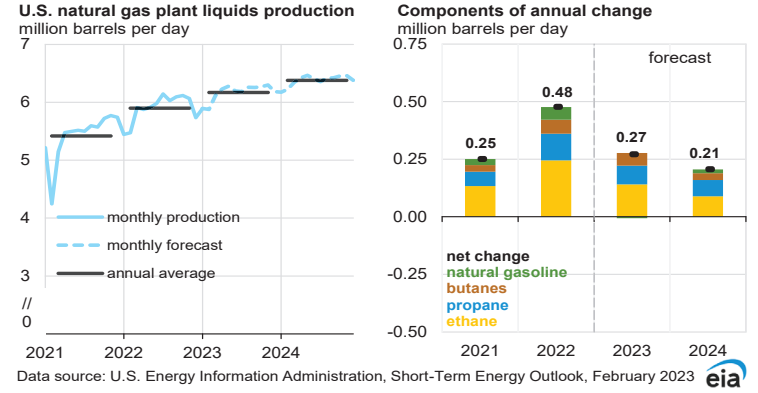
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Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, February 2023, and Refinitiv an LSEG Business

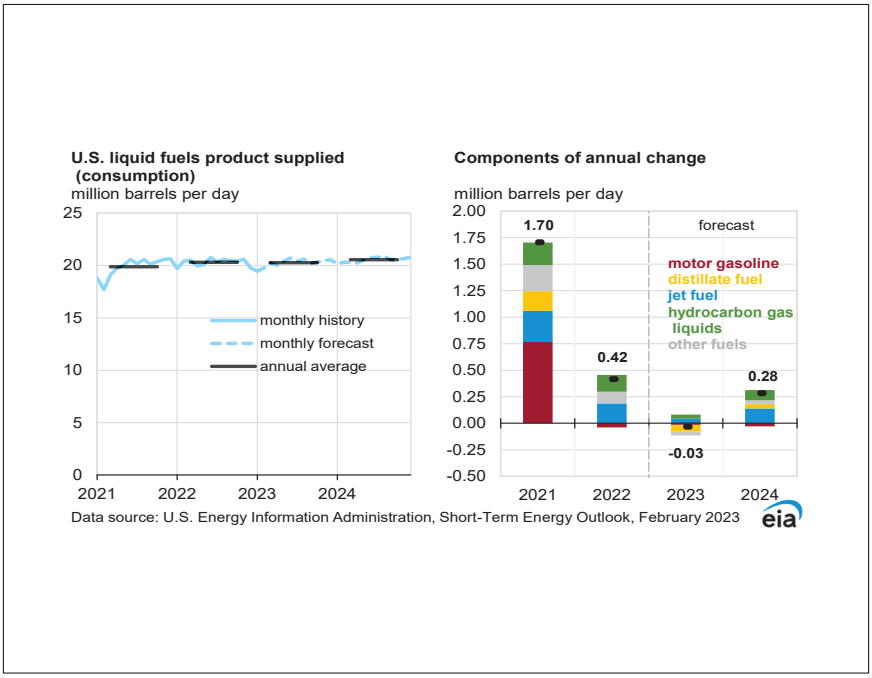


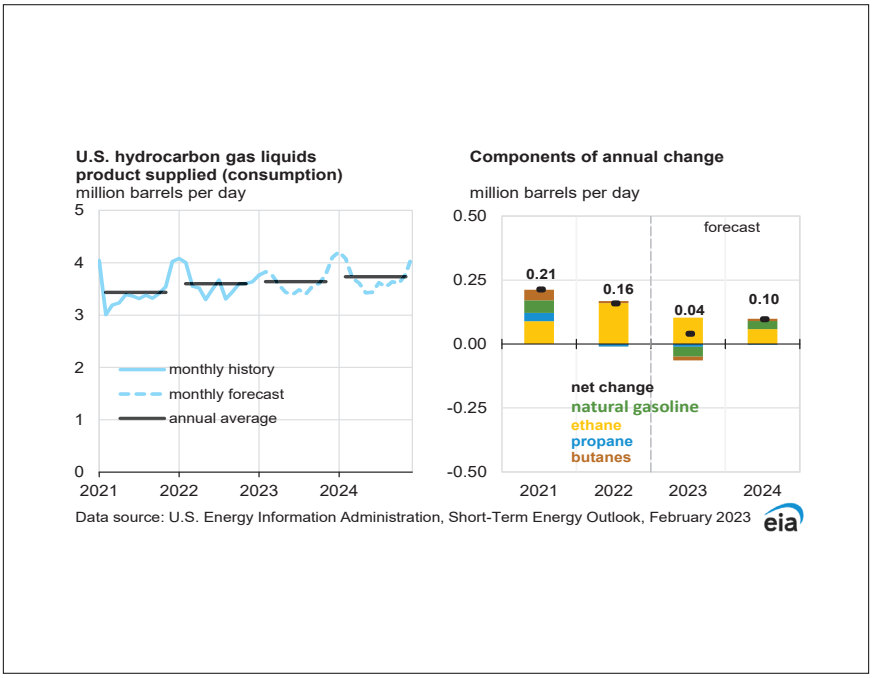
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, February 2023

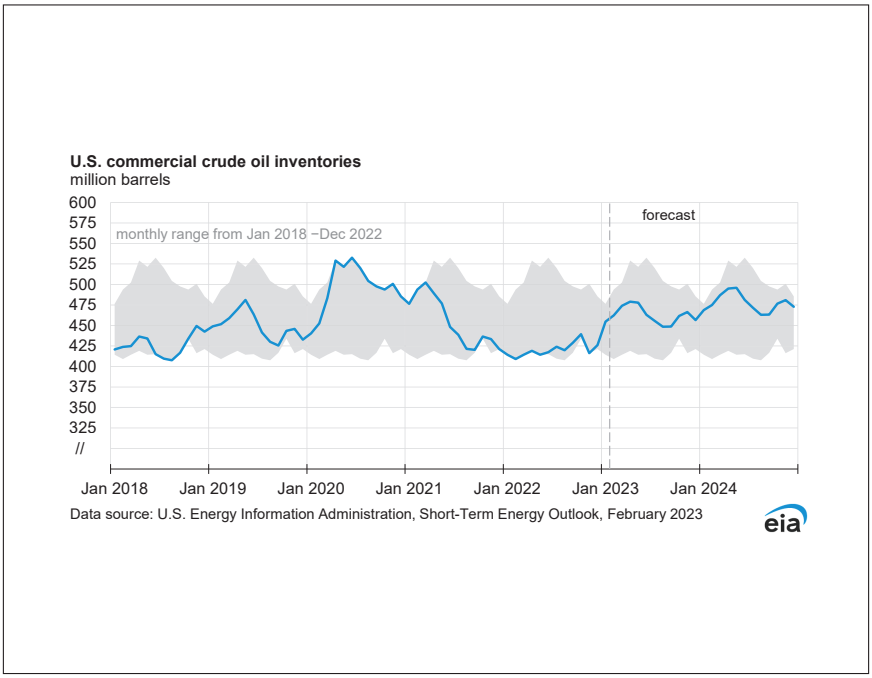


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, February 2023

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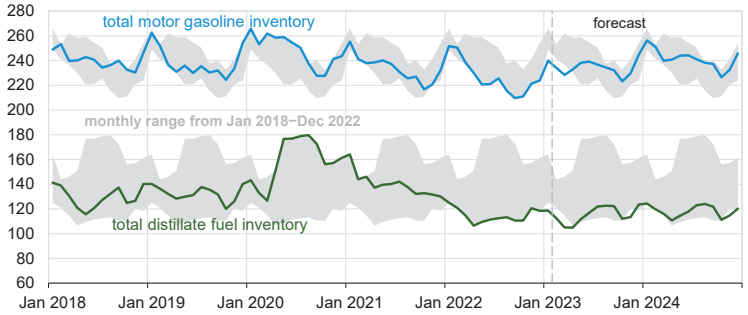






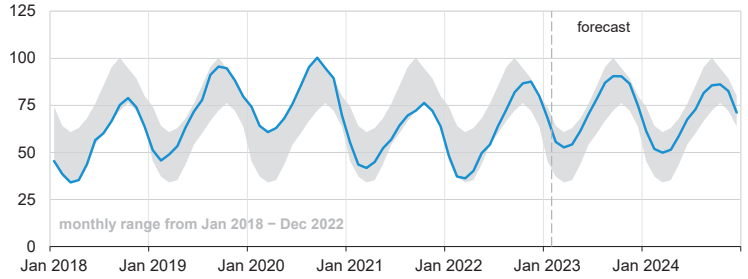
Attachment STF-244-11-d

U.S. gasoline and distillate inventories
million barrels



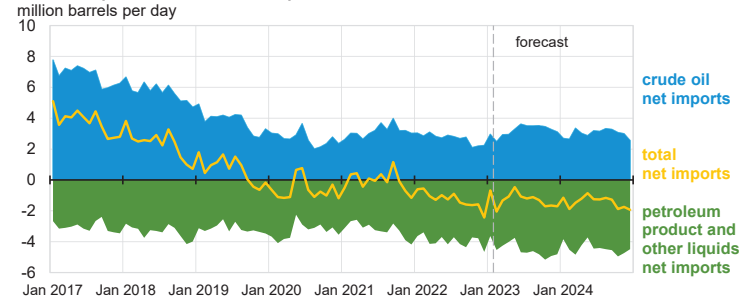
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, February 2023

U.S. commercial propane inventories
million barrels



Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, February 2023
Note: Excludes propylene.

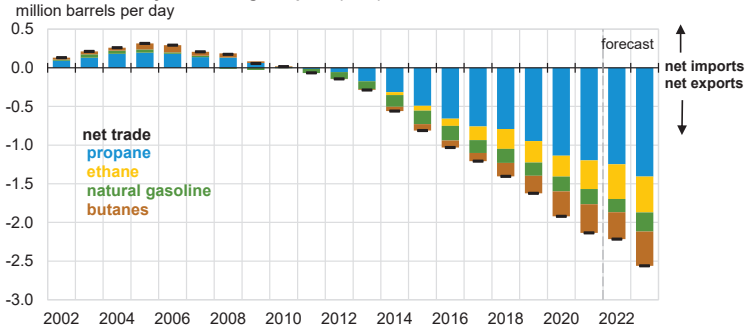
U.S. net imports of crude oil and liquid fuels
million barrels per day



Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, February 2023
Note: Petroleum product and other liquids include: gasoline, distillate fuels, hydrocarbon gas liquids, jet fuel, residual fuel oil, unfinished oils, other hydrocarbons/oxygenates, and other oils.

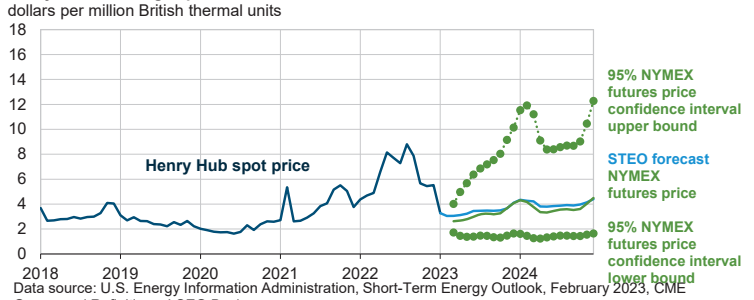
Attachment STF-244-11-d

U.S. net trade of hydrocarbon gas liquids (HGL)
million barrels per day



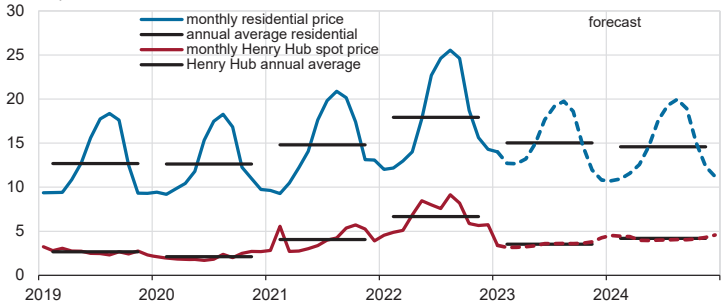
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, February 2023

Henry Hub natural gas price and NYMEX confidence intervals
dollars per million British thermal units



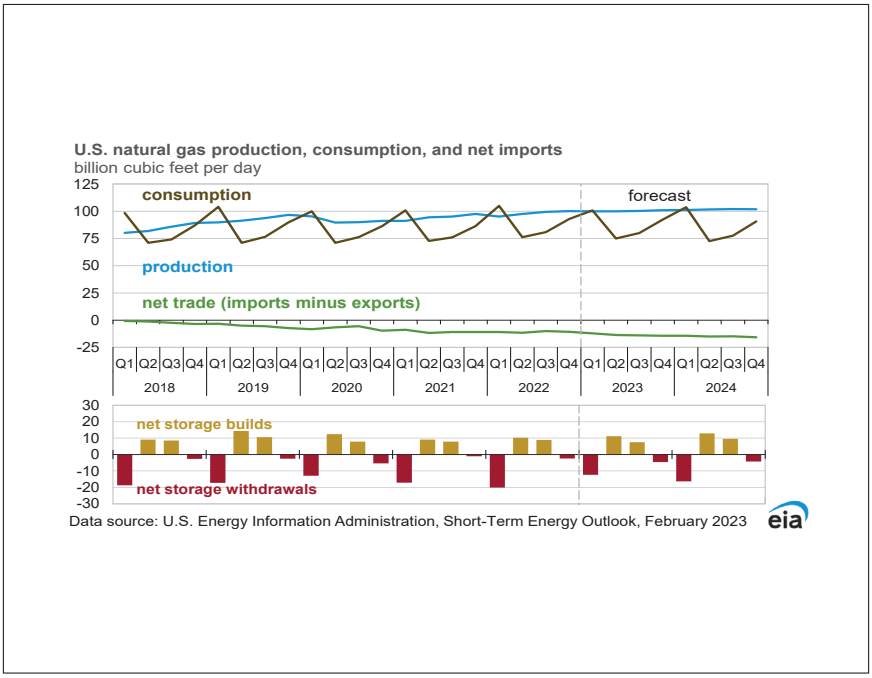
Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, February 2023, CME Group, and Refinitiv an LSEG Business
Note: Confidence interval derived from options market information for the five trading days ending February 2, 2023. Intervals not calculated for months with sparse trading in near-the-money options contracts.

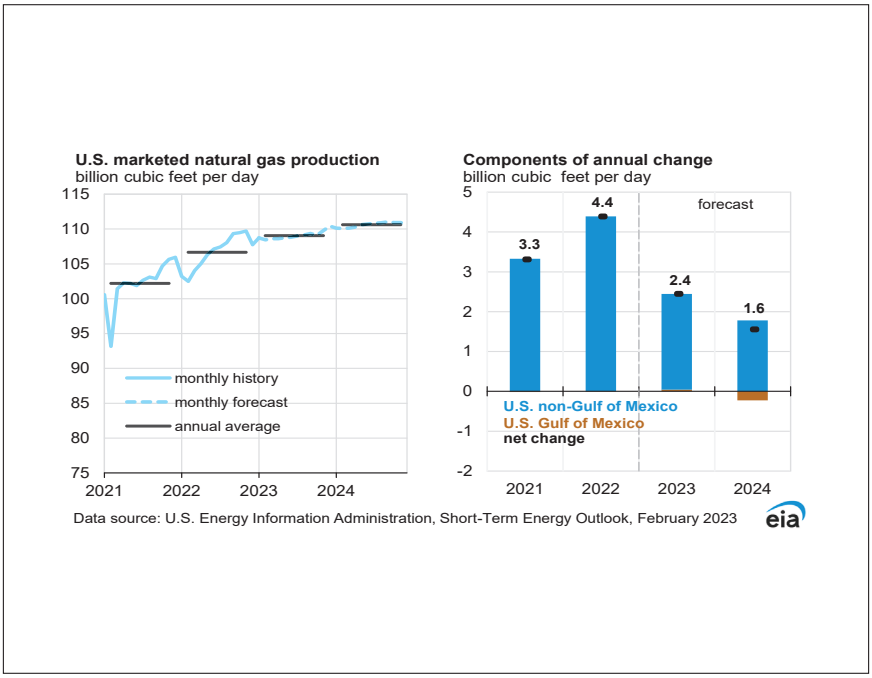
U.S. natural gas prices
dollars per thousand cubic feet

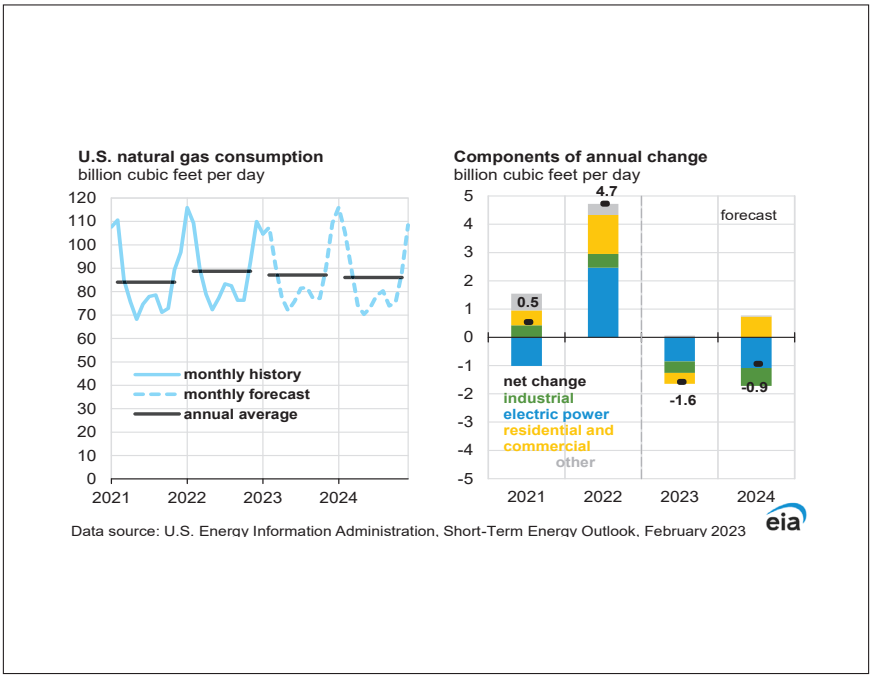


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, February 2023, and Refinitiv an LSEG Business

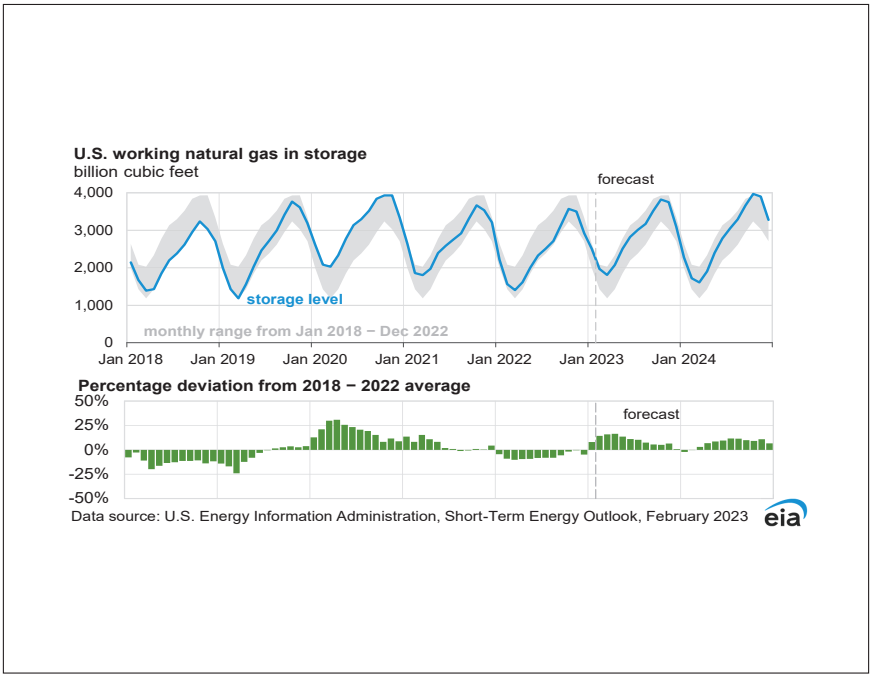
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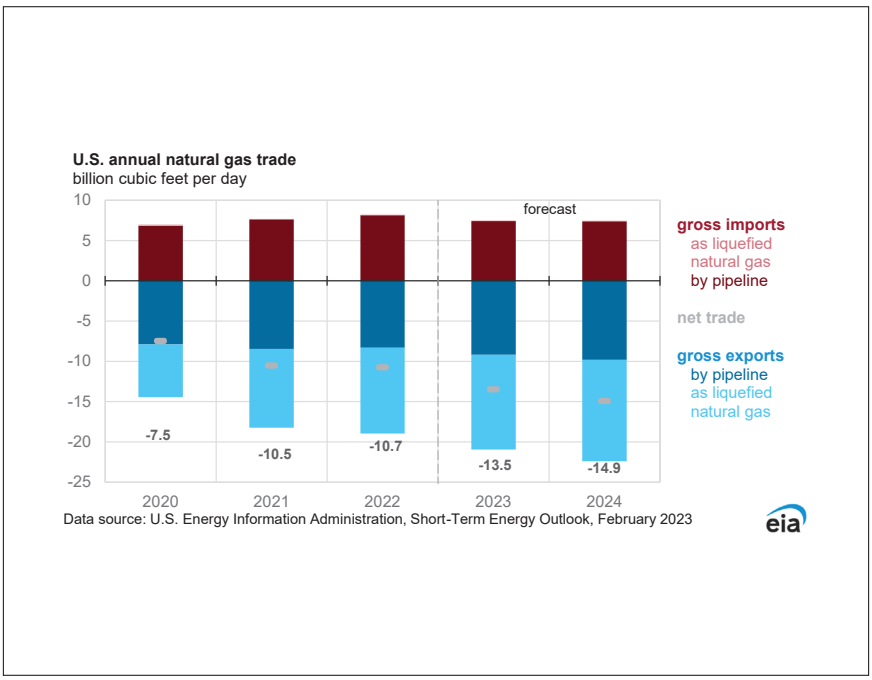


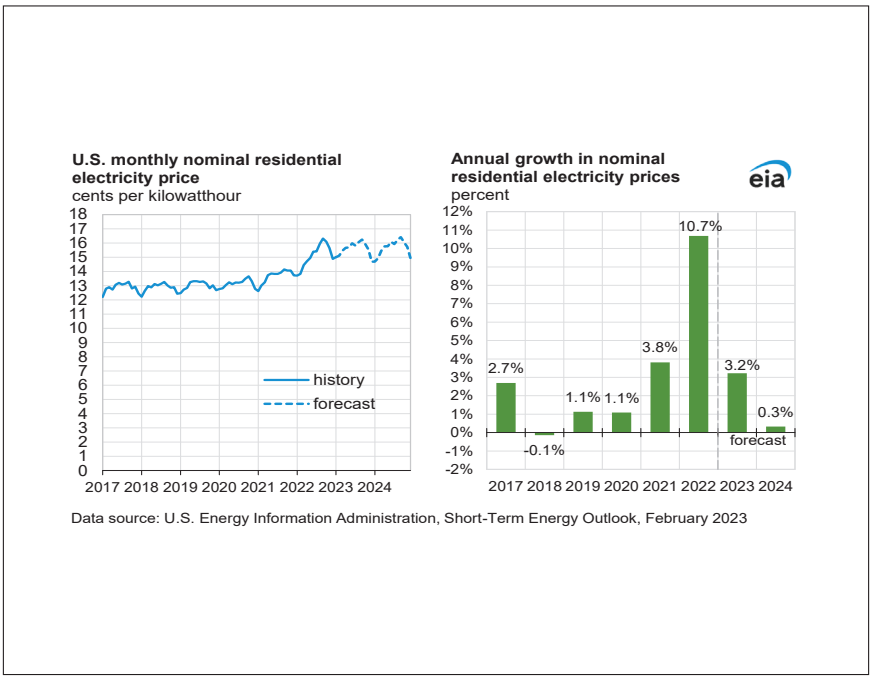




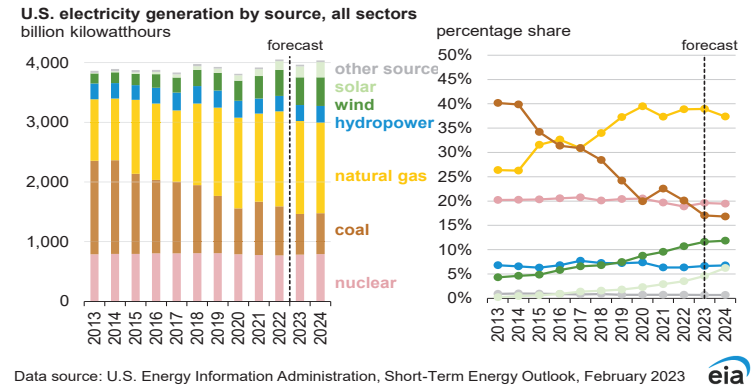
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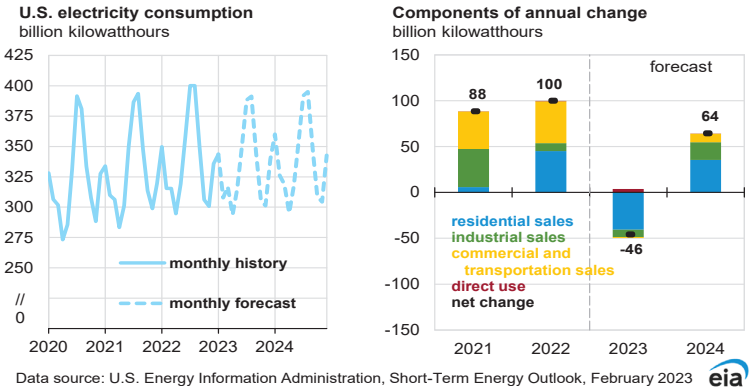




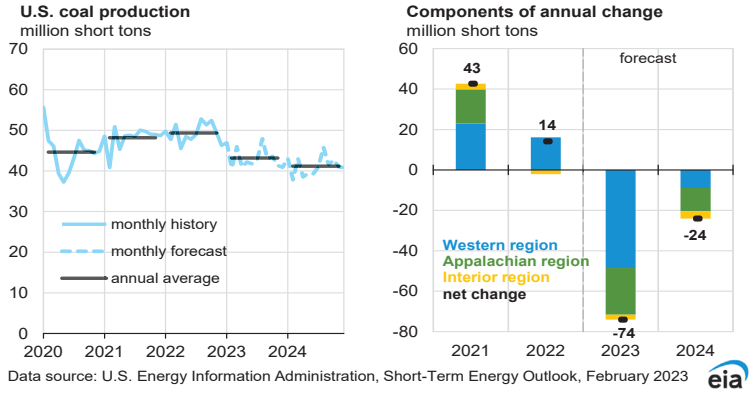
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Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, February 2023

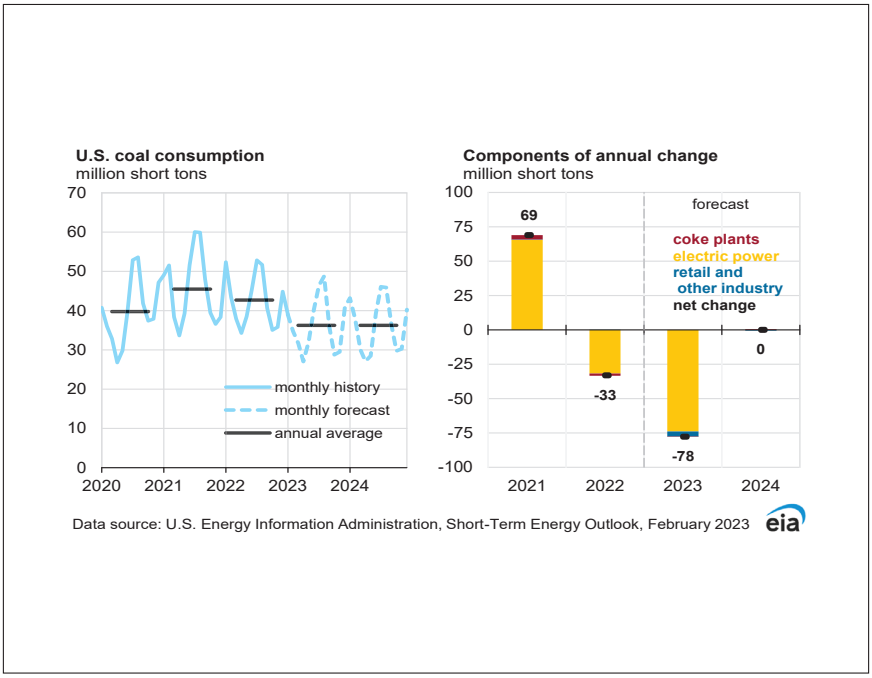


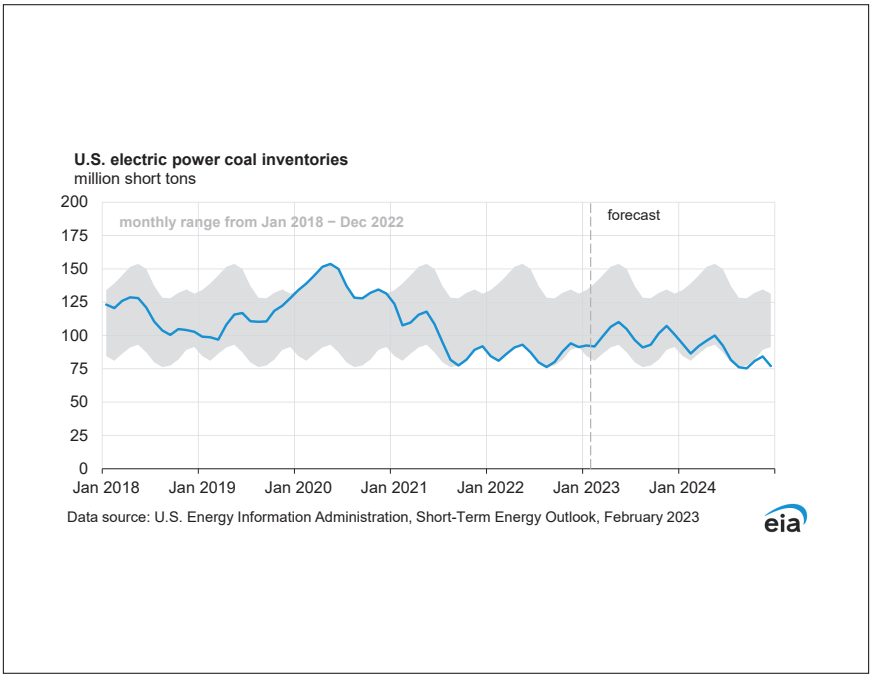
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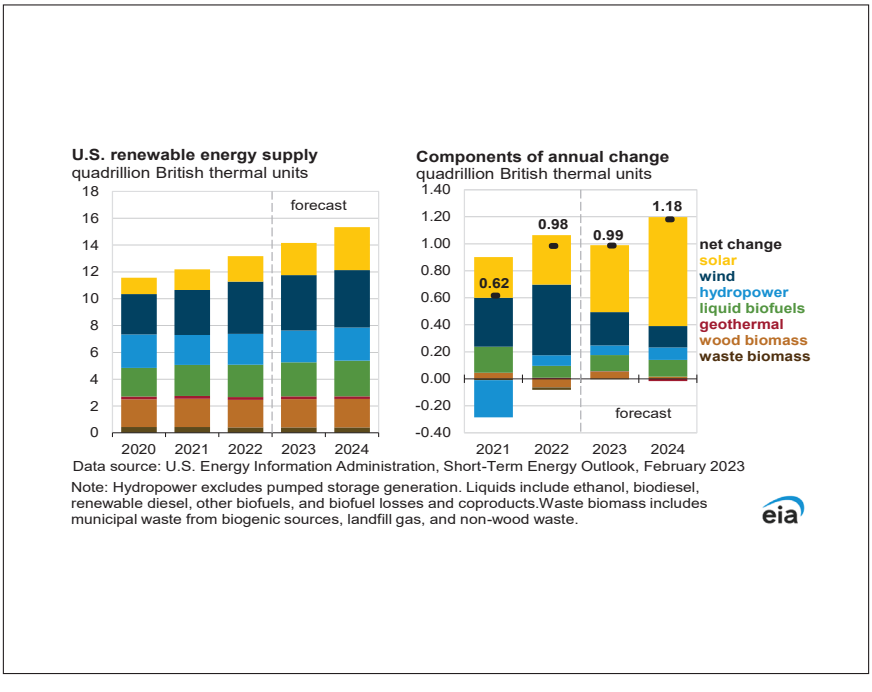


Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, February 2023

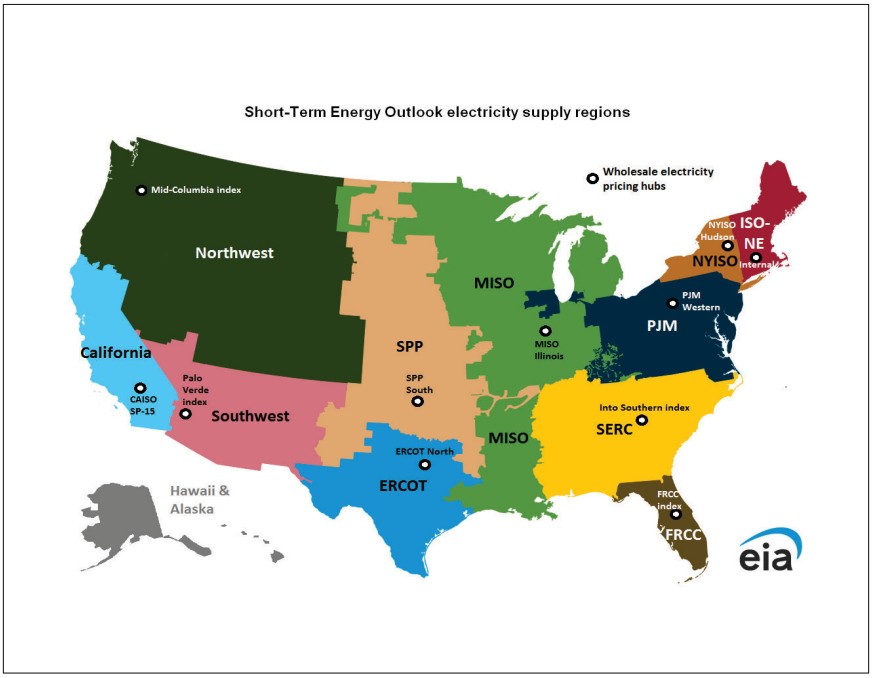
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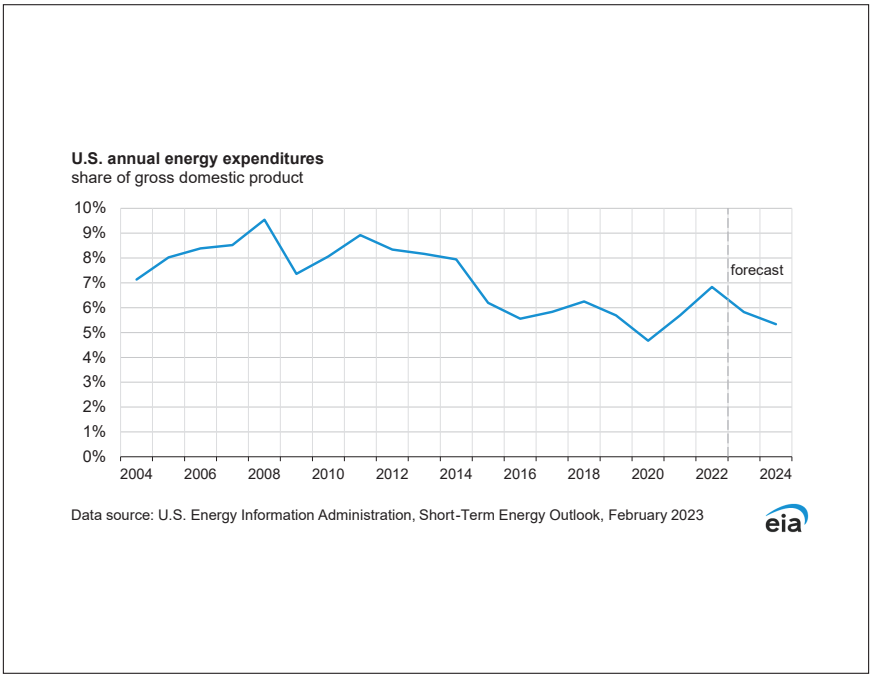


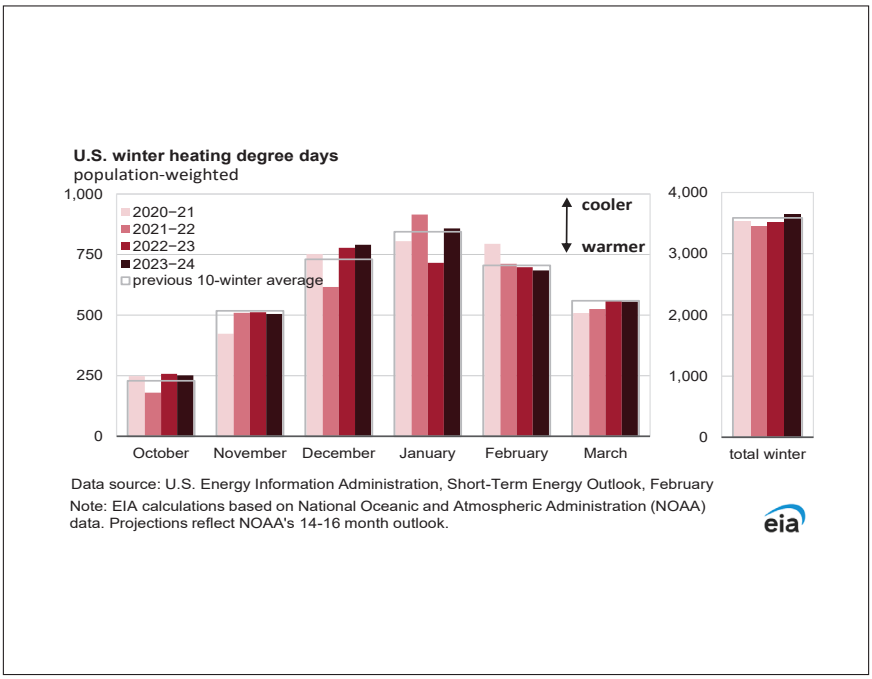




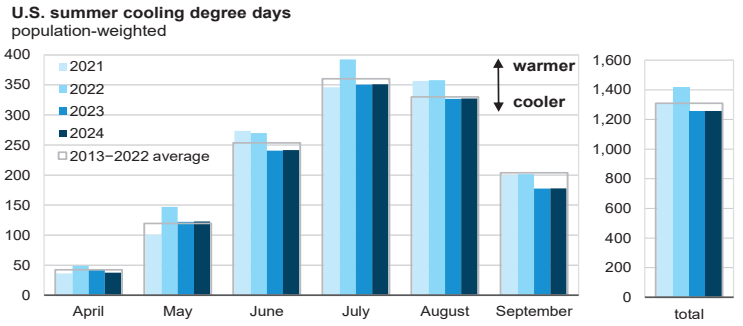
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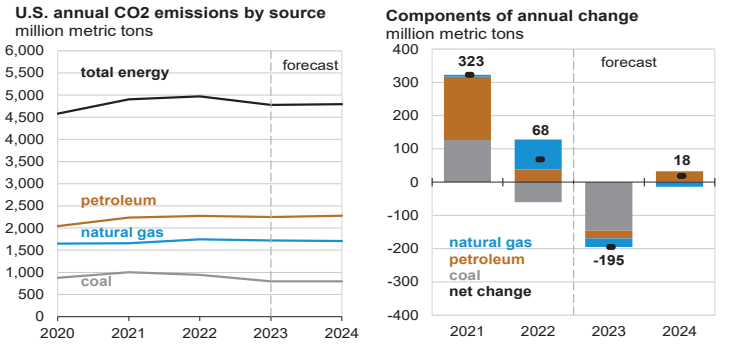




Attachment STF-244-11-d



Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, February 2023
Note: EIA calculations based on National Oceanic and Atmospheric Administration (NOAA) data.
Projections reflect NOAA's 14-16 month outlook.



Data source: U.S. Energy Information Administration, Short-Term Energy Outlook, February 2023

Table 1. U.S. Energy Markets Summary

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Energy Production															
Crude Oil Production (a)															
(million barrels per day)	**11.47**	**11.70**	**12.06**	**12.36**	*12.44*	*12.46*	*12.49*	*12.56*	*12.63*	*12.62*	*12.65*	*12.70*	**11.90**	*12.49*	*12.65*
Dry Natural Gas Production															
(billion cubic feet per day)	**95.09**	**97.59**	**99.46**	**100.13**	*99.87*	*99.95*	*100.34*	*100.89*	*101.21*	*101.63*	*101.95*	*101.91*	**98.09**	*100.27*	*101.68*
Coal Production															
(million short tons)	**149**	**142**	**153**	**148**	*134*	*125*	*134*	*126*	*124*	*117*	*128*	*125*	**592**	*518*	*494*
Energy Consumption															
Liquid Fuels															
(million barrels per day)	**20.22**	**20.27**	**20.47**	**20.26**	*19.84*	*20.38*	*20.41*	*20.45*	*20.26*	*20.52*	*20.75*	*20.69*	**20.30**	*20.27*	*20.56*
Natural Gas															
(billion cubic feet per day)	**104.85**	**76.13**	**80.79**	**92.96**	*100.88*	*75.06*	*80.05*	*92.35*	*103.68*	*72.58*	*77.59*	*90.60*	**88.63**	*87.04*	*86.10*
Coal (b)															
(million short tons)	**134**	**118**	**145**	**116**	*105*	*99*	*131*	*99*	*111*	*95*	*128*	*100*	**512**	*435*	*435*
Electricity															
(billion kilowatt hours per day)	**10.90**	**10.68**	**12.50**	**10.25**	*10.76*	*10.55*	*12.22*	*10.29*	*11.05*	*10.62*	*12.34*	*10.39*	**11.08**	*10.96*	*11.10*
Renewables (c)															
(quadrillion Btu)	**3.34**	**3.54**	**3.11**	**3.18**	*3.48*	*3.84*	*3.37*	*3.45*	*3.77*	*4.16*	*3.71*	*3.70*	**13.17**	*14.15*	*15.34*
Total Energy Consumption (d)															
(quadrillion Btu)	**26.53**	**23.86**	**24.94**	**25.15**	*25.53*	*23.75*	*24.77*	*25.24*	*26.64*	*23.84*	*24.93*	*25.34*	**100.48**	*99.30*	*100.75*
Energy Prices															
Crude Oil West Texas Intermediate Spot															
(dollars per barrel)	**95.18**	**108.93**	**93.07**	**82.69**	*79.73*	*79.30*	*77.00*	*75.35*	*74.00*	*72.34*	*70.69*	*69.36*	**94.91**	*77.84*	*71.57*
Natural Gas Henry Hub Spot															
(dollars per million Btu)	**4.66**	**7.48**	**7.99**	**5.55**	*3.13*	*3.27*	*3.47*	*3.76*	*4.28*	*3.82*	*3.89*	*4.17*	**6.42**	*3.40*	*4.04*
Coal															
(dollars per million Btu)	**2.18**	**2.26**	**2.50**	**2.48**	*2.50*	*2.50*	*2.49*	*2.46*	*2.48*	*2.49*	*2.49*	*2.46*	**2.36**	*2.49*	*2.48*
Macroeconomic															
Real Gross Domestic Product															
(billion chained 2012 dollars - SAAR)	**19,924**	**19,895**	**20,055**	**20,170**	*20,103*	*20,090*	*20,184*	*20,304*	*20,412*	*20,532*	*20,650*	*20,765*	**20,011**	*20,170*	*20,590*
Percent change from prior year	**3.7**	**1.8**	**1.9**	**0.8**	*0.9*	*1.0*	*0.6*	*0.7*	*1.5*	*2.2*	*2.3*	*2.3*	**2.0**	*0.8*	*2.1*
GDP Implicit Price Deflator															
(Index, 2012=100)	**124.2**	**126.9**	**128.3**	**129.4**	*130.2*	*131.0*	*131.7*	*132.5*	*133.2*	*133.7*	*134.2*	*134.9*	**127.2**	*131.4*	*134.0*
Percent change from prior year	**6.9**	**7.6**	**7.1**	**6.3**	*4.8*	*3.2*	*2.7*	*2.4*	*2.3*	*2.1*	*1.9*	*1.8*	**7.0**	*3.3*	*2.0*
Real Disposable Personal Income															
(billion chained 2012 dollars - SAAR)	**15,109**	**15,022**	**15,059**	**15,171**	*15,400*	*15,461*	*15,612*	*15,769*	*15,938*	*16,113*	*16,249*	*16,366*	**15,090**	*15,560*	*16,166*
Percent change from prior year	**-12.8**	**-5.7**	**-4.3**	**-2.4**	*1.9*	*2.9*	*3.7*	*3.9*	*3.5*	*4.2*	*4.1*	*3.8*	**-6.4**	*3.1*	*3.9*
Manufacturing Production Index															
(Index, 2017=100)	**101.5**	**102.4**	**102.3**	**101.6**	*101.1*	*100.6*	*101.0*	*101.9*	*102.6*	*103.4*	*104.4*	*105.2*	**102.0**	*101.1*	*103.9*
Percent change from prior year	**4.8**	**4.1**	**3.1**	**1.0**	*-0.4*	*-1.7*	*-1.3*	*0.2*	*1.5*	*2.8*	*3.3*	*3.3*	**3.2**	*-0.8*	*2.7*
Weather															
U.S. Heating Degree-Days	**2,152**	**491**	**54**	**1,547**	*1,974*	*488*	*74*	*1,546*	*2,098*	*485*	*74*	*1,544*	**4,245**	*4,083*	*4,201*
U.S. Cooling Degree-Days	**47**	**466**	**952**	**90**	*47*	*405*	*855*	*93*	*41*	*401*	*857*	*94*	**1,554**	*1,400*	*1,393*

(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 (MER).
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.

- = no data available

Notes: EIA completed modeling and analysis for this report on February 2, 2022.

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

Prices are not adjusted for inflation.

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.

Forecasts: EIA Short-Term Integrated Forecasting System. U.S. macroeconomic forecasts are based on the S&P Global model of the U.S. Economy.
Weather forecasts from National Oceanic and Atmospheric Administration.

Table 2. Energy Prices

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Crude Oil (dollars per barrel)															
West Texas Intermediate Spot Average	**95.18**	**108.93**	**93.07**	**82.69**	*79.73*	*79.30*	*77.00*	*75.35*	*74.00*	*72.34*	*70.69*	*69.36*	**94.91**	*77.84*	*71.57*
Brent Spot Average	**101.17**	**113.84**	**100.53**	**88.44**	*84.88*	*85.30*	*83.00*	*81.35*	*80.00*	*78.34*	*76.69*	*75.36*	**100.94**	*83.63*	*77.57*
U.S. Imported Average	**89.85**	**107.23**	**91.86**	**79.12**	*76.91*	*76.55*	*74.26*	*72.61*	*71.25*	*69.58*	*67.92*	*66.61*	**92.72**	*74.98*	*68.82*
U.S. Refiner Average Acquisition Cost	**92.62**	**109.86**	**95.20**	**83.17**	*79.20*	*78.82*	*76.52*	*74.83*	*73.50*	*71.82*	*70.18*	*68.83*	**95.25**	*77.31*	*71.06*
U.S. Liquid Fuels (cents per gallon)															
Refiner Prices for Resale															
Gasoline	**278**	**376**	**311**	**267**	*266*	*262*	*252*	*236*	*231*	*237*	*227*	*210*	**309**	*254*	*226*
Diesel Fuel	**301**	**418**	**357**	**363**	*325*	*306*	*275*	*276*	*256*	*238*	*236*	*248*	**360**	*295*	*244*
Fuel Oil	**284**	**419**	**344**	**359**	*306*	*293*	*266*	*269*	*248*	*227*	*222*	*241*	**352**	*296*	*241*
Refiner Prices to End Users															
Jet Fuel	**283**	**400**	**340**	**332**	*357*	*314*	*277*	*264*	*242*	*229*	*227*	*239*	**340**	*301*	*234*
No. 6 Residual Fuel Oil (a)	**252**	**258**	**228**	**202**	*202*	*202*	*199*	*194*	*193*	*186*	*183*	*180*	**236**	*199*	*185*
Retail Prices Including Taxes															
Gasoline Regular Grade (b)	**371**	**450**	**408**	**357**	*347*	*349*	*338*	*322*	*314*	*321*	*310*	*293*	**397**	*339*	*310*
Gasoline All Grades (b)	**380**	**460**	**419**	**369**	*358*	*362*	*351*	*337*	*328*	*335*	*325*	*308*	**408**	*352*	*324*
On-highway Diesel Fuel	**432**	**549**	**516**	**507**	*461*	*441*	*396*	*396*	*385*	*366*	*359*	*369*	**502**	*423*	*370*
Heating Oil	**415**	**555**	**497**	**488**	*432*	*406*	*369*	*386*	*372*	*343*	*329*	*365*	**465**	*407*	*362*
Natural Gas															
Henry Hub Spot (dollars per thousand cubic feet)	**4.84**	**7.77**	**8.30**	**5.76**	*3.25*	*3.39*	*3.60*	*3.90*	*4.44*	*3.97*	*4.04*	*4.34*	**6.67**	*3.54*	*4.20*
Henry Hub Spot (dollars per million Btu)	**4.66**	**7.48**	**7.99**	**5.55**	*3.13*	*3.27*	*3.47*	*3.76*	*4.28*	*3.82*	*3.89*	*4.17*	**6.42**	*3.40*	*4.04*
U.S. Retail Prices (dollars per thousand cubic feet)															
Industrial Sector	**6.82**	**8.24**	**9.26**	**7.25**	*5.68*	*4.43*	*4.48*	*4.90*	*5.74*	*5.05*	*4.91*	*5.37*	**7.83**	*4.89*	*5.30*
Commercial Sector	**10.00**	**11.71**	**14.10**	**11.86**	*10.40*	*9.54*	*9.52*	*8.37*	*8.45*	*9.05*	*9.51*	*8.62*	**11.28**	*9.52*	*8.72*
Residential Sector	**12.32**	**16.57**	**24.92**	**15.40**	*13.17*	*14.66*	*19.14*	*11.81*	*11.02*	*14.26*	*19.36*	*12.20*	**14.74**	*13.42*	*12.51*
U.S. Electricity															
Power Generation Fuel Costs (dollars per million Btu)															
Coal	**2.18**	**2.26**	**2.50**	**2.48**	*2.50*	*2.50*	*2.49*	*2.46*	*2.48*	*2.49*	*2.49*	*2.46*	**2.36**	*2.49*	*2.48*
Natural Gas	**5.95**	**7.39**	**8.23**	**5.85**	*3.69*	*3.50*	*3.63*	*4.11*	*4.86*	*4.07*	*4.09*	*4.55*	**7.00**	*3.72*	*4.37*
Residual Fuel Oil (c)	**16.81**	**26.17**	**26.53**	**22.00**	*17.99*	*17.82*	*16.27*	*15.67*	*15.61*	*15.56*	*14.55*	*14.34*	**22.02**	*17.01*	*15.04*
Distillate Fuel Oil	**21.23**	**30.70**	**26.79**	**27.19**	*24.87*	*23.58*	*21.25*	*21.14*	*20.09*	*18.37*	*18.14*	*19.01*	**25.56**	*22.93*	*19.10*
Prices to Ultimate Customers (cents per kilowatthour)															
Industrial Sector	**7.42**	**8.41**	**9.42**	**8.22**	*7.58*	*8.17*	*9.05*	*8.06*	*7.65*	*8.16*	*9.05*	*8.06*	**8.39**	*8.23*	*8.24*
Commercial Sector	**11.63**	**12.34**	**13.37**	**12.51**	*12.29*	*12.63*	*13.40*	*12.31*	*12.09*	*12.64*	*13.55*	*12.43*	**12.51**	*12.69*	*12.71*
Residential Sector	**13.97**	**15.05**	**15.85**	**15.48**	*15.18*	*15.79*	*16.02*	*15.33*	*15.00*	*15.89*	*16.17*	*15.50*	**15.12**	*15.60*	*15.66*

(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.

- = no data available

Notes: EIA completed modeling and analysis for this report on February 2, 2022.

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

Prices are not adjusted for inflation; 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.

Natural gas Henry Hub and WTI crude oil spot prices from Reuter's News Service (http://www.reuters.com).

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

Forecasts: EIA Short-Term Integrated Forecasting System.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Production (million barrels per day) (a)															
OECD	**31.62**	**31.87**	**32.54**	**33.28**	*33.59*	*33.75*	*33.93*	*34.44*	*34.53*	*34.38*	*34.51*	*35.06*	**32.33**	*33.93*	*34.62*
U.S. (50 States)	**19.44**	**20.12**	**20.60**	**20.82**	*20.77*	*21.18*	*21.21*	*21.34*	*21.33*	*21.56*	*21.59*	*21.73*	**20.25**	*21.13*	*21.56*
Canada	**5.66**	**5.51**	**5.72**	**5.91**	*6.00*	*5.72*	*5.93*	*6.14*	*6.21*	*5.92*	*6.13*	*6.34*	**5.70**	*5.95*	*6.15*
Mexico	**1.91**	**1.89**	**1.90**	**1.90**	*1.92*	*1.95*	*1.96*	*1.94*	*1.96*	*1.96*	*1.93*	*1.89*	**1.90**	*1.94*	*1.93*
Other OECD	**4.61**	**4.35**	**4.32**	**4.64**	*4.90*	*4.90*	*4.83*	*5.01*	*5.03*	*4.94*	*4.85*	*5.10*	**4.48**	*4.91*	*4.98*
Non-OECD	**67.21**	**66.87**	**68.26**	**68.11**	*67.11*	*66.96*	*67.54*	*67.05*	*67.37*	*68.08*	*68.47*	*68.04*	**67.62**	*67.17*	*67.99*
OPEC	**33.75**	**33.76**	**34.71**	**34.44**	*33.99*	*34.11*	*34.21*	*34.00*	*34.76*	*34.79*	*34.87*	*34.65*	**34.17**	*34.08*	*34.77*
Crude Oil Portion	**28.19**	**28.33**	**29.23**	**28.92**	*28.50*	*28.75*	*28.81*	*28.57*	*29.23*	*29.38*	*29.43*	*29.17*	**28.67**	*28.66*	*29.31*
Other Liquids (b)	**5.56**	**5.43**	**5.48**	**5.52**	*5.49*	*5.36*	*5.40*	*5.44*	*5.53*	*5.40*	*5.44*	*5.48*	**5.50**	*5.42*	*5.46*
Eurasia	**14.39**	**13.39**	**13.56**	**13.92**	*13.54*	*12.54*	*12.80*	*12.88*	*12.91*	*12.88*	*12.86*	*12.95*	**13.81**	*12.94*	*12.90*
China	**5.18**	**5.18**	**5.05**	**5.09**	*5.21*	*5.24*	*5.23*	*5.27*	*5.21*	*5.23*	*5.23*	*5.27*	**5.12**	*5.24*	*5.23*
Other Non-OECD	**13.90**	**14.54**	**14.95**	**14.66**	*14.38*	*15.08*	*15.31*	*14.90*	*14.49*	*15.18*	*15.50*	*15.18*	**14.51**	*14.92*	*15.09*
Total World Production	**98.83**	**98.75**	**100.80**	**101.39**	*100.70*	*100.71*	*101.47*	*101.50*	*101.90*	*102.46*	*102.97*	*103.11*	**99.95**	*101.10*	*102.61*
Non-OPEC Production	**65.08**	**64.98**	**66.09**	**66.94**	*66.71*	*66.60*	*67.26*	*67.49*	*67.14*	*67.68*	*68.10*	*68.46*	**65.78**	*67.02*	*67.85*
Consumption (million barrels per day) (c)															
OECD	**45.78**	**45.37**	**46.62**	**45.97**	*45.64*	*45.22*	*45.80*	*46.03*	*45.72*	*45.30*	*46.16*	*46.32*	**45.94**	*45.67*	*45.88*
U.S. (50 States)	**20.22**	**20.27**	**20.47**	**20.26**	*19.84*	*20.38*	*20.41*	*20.45*	*20.26*	*20.52*	*20.75*	*20.69*	**20.30**	*20.27*	*20.56*
U.S. Territories	**0.14**	**0.12**	**0.12**	**0.13**	*0.13*	*0.12*	*0.12*	*0.13*	*0.13*	*0.12*	*0.12*	*0.13*	**0.13**	*0.12*	*0.13*
Canada	**2.24**	**2.21**	**2.38**	**2.26**	*2.28*	*2.23*	*2.33*	*2.31*	*2.30*	*2.25*	*2.35*	*2.33*	**2.27**	*2.29*	*2.31*
Europe	**13.19**	**13.42**	**14.09**	**13.56**	*13.39*	*13.30*	*13.70*	*13.47*	*13.19*	*13.34*	*13.74*	*13.50*	**13.57**	*13.46*	*13.44*
Japan	**3.70**	**3.03**	**3.19**	**3.53**	*3.69*	*3.04*	*3.06*	*3.36*	*3.54*	*2.93*	*3.03*	*3.36*	**3.36**	*3.29*	*3.21*
Other OECD	**6.30**	**6.33**	**6.37**	**6.23**	*6.31*	*6.15*	*6.18*	*6.32*	*6.30*	*6.14*	*6.16*	*6.31*	**6.31**	*6.24*	*6.23*
Non-OECD	**52.92**	**53.25**	**53.76**	**53.75**	*54.02*	*54.83*	*55.18*	*55.16*	*55.84*	*56.47*	*56.70*	*56.53*	**53.42**	*54.80*	*56.39*
Eurasia	**4.44**	**4.33**	**4.69**	**4.56**	*4.20*	*4.35*	*4.67*	*4.58*	*4.38*	*4.53*	*4.85*	*4.76*	**4.50**	*4.45*	*4.63*
Europe	**0.75**	**0.75**	**0.76**	**0.77**	*0.74*	*0.76*	*0.76*	*0.76*	*0.74*	*0.76*	*0.77*	*0.77*	**0.76**	*0.76*	*0.76*
China	**15.09**	**15.07**	**15.06**	**15.25**	*15.49*	*15.83*	*15.91*	*16.14*	*15.99*	*16.30*	*16.26*	*16.34*	**15.12**	*15.85*	*16.22*
Other Asia	**13.74**	**13.75**	**13.46**	**13.89**	*14.30*	*14.27*	*13.69*	*13.99*	*14.88*	*14.85*	*14.25*	*14.56*	**13.71**	*14.06*	*14.64*
Other Non-OECD	**18.91**	**19.34**	**19.79**	**19.28**	*19.29*	*19.62*	*20.15*	*19.68*	*19.85*	*20.02*	*20.57*	*20.09*	**19.33**	*19.69*	*20.13*
Total World Consumption	**98.71**	**98.62**	**100.38**	**99.72**	*99.65*	*100.05*	*100.99*	*101.19*	*101.56*	*101.77*	*102.85*	*102.85*	**99.36**	*100.47*	*102.26*
Total Crude Oil and Other Liquids Inventory Net Withdrawals (million barrels per day)															
U.S. (50 States)	**0.81**	**0.51**	**0.45**	**0.51**	*-0.12*	*-0.49*	*-0.08*	*0.36*	*-0.11*	*-0.55*	*-0.11*	*0.37*	**0.57**	*-0.08*	*-0.10*
Other OECD	**-0.09**	**-0.29**	**-0.48**	**-0.54**	*-0.30*	*-0.06*	*-0.13*	*-0.21*	*-0.07*	*-0.04*	*0.00*	*-0.20*	**-0.35**	*-0.17*	*-0.08*
Other Stock Draws and Balance	**-0.83**	**-0.35**	**-0.39**	**-1.63**	*-0.63*	*-0.12*	*-0.28*	*-0.46*	*-0.16*	*-0.10*	*-0.01*	*-0.43*	**-0.80**	*-0.37*	*-0.17*
Total Stock Draw	**-0.12**	**-0.12**	**-0.42**	**-1.67**	*-1.04*	*-0.67*	*-0.49*	*-0.31*	*-0.34*	*-0.69*	*-0.12*	*-0.26*	**-0.59**	*-0.62*	*-0.35*
End-of-period Commercial Crude Oil and Other Liquids Inventories (million barrels)															
U.S. Commercial Inventory	**1,154**	**1,180**	**1,215**	**1,213**	*1,228*	*1,286*	*1,297*	*1,264*	*1,268*	*1,312*	*1,316*	*1,277*	**1,213**	*1,264*	*1,277*
OECD Commercial Inventory	**2,604**	**2,656**	**2,735**	**2,783**	*2,825*	*2,888*	*2,911*	*2,897*	*2,907*	*2,956*	*2,960*	*2,938*	**2,783**	*2,897*	*2,938*

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

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

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

- = no data available

OECD = Organization for Economic Cooperation and Development: Australia, Austria, Belgium, Canada, Chile, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Latvia, Lithuania, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Slovakia, Slovenia, South Korea, Spain, Sweden, Switzerland, Turkey, the United Kingdom, the United States.

OPEC = Organization of the Petroleum Exporting Countries: Algeria, Angola, Congo (Brazzaville), Equatorial Guinea, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, Saudi Arabia, the United Arab Emirates, Venezuela.

Notes: EIA completed modeling and analysis for this report on February 2, 2022.

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

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

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

Forecasts: EIA Short-Term Integrated Forecasting System.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
North America	**27.01**	**27.52**	**28.22**	**28.64**	*28.69*	*28.85*	*29.10*	*29.43*	*29.51*	*29.44*	*29.66*	*29.96*	**27.85**	*29.02*	*29.64*
Canada	**5.66**	**5.51**	**5.72**	**5.91**	*6.00*	*5.72*	*5.93*	*6.14*	*6.21*	*5.92*	*6.13*	*6.34*	**5.70**	*5.95*	*6.15*
Mexico	**1.91**	**1.89**	**1.90**	**1.90**	*1.92*	*1.95*	*1.96*	*1.94*	*1.96*	*1.96*	*1.93*	*1.89*	**1.90**	*1.94*	*1.93*
United States	**19.44**	**20.12**	**20.60**	**20.82**	*20.77*	*21.18*	*21.21*	*21.34*	*21.33*	*21.56*	*21.59*	*21.73*	**20.25**	*21.13*	*21.56*
Central and South America	**5.83**	**6.41**	**6.86**	**6.58**	*6.26*	*6.96*	*7.22*	*6.84*	*6.43*	*7.15*	*7.49*	*7.19*	**6.42**	*6.82*	*7.06*
Argentina	**0.77**	**0.78**	**0.79**	**0.82**	*0.85*	*0.87*	*0.88*	*0.92*	*0.89*	*0.92*	*0.93*	*0.98*	**0.79**	*0.88*	*0.93*
Brazil	**3.33**	**3.79**	**4.15**	**3.78**	*3.41*	*4.09*	*4.36*	*3.89*	*3.54*	*4.22*	*4.50*	*4.03*	**3.76**	*3.94*	*4.07*
Colombia	**0.77**	**0.77**	**0.78**	**0.79**	*0.78*	*0.78*	*0.78*	*0.79*	*0.77*	*0.77*	*0.78*	*0.79*	**0.78**	*0.78*	*0.78*
Ecuador	**0.48**	**0.47**	**0.49**	**0.49**	*0.50*	*0.50*	*0.51*	*0.51*	*0.55*	*0.54*	*0.54*	*0.54*	**0.48**	*0.51*	*0.54*
Guyana	**0.12**	**0.24**	**0.32**	**0.35**	*0.35*	*0.36*	*0.36*	*0.36*	*0.36*	*0.36*	*0.43*	*0.54*	**0.26**	*0.36*	*0.42*
Europe	**4.04**	**3.76**	**3.81**	**4.11**	*4.36*	*4.36*	*4.30*	*4.48*	*4.51*	*4.42*	*4.33*	*4.59*	**3.93**	*4.38*	*4.46*
Norway	**1.97**	**1.74**	**1.91**	**2.11**	*2.32*	*2.32*	*2.32*	*2.40*	*2.44*	*2.37*	*2.38*	*2.55*	**1.93**	*2.34*	*2.43*
United Kingdom	**0.97**	**0.91**	**0.80**	**0.88**	*0.92*	*0.91*	*0.83*	*0.92*	*0.92*	*0.91*	*0.81*	*0.90*	**0.89**	*0.89*	*0.89*
Eurasia	**14.39**	**13.39**	**13.56**	**13.92**	*13.54*	*12.54*	*12.80*	*12.88*	*12.91*	*12.88*	*12.86*	*12.95*	**13.81**	*12.94*	*12.90*
Azerbaijan	**0.70**	**0.67**	**0.65**	**0.67**	*0.67*	*0.65*	*0.64*	*0.65*	*0.66*	*0.66*	*0.66*	*0.67*	**0.67**	*0.65*	*0.66*
Kazakhstan	**2.01**	**1.77**	**1.62**	**1.92**	*2.04*	*1.96*	*1.96*	*2.03*	*2.04*	*2.02*	*2.00*	*2.08*	**1.83**	*2.00*	*2.04*
Russia	**11.30**	**10.59**	**10.92**	**10.95**	*10.41*	*9.52*	*9.78*	*9.78*	*9.80*	*9.80*	*9.80*	*9.80*	**10.94**	*9.87*	*9.80*
Turkmenistan	**0.26**	**0.26**	**0.26**	**0.26**	*0.27*	*0.27*	*0.27*	*0.27*	*0.27*	*0.27*	*0.27*	*0.27*	**0.26**	*0.27*	*0.27*
Middle East	**3.23**	**3.29**	**3.33**	**3.24**	*3.21*	*3.23*	*3.22*	*3.22*	*3.23*	*3.23*	*3.23*	*3.22*	**3.27**	*3.22*	*3.23*
Oman	**1.05**	**1.07**	**1.10**	**1.08**	*1.06*	*1.06*	*1.06*	*1.06*	*1.07*	*1.07*	*1.07*	*1.07*	**1.07**	*1.06*	*1.07*
Qatar	**1.85**	**1.86**	**1.86**	**1.86**	*1.86*	*1.86*	*1.86*	*1.86*	*1.86*	*1.86*	*1.86*	*1.86*	**1.86**	*1.86*	*1.86*
Asia and Oceania	**9.16**	**9.17**	**8.87**	**9.02**	*9.22*	*9.23*	*9.20*	*9.22*	*9.17*	*9.17*	*9.15*	*9.17*	**9.05**	*9.22*	*9.17*
Australia	**0.44**	**0.47**	**0.39**	**0.43**	*0.43*	*0.43*	*0.42*	*0.42*	*0.40*	*0.40*	*0.39*	*0.39*	**0.43**	*0.42*	*0.39*
China	**5.18**	**5.18**	**5.05**	**5.09**	*5.21*	*5.24*	*5.23*	*5.27*	*5.21*	*5.23*	*5.23*	*5.27*	**5.12**	*5.24*	*5.23*
India	**0.88**	**0.89**	**0.87**	**0.87**	*0.90*	*0.90*	*0.89*	*0.89*	*0.91*	*0.91*	*0.90*	*0.90*	**0.88**	*0.90*	*0.91*
Indonesia	**0.84**	**0.83**	**0.81**	**0.82**	*0.83*	*0.82*	*0.81*	*0.80*	*0.80*	*0.79*	*0.79*	*0.78*	**0.82**	*0.81*	*0.79*
Malaysia	**0.61**	**0.60**	**0.58**	**0.61**	*0.61*	*0.60*	*0.60*	*0.60*	*0.59*	*0.58*	*0.58*	*0.57*	**0.60**	*0.60*	*0.58*
Africa	**1.41**	**1.44**	**1.45**	**1.43**	*1.44*	*1.44*	*1.43*	*1.42*	*1.39*	*1.38*	*1.38*	*1.37*	**1.43**	*1.43*	*1.38*
Egypt	**0.66**	**0.68**	**0.67**	**0.67**	*0.69*	*0.69*	*0.69*	*0.69*	*0.66*	*0.65*	*0.65*	*0.66*	**0.67**	*0.69*	*0.65*
South Sudan	**0.15**	**0.15**	**0.16**	**0.15**	*0.15*	*0.16*	*0.16*	*0.16*	*0.17*	*0.17*	*0.17*	*0.17*	**0.16**	*0.16*	*0.17*
Total non-OPEC liquids	**65.08**	**64.98**	**66.09**	**66.94**	*66.71*	*66.60*	*67.26*	*67.49*	*67.14*	*67.68*	*68.10*	*68.46*	**65.78**	*67.02*	*67.85*
OPEC non-crude liquids	**5.56**	**5.43**	**5.48**	**5.52**	*5.49*	*5.36*	*5.40*	*5.44*	*5.53*	*5.40*	*5.44*	*5.48*	**5.50**	*5.42*	*5.46*
Non-OPEC + OPEC non-crude	**70.64**	**70.42**	**71.57**	**72.46**	*72.20*	*71.96*	*72.66*	*72.93*	*72.67*	*73.08*	*73.54*	*73.94*	**71.28**	*72.44*	*73.31*
Unplanned non-OPEC Production Outages	**0.76**	**1.31**	**0.78**	**0.56**	-	-	-	-	-	-	-	-	**0.85**	-	-

- = no data available

OPEC = Organization of the Petroleum Exporting Countries: Algeria, Angola, Congo (Brazzaville), Equatorial Guinea, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, Saudi Arabia, the United Arab Emirates, Venezuela.

Notes: EIA completed modeling and analysis for this report on February 2, 2022.

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.

Forecasts: EIA Short-Term Integrated Forecasting System.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Crude Oil															
Algeria	**0.97**	**1.00**	**1.02**	**1.02**	-	-	-	-	-	-	-	-	**1.00**	-	-
Angola	**1.15**	**1.19**	**1.16**	**1.10**	-	-	-	-	-	-	-	-	**1.15**	-	-
Congo (Brazzaville)	**0.27**	**0.29**	**0.28**	**0.26**	-	-	-	-	-	-	-	-	**0.28**	-	-
Equatorial Guinea	**0.09**	**0.09**	**0.09**	**0.07**	-	-	-	-	-	-	-	-	**0.09**	-	-
Gabon	**0.19**	**0.19**	**0.20**	**0.21**	-	-	-	-	-	-	-	-	**0.20**	-	-
Iran	**2.55**	**2.53**	**2.53**	**2.56**	-	-	-	-	-	-	-	-	**2.54**	-	-
Iraq	**4.30**	**4.42**	**4.55**	**4.51**	-	-	-	-	-	-	-	-	**4.45**	-	-
Kuwait	**2.61**	**2.69**	**2.80**	**2.72**	-	-	-	-	-	-	-	-	**2.71**	-	-
Libya	**1.06**	**0.76**	**0.95**	**1.14**	-	-	-	-	-	-	-	-	**0.98**	-	-
Nigeria	**1.27**	**1.11**	**0.97**	**1.07**	-	-	-	-	-	-	-	-	**1.10**	-	-
Saudi Arabia	**10.08**	**10.30**	**10.85**	**10.50**	-	-	-	-	-	-	-	-	**10.43**	-	-
United Arab Emirates	**2.94**	**3.04**	**3.17**	**3.09**	-	-	-	-	-	-	-	-	**3.06**	-	-
Venezuela	**0.70**	**0.72**	**0.66**	**0.69**	-	-	-	-	-	-	-	-	**0.69**	-	-
OPEC Total	**28.19**	**28.33**	**29.23**	**28.92**	*28.50*	*28.75*	*28.81*	*28.57*	*29.23*	*29.38*	*29.43*	*29.17*	**28.67**	*28.66*	*29.31*
Other Liquids (a)	**5.56**	**5.43**	**5.48**	**5.52**	*5.49*	*5.36*	*5.40*	*5.44*	*5.53*	*5.40*	*5.44*	*5.48*	**5.50**	*5.42*	*5.46*
Total OPEC Production	**33.75**	**33.76**	**34.71**	**34.44**	*33.99*	*34.11*	*34.21*	*34.00*	*34.76*	*34.79*	*34.87*	*34.65*	**34.17**	*34.08*	*34.77*
Crude Oil Production Capacity															
Middle East	**25.48**	**25.46**	**25.55**	**25.66**	*25.85*	*25.98*	*25.98*	*25.98*	*26.48*	*26.58*	*26.63*	*26.63*	**25.54**	*25.95*	*26.58*
Other	**5.83**	**5.45**	**5.35**	**5.56**	*5.78*	*5.94*	*5.92*	*5.89*	*5.84*	*5.87*	*5.83*	*5.80*	**5.54**	*5.89*	*5.83*
OPEC Total	**31.31**	**30.91**	**30.89**	**31.21**	*31.63*	*31.92*	*31.90*	*31.87*	*32.32*	*32.45*	*32.46*	*32.43*	**31.08**	*31.83*	*32.42*
Surplus Crude Oil Production Capacity															
Middle East	**3.00**	**2.47**	**1.65**	**2.28**	*3.11*	*3.14*	*3.06*	*3.28*	*3.06*	*3.04*	*3.01*	*3.24*	**2.35**	*3.15*	*3.09*
Other	**0.12**	**0.11**	**0.01**	**0.01**	*0.03*	*0.03*	*0.03*	*0.03*	*0.03*	*0.02*	*0.02*	*0.02*	**0.06**	*0.03*	*0.02*
OPEC Total	**3.12**	**2.58**	**1.67**	**2.29**	*3.14*	*3.17*	*3.09*	*3.31*	*3.09*	*3.06*	*3.03*	*3.26*	**2.41**	*3.18*	*3.11*
Unplanned OPEC Production Outages	**1.98**	**2.42**	**2.50**	**2.14**	-	-	-	-	-	-	-	-	**2.26**	-	-

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

OPEC = Organization of the Petroleum Exporting Countries: Iran, Iraq, Kuwait, Saudi Arabia, and the United Arab Emirates (Middle East); Algeria, Angola, Congo (Brazzaville), Equatorial Guinea, Gabon, Libya, Nigeria, and Venezuela (Other).

Notes: EIA completed modeling and analysis for this report on February 2, 2022.

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

Forecasts are not published for individual OPEC countries.

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

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

Forecasts: EIA Short-Term Integrated Forecasting System.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2023

	2022				2023				2024						
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
North America	**24.22**	**24.47**	**24.82**	**24.32**	*23.91*	*24.42*	*24.55*	*24.58*	*24.33*	*24.56*	*24.89*	*24.82*	**24.46**	*24.37*	*24.65*
Canada	**2.24**	**2.21**	**2.38**	**2.26**	*2.28*	*2.23*	*2.33*	*2.31*	*2.30*	*2.25*	*2.35*	*2.33*	**2.27**	*2.29*	*2.31*
Mexico	**1.76**	**1.99**	**1.96**	**1.80**	*1.78*	*1.81*	*1.80*	*1.82*	*1.76*	*1.78*	*1.78*	*1.79*	**1.88**	*1.80*	*1.78*
United States	**20.22**	**20.27**	**20.47**	**20.26**	*19.84*	*20.38*	*20.41*	*20.45*	*20.26*	*20.52*	*20.75*	*20.69*	**20.30**	*20.27*	*20.56*
Central and South America	**6.29**	**6.42**	**6.54**	**6.53**	*6.29*	*6.42*	*6.53*	*6.46*	*6.43*	*6.56*	*6.67*	*6.61*	**6.44**	*6.43*	*6.57*
Brazil	**2.85**	**2.93**	**3.02**	**3.02**	*2.88*	*2.94*	*3.01*	*3.00*	*2.97*	*3.03*	*3.10*	*3.09*	**2.95**	*2.96*	*3.05*
Europe	**13.94**	**14.18**	**14.85**	**14.33**	*14.13*	*14.06*	*14.46*	*14.23*	*13.93*	*14.10*	*14.50*	*14.27*	**14.32**	*14.22*	*14.20*
Eurasia	**4.44**	**4.33**	**4.69**	**4.56**	*4.20*	*4.35*	*4.67*	*4.58*	*4.38*	*4.53*	*4.85*	*4.76*	**4.50**	*4.45*	*4.63*
Russia	**3.35**	**3.30**	**3.58**	**3.44**	*3.18*	*3.26*	*3.55*	*3.41*	*3.32*	*3.41*	*3.70*	*3.56*	**3.42**	*3.35*	*3.50*
Middle East	**8.89**	**9.19**	**9.63**	**8.94**	*9.17*	*9.35*	*9.87*	*9.28*	*9.48*	*9.49*	*10.03*	*9.43*	**9.16**	*9.42*	*9.61*
Asia and Oceania	**36.48**	**35.60**	**35.52**	**36.56**	*37.44*	*36.91*	*36.46*	*37.44*	*38.38*	*37.87*	*37.35*	*38.23*	**36.04**	*37.06*	*37.96*
China	**15.09**	**15.07**	**15.06**	**15.25**	*15.49*	*15.83*	*15.91*	*16.14*	*15.99*	*16.30*	*16.26*	*16.34*	**15.12**	*15.85*	*16.22*
Japan	**3.70**	**3.03**	**3.19**	**3.53**	*3.69*	*3.04*	*3.06*	*3.36*	*3.54*	*2.93*	*3.03*	*3.36*	**3.36**	*3.29*	*3.21*
India	**5.08**	**5.07**	**4.83**	**5.13**	*5.29*	*5.36*	*5.01*	*5.33*	*5.60*	*5.67*	*5.30*	*5.63*	**5.03**	*5.25*	*5.55*
Africa	**4.45**	**4.44**	**4.34**	**4.47**	*4.52*	*4.53*	*4.45*	*4.61*	*4.63*	*4.65*	*4.56*	*4.73*	**4.43**	*4.53*	*4.64*
Total OECD Liquid Fuels Consumption	**45.78**	**45.37**	**46.62**	**45.97**	*45.64*	*45.22*	*45.80*	*46.03*	*45.72*	*45.30*	*46.16*	*46.32*	**45.94**	*45.67*	*45.88*
Total non-OECD Liquid Fuels Consumption	**52.92**	**53.25**	**53.76**	**53.75**	*54.02*	*54.83*	*55.18*	*55.16*	*55.84*	*56.47*	*56.70*	*56.53*	**53.42**	*54.80*	*56.39*
Total World Liquid Fuels Consumption	**98.71**	**98.62**	**100.38**	**99.72**	*99.65*	*100.05*	*100.99*	*101.19*	*101.56*	*101.77*	*102.85*	*102.85*	**99.36**	*100.47*	*102.26*
Real Gross Domestic Product (a)															
World Index, 2015 Q1 = 100	**121.7**	**121.8**	**123.1**	**123.1**	*123.5*	*124.0*	*125.0*	*126.1*	*127.0*	*128.0*	*129.3*	*130.6*	**122.4**	*124.6*	*128.7*
Percent change from prior year	**4.4**	**3.5**	**3.2**	**1.8**	*1.5*	*1.8*	*1.5*	*2.4*	*2.8*	*3.2*	*3.5*	*3.6*	**3.2**	*1.8*	*3.3*
OECD Index, 2015 = 100													**113.3**	*113.5*	*115.2*
Percent change from prior year													**3.0**	*0.2*	*1.5*
Non-OECD Index, 2015 = 100													**128.2**	*132.2*	*138.3*
Percent change from prior year													**3.4**	*3.1*	*4.7*
Nominal U.S. Dollar Index (b)															
Index, 2015 Q1 = 100	**109.6**	**113.0**	**117.3**	**118.6**	*116.1*	*117.0*	*117.2*	*117.3*	*117.2*	*116.9*	*116.2*	*115.2*	**114.6**	*116.9*	*116.4*
Percent change from prior year	**2.9**	**6.5**	**9.1**	**8.7**	*6.0*	*3.6*	*-0.1*	*-1.1*	*0.9*	*-0.1*	*-0.9*	*-1.8*	**6.8**	*2.0*	*-0.5*

(a) GDP values for the individual countries in the indexes are converted to U.S. dollars at purchasing power parity and then summed to create values for the world, OECD, and non-OECD. Historical and forecast data are from Oxford Economics, and quarterly values are reindexed to 2015 Q1 by EIA.

(b) Data source is the Board of Governors of the U.S. Federal Reserve System Nominal Broad Trade-Weighted Dollar Index. An increase in the index indicates an appreciation of the U.S. dollar against a basket of currencies and a decrease in the index indicates a depreciation of the U.S. dollar against a basket of currencies. Historical and forecast data are from Oxford Economics, and quarterly values are reindexed to 2015 Q1 by EIA.

- = no data available

OECD = Organization for Economic Cooperation and Development: Australia, Austria, Belgium, Canada, Chile, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Latvia, Lithuania, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Slovakia, Slovenia, South Korea, Spain, Sweden, Switzerland, Turkey, the United Kingdom, the United States.

Notes: EIA completed modeling and analysis for this report on February 2, 2022.

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

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

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

Forecasts: EIA Short-Term Integrated Forecasting System.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Supply (million barrels per day)															
Crude Oil Supply															
Domestic Production (a)	**11.47**	**11.70**	**12.06**	**12.36**	*12.44*	*12.46*	*12.49*	*12.56*	*12.63*	*12.62*	*12.65*	*12.70*	**11.90**	*12.49*	*12.65*
Alaska	**0.45**	**0.44**	**0.42**	**0.45**	*0.43*	*0.36*	*0.39*	*0.41*	*0.40*	*0.34*	*0.36*	*0.38*	**0.44**	*0.40*	*0.37*
Federal Gulf of Mexico (b)	**1.67**	**1.70**	**1.80**	**1.88**	*2.00*	*1.96*	*1.86*	*1.85*	*1.91*	*1.89*	*1.83*	*1.85*	**1.76**	*1.91*	*1.87*
Lower 48 States (excl GOM)	**9.35**	**9.56**	**9.84**	**10.03**	*10.01*	*10.14*	*10.25*	*10.30*	*10.32*	*10.39*	*10.45*	*10.47*	**9.70**	*10.17*	*10.41*
Crude Oil Net Imports (c)	**3.00**	**2.81**	**2.75**	**2.17**	*2.80*	*3.28*	*3.51*	*3.28*	*2.90*	*3.02*	*3.25*	*2.87*	**2.68**	*3.22*	*3.01*
SPR Net Withdrawals	**0.31**	**0.80**	**0.84**	**0.48**	*0.05*	*0.15*	*0.05*	*0.00*	*-0.07*	*-0.07*	*-0.07*	*-0.07*	**0.61**	*0.06*	*-0.07*
Commercial Inventory Net Withdrawals	**0.08**	**-0.03**	**-0.12**	**0.03**	*-0.53*	*0.12*	*0.15*	*-0.09*	*-0.33*	*0.06*	*0.19*	*-0.10*	**-0.01**	*-0.08*	*-0.04*
Crude Oil Adjustment (d)	**0.71**	**0.81**	**0.74**	**0.82**	*0.52*	*0.56*	*0.50*	*0.44*	*0.54*	*0.61*	*0.50*	*0.46*	**0.77**	*0.50*	*0.53*
Total Crude Oil Input to Refineries	**15.56**	**16.09**	**16.26**	**15.86**	*15.28*	*16.58*	*16.69*	*16.20*	*15.68*	*16.25*	*16.52*	*15.87*	**15.94**	*16.19*	*16.08*
Other Supply															
Refinery Processing Gain	**0.95**	**1.07**	**1.05**	**1.03**	*0.95*	*1.03*	*1.04*	*1.05*	*0.99*	*1.00*	*1.02*	*1.02*	**1.03**	*1.02*	*1.01*
Natural Gas Plant Liquids Production	**5.61**	**5.92**	**6.09**	**5.97**	*5.97*	*6.24*	*6.23*	*6.25*	*6.25*	*6.43*	*6.40*	*6.43*	**5.90**	*6.17*	*6.38*
Renewables and Oxygenate Production (e)	**1.20**	**1.20**	**1.18**	**1.23**	*1.21*	*1.23*	*1.22*	*1.27*	*1.25*	*1.29*	*1.30*	*1.35*	**1.20**	*1.23*	*1.30*
Fuel Ethanol Production	**1.02**	**1.01**	**0.97**	**1.01**	*0.98*	*0.99*	*0.97*	*1.01*	*0.99*	*1.00*	*0.99*	*1.03*	**1.00**	*0.99*	*1.00*
Petroleum Products Adjustment (f)	**0.21**	**0.23**	**0.22**	**0.22**	*0.20*	*0.22*	*0.22*	*0.22*	*0.21*	*0.22*	*0.22*	*0.22*	**0.22**	*0.22*	*0.22*
Product Net Imports (c)	**-3.74**	**-3.99**	**-4.07**	**-4.06**	*-4.13*	*-4.15*	*-4.71*	*-4.97*	*-4.40*	*-4.13*	*-4.48*	*-4.73*	**-3.96**	*-4.49*	*-4.44*
Hydrocarbon Gas Liquids	**-2.14**	**-2.31**	**-2.16**	**-2.25**	*-2.52*	*-2.57*	*-2.58*	*-2.57*	*-2.53*	*-2.74*	*-2.65*	*-2.70*	**-2.21**	*-2.56*	*-2.66*
Unfinished Oils	**0.09**	**0.25**	**0.28**	**0.25**	*0.14*	*0.26*	*0.37*	*0.19*	*0.19*	*0.25*	*0.30*	*0.19*	**0.22**	*0.24*	*0.23*
Other HC/Oxygenates	**-0.09**	**-0.10**	**-0.07**	**-0.03**	*-0.06*	*-0.04*	*-0.03*	*-0.04*	*-0.06*	*-0.05*	*-0.04*	*-0.05*	**-0.07**	*-0.05*	*-0.05*
Motor Gasoline Blend Comp.	**0.40**	**0.60**	**0.48**	**0.37**	*0.39*	*0.71*	*0.39*	*0.41*	*0.40*	*0.65*	*0.39*	*0.37*	**0.46**	*0.48*	*0.46*
Finished Motor Gasoline	**-0.76**	**-0.73**	**-0.81**	**-0.80**	*-0.73*	*-0.78*	*-0.96*	*-1.17*	*-0.95*	*-0.76*	*-0.86*	*-0.98*	**-0.78**	*-0.91*	*-0.89*
Jet Fuel	**-0.04**	**-0.06**	**-0.11**	**-0.05**	*-0.16*	*-0.08*	*-0.05*	*0.01*	*0.14*	*0.16*	*0.18*	*0.16*	**-0.06**	*-0.07*	*0.16*
Distillate Fuel Oil	**-0.81**	**-1.15**	**-1.29**	**-1.02**	*-0.82*	*-1.15*	*-1.34*	*-1.29*	*-1.08*	*-1.18*	*-1.32*	*-1.30*	**-1.07**	*-1.15*	*-1.22*
Residual Fuel Oil	**0.14**	**0.10**	**0.10**	**0.06**	*0.09*	*0.10*	*0.08*	*0.13*	*0.06*	*0.09*	*0.08*	*0.15*	**0.10**	*0.10*	*0.10*
Other Oils (g)	**-0.54**	**-0.59**	**-0.49**	**-0.59**	*-0.46*	*-0.60*	*-0.58*	*-0.64*	*-0.56*	*-0.55*	*-0.56*	*-0.57*	**-0.55**	*-0.57*	*-0.56*
Product Inventory Net Withdrawals	**0.42**	**-0.25**	**-0.26**	**-0.01**	*0.36*	*-0.76*	*-0.28*	*0.44*	*0.28*	*-0.55*	*-0.24*	*0.53*	**-0.03**	*-0.06*	*0.01*
Total Supply	**20.22**	**20.27**	**20.47**	**20.26**	*19.84*	*20.38*	*20.41*	*20.45*	*20.26*	*20.52*	*20.75*	*20.69*	**20.30**	*20.27*	*20.56*
Consumption (million barrels per day)															
Hydrocarbon Gas Liquids	**3.87**	**3.43**	**3.48**	**3.61**	*3.78*	*3.47*	*3.48*	*3.83*	*4.00*	*3.49*	*3.60*	*3.85*	**3.60**	*3.64*	*3.73*
Other HC/Oxygenates	**0.13**	**0.17**	**0.17**	**0.20**	*0.21*	*0.20*	*0.20*	*0.22*	*0.21*	*0.24*	*0.26*	*0.28*	**0.17**	*0.21*	*0.25*
Unfinished Oils	**0.13**	**0.04**	**0.11**	**0.08**	*0.01*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	**0.09**	*0.00*	*0.00*
Motor Gasoline	**8.47**	**9.00**	**8.88**	**8.75**	*8.45*	*8.98*	*8.90*	*8.72*	*8.43*	*8.91*	*8.86*	*8.72*	**8.78**	*8.76*	*8.73*
Fuel Ethanol blended into Motor Gasoline	**0.87**	**0.93**	**0.92**	**0.92**	*0.87*	*0.93*	*0.92*	*0.93*	*0.88*	*0.93*	*0.92*	*0.94*	**0.91**	*0.91*	*0.92*
Jet Fuel	**1.45**	**1.61**	**1.60**	**1.57**	*1.48*	*1.63*	*1.66*	*1.64*	*1.65*	*1.75*	*1.82*	*1.75*	**1.56**	*1.60*	*1.74*
Distillate Fuel Oil	**4.14**	**3.89**	**3.86**	**3.99**	*3.98*	*3.90*	*3.83*	*3.94*	*4.04*	*3.94*	*3.84*	*3.98*	**3.97**	*3.91*	*3.95*
Residual Fuel Oil	**0.38**	**0.31**	**0.39**	**0.28**	*0.34*	*0.36*	*0.37*	*0.38*	*0.32*	*0.35*	*0.38*	*0.39*	**0.34**	*0.36*	*0.36*
Other Oils (g)	**1.65**	**1.82**	**1.99**	**1.77**	*1.60*	*1.85*	*1.99*	*1.73*	*1.62*	*1.84*	*1.99*	*1.73*	**1.81**	*1.79*	*1.80*
Total Consumption	**20.22**	**20.27**	**20.47**	**20.26**	*19.84*	*20.38*	*20.41*	*20.45*	*20.26*	*20.52*	*20.75*	*20.69*	**20.30**	*20.27*	*20.56*
Total Petroleum and Other Liquids Net Imports	**-0.74**	**-1.18**	**-1.32**	**-1.88**	*-1.33*	*-0.86*	*-1.21*	*-1.69*	*-1.50*	*-1.10*	*-1.23*	*-1.86*	**-1.28**	*-1.27*	*-1.42*
End-of-period Inventories (million barrels)															
Commercial Inventory															
Crude Oil (excluding SPR)	**414.4**	**417.5**	**428.8**	**426.1**	*474.0*	*463.0*	*448.7*	*456.7*	*486.9*	*481.1*	*463.2*	*472.8*	**426.1**	*456.7*	*472.8*
Hydrocarbon Gas Liquids	**142.0**	**186.7**	**243.6**	**217.4**	*174.6*	*224.2*	*262.5*	*217.1*	*179.8*	*230.3*	*266.4*	*220.8*	**217.4**	*217.1*	*220.8*
Unfinished Oils	**87.9**	**88.8**	**82.3**	**83.9**	*91.2*	*89.3*	*88.9*	*81.2*	*91.1*	*88.3*	*87.3*	*79.5*	**83.9**	*81.2*	*79.5*
Other HC/Oxygenates	**34.1**	**29.4**	**27.3**	**30.9**	*31.7*	*30.5*	*30.2*	*30.5*	*32.5*	*31.3*	*31.0*	*31.3*	**30.9**	*30.5*	*31.3*
Total Motor Gasoline	**238.5**	**221.0**	**209.6**	**223.8**	*228.4*	*239.2*	*232.1*	*244.8*	*239.9*	*244.2*	*237.2*	*245.8*	**223.8**	*244.8*	*245.8*
Finished Motor Gasoline	**17.3**	**17.1**	**17.6**	**16.4**	*14.9*	*16.8*	*18.8*	*21.5*	*18.5*	*19.6*	*21.3*	*23.5*	**16.4**	*21.5*	*23.5*
Motor Gasoline Blend Comp.	**221.2**	**203.8**	**192.0**	**207.5**	*213.5*	*222.4*	*213.3*	*223.2*	*221.4*	*224.6*	*215.9*	*222.4*	**207.5**	*223.2*	*222.4*
Jet Fuel	**35.6**	**39.3**	**36.2**	**34.1**	*37.0*	*40.1*	*41.1*	*38.0*	*39.1*	*39.1*	*40.7*	*37.2*	**34.1**	*38.0*	*37.2*
Distillate Fuel Oil	**114.6**	**111.4**	**110.5**	**118.5**	*104.9*	*116.9*	*122.3*	*123.6*	*116.1*	*117.8*	*121.8*	*120.2*	**118.5**	*123.6*	*120.2*
Residual Fuel Oil	**27.9**	**29.2**	**27.3**	**29.9**	*31.3*	*30.5*	*28.6*	*28.0*	*29.5*	*28.8*	*27.0*	*26.4*	**29.9**	*28.0*	*26.4*
Other Oils (g)	**58.5**	**56.4**	**49.5**	**48.3**	*55.4*	*53.7*	*44.9*	*46.6*	*56.0*	*54.1*	*45.1*	*46.7*	**48.3**	*46.6*	*46.7*
Total Commercial Inventory	**1153.6**	**1179.7**	**1215.1**	**1212.8**	*1228.7*	*1287.3*	*1299.2*	*1266.4*	*1270.9*	*1315.2*	*1319.7*	*1280.8*	**1212.8**	*1266.4*	*1280.8*
Crude Oil in SPR	**566.1**	**493.3**	**416.4**	**372.2**	*367.3*	*353.7*	*349.5*	*349.5*	*355.6*	*361.6*	*367.6*	*373.6*	**372.2**	*349.5*	*373.6*

(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. Beginning in January 2021, renewable fuels includes biodiesel, renewable diesel, renewable jet fuel, renewable heating oil, renewable naphtha and gasoline, and other renewable fuels. For December 2020 and prior, renewable fuels includes only biodiesel.

(f) Petroleum products adjustment includes hydrogen/oxygenates/renewables/other hydrocarbons, motor gasoline blend components, and finished motor gasoline.

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

- = no data available

SPR: Strategic Petroleum Reserve

HC: Hydrocarbons

Notes: EIA completed modeling and analysis for this report on February 2, 2022.

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; and *Weekly Petroleum Status Report* , DOE/EIA-0208.

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

Forecasts: EIA Short-Term Integrated Forecasting System.

Table 4b. U.S. Hydrocarbon Gas Liquids (HGL) and Petroleum Refinery Balances (million barrels per day, except inventories and utilization factor)

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
HGL Production															
Natural Gas Processing Plants															
Ethane	**2.33**	**2.43**	**2.41**	**2.41**	*2.41*	*2.59*	*2.54*	*2.59*	*2.60*	*2.66*	*2.58*	*2.66*	**2.39**	*2.53*	*2.62*
Propane	**1.77**	**1.85**	**1.92**	**1.90**	*1.91*	*1.95*	*1.96*	*1.96*	*1.97*	*2.02*	*2.03*	*2.03*	**1.86**	*1.94*	*2.01*
Butanes	**0.93**	**0.98**	**1.02**	**1.00**	*1.02*	*1.03*	*1.05*	*1.04*	*1.05*	*1.07*	*1.08*	*1.07*	**0.98**	*1.04*	*1.07*
Natural Gasoline (Pentanes Plus)	**0.59**	**0.67**	**0.74**	**0.67**	*0.63*	*0.66*	*0.69*	*0.66*	*0.64*	*0.68*	*0.71*	*0.67*	**0.66**	*0.66*	*0.68*
Refinery and Blender Net Production															
Ethane/Ethylene	**0.01**	**0.01**	**0.01**	**0.01**	*0.00*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	*0.01*	**0.01**	*0.01*	*0.01*
Propane	**0.27**	**0.29**	**0.29**	**0.29**	*0.28*	*0.28*	*0.29*	*0.28*	*0.28*	*0.29*	*0.30*	*0.29*	**0.29**	*0.28*	*0.29*
Propylene (refinery-grade)	**0.28**	**0.28**	**0.26**	**0.25**	*0.28*	*0.29*	*0.28*	*0.28*	*0.28*	*0.28*	*0.28*	*0.28*	**0.27**	*0.28*	*0.28*
Butanes/Butylenes	**-0.07**	**0.25**	**0.19**	**-0.18**	*-0.08*	*0.26*	*0.19*	*-0.20*	*-0.08*	*0.27*	*0.20*	*-0.19*	**0.05**	*0.05*	*0.05*
Renewable Fuels and Oxygenate Plant Net Production															
Natural Gasoline (Pentanes Plus)	**-0.02**	**-0.02**	**-0.02**	**-0.02**	*-0.02*	*-0.02*	*-0.02*	*-0.02*	*-0.02*	*-0.02*	*-0.02*	*-0.02*	**-0.02**	*-0.02*	*-0.02*
HGL Net Imports															
Ethane	**-0.50**	**-0.40**	**-0.43**	**-0.46**	*-0.46*	*-0.47*	*-0.47*	*-0.47*	*-0.49*	*-0.49*	*-0.48*	*-0.52*	**-0.45**	*-0.46*	*-0.49*
Propane/Propylene	**-1.18**	**-1.33**	**-1.21**	**-1.28**	*-1.40*	*-1.39*	*-1.39*	*-1.45*	*-1.38*	*-1.51*	*-1.47*	*-1.56*	**-1.25**	*-1.41*	*-1.48*
Butanes/Butylenes	**-0.28**	**-0.41**	**-0.34**	**-0.36**	*-0.40*	*-0.47*	*-0.47*	*-0.43*	*-0.42*	*-0.49*	*-0.48*	*-0.42*	**-0.35**	*-0.44*	*-0.45*
Natural Gasoline (Pentanes Plus)	**-0.17**	**-0.17**	**-0.19**	**-0.16**	*-0.26*	*-0.25*	*-0.25*	*-0.23*	*-0.25*	*-0.24*	*-0.23*	*-0.20*	**-0.17**	*-0.25*	*-0.23*
HGL Refinery and Blender Net Inputs															
Butanes/Butylenes	**0.44**	**0.31**	**0.35**	**0.55**	*0.44*	*0.29*	*0.32*	*0.52*	*0.43*	*0.29*	*0.33*	*0.55*	**0.41**	*0.39*	*0.40*
Natural Gasoline (Pentanes Plus)	**0.20**	**0.20**	**0.22**	**0.19**	*0.17*	*0.18*	*0.19*	*0.18*	*0.17*	*0.18*	*0.19*	*0.18*	**0.20**	*0.18*	*0.18*
HGL Consumption															
Ethane/Ethylene	**1.98**	**2.03**	**1.97**	**1.89**	*1.99*	*2.08*	*2.08*	*2.12*	*2.12*	*2.13*	*2.11*	*2.16*	**1.97**	*2.07*	*2.13*
Propane	**1.16**	**0.60**	**0.69**	**0.92**	*1.08*	*0.63*	*0.62*	*0.95*	*1.12*	*0.59*	*0.66*	*0.89*	**0.84**	*0.82*	*0.81*
Propylene (refinery-grade)	**0.30**	**0.29**	**0.28**	**0.26**	*0.29*	*0.30*	*0.30*	*0.30*	*0.30*	*0.30*	*0.29*	*0.29*	**0.28**	*0.30*	*0.30*
Butanes/Butylenes	**0.23**	**0.26**	**0.29**	**0.22**	*0.21*	*0.26*	*0.26*	*0.22*	*0.22*	*0.26*	*0.27*	*0.22*	**0.25**	*0.23*	*0.24*
Natural Gasoline (Pentanes Plus)	**0.21**	**0.24**	**0.26**	**0.32**	*0.21*	*0.20*	*0.22*	*0.24*	*0.23*	*0.22*	*0.27*	*0.28*	**0.26**	*0.22*	*0.25*
HGL Inventories (million barrels)															
Ethane	**51.1**	**51.7**	**49.9**	**55.8**	*55.5*	*58.6*	*58.5*	*60.5*	*58.6*	*62.8*	*62.5*	*63.3*	**52.1**	*58.3*	*61.8*
Propane	**36.3**	**54.1**	**81.9**	**80.0**	*52.7*	*70.3*	*90.5*	*74.9*	*49.9*	*67.5*	*85.6*	*71.1*	**80.0**	*74.9*	*71.1*
Propylene (at refineries only)	**1.0**	**1.2**	**1.1**	**1.1**	*1.2*	*1.5*	*1.8*	*1.7*	*1.5*	*1.7*	*1.9*	*1.8*	**1.1**	*1.7*	*1.8*
Butanes/Butylenes	**35.7**	**58.8**	**81.2**	**52.6**	*43.2*	*69.1*	*87.0*	*57.7*	*48.6*	*76.1*	*94.1*	*65.0*	**52.6**	*57.7*	*65.0*
Natural Gasoline (Pentanes Plus)	**19.4**	**22.7**	**27.2**	**25.9**	*23.0*	*23.8*	*24.3*	*23.2*	*20.4*	*21.4*	*21.9*	*21.0*	**25.9**	*23.2*	*21.0*
Refinery and Blender Net Inputs															
Crude Oil	**15.56**	**16.09**	**16.26**	**15.86**	*15.28*	*16.58*	*16.69*	*16.20*	*15.68*	*16.25*	*16.52*	*15.87*	**15.94**	*16.19*	*16.08*
Hydrocarbon Gas Liquids	**0.64**	**0.50**	**0.57**	**0.74**	*0.61*	*0.47*	*0.51*	*0.70*	*0.59*	*0.47*	*0.52*	*0.73*	**0.61**	*0.57*	*0.58*
Other Hydrocarbons/Oxygenates	**1.12**	**1.20**	**1.19**	**1.17**	*1.11*	*1.20*	*1.20*	*1.19*	*1.15*	*1.21*	*1.21*	*1.21*	**1.17**	*1.18*	*1.19*
Unfinished Oils	**-0.12**	**0.21**	**0.24**	**0.15**	*0.06*	*0.28*	*0.38*	*0.28*	*0.08*	*0.28*	*0.31*	*0.27*	**0.12**	*0.25*	*0.23*
Motor Gasoline Blend Components	**0.33**	**0.84**	**0.66**	**0.26**	*0.42*	*0.72*	*0.59*	*0.53*	*0.55*	*0.72*	*0.59*	*0.53*	**0.52**	*0.56*	*0.59*
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	**17.53**	**18.84**	**18.92**	**18.18**	*17.48*	*19.25*	*19.36*	*18.89*	*18.04*	*18.93*	*19.15*	*18.60*	**18.37**	*18.75*	*18.68*
Refinery Processing Gain	**0.95**	**1.07**	**1.05**	**1.03**	*0.95*	*1.03*	*1.04*	*1.05*	*0.99*	*1.00*	*1.02*	*1.02*	**1.03**	*1.02*	*1.01*
Refinery and Blender Net Production															
Hydrocarbon Gas Liquids	**0.49**	**0.84**	**0.75**	**0.37**	*0.48*	*0.83*	*0.77*	*0.38*	*0.48*	*0.85*	*0.78*	*0.38*	**0.61**	*0.62*	*0.62*
Finished Motor Gasoline	**9.22**	**9.74**	**9.73**	**9.56**	*9.23*	*9.84*	*9.94*	*10.09*	*9.44*	*9.74*	*9.80*	*9.89*	**9.56**	*9.78*	*9.72*
Jet Fuel	**1.48**	**1.71**	**1.67**	**1.60**	*1.67*	*1.74*	*1.71*	*1.59*	*1.52*	*1.59*	*1.65*	*1.56*	**1.62**	*1.68*	*1.58*
Distillate Fuel	**4.77**	**5.00**	**5.15**	**5.10**	*4.66*	*5.18*	*5.23*	*5.25*	*5.03*	*5.14*	*5.21*	*5.26*	**5.01**	*5.08*	*5.16*
Residual Fuel	**0.26**	**0.22**	**0.26**	**0.24**	*0.26*	*0.25*	*0.28*	*0.24*	*0.27*	*0.25*	*0.28*	*0.23*	**0.25**	*0.26*	*0.26*
Other Oils (a)	**2.26**	**2.39**	**2.40**	**2.34**	*2.13*	*2.43*	*2.47*	*2.39*	*2.29*	*2.38*	*2.45*	*2.31*	**2.35**	*2.36*	*2.36*
Total Refinery and Blender Net Production	**18.49**	**19.90**	**19.97**	**19.21**	*18.43*	*20.28*	*20.40*	*19.94*	*19.03*	*19.94*	*20.17*	*19.63*	**19.40**	*19.77*	*19.69*
Refinery Distillation Inputs	**16.07**	**16.61**	**16.82**	**16.38**	*15.61*	*16.77*	*16.96*	*16.46*	*15.96*	*16.49*	*16.80*	*16.17*	**16.47**	*16.45*	*16.36*
Refinery Operable Distillation Capacity	**17.94**	**17.94**	**17.98**	**18.01**	*18.06*	*18.27*	*18.27*	*18.27*	*18.05*	*18.00*	*18.00*	*18.00*	**17.97**	*18.21*	*18.01*
Refinery Distillation Utilization Factor	**0.90**	**0.93**	**0.94**	**0.91**	*0.86*	*0.92*	*0.93*	*0.90*	*0.88*	*0.92*	*0.93*	*0.90*	**0.92**	*0.90*	*0.91*

(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.

- = no data available

Notes: EIA completed modeling and analysis for this report on February 2, 2022.

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

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

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

Forecasts: EIA Short-Term Integrated Forecasting System.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Prices (cents per gallon)															
Refiner Wholesale Price	**278**	**376**	**311**	**267**	*266*	*262*	*252*	*236*	*231*	*237*	*227*	*210*	**309**	*254*	*226*
Gasoline Regular Grade Retail Prices Including Taxes															
PADD 1	**364**	**438**	**393**	**340**	*344*	*348*	*333*	*315*	*308*	*313*	*302*	*287*	**384**	*335*	*302*
PADD 2	**352**	**436**	**397**	**345**	*335*	*335*	*323*	*311*	*302*	*309*	*300*	*279*	**383**	*326*	*297*
PADD 3	**340**	**414**	**357**	**300**	*309*	*311*	*302*	*285*	*277*	*283*	*273*	*255*	**353**	*302*	*272*
PADD 4	**360**	**446**	**434**	**359**	*350*	*357*	*354*	*330*	*311*	*324*	*318*	*298*	**401**	*348*	*313*
PADD 5	**452**	**543**	**511**	**478**	*411*	*409*	*403*	*392*	*382*	*394*	*380*	*360*	**497**	*404*	*379*
U.S. Average	**371**	**450**	**408**	**357**	*347*	*349*	*338*	*322*	*314*	*321*	*310*	*293*	**397**	*339*	*310*
Gasoline All Grades Including Taxes	**380**	**460**	**419**	**369**	*358*	*362*	*351*	*337*	*328*	*335*	*325*	*308*	**408**	*352*	*324*
End-of-period Inventories (million barrels)															
Total Gasoline Inventories															
PADD 1	**56.9**	**53.6**	**54.4**	**57.0**	*58.4*	*65.6*	*61.7*	*65.0*	*61.7*	*66.3*	*61.5*	*64.4*	**57.0**	*65.0*	*64.4*
PADD 2	**56.5**	**46.7**	**44.1**	**46.1**	*48.0*	*47.1*	*45.6*	*50.5*	*52.6*	*49.8*	*47.0*	*51.0*	**46.1**	*50.5*	*51.0*
PADD 3	**87.1**	**83.9**	**80.2**	**80.3**	*85.3*	*89.6*	*86.9*	*89.7*	*87.5*	*90.7*	*90.9*	*90.7*	**80.3**	*89.7*	*90.7*
PADD 4	**8.1**	**6.4**	**6.4**	**7.3**	*6.7*	*7.1*	*7.6*	*8.4*	*8.1*	*7.6*	*7.7*	*8.4*	**7.3**	*8.4*	*8.4*
PADD 5	**29.9**	**30.3**	**24.5**	**33.1**	*30.0*	*29.9*	*30.2*	*31.1*	*30.0*	*29.8*	*30.2*	*31.2*	**33.1**	*31.1*	*31.2*
U.S. Total	**238.5**	**221.0**	**209.6**	**223.8**	*228.4*	*239.2*	*232.1*	*244.8*	*239.9*	*244.2*	*237.2*	*245.8*	**223.8**	*244.8*	*245.8*
Finished Gasoline Inventories															
U.S. Total	**17.3**	**17.1**	**17.6**	**16.4**	*14.9*	*16.8*	*18.8*	*21.5*	*18.5*	*19.6*	*21.3*	*23.5*	**16.4**	*21.5*	*23.5*
Gasoline Blending Components Inventories															
U.S. Total	**221.2**	**203.8**	**192.0**	**207.5**	*213.5*	*222.4*	*213.3*	*223.2*	*221.4*	*224.6*	*215.9*	*222.4*	**207.5**	*223.2*	*222.4*

- = no data available

Notes: EIA completed modeling and analysis for this report on February 2, 2022.

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

Prices are not adjusted for inflation.

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.

Forecasts: EIA Short-Term Integrated Forecasting System.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Supply (billion cubic feet per day)															
Total Marketed Production	**103.27**	**106.18**	**108.27**	**108.98**	*108.60*	*108.73*	*109.16*	*109.76*	*110.11*	*110.56*	*110.92*	*110.87*	**106.70**	*109.07*	*110.61*
Alaska	**1.06**	**1.00**	**0.96**	**1.02**	*1.01*	*0.93*	*0.85*	*0.98*	*1.00*	*0.92*	*0.84*	*0.97*	**1.01**	*0.94*	*0.93*
Federal GOM (a)	**2.05**	**2.11**	**2.19**	**2.17**	*2.28*	*2.26*	*2.11*	*2.05*	*2.07*	*2.00*	*1.87*	*1.85*	**2.13**	*2.17*	*1.95*
Lower 48 States (excl GOM)	**100.16**	**103.07**	**105.12**	**105.79**	*105.31*	*105.55*	*106.21*	*106.74*	*107.04*	*107.64*	*108.20*	*108.04*	**103.55**	*105.96*	*107.73*
Total Dry Gas Production	**95.09**	**97.59**	**99.46**	**100.13**	*99.87*	*99.95*	*100.34*	*100.89*	*101.21*	*101.63*	*101.95*	*101.91*	**98.09**	*100.27*	*101.68*
LNG Gross Imports	**0.15**	**0.01**	**0.06**	**0.05**	*0.10*	*0.04*	*0.04*	*0.06*	*0.10*	*0.04*	*0.04*	*0.06*	**0.07**	*0.06*	*0.06*
LNG Gross Exports	**11.50**	**10.80**	**9.74**	**10.49**	*11.23*	*11.63*	*11.97*	*12.27*	*12.63*	*12.50*	*12.11*	*13.14*	**10.63**	*11.78*	*12.59*
Pipeline Gross Imports	**8.89**	**7.73**	**7.84**	**8.15**	*8.28*	*6.86*	*7.05*	*7.50*	*8.24*	*6.81*	*7.04*	*7.49*	**8.15**	*7.42*	*7.40*
Pipeline Gross Exports	**8.45**	**8.46**	**8.08**	**8.32**	*9.20*	*8.79*	*9.14*	*9.56*	*9.99*	*9.38*	*9.71*	*10.14*	**8.33**	*9.17*	*9.81*
Supplemental Gaseous Fuels	**0.21**	**0.17**	**0.18**	**0.16**	*0.18*	*0.18*	*0.18*	*0.19*	*0.19*	*0.19*	*0.19*	*0.19*	**0.18**	*0.18*	*0.19*
Net Inventory Withdrawals	**20.14**	**-10.25**	**-8.94**	**2.45**	*12.37*	*-11.14*	*-7.53*	*4.54*	*16.37*	*-12.89*	*-9.57*	*4.19*	**0.78**	*-0.48*	*-0.49*
Total Supply	**104.54**	**75.99**	**80.78**	**92.13**	*100.38*	*75.47*	*78.97*	*91.35*	*103.48*	*73.90*	*77.83*	*90.56*	**88.30**	*86.50*	*86.43*
Balancing Item (b)	**0.31**	**0.14**	**0.01**	**0.83**	*0.50*	*-0.40*	*1.08*	*1.00*	*0.21*	*-1.32*	*-0.24*	*0.04*	**0.32**	*0.55*	*-0.33*
Total Primary Supply	**104.85**	**76.13**	**80.79**	**92.96**	*100.88*	*75.06*	*80.05*	*92.35*	*103.68*	*72.58*	*77.59*	*90.60*	**88.63**	*87.04*	*86.10*
Consumption (billion cubic feet per day)															
Residential	**26.09**	**7.85**	**3.57**	**17.39**	*23.99*	*8.02*	*4.25*	*17.53*	*25.81*	*8.01*	*4.31*	*17.58*	**13.67**	*13.41*	*13.91*
Commercial	**15.61**	**6.67**	**4.74**	**11.73**	*14.51*	*6.86*	*5.19*	*11.69*	*15.37*	*6.80*	*5.20*	*11.73*	**9.67**	*9.54*	*9.77*
Industrial	**25.46**	**22.25**	**21.47**	**23.67**	*23.85*	*21.65*	*21.66*	*24.08*	*24.49*	*20.91*	*20.49*	*22.81*	**23.21**	*22.81*	*22.17*
Electric Power (c)	**28.41**	**31.00**	**42.37**	**31.03**	*29.11*	*30.11*	*40.30*	*29.90*	*28.40*	*28.43*	*38.95*	*29.34*	**33.24**	*32.38*	*31.30*
Lease and Plant Fuel	**5.26**	**5.41**	**5.51**	**5.55**	*5.53*	*5.54*	*5.56*	*5.59*	*5.61*	*5.63*	*5.65*	*5.65*	**5.43**	*5.56*	*5.63*
Pipeline and Distribution Use	**3.86**	**2.80**	**2.98**	**3.44**	*3.74*	*2.75*	*2.94*	*3.42*	*3.85*	*2.66*	*2.84*	*3.35*	**3.27**	*3.21*	*3.18*
Vehicle Use	**0.15**	**0.15**	**0.15**	**0.15**	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	*0.15*	**0.15**	*0.15*	*0.15*
Total Consumption	**104.85**	**76.13**	**80.79**	**92.96**	*100.88*	*75.06*	*80.05*	*92.35*	*103.68*	*72.58*	*77.59*	*90.60*	**88.63**	*87.04*	*86.10*
End-of-period Inventories (billion cubic feet)															
Working Gas Inventory	**1,401**	**2,325**	**3,146**	**2,922**	*1,809*	*2,823*	*3,515*	*3,097*	*1,608*	*2,780*	*3,661*	*3,276*	**2,922**	*3,097*	*3,276*
East Region (d)	**242**	**482**	**759**	**692**	*312*	*614*	*855*	*706*	*255*	*586*	*875*	*726*	**692**	*706*	*726*
Midwest Region (d)	**296**	**557**	**917**	**837**	*408*	*672*	*988*	*832*	*336*	*666*	*1,033*	*889*	**837**	*832*	*889*
South Central Region (d)	**587**	**885**	**1,006**	**1,044**	*848*	*1,128*	*1,150*	*1,088*	*698*	*1,053*	*1,168*	*1,129*	**1,044**	*1,088*	*1,129*
Mountain Region (d)	**90**	**137**	**184**	**156**	*82*	*132*	*201*	*183*	*116*	*159*	*222*	*201*	**156**	*183*	*201*
Pacific Region (d)	**165**	**240**	**247**	**164**	*133*	*251*	*296*	*262*	*176*	*290*	*337*	*305*	**164**	*262*	*305*
Alaska	**21**	**25**	**32**	**29**	*26*	*26*	*26*	*26*	*26*	*26*	*26*	*26*	**29**	*26*	*26*

(a) Marketed production from U.S. Federal leases in the Gulf of Mexico.

(b) The balancing item represents the difference between the sum of the components of natural gas supply and the sum of components of natural gas demand.

(c) Natural gas used for electricity generation and (a limited amount of) useful thermal output by electric utilities and independent power producers.

(d) For a list of States in each inventory region refer to *Weekly Natural Gas Storage Report, Notes and Definitions (http://ir.eia.gov/ngs/notes.html)* .

- = no data available

LNG: liquefied natural gas.

Notes: EIA completed modeling and analysis for this report on February 2, 2022.

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: *Natural Gas Monthly* , DOE/EIA-0130; and *Electric Power Monthly* , Minor discrepancies with published historical data are due to independent rounding.

Forecasts: EIA Short-Term Integrated Forecasting System.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Wholesale/Spot															
Henry Hub Spot Price	**4.84**	**7.77**	**8.30**	**5.76**	*3.25*	*3.39*	*3.60*	*3.90*	*4.44*	*3.97*	*4.04*	*4.34*	**6.67**	*3.54*	*4.20*
Residential Retail															
New England	**17.69**	**20.93**	**26.83**	**21.19**	*19.73*	*19.31*	*21.31*	*16.48*	*15.79*	*16.58*	*19.45*	*15.31*	**19.70**	*18.78*	*16.01*
Middle Atlantic	**12.79**	**15.55**	**23.86**	**16.97**	*13.76*	*14.16*	*18.24*	*11.73*	*10.96*	*13.43*	*18.25*	*11.99*	**15.07**	*13.47*	*12.12*
E. N. Central	**9.81**	**14.81**	**25.79**	**13.50**	*10.70*	*12.77*	*18.76*	*9.59*	*9.07*	*11.97*	*18.52*	*9.76*	**12.49**	*11.16*	*10.31*
W. N. Central	**11.40**	**15.25**	**25.07**	**12.66**	*10.28*	*12.26*	*18.39*	*9.90*	*9.11*	*12.09*	*18.56*	*10.23*	**13.01**	*10.94*	*10.41*
S. Atlantic	**13.91**	**22.14**	**32.69**	**17.75**	*14.63*	*18.12*	*24.28*	*13.43*	*12.00*	*17.21*	*24.10*	*13.56*	**17.47**	*15.51*	*14.04*
E. S. Central	**11.80**	**17.16**	**26.38**	**15.75**	*13.07*	*16.44*	*23.32*	*13.71*	*12.05*	*17.16*	*24.22*	*14.58*	**14.33**	*14.67*	*14.25*
W. S. Central	**12.62**	**20.91**	**30.98**	**16.55**	*11.76*	*15.50*	*21.70*	*12.31*	*9.72*	*15.60*	*22.08*	*12.87*	**16.06**	*13.36*	*12.35*
Mountain	**10.31**	**12.87**	**19.38**	**13.89**	*11.45*	*11.82*	*14.83*	*9.17*	*8.94*	*10.87*	*14.76*	*9.48*	**12.41**	*11.00*	*9.85*
Pacific	**17.07**	**17.80**	**20.54**	**18.05**	*17.34*	*16.57*	*17.04*	*16.10*	*16.72*	*17.49*	*18.32*	*17.46*	**17.90**	*16.78*	*17.27*
U.S. Average	**12.32**	**16.57**	**24.92**	**15.40**	*13.17*	*14.66*	*19.14*	*11.81*	*11.02*	*14.26*	*19.36*	*12.20*	**14.74**	*13.42*	*12.51*
Commercial Retail															
New England	**12.62**	**14.46**	**16.18**	**15.28**	*13.70*	*12.07*	*11.02*	*10.53*	*11.06*	*11.31*	*10.97*	*10.76*	**14.07**	*12.24*	*11.00*
Middle Atlantic	**10.36**	**10.78**	**12.01**	**11.57**	*10.76*	*9.35*	*8.26*	*8.38*	*8.75*	*8.55*	*8.00*	*8.42*	**10.99**	*9.50*	*8.54*
E. N. Central	**8.12**	**10.46**	**14.23**	**10.31**	*8.96*	*8.60*	*9.50*	*7.34*	*7.60*	*8.68*	*9.89*	*7.87*	**9.56**	*8.42*	*8.01*
W. N. Central	**10.22**	**11.73**	**15.07**	**10.50**	*8.99*	*8.35*	*9.43*	*7.60*	*7.89*	*8.58*	*9.84*	*8.07*	**10.87**	*8.49*	*8.19*
S. Atlantic	**10.52**	**12.23**	**14.12**	**13.04**	*11.25*	*10.48*	*10.57*	*9.42*	*9.41*	*10.49*	*10.88*	*9.89*	**12.02**	*10.47*	*9.91*
E. S. Central	**10.41**	**12.80**	**15.54**	**13.47**	*11.49*	*10.70*	*10.71*	*9.37*	*9.03*	*10.23*	*10.81*	*9.69*	**12.24**	*10.60*	*9.60*
W. S. Central	**10.09**	**12.86**	**15.00**	**12.32**	*9.88*	*8.67*	*8.77*	*7.89*	*7.49*	*8.43*	*9.00*	*8.31*	**11.89**	*8.96*	*8.09*
Mountain	**8.78**	**9.98**	**12.60**	**11.42**	*10.24*	*9.52*	*9.72*	*8.09*	*7.79*	*8.15*	*9.01*	*7.80*	**10.19**	*9.40*	*7.98*
Pacific	**13.08**	**13.67**	**15.58**	**13.73**	*12.26*	*10.51*	*10.08*	*9.23*	*9.18*	*9.13*	*9.51*	*9.12*	**13.77**	*10.63*	*9.20*
U.S. Average	**10.00**	**11.71**	**14.10**	**11.86**	*10.40*	*9.54*	*9.52*	*8.37*	*8.45*	*9.05*	*9.51*	*8.62*	**11.28**	*9.52*	*8.72*
Industrial Retail															
New England	**11.11**	**12.09**	**12.03**	**13.01**	*11.07*	*8.86*	*7.59*	*8.60*	*9.33*	*8.86*	*7.92*	*9.04*	**12.00**	*9.35*	*8.91*
Middle Atlantic	**10.80**	**10.15**	**11.91**	**11.99**	*10.40*	*8.32*	*7.69*	*8.00*	*8.67*	*8.41*	*8.04*	*8.38*	**11.13**	*9.14*	*8.48*
E. N. Central	**7.66**	**8.72**	**10.75**	**9.89**	*7.78*	*6.24*	*6.19*	*6.27*	*7.02*	*6.84*	*6.67*	*6.75*	**8.80**	*6.89*	*6.87*
W. N. Central	**7.96**	**8.58**	**9.58**	**8.16**	*6.63*	*4.94*	*4.82*	*5.42*	*6.16*	*5.51*	*5.29*	*5.87*	**8.52**	*5.52*	*5.74*
S. Atlantic	**7.46**	**8.84**	**11.14**	**8.66**	*6.31*	*5.09*	*5.31*	*5.69*	*6.52*	*5.89*	*5.76*	*6.16*	**8.94**	*5.64*	*6.11*
E. S. Central	**6.53**	**8.70**	**10.55**	**7.70**	*5.92*	*4.79*	*4.85*	*5.30*	*6.13*	*5.55*	*5.30*	*5.77*	**8.24**	*5.25*	*5.72*
W. S. Central	**5.58**	**7.69**	**8.45**	**5.77**	*3.85*	*3.46*	*3.77*	*3.94*	*4.55*	*4.19*	*4.19*	*4.39*	**6.87**	*3.75*	*4.33*
Mountain	**7.11**	**8.39**	**10.45**	**10.20**	*8.86*	*7.45*	*6.99*	*6.49*	*6.61*	*6.40*	*6.55*	*6.42*	**8.93**	*7.52*	*6.50*
Pacific	**8.82**	**9.02**	**9.60**	**9.18**	*8.49*	*7.02*	*6.77*	*6.79*	*7.37*	*7.19*	*7.18*	*7.27*	**9.11**	*7.33*	*7.26*
U.S. Average	**6.82**	**8.24**	**9.26**	**7.25**	*5.68*	*4.43*	*4.48*	*4.90*	*5.74*	*5.05*	*4.91*	*5.37*	**7.83**	*4.89*	*5.30*

- = no data available

Notes: EIA completed modeling and analysis for this report on February 2, 2022.

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

Prices are not adjusted for inflation.

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.

Forecasts: EIA Short-Term Integrated Forecasting System.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Supply (million short tons)															
Production	**149.0**	**141.7**	**153.2**	**148.3**	*133.5*	*124.9*	*133.8*	*125.8*	*123.9*	*117.2*	*128.2*	*124.6*	**592.2**	*518.0*	*493.9*
Appalachia	**40.2**	**38.7**	**38.7**	**38.4**	*36.6*	*35.2*	*31.0*	*30.1*	*31.9*	*31.6*	*28.5*	*29.3*	**156.0**	*132.9*	*121.4*
Interior	**23.8**	**21.9**	**22.7**	**22.9**	*23.2*	*21.9*	*22.7*	*21.1*	*22.3*	*20.6*	*21.6*	*20.7*	**91.4**	*88.9*	*85.3*
Western	**85.0**	**81.1**	**91.7**	**86.9**	*73.7*	*67.7*	*80.1*	*74.7*	*69.7*	*64.9*	*78.0*	*74.6*	**344.8**	*296.3*	*287.3*
Primary Inventory Withdrawals	**-1.9**	**0.0**	**3.4**	**-0.2**	*-1.7*	*0.1*	*3.5*	*0.0*	*-1.7*	*0.2*	*3.5*	*0.0*	**1.3**	*2.0*	*2.0*
Imports	**1.3**	**1.6**	**2.0**	**1.7**	*1.0*	*1.1*	*1.3*	*0.9*	*0.6*	*0.8*	*1.2*	*0.9*	**6.6**	*4.3*	*3.5*
Exports	**20.2**	**23.0**	**20.7**	**22.0**	*22.1*	*22.9*	*21.0*	*22.0*	*22.8*	*24.5*	*23.4*	*25.3*	**85.9**	*88.1*	*96.0*
Metallurgical Coal	**10.5**	**13.1**	**11.6**	**12.2**	*12.1*	*12.6*	*11.3*	*11.6*	*12.2*	*13.3*	*12.5*	*13.2*	**47.4**	*47.6*	*51.2*
Steam Coal	**9.7**	**9.9**	**9.2**	**9.8**	*10.0*	*10.3*	*9.7*	*10.4*	*10.6*	*11.2*	*10.9*	*12.1*	**38.6**	*40.5*	*44.8*
Total Primary Supply	**128.2**	**120.4**	**137.8**	**127.7**	*110.7*	*103.2*	*117.6*	*104.8*	*100.1*	*93.7*	*109.5*	*100.2*	**514.1**	*436.3*	*403.4*
Secondary Inventory Withdrawals	**5.9**	**-1.1**	**7.0**	**-12.3**	*-7.2*	*-5.8*	*11.5*	*-7.5*	*9.3*	*-0.6*	*17.0*	*-1.7*	**-0.4**	*-8.9*	*23.9*
Waste Coal (a)	**1.9**	**1.9**	**1.9**	**1.9**	*1.8*	*1.8*	*1.8*	*1.8*	*1.8*	*1.8*	*1.8*	*1.8*	**7.5**	*7.2*	*7.2*
Total Supply	**135.9**	**121.2**	**146.7**	**117.4**	*105.3*	*99.2*	*131.0*	*99.1*	*111.2*	*94.9*	*128.3*	*100.2*	**521.3**	*434.6*	*434.6*
Consumption (million short tons)															
Coke Plants	**4.2**	**3.9**	**3.9**	**3.9**	*3.8*	*3.9*	*3.9*	*4.0*	*4.0*	*4.0*	*4.1*	*4.1*	**16.0**	*15.7*	*16.2*
Electric Power Sector (b)	**122.6**	**107.2**	**134.7**	**105.1**	*95.2*	*89.9*	*121.7*	*89.0*	*101.0*	*85.7*	*119.0*	*90.1*	**469.7**	*395.7*	*395.7*
Retail and Other Industry	**6.9**	**6.7**	**6.5**	**6.7**	*6.3*	*5.4*	*5.4*	*6.1*	*6.2*	*5.2*	*5.2*	*6.0*	**26.8**	*23.2*	*22.6*
Residential and Commercial	**0.2**	**0.1**	**0.2**	**0.2**	*0.3*	*0.2*	*0.2*	*0.2*	*0.3*	*0.2*	*0.2*	*0.3*	**0.8**	*0.9*	*0.9*
Other Industrial	**6.7**	**6.6**	**6.3**	**6.5**	*6.0*	*5.2*	*5.2*	*5.9*	*5.9*	*5.0*	*5.1*	*5.7*	**26.0**	*22.3*	*21.7*
Total Consumption	**133.7**	**117.9**	**145.1**	**115.7**	*105.3*	*99.2*	*131.0*	*99.1*	*111.2*	*94.9*	*128.3*	*100.2*	**512.4**	*434.6*	*434.6*
Discrepancy (c)	**2.2**	**3.3**	**1.6**	**1.7**	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	**8.8**	*0.0*	*0.0*
End-of-period Inventories (million short tons)															
Primary Inventories (d)	**21.0**	**20.9**	**17.5**	**17.7**	*19.4*	*19.3*	*15.7*	*15.7*	*17.4*	*17.3*	*13.7*	*13.7*	**17.7**	*15.7*	*13.7*
Secondary Inventories	**90.5**	**91.5**	**84.5**	**96.8**	*104.0*	*109.7*	*98.2*	*105.6*	*96.4*	*97.0*	*80.0*	*81.7*	**96.8**	*105.6*	*81.7*
Electric Power Sector	**86.3**	**87.4**	**80.2**	**91.3**	*99.3*	*104.9*	*93.1*	*100.7*	*92.1*	*92.6*	*75.3*	*77.1*	**91.3**	*100.7*	*77.1*
Retail and General Industry	**2.4**	**2.4**	**2.5**	**3.5**	*3.0*	*3.0*	*3.2*	*3.2*	*2.7*	*2.8*	*3.0*	*3.0*	**3.5**	*3.2*	*3.0*
Coke Plants	**1.6**	**1.6**	**1.6**	**1.8**	*1.6*	*1.7*	*1.7*	*1.6*	*1.4*	*1.5*	*1.5*	*1.5*	**1.8**	*1.6*	*1.5*
Commercial & Institutional	**0.2**	**0.2**	**0.2**	**0.2**	*0.1*	*0.1*	*0.2*	*0.2*	*0.1*	*0.1*	*0.1*	*0.1*	**0.2**	*0.2*	*0.1*
Coal Market Indicators															
Coal Miner Productivity (Tons per hour)	**6.05**	**6.05**	**6.05**	**6.05**	*5.98*	*5.98*	*5.98*	*5.98*	*5.80*	*5.80*	*5.80*	*5.80*	**6.05**	*5.98*	*5.80*
Total Raw Steel Production (Million short tons per day)	**0.253**	**0.253**	**0.247**	**0.235**	*0.237*	*0.235*	*0.235*	*0.239*	*0.245*	*0.241*	*0.244*	*0.247*	**0.247**	*0.236*	*0.244*
Cost of Coal to Electric Utilities (Dollars per million Btu)	**2.18**	**2.26**	**2.50**	**2.48**	*2.50*	*2.50*	*2.49*	*2.46*	*2.48*	*2.49*	*2.49*	*2.46*	**2.36**	*2.49*	*2.48*

(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.

- = no data available

Notes: EIA completed modeling and analysis for this report on February 2, 2022.

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

Forecasts: EIA Short-Term Integrated Forecasting System.

Table 7a. U.S. Electricity Industry Overview

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Electricity Supply (billion kilowatthours)															
Electricity Generation	**1,030**	**1,026**	**1,187**	**1,001**	*995*	*1,012*	*1,163*	*987*	*1,036*	*1,020*	*1,175*	*997*	**4,244**	*4,157*	*4,228*
Electric Power Sector (a)	**991**	**989**	**1,148**	**963**	*956*	*974*	*1,122*	*948*	*997*	*982*	*1,133*	*958*	**4,091**	*4,000*	*4,070*
Industrial Sector (b)	**36**	**34**	**36**	**36**	*36*	*35*	*37*	*36*	*36*	*35*	*37*	*36*	**141**	*144*	*144*
Commercial Sector (b)	**3**	**3**	**3**	**3**	*3*	*3*	*4*	*3*	*3*	*3*	*4*	*3*	**13**	*13*	*14*
Net Imports	**7**	**10**	**15**	**11**	*12*	*13*	*14*	*11*	*12*	*12*	*14*	*11*	**43**	*50*	*50*
Total Supply	**1,036**	**1,036**	**1,202**	**1,012**	*1,007*	*1,025*	*1,177*	*998*	*1,048*	*1,032*	*1,189*	*1,008*	**4,287**	*4,207*	*4,278*
Losses and Unaccounted for (c)	**56**	**64**	**53**	**70**	*39*	*65*	*53*	*52*	*43*	*66*	*54*	*52*	**242**	*209*	*215*
Electricity Consumption (billion kilowatthours unless noted)															
Sales to Ultimate Customers	**945**	**938**	**1,114**	**908**	*933*	*925*	*1,087*	*911*	*970*	*931*	*1,098*	*921*	**3,905**	*3,856*	*3,920*
Residential Sector	**380**	**347**	**457**	**332**	*364*	*337*	*439*	*335*	*389*	*340*	*443*	*338*	**1,516**	*1,475*	*1,510*
Commercial Sector	**322**	**335**	**389**	**328**	*326*	*335*	*384*	*328*	*331*	*335*	*386*	*330*	**1,374**	*1,373*	*1,382*
Industrial Sector	**242**	**255**	**266**	**247**	*242*	*251*	*262*	*247*	*248*	*255*	*267*	*251*	**1,009**	*1,001*	*1,021*
Transportation Sector	**2**	**2**	**2**	**2**	*2*	*2*	*2*	*2*	*2*	*2*	*2*	*2*	**7**	*6*	*6*
Direct Use (d)	**35**	**34**	**36**	**35**	*35*	*35*	*37*	*35*	*36*	*35*	*37*	*35*	**139**	*143*	*143*
Total Consumption	**981**	**972**	**1,150**	**943**	*968*	*960*	*1,124*	*946*	*1,005*	*966*	*1,135*	*956*	**4,045**	*3,999*	*4,063*
Average residential electricity usage per customer (kWh)	**2,711**	**2,475**	**3,265**	**2,369**	*2,573*	*2,383*	*3,108*	*2,374*	*2,731*	*2,383*	*3,109*	*2,371*	**10,821**	*10,438*	*10,593*
End-of-period Fuel Inventories Held by Electric Power Sector															
Coal (mmst)	**86.3**	**87.4**	**80.2**	**91.3**	*99.3*	*104.9*	*93.1*	*100.7*	*92.1*	*92.6*	*75.3*	*77.1*	**91.3**	*100.7*	*77.1*
Residual Fuel (mmb)	**5.6**	**5.9**	**5.7**	**5.8**	*4.2*	*4.1*	*2.4*	*2.8*	*1.5*	*1.9*	*0.4*	*1.0*	**5.8**	*2.8*	*1.0*
Distillate Fuel (mmb)	**17.6**	**17.7**	**16.7**	**17.6**	*17.3*	*17.0*	*16.8*	*17.0*	*16.8*	*16.6*	*16.6*	*16.8*	**17.6**	*17.0*	*16.8*
Prices															
Power Generation Fuel Costs (dollars per million Btu)															
Coal	**2.18**	**2.26**	**2.50**	**2.48**	*2.50*	*2.50*	*2.49*	*2.46*	*2.48*	*2.49*	*2.49*	*2.46*	**2.36**	*2.49*	*2.48*
Natural Gas	**5.95**	**7.39**	**8.23**	**5.85**	*3.69*	*3.50*	*3.63*	*4.11*	*4.86*	*4.07*	*4.09*	*4.55*	**7.00**	*3.72*	*4.37*
Residual Fuel Oil	**16.81**	**26.17**	**26.53**	**22.00**	*17.99*	*17.82*	*16.27*	*15.67*	*15.61*	*15.56*	*14.55*	*14.34*	**22.02**	*17.01*	*15.04*
Distillate Fuel Oil	**21.23**	**30.70**	**26.79**	**27.19**	*24.87*	*23.58*	*21.25*	*21.14*	*20.09*	*18.37*	*18.14*	*19.01*	**25.56**	*22.93*	*19.10*
Prices to Ultimate Customers (cents per kilowatthour)															
Residential Sector	**13.97**	**15.05**	**15.85**	**15.48**	*15.18*	*15.79*	*16.02*	*15.33*	*15.00*	*15.89*	*16.17*	*15.50*	**15.12**	*15.60*	*15.66*
Commercial Sector	**11.63**	**12.34**	**13.37**	**12.51**	*12.29*	*12.63*	*13.40*	*12.31*	*12.09*	*12.64*	*13.55*	*12.43*	**12.51**	*12.69*	*12.71*
Industrial Sector	**7.42**	**8.41**	**9.42**	**8.22**	*7.58*	*8.17*	*9.05*	*8.06*	*7.65*	*8.16*	*9.05*	*8.06*	**8.39**	*8.23*	*8.24*
Wholesale Electricity Prices (dollars per megawatthour)															
ERCOT North hub	**42.73**	**83.19**	**130.71**	**53.01**	*28.80*	*32.84*	*41.34*	*30.36*	*30.96*	*26.70*	*35.74*	*27.95*	**77.41**	*33.34*	*30.34*
CAISO SP15 zone	**45.20**	**60.34**	**110.03**	**135.13**	*87.05*	*50.75*	*69.07*	*62.22*	*61.46*	*47.36*	*62.55*	*53.65*	**87.67**	*67.27*	*56.26*
ISO-NE Internal hub	**116.48**	**73.28**	**99.14**	**80.77**	*71.13*	*45.29*	*53.30*	*64.69*	*114.61*	*45.79*	*55.19*	*68.56*	**92.42**	*58.60*	*71.04*
NYISO Hudson Valley zone	**100.10**	**79.72**	**104.71**	**77.17**	*61.53*	*48.82*	*51.80*	*60.11*	*96.75*	*46.52*	*52.91*	*63.39*	**90.42**	*55.57*	*64.89*
PJM Western hub	**58.33**	**93.00**	**110.99**	**71.60**	*50.68*	*51.36*	*54.82*	*56.02*	*67.93*	*52.23*	*59.29*	*58.00*	**83.48**	*53.22*	*59.36*
Midcontinent ISO Illinois hub	**47.88**	**89.21**	**101.80**	**57.87**	*40.40*	*40.75*	*44.18*	*44.58*	*51.19*	*44.19*	*49.82*	*46.53*	**74.19**	*42.48*	*47.93*
SPP ISO South hub	**37.25**	**72.85**	**109.97**	**56.06**	*34.12*	*36.08*	*44.42*	*40.28*	*43.26*	*41.26*	*49.15*	*42.32*	**69.03**	*38.73*	*44.00*
SERC index, Into Southern	**42.45**	**84.96**	**94.82**	**59.33**	*38.90*	*40.99*	*46.04*	*43.82*	*49.52*	*44.84*	*49.72*	*46.51*	**70.39**	*42.44*	*47.65*
FRCC index, Florida Reliability	**41.11**	**78.70**	**92.71**	**58.54**	*40.16*	*44.60*	*47.54*	*44.37*	*46.89*	*45.01*	*46.96*	*45.07*	**67.77**	*44.17*	*45.98*
Northwest index, Mid-Columbia	**39.85**	**59.39**	**137.82**	**151.39**	*83.89*	*49.16*	*73.44*	*66.92*	*64.05*	*47.93*	*64.22*	*57.01*	**97.11**	*68.35*	*58.30*
Southwest index, Palo Verde	**39.02**	**60.50**	**128.25**	**130.12**	*77.17*	*48.70*	*73.16*	*57.80*	*55.44*	*48.12*	*64.34*	*52.72*	**89.47**	*64.21*	*55.15*

Notes: EIA completed modeling and analysis for this report on February 2, 2022.

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

kWh = kilowatthours. Btu = British thermal units.

Prices are not adjusted for inflation.

(a) Generation supplied by power plants with capacity of at least 1 megawatt operated by electric utilities and independent power producers.

(b) Generation supplied by power plants with capacity of at least 1 megawatt operated by businesses in the commercial and industrial sectors, primarily for onsite use.

(c) Includes transmission and distribution losses, data collection time-frame differences, and estimation error.

(d) Direct Use represents commercial and industrial facility use of onsite net electricity generation; and electrical sales or transfers to adjacent or colocated facilities for which revenue information is not available. See Table 7.6 of the EIA *Monthly Energy Review*.

Historical data sources:

(1) Electricity supply, consumption, fuel costs, and retail electricity prices: Latest data available from U.S. Energy Information Administration databases supporting the following reports: Electric Power Monthly, DOE/EIA-0226; and Electric Power Annual, DOE/EIA-0348

(2) Wholesale electricity prices (except for PJM RTO price): S&P Global Market Intelligence, SNL Energy Data

(3) PJM ISO Western Hub wholesale electricity prices: PJM Data Miner website

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

Forecasts: EIA Short-Term Integrated Forecasting System.

Table 7b. U.S. Regional Electricity Sales to Ultimate Customers (billion kilowatthours)

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Residential Sector															
New England	**13.1**	**10.5**	**13.9**	**10.8**	*12.3*	*10.5*	*12.6*	*11.1*	*13.1*	*10.6*	*12.7*	*11.2*	**48.3**	*46.5*	*47.6*
Middle Atlantic	**36.1**	**30.0**	**42.5**	**29.8**	*34.3*	*30.1*	*39.2*	*30.2*	*36.3*	*30.1*	*39.4*	*30.3*	**138.4**	*133.8*	*136.0*
E. N. Central	**50.8**	**43.8**	**54.8**	**42.7**	*47.8*	*42.4*	*54.5*	*43.7*	*50.7*	*43.0*	*55.1*	*43.9*	**192.1**	*188.5*	*192.8*
W. N. Central	**30.6**	**24.7**	**31.3**	**25.0**	*29.8*	*24.3*	*31.3*	*25.4*	*31.1*	*24.7*	*31.9*	*25.9*	**111.6**	*110.9*	*113.6*
S. Atlantic	**96.0**	**91.5**	**116.2**	**85.4**	*91.5*	*89.1*	*114.1*	*86.9*	*100.9*	*90.0*	*115.3*	*87.6*	**389.1**	*381.6*	*393.9*
E. S. Central	**32.6**	**27.7**	**37.0**	**26.3**	*31.1*	*27.3*	*36.8*	*27.0*	*34.5*	*27.5*	*37.0*	*27.2*	**123.6**	*122.1*	*126.2*
W. S. Central	**56.9**	**58.8**	**81.3**	**49.5**	*52.3*	*54.9*	*76.1*	*51.1*	*58.0*	*55.4*	*76.8*	*51.6*	**246.4**	*234.4*	*241.8*
Mountain	**24.1**	**26.2**	**36.1**	**23.9**	*24.5*	*25.5*	*34.2*	*23.6*	*24.7*	*25.8*	*34.7*	*23.8*	**110.4**	*107.8*	*108.9*
Pacific contiguous	**38.4**	**32.4**	**43.1**	**36.9**	*38.7*	*31.7*	*39.2*	*35.2*	*38.8*	*31.6*	*39.2*	*35.2*	**150.8**	*144.8*	*144.8*
AK and HI	**1.3**	**1.1**	**1.2**	**1.3**	*1.2*	*1.1*	*1.2*	*1.3*	*1.2*	*1.1*	*1.2*	*1.3*	**4.8**	*4.8*	*4.8*
Total	**379.8**	**346.7**	**457.3**	**331.8**	*363.6*	*336.8*	*439.2*	*335.4*	*389.4*	*339.7*	*443.2*	*338.0*	**1,515.6**	*1,475.0*	*1,510.3*
Commercial Sector															
New England	**12.1**	**11.8**	**13.9**	**11.6**	*12.1*	*11.8*	*13.2*	*11.6*	*12.1*	*11.7*	*13.1*	*11.5*	**49.4**	*48.7*	*48.4*
Middle Atlantic	**36.0**	**34.3**	**40.5**	**34.4**	*36.0*	*34.1*	*38.7*	*33.9*	*36.2*	*33.9*	*38.7*	*33.8*	**145.1**	*142.8*	*142.6*
E. N. Central	**43.3**	**42.9**	**48.8**	**42.7**	*43.1*	*42.4*	*48.2*	*42.2*	*43.2*	*42.1*	*48.2*	*42.3*	**177.6**	*175.9*	*175.8*
W. N. Central	**25.1**	**24.6**	**28.1**	**24.5**	*25.3*	*24.6*	*27.9*	*24.4*	*25.5*	*24.5*	*27.9*	*24.5*	**102.2**	*102.3*	*102.3*
S. Atlantic	**75.1**	**82.5**	**93.5**	**78.9**	*76.9*	*83.9*	*94.8*	*80.7*	*80.3*	*85.9*	*97.5*	*83.1*	**330.0**	*336.3*	*346.9*
E. S. Central	**21.0**	**22.4**	**26.8**	**21.1**	*21.1*	*22.0*	*26.4*	*21.2*	*21.6*	*21.8*	*26.2*	*21.1*	**91.4**	*90.8*	*90.7*
W. S. Central	**47.0**	**52.1**	**61.2**	**49.5**	*48.2*	*52.0*	*60.3*	*49.6*	*49.0*	*51.7*	*60.3*	*49.8*	**209.8**	*210.0*	*210.8*
Mountain	**23.2**	**25.4**	**29.6**	**23.9**	*23.4*	*25.2*	*28.9*	*23.7*	*23.4*	*25.1*	*28.9*	*23.8*	**102.2**	*101.3*	*101.3*
Pacific contiguous	**37.7**	**37.9**	**45.4**	**39.9**	*38.4*	*38.0*	*44.4*	*38.9*	*38.1*	*37.4*	*43.9*	*38.7*	**160.9**	*159.7*	*158.1*
AK and HI	**1.3**	**1.3**	**1.4**	**1.4**	*1.3*	*1.3*	*1.4*	*1.4*	*1.4*	*1.3*	*1.4*	*1.4*	**5.4**	*5.4*	*5.5*
Total	**321.8**	**335.2**	**389.0**	**327.9**	*325.8*	*335.4*	*384.3*	*327.6*	*330.8*	*335.3*	*386.1*	*330.0*	**1,374.0**	*1,373.1*	*1,382.3*
Industrial Sector															
New England	**3.9**	**3.9**	**4.1**	**3.8**	*3.8*	*3.8*	*4.0*	*3.8*	*3.8*	*3.7*	*4.0*	*3.7*	**15.7**	*15.3*	*15.2*
Middle Atlantic	**17.5**	**18.2**	**19.4**	**18.2**	*17.5*	*18.1*	*19.1*	*18.1*	*17.8*	*18.3*	*19.4*	*18.3*	**73.3**	*72.8*	*73.8*
E. N. Central	**45.9**	**47.0**	**48.8**	**45.3**	*45.2*	*45.8*	*47.6*	*44.9*	*45.8*	*46.0*	*48.2*	*45.5*	**187.0**	*183.6*	*185.5*
W. N. Central	**24.0**	**24.8**	**26.9**	**24.9**	*23.9*	*24.2*	*26.2*	*24.9*	*24.6*	*24.9*	*27.0*	*25.7*	**100.6**	*99.2*	*102.2*
S. Atlantic	**36.3**	**37.5**	**38.7**	**36.4**	*36.1*	*36.5*	*37.5*	*36.1*	*37.0*	*37.2*	*38.3*	*36.8*	**148.9**	*146.2*	*149.3*
E. S. Central	**24.7**	**25.8**	**25.6**	**23.8**	*24.4*	*25.2*	*25.0*	*23.5*	*24.6*	*25.1*	*25.0*	*23.5*	**99.9**	*98.0*	*98.2*
W. S. Central	**49.8**	**53.3**	**53.8**	**52.3**	*51.6*	*54.0*	*54.6*	*53.7*	*54.2*	*56.3*	*56.9*	*56.0*	**209.3**	*213.8*	*223.5*
Mountain	**19.9**	**21.7**	**24.0**	**20.8**	*20.0*	*21.9*	*24.2*	*21.1*	*20.5*	*22.1*	*24.6*	*21.4*	**86.3**	*87.2*	*88.6*
Pacific contiguous	**19.0**	**21.0**	**23.4**	**20.0**	*18.5*	*20.2*	*22.4*	*19.3*	*18.2*	*19.9*	*22.2*	*19.2*	**83.4**	*80.4*	*79.6*
AK and HI	**1.1**	**1.2**	**1.3**	**1.2**	*1.1*	*1.2*	*1.2*	*1.2*	*1.1*	*1.2*	*1.2*	*1.2*	**4.8**	*4.7*	*4.7*
Total	**242.2**	**254.5**	**265.9**	**246.7**	*242.0*	*250.8*	*261.9*	*246.5*	*247.6*	*254.8*	*266.8*	*251.4*	**1,009.3**	*1,001.2*	*1,020.7*
Total All Sectors (a)															
New England	**29.2**	**26.3**	**32.0**	**26.3**	*28.3*	*26.2*	*29.9*	*26.5*	*29.2*	*26.1*	*29.9*	*26.5*	**113.8**	*110.9*	*111.7*
Middle Atlantic	**90.4**	**83.3**	**103.2**	**83.3**	*88.7*	*83.0*	*97.9*	*82.9*	*91.1*	*83.0*	*98.2*	*83.2*	**360.2**	*352.5*	*355.6*
E. N. Central	**140.2**	**133.8**	**152.4**	**130.8**	*136.2*	*130.6*	*150.5*	*131.0*	*139.9*	*131.2*	*151.6*	*131.8*	**557.2**	*548.4*	*554.5*
W. N. Central	**79.7**	**74.1**	**86.2**	**74.4**	*79.0*	*73.2*	*85.5*	*74.7*	*81.3*	*74.0*	*86.8*	*76.1*	**314.4**	*312.4*	*318.2*
S. Atlantic	**207.7**	**211.8**	**248.6**	**200.9**	*204.7*	*209.7*	*246.7*	*204.0*	*218.5*	*213.4*	*251.4*	*207.8*	**869.0**	*865.2*	*891.1*
E. S. Central	**78.4**	**76.0**	**89.4**	**71.3**	*76.6*	*74.5*	*88.2*	*71.7*	*80.6*	*74.4*	*88.3*	*71.8*	**315.0**	*310.9*	*315.1*
W. S. Central	**153.7**	**164.2**	**196.4**	**151.4**	*152.1*	*160.9*	*191.0*	*154.4*	*161.3*	*163.5*	*194.1*	*157.4*	**665.7**	*658.4*	*676.3*
Mountain	**67.2**	**73.4**	**89.7**	**68.7**	*67.9*	*72.6*	*87.4*	*68.4*	*68.7*	*73.1*	*88.2*	*69.0*	**299.1**	*296.4*	*299.0*
Pacific contiguous	**95.3**	**91.5**	**112.1**	**97.0**	*95.8*	*90.1*	*106.2*	*93.6*	*95.3*	*89.2*	*105.5*	*93.3*	**396.0**	*385.6*	*383.2*
AK and HI	**3.7**	**3.6**	**3.8**	**3.9**	*3.7*	*3.6*	*3.8*	*3.9*	*3.7*	*3.6*	*3.8*	*3.9*	**15.0**	*14.9*	*15.0*
Total	**945.5**	**938.0**	**1,113.9**	**908.0**	*933.0*	*924.5*	*1,087.0*	*911.1*	*969.5*	*931.5*	*1,097.8*	*920.9*	**3,905.4**	*3,855.6*	*3,919.7*

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

- = no data available

Notes: EIA completed modeling and analysis for this report on February 2, 2022.

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*

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

Forecasts: EIA Short-Term Integrated Forecasting System.

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

Attachment STF-244-11-d

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Residential Sector															
New England	**23.96**	**24.31**	**24.80**	**26.03**	*28.00*	*27.59*	*27.37*	*27.47*	*28.70*	*27.87*	*27.58*	*27.97*	**24.74**	*27.61*	*28.05*
Middle Atlantic	**17.13**	**18.29**	**18.96**	**19.26**	*18.40*	*18.40*	*18.53*	*18.66*	*18.43*	*18.76*	*18.92*	*18.91*	**18.40**	*18.50*	*18.75*
E. N. Central	**14.21**	**15.50**	**16.20**	**16.03**	*15.46*	*16.30*	*16.53*	*15.82*	*15.09*	*16.15*	*16.61*	*16.13*	**15.48**	*16.04*	*16.00*
W. N. Central	**11.28**	**13.26**	**14.36**	**12.42**	*11.56*	*13.28*	*14.04*	*12.15*	*11.48*	*13.36*	*14.05*	*12.15*	**12.84**	*12.77*	*12.76*
S. Atlantic	**12.68**	**13.61**	**14.27**	**13.81**	*13.89*	*14.31*	*14.51*	*13.57*	*13.44*	*14.15*	*14.43*	*13.56*	**13.62**	*14.10*	*13.92*
E. S. Central	**11.97**	**13.08**	**13.79**	**13.06**	*12.63*	*13.02*	*13.25*	*12.68*	*12.68*	*13.40*	*13.59*	*12.98*	**12.99**	*12.92*	*13.17*
W. S. Central	**11.82**	**12.93**	**13.81**	**13.97**	*13.10*	*13.61*	*14.10*	*13.78*	*12.90*	*13.82*	*14.37*	*14.02*	**13.18**	*13.69*	*13.81*
Mountain	**12.14**	**12.85**	**13.23**	**13.09**	*12.88*	*13.67*	*13.95*	*13.59*	*13.08*	*13.56*	*13.71*	*13.52*	**12.87**	*13.56*	*13.49*
Pacific	**18.12**	**20.54**	**22.06**	**19.28**	*19.47*	*21.99*	*22.73*	*19.45*	*19.69*	*22.75*	*23.55*	*19.97*	**20.05**	*20.90*	*21.47*
U.S. Average	**13.97**	**15.05**	**15.85**	**15.48**	*15.18*	*15.79*	*16.02*	*15.33*	*15.00*	*15.89*	*16.17*	*15.50*	**15.12**	*15.60*	*15.66*
Commercial Sector															
New England	**18.47**	**17.46**	**18.32**	**18.27**	*20.01*	*18.50*	*18.98*	*18.37*	*19.89*	*18.47*	*19.17*	*18.77*	**18.14**	*18.97*	*19.09*
Middle Atlantic	**14.04**	**14.92**	**16.60**	**15.00**	*14.65*	*14.68*	*15.93*	*14.22*	*14.07*	*14.65*	*16.06*	*14.16*	**15.19**	*14.90*	*14.77*
E. N. Central	**11.06**	**11.85**	**12.15**	**11.73**	*11.58*	*11.94*	*11.83*	*11.19*	*11.13*	*11.85*	*12.02*	*11.41*	**11.71**	*11.64*	*11.61*
W. N. Central	**9.65**	**10.71**	**11.70**	**10.05**	*9.19*	*9.79*	*11.17*	*9.92*	*9.56*	*10.92*	*12.14*	*10.06*	**10.56**	*10.05*	*10.71*
S. Atlantic	**10.30**	**10.87**	**11.52**	**11.04**	*10.81*	*11.00*	*11.30*	*10.46*	*10.24*	*10.75*	*11.26*	*10.53*	**10.96**	*10.91*	*10.72*
E. S. Central	**11.69**	**12.20**	**13.02**	**12.37**	*12.51*	*12.56*	*13.04*	*12.17*	*12.35*	*12.72*	*13.36*	*12.44*	**12.36**	*12.60*	*12.75*
W. S. Central	**8.68**	**9.63**	**10.47**	**9.44**	*8.84*	*9.54*	*10.49*	*9.60*	*9.17*	*9.98*	*10.94*	*9.92*	**9.62**	*9.67*	*10.05*
Mountain	**9.56**	**10.31**	**10.96**	**10.42**	*10.18*	*10.78*	*11.33*	*10.59*	*10.14*	*10.60*	*11.17*	*10.52*	**10.35**	*10.75*	*10.64*
Pacific	**16.10**	**17.77**	**20.29**	**18.42**	*18.31*	*19.98*	*22.09*	*19.33*	*18.53*	*19.68*	*21.98*	*19.46*	**18.25**	*20.00*	*19.99*
U.S. Average	**11.63**	**12.34**	**13.37**	**12.51**	*12.29*	*12.63*	*13.40*	*12.31*	*12.09*	*12.64*	*13.55*	*12.43*	**12.51**	*12.69*	*12.71*
Industrial Sector															
New England	**15.12**	**15.17**	**15.92**	**14.76**	*15.96*	*15.61*	*16.09*	*14.74*	*15.92*	*15.65*	*16.24*	*14.96*	**15.25**	*15.61*	*15.70*
Middle Atlantic	**7.88**	**8.29**	**9.81**	**8.09**	*7.61*	*7.71*	*9.01*	*7.73*	*7.68*	*7.53*	*8.84*	*7.57*	**8.54**	*8.03*	*7.92*
E. N. Central	**7.72**	**8.56**	**9.01**	**8.39**	*7.83*	*8.27*	*8.63*	*8.31*	*8.02*	*8.36*	*8.75*	*8.39*	**8.43**	*8.26*	*8.38*
W. N. Central	**7.16**	**7.99**	**8.69**	**7.44**	*7.27*	*7.93*	*8.59*	*7.49*	*7.45*	*8.08*	*8.75*	*7.61*	**7.84**	*7.83*	*7.99*
S. Atlantic	**6.85**	**8.10**	**9.11**	**7.62**	*6.81*	*7.67*	*8.57*	*7.42*	*6.92*	*7.69*	*8.57*	*7.43*	**7.94**	*7.63*	*7.66*
E. S. Central	**6.35**	**7.36**	**8.40**	**7.24**	*6.61*	*7.11*	*8.04*	*7.09*	*6.69*	*7.13*	*8.06*	*7.10*	**7.35**	*7.22*	*7.25*
W. S. Central	**6.20**	**7.28**	**8.08**	**7.11**	*6.26*	*6.84*	*7.37*	*6.69*	*6.12*	*6.57*	*7.09*	*6.45*	**7.18**	*6.80*	*6.56*
Mountain	**6.58**	**7.27**	**8.41**	**7.44**	*7.06*	*7.42*	*8.42*	*7.40*	*7.07*	*7.46*	*8.44*	*7.42*	**7.47**	*7.61*	*7.63*
Pacific	**10.37**	**11.97**	**14.15**	**12.19**	*11.02*	*12.30*	*14.38*	*12.36*	*11.29*	*12.68*	*14.79*	*12.73*	**12.27**	*12.60*	*12.96*
U.S. Average	**7.42**	**8.41**	**9.42**	**8.22**	*7.58*	*8.17*	*9.05*	*8.06*	*7.65*	*8.16*	*9.05*	*8.06*	**8.39**	*8.23*	*8.24*
All Sectors (a)															
New England	**20.46**	**19.83**	**20.80**	**20.91**	*22.91*	*21.69*	*22.09*	*21.62*	*23.30*	*21.84*	*22.32*	*22.07*	**20.51**	*22.09*	*22.40*
Middle Atlantic	**14.07**	**14.66**	**16.27**	**14.99**	*14.69*	*14.50*	*15.61*	*14.41*	*14.55*	*14.56*	*15.76*	*14.43*	**15.05**	*14.84*	*14.86*
E. N. Central	**11.11**	**11.89**	**12.60**	**11.97**	*11.69*	*12.06*	*12.52*	*11.74*	*11.54*	*12.03*	*12.65*	*11.94*	**11.90**	*12.02*	*12.05*
W. N. Central	**9.53**	**10.65**	**11.73**	**9.97**	*9.50*	*10.33*	*11.43*	*9.87*	*9.66*	*10.78*	*11.79*	*9.94*	**10.50**	*10.31*	*10.57*
S. Atlantic	**10.79**	**11.56**	**12.43**	**11.60**	*11.48*	*11.82*	*12.37*	*11.25*	*11.16*	*11.65*	*12.30*	*11.26*	**11.63**	*11.76*	*11.62*
E. S. Central	**10.12**	**10.88**	**12.02**	**10.91**	*10.68*	*10.89*	*11.71*	*10.70*	*10.77*	*11.09*	*11.95*	*10.89*	**11.02**	*11.03*	*11.20*
W. S. Central	**9.04**	**10.05**	**11.20**	**10.12**	*9.43*	*10.02*	*11.04*	*9.97*	*9.48*	*10.11*	*11.17*	*10.03*	**10.17**	*10.17*	*10.24*
Mountain	**9.60**	**10.32**	**11.19**	**10.45**	*10.24*	*10.78*	*11.55*	*10.64*	*10.28*	*10.69*	*11.41*	*10.60*	**10.45**	*10.85*	*10.79*
Pacific	**15.76**	**17.41**	**19.68**	**17.45**	*17.36*	*18.94*	*20.68*	*17.92*	*17.60*	*19.18*	*21.02*	*18.25*	**17.67**	*18.78*	*19.07*
U.S. Average	**11.49**	**12.28**	**13.45**	**12.43**	*12.19*	*12.57*	*13.41*	*12.27*	*12.12*	*12.60*	*13.51*	*12.36*	**12.46**	*12.64*	*12.68*

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

- = no data available

Notes: EIA completed modeling and analysis for this report on February 2, 2022.

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

Prices are not adjusted for inflation.

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*

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

Forecasts: EIA Short-Term Integrated Forecasting System.

Table 7d part 1. U.S. Regional Electricity Generation, Electric Power Sector (billion kilowatthours), *continues on Table 7d part 2*

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
United States															
Natural Gas	**337.0**	**365.5**	**509.4**	**377.6**	*346.8*	*357.2*	*487.9*	*366.0*	*344.5*	*340.0*	*474.5*	*361.7*	**1,589.5**	*1,557.9*	*1,520.6*
Coal	**217.5**	**189.1**	**234.6**	**181.6**	*166.2*	*155.0*	*208.5*	*151.4*	*178.0*	*148.0*	*204.8*	*153.6*	**822.8**	*681.0*	*684.4*
Nuclear	**195.6**	**184.4**	**201.5**	**190.1**	*194.6*	*186.9*	*206.5*	*196.3*	*201.2*	*192.9*	*208.2*	*190.0*	**771.6**	*784.2*	*792.3*
Renewable Energy Sources:	**233.2**	**244.9**	**197.4**	**207.6**	*242.2*	*269.7*	*214.5*	*229.1*	*267.1*	*296.4*	*241.5*	*247.7*	**883.1**	*955.6*	*1,052.7*
Conventional Hydropower	**74.4**	**69.2**	**62.3**	**53.2**	*67.2*	*76.3*	*63.0*	*58.8*	*71.7*	*79.9*	*64.6*	*59.6*	**259.1**	*265.4*	*275.7*
Wind	**119.0**	**121.0**	**80.6**	**116.2**	*129.1*	*128.1*	*85.0*	*122.2*	*135.4*	*131.0*	*87.5*	*128.2*	**436.8**	*464.4*	*482.2*
Solar (a)	**29.1**	**44.3**	**43.2**	**27.5**	*35.1*	*55.3*	*55.5*	*37.6*	*49.7*	*76.3*	*78.3*	*49.8*	**144.1**	*183.5*	*254.1*
Biomass	**6.6**	**6.5**	**7.1**	**6.4**	*6.5*	*6.2*	*6.7*	*6.2*	*6.6*	*6.3*	*6.9*	*6.3*	**26.6**	*25.6*	*26.0*
Geothermal	**4.1**	**4.0**	**4.2**	**4.2**	*4.3*	*3.9*	*4.3*	*4.2*	*3.7*	*2.8*	*4.3*	*3.9*	**16.5**	*16.6*	*14.7*
Pumped Storage Hydropower	**-1.2**	**-1.3**	**-2.0**	**-1.3**	*-1.0*	*-1.3*	*-1.9*	*-1.3*	*-1.2*	*-1.4*	*-2.0*	*-1.3*	**-5.9**	*-5.5*	*-5.9*
Petroleum (b)	**6.4**	**4.1**	**4.5**	**4.5**	*5.3*	*3.8*	*4.4*	*4.2*	*5.5*	*3.7*	*4.4*	*4.3*	**19.5**	*17.7*	*17.8*
Other Gases	**0.8**	**0.9**	**1.0**	**0.8**	*0.8*	*0.8*	*0.9*	*0.8*	*0.8*	*0.9*	*0.9*	*0.8*	**3.5**	*3.3*	*3.4*
Other Nonrenewable Fuels (c)	**1.6**	**1.6**	**1.6**	**1.6**	*1.5*	*1.4*	*1.4*	*1.4*	*1.3*	*1.2*	*1.1*	*1.3*	**6.4**	*5.6*	*4.9*
Total Generation	**990.8**	**989.3**	**1,147.8**	**962.6**	*956.3*	*973.5*	*1,122.0*	*947.9*	*997.1*	*981.6*	*1,133.4*	*958.2*	**4,090.5**	*3,999.8*	*4,070.2*
New England (ISO-NE)															
Natural Gas	**12.1**	**12.6**	**17.4**	**12.2**	*13.1*	*12.3*	*15.2*	*13.1*	*13.4*	*11.5*	*14.8*	*12.6*	**54.3**	*53.8*	*52.2*
Coal	**0.3**	**0.0**	**0.0**	**0.0**	*0.1*	*0.0*	*0.0*	*0.0*	*0.2*	*0.0*	*0.0*	*0.0*	**0.3**	*0.2*	*0.3*
Nuclear	**7.1**	**5.6**	**7.3**	**7.5**	*7.2*	*5.6*	*7.3*	*6.2*	*7.2*	*7.2*	*7.3*	*5.7*	**27.4**	*26.3*	*27.4*
Conventional hydropower	**1.7**	**1.5**	**1.0**	**1.3**	*1.9*	*2.2*	*1.2*	*1.7*	*2.0*	*2.2*	*1.2*	*1.7*	**5.5**	*7.0*	*7.1*
Nonhydro renewables (d)	**3.2**	**3.2**	**3.0**	**2.8**	*3.1*	*3.2*	*3.1*	*2.9*	*3.3*	*3.9*	*3.6*	*3.6*	**12.2**	*12.2*	*14.4*
Other energy sources (e)	**1.4**	**0.4**	**0.4**	**0.4**	*1.1*	*0.3*	*0.2*	*0.3*	*0.9*	*0.3*	*0.3*	*0.3*	**2.5**	*1.9*	*1.9*
Total generation	**25.7**	**23.1**	**29.2**	**24.3**	*26.4*	*23.6*	*27.0*	*24.3*	*26.9*	*25.1*	*27.2*	*24.0*	**102.2**	*101.4*	*103.2*
Net energy for load (f)	**30.2**	**26.0**	**33.0**	**27.3**	*29.4*	*28.0*	*32.2*	*28.9*	*31.1*	*28.2*	*32.5*	*29.2*	**116.5**	*118.4*	*121.1*
New York (NYISO)															
Natural Gas	**14.1**	**15.5**	**21.2**	**14.3**	*11.5*	*15.2*	*15.4*	*12.5*	*13.3*	*14.7*	*16.6*	*13.1*	**65.1**	*54.5*	*57.8*
Coal	**0.0**	**0.0**	**0.0**	**0.0**	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	**0.0**	*0.0*	*0.0*
Nuclear	**6.4**	**7.0**	**6.4**	**7.0**	*6.7*	*6.4*	*7.0*	*7.0*	*6.3*	*6.9*	*6.8*	*6.4*	**26.8**	*27.1*	*26.4*
Conventional hydropower	**7.3**	**6.9**	**6.6**	**6.5**	*6.4*	*6.6*	*6.7*	*7.0*	*6.9*	*6.8*	*6.9*	*7.1*	**27.3**	*26.7*	*27.7*
Nonhydro renewables (d)	**2.1**	**2.0**	**1.7**	**2.2**	*2.4*	*2.5*	*2.0*	*2.8*	*3.6*	*4.1*	*3.2*	*3.7*	**7.9**	*9.7*	*14.5*
Other energy sources (e)	**1.1**	**0.1**	**0.1**	**0.1**	*0.5*	*0.1*	*0.2*	*0.1*	*0.6*	*0.1*	*0.2*	*0.1*	**1.5**	*0.9*	*1.1*
Total generation	**31.0**	**31.5**	**36.0**	**30.1**	*27.6*	*30.8*	*31.2*	*29.4*	*30.7*	*32.7*	*33.7*	*30.4*	**128.6**	*119.0*	*127.4*
Net energy for load (f)	**37.6**	**34.0**	**43.3**	**34.8**	*35.8*	*35.3*	*41.4*	*35.0*	*37.0*	*35.3*	*41.6*	*35.2*	**149.7**	*147.4*	*149.1*
Mid-Atlantic (PJM)															
Natural Gas	**76.8**	**74.3**	**103.8**	**80.1**	*82.3*	*80.9*	*103.6*	*81.7*	*81.8*	*83.8*	*103.8*	*82.0*	**335.0**	*348.4*	*351.4*
Coal	**48.6**	**35.3**	**42.2**	**30.4**	*33.2*	*32.4*	*37.2*	*25.3*	*36.5*	*30.5*	*36.7*	*27.8*	**156.4**	*128.1*	*131.6*
Nuclear	**69.0**	**65.1**	**69.7**	**66.6**	*67.6*	*67.1*	*72.0*	*68.6*	*69.0*	*64.8*	*72.0*	*68.6*	**270.4**	*275.4*	*274.5*
Conventional hydropower	**2.7**	**2.4**	**1.4**	**1.9**	*2.6*	*2.6*	*1.7*	*2.1*	*2.7*	*2.6*	*1.7*	*2.1*	**8.5**	*9.0*	*9.0*
Nonhydro renewables (d)	**13.3**	**13.0**	**9.7**	**12.9**	*14.1*	*14.2*	*11.2*	*14.6*	*16.4*	*17.4*	*14.3*	*16.6*	**48.8**	*54.0*	*64.8*
Other energy sources (e)	**0.7**	**0.4**	**0.2**	**0.7**	*0.7*	*0.4*	*0.3*	*0.7*	*0.6*	*0.5*	*0.3*	*0.7*	**2.0**	*2.1*	*2.1*
Total generation	**211.1**	**190.3**	**227.1**	**192.6**	*200.5*	*197.5*	*226.0*	*193.0*	*207.1*	*199.6*	*228.9*	*197.9*	**821.1**	*817.0*	*833.4*
Net energy for load (f)	**201.0**	**180.3**	**213.2**	**185.1**	*193.1*	*180.5*	*206.8*	*182.0*	*201.2*	*180.9*	*208.3*	*183.5*	**779.5**	*762.4*	*773.9*
Southeast (SERC)															
Natural Gas	**63.5**	**67.1**	**86.7**	**65.9**	*60.2*	*62.1*	*88.9*	*70.0*	*67.7*	*63.8*	*86.8*	*70.9*	**283.2**	*281.3*	*289.1*
Coal	**32.3**	**32.8**	**32.0**	**26.9**	*24.5*	*27.3*	*32.1*	*19.0*	*26.8*	*22.6*	*32.7*	*20.0*	**124.0**	*102.9*	*102.2*
Nuclear	**51.4**	**51.1**	**55.4**	**51.1**	*52.3*	*53.1*	*57.3*	*57.4*	*57.5*	*57.6*	*60.1*	*54.3*	**209.1**	*220.1*	*229.4*
Conventional hydropower	**10.3**	**8.3**	**6.1**	**7.7**	*11.0*	*8.9*	*8.0*	*9.1*	*11.5*	*9.0*	*8.1*	*9.1*	**32.4**	*37.0*	*37.7*
Nonhydro renewables (d)	**5.0**	**7.0**	**6.5**	**4.8**	*5.5*	*7.7*	*7.2*	*5.4*	*6.3*	*8.6*	*8.0*	*6.0*	**23.4**	*25.7*	*28.9*
Other energy sources (e)	**-0.2**	**-0.3**	**-0.6**	**-0.4**	*-0.3*	*-0.4*	*-0.8*	*-0.4*	*-0.2*	*-0.5*	*-0.8*	*-0.4*	**-1.6**	*-1.8*	*-1.9*
Total generation	**162.3**	**166.0**	**186.2**	**155.9**	*153.2*	*158.7*	*192.8*	*160.6*	*169.6*	*161.2*	*194.8*	*159.9*	**670.4**	*665.2*	*685.5*
Net energy for load (f)	**164.8**	**167.3**	**180.3**	**154.3**	*157.6*	*161.2*	*188.1*	*159.7*	*175.2*	*168.3*	*194.5*	*164.8*	**666.8**	*666.5*	*702.8*
Florida (FRCC)															
Natural Gas	**38.4**	**47.7**	**56.8**	**42.9**	*41.2*	*43.9*	*58.7*	*41.0*	*44.8*	*44.4*	*60.1*	*42.5*	**185.8**	*184.8*	*191.7*
Coal	**3.5**	**4.3**	**3.7**	**4.0**	*2.2*	*2.7*	*2.8*	*3.1*	*2.2*	*2.6*	*2.7*	*3.2*	**15.5**	*10.8*	*10.8*
Nuclear	**7.3**	**7.9**	**7.5**	**8.1**	*7.2*	*6.9*	*7.5*	*7.7*	*7.2*	*7.8*	*7.1*	*7.1*	**30.8**	*29.3*	*29.3*
Conventional hydropower	**0.1**	**0.1**	**0.1**	**0.1**	*0.1*	*0.1*	*0.0*	*0.0*	*0.1*	*0.0*	*0.0*	*0.0*	**0.2**	*0.2*	*0.2*
Nonhydro renewables (d)	**2.9**	**3.7**	**3.5**	**2.7**	*3.8*	*4.7*	*4.4*	*3.4*	*5.2*	*6.1*	*5.7*	*4.3*	**12.8**	*16.3*	*21.2*
Other energy sources (e)	**0.7**	**0.6**	**0.7**	**0.6**	*0.8*	*0.6*	*0.7*	*0.6*	*0.8*	*0.6*	*0.7*	*0.6*	**2.5**	*2.7*	*2.6*
Total generation	**52.9**	**64.2**	**72.2**	**58.3**	*55.2*	*58.8*	*74.2*	*55.8*	*60.3*	*61.6*	*76.4*	*57.6*	**247.6**	*244.1*	*255.9*
Net energy for load (f)	**53.3**	**65.8**	**76.6**	**60.4**	*49.7*	*60.3*	*68.0*	*53.2*	*51.3*	*60.3*	*68.4*	*53.6*	**256.0**	*231.1*	*233.6*

(a) Solar generation from large-scale power plants with more than 1 megawatt of capacity. Excludes generation from small-scale solar photovoltaic systems.

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

(c) Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, nonrenewable waste, and miscellaneous technologies.

(d) Wind, large-scale solar, biomass, and geothermal

(e) Pumped storage hydroelectric, petroleum, other gases, batteries, and other nonrenewable fuels. See notes (b) and (c).

(f) Regional generation from generating units operated by electric power sector, plus energy receipts from minus energy deliveries to U.S. balancing authorities outside region.

Notes: EIA completed modeling and analysis for this report on February 2, 2022.

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

Data reflect generation supplied by power plants with a combined capacity of at least 1 megawatt operated by electric utilities and independent power producers.

Historical data: Latest data available from U.S. Energy Information Administration databases supporting the following reports: *Electric Power Monthly*, DOE/EIA-0226; and *Electric Power Annual*, DOE/EIA-0348.

Table 7d part 2. U.S. Regional Electricity Generation, Electric Power Sector (billion kilowatthours), *continued from Table 7d part 1*

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Midwest (MISO)															
Natural Gas	**41.6**	**47.4**	**59.7**	**43.4**	*43.2*	*51.3*	*53.5*	*46.2*	*40.5*	*48.7*	*55.7*	*45.7*	**192.1**	*194.2*	*190.6*
Coal	**64.5**	**54.1**	**68.6**	**52.7**	*50.7*	*43.3*	*63.9*	*45.8*	*55.1*	*42.6*	*60.2*	*45.8*	**239.8**	*203.8*	*203.7*
Nuclear	**23.8**	**19.6**	**24.3**	**23.7**	*22.8*	*21.1*	*24.4*	*20.9*	*23.2*	*22.5*	*23.8*	*21.5*	**91.4**	*89.2*	*90.9*
Conventional hydropower	**2.9**	**2.7**	**2.4**	**2.2**	*2.6*	*2.9*	*2.4*	*2.2*	*2.5*	*2.9*	*2.4*	*2.2*	**10.2**	*10.0*	*10.0*
Nonhydro renewables (d)	**32.0**	**28.7**	**20.3**	**31.6**	*34.5*	*30.7*	*22.2*	*33.7*	*36.3*	*32.5*	*24.7*	*35.7*	**112.7**	*121.2*	*129.3*
Other energy sources (e)	**1.4**	**1.7**	**1.3**	**1.6**	*1.6*	*1.5*	*1.5*	*1.6*	*1.6*	*1.5*	*1.5*	*1.6*	**6.0**	*6.2*	*6.2*
Total generation	**166.1**	**154.2**	**176.8**	**155.1**	*155.4*	*150.9*	*167.9*	*150.4*	*159.2*	*150.7*	*168.2*	*152.6*	**652.3**	*624.6*	*630.7*
Net energy for load (f)	**165.1**	**158.9**	**179.5**	**154.9**	*157.1*	*159.6*	*179.0*	*156.6*	*164.0*	*160.1*	*180.5*	*158.0*	**658.5**	*652.3*	*662.6*
Central (Southwest Power Pool)															
Natural Gas	**10.6**	**13.4**	**22.4**	**15.3**	*14.5*	*15.0*	*22.4*	*13.9*	*14.5*	*15.7*	*22.2*	*14.1*	**61.6**	*65.8*	*66.5*
Coal	**22.1**	**20.5**	**30.1**	**18.8**	*16.0*	*14.6*	*21.0*	*12.9*	*16.9*	*13.1*	*21.7*	*13.6*	**91.5**	*64.5*	*65.5*
Nuclear	**4.3**	**4.3**	**3.9**	**2.1**	*4.3*	*4.3*	*4.4*	*4.4*	*4.3*	*3.0*	*4.4*	*3.5*	**14.6**	*17.4*	*15.2*
Conventional hydropower	**4.3**	**3.9**	**3.2**	**2.9**	*3.6*	*4.2*	*3.7*	*3.1*	*3.6*	*4.2*	*3.7*	*3.1*	**14.3**	*14.6*	*14.5*
Nonhydro renewables (d)	**28.6**	**29.6**	**21.3**	**28.9**	*31.7*	*31.5*	*22.6*	*29.9*	*33.6*	*32.4*	*23.7*	*31.4*	**108.4**	*115.7*	*121.1*
Other energy sources (e)	**0.3**	**0.4**	**0.2**	**0.2**	*0.3*	*0.3*	*0.1*	*0.2*	*0.3*	*0.3*	*0.2*	*0.2*	**1.1**	*1.0*	*1.0*
Total generation	**70.2**	**72.0**	**81.1**	**68.3**	*70.5*	*70.0*	*74.1*	*64.3*	*73.3*	*68.7*	*75.8*	*65.9*	**291.6**	*278.9*	*283.8*
Net energy for load (f)	**67.3**	**69.0**	**82.6**	**67.8**	*66.0*	*65.6*	*77.7*	*62.6*	*67.2*	*66.4*	*79.1*	*64.1*	**286.7**	*271.9*	*276.8*
Texas (ERCOT)															
Natural Gas	**33.6**	**42.9**	**64.7**	**40.1**	*32.7*	*34.8*	*54.0*	*35.4*	*28.5*	*27.2*	*45.5*	*30.1*	**181.3**	*156.8*	*131.3*
Coal	**17.7**	**16.8**	**20.2**	**16.6**	*11.7*	*14.4*	*19.4*	*14.4*	*12.7*	*14.0*	*18.9*	*14.0*	**71.2**	*59.9*	*59.7*
Nuclear	**11.0**	**9.9**	**10.7**	**10.0**	*10.9*	*8.9*	*11.0*	*10.1*	*10.9*	*9.7*	*11.0*	*9.1*	**41.6**	*40.9*	*40.7*
Conventional hydropower	**0.2**	**0.1**	**0.0**	**0.1**	*0.2*	*0.2*	*0.1*	*0.1*	*0.2*	*0.2*	*0.1*	*0.1*	**0.4**	*0.6*	*0.6*
Nonhydro renewables (d)	**30.9**	**39.1**	**28.0**	**30.2**	*36.8*	*45.7*	*33.7*	*34.5*	*41.3*	*51.8*	*42.0*	*40.5*	**128.2**	*150.6*	*175.6*
Other energy sources (e)	**0.4**	**0.5**	**0.4**	**0.3**	*0.4*	*0.4*	*0.4*	*0.4*	*0.3*	*0.4*	*0.3*	*0.3*	**1.5**	*1.5*	*1.3*
Total generation	**93.7**	**109.2**	**124.0**	**97.3**	*92.6*	*104.4*	*118.6*	*94.8*	*93.8*	*103.3*	*117.9*	*94.2*	**424.3**	*410.3*	*409.1*
Net energy for load (f)	**93.7**	**109.2**	**124.0**	**97.3**	*92.6*	*104.4*	*118.6*	*94.8*	*93.8*	*103.3*	*117.9*	*94.2*	**424.3**	*410.3*	*409.1*
Northwest															
Natural Gas	**20.2**	**15.9**	**27.3**	**25.8**	*19.6*	*12.2*	*26.7*	*19.8*	*18.6*	*6.7*	*26.6*	*18.9*	**89.3**	*78.3*	*70.8*
Coal	**21.6**	**18.1**	**26.9**	**23.9**	*21.0*	*15.1*	*24.0*	*22.7*	*20.2*	*17.3*	*23.4*	*21.5*	**90.5**	*82.8*	*82.4*
Nuclear	**2.5**	**2.3**	**2.5**	**2.6**	*2.4*	*1.2*	*2.4*	*2.4*	*2.4*	*2.4*	*2.4*	*2.4*	**9.9**	*8.4*	*9.6*
Conventional hydropower	**38.9**	**35.7**	**33.9**	**26.0**	*32.5*	*38.6*	*29.8*	*28.0*	*35.4*	*41.2*	*30.7*	*28.2*	**134.5**	*128.9*	*135.4*
Nonhydro renewables (d)	**19.2**	**20.4**	**15.9**	**18.4**	*20.1*	*22.2*	*17.7*	*20.2*	*22.9*	*25.0*	*20.9*	*22.0*	**73.9**	*80.1*	*90.8*
Other energy sources (e)	**0.2**	**0.2**	**0.2**	**0.1**	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	**0.7**	*0.4*	*0.4*
Total generation	**102.6**	**92.6**	**106.7**	**96.9**	*95.7*	*89.4*	*100.7*	*93.2*	*99.6*	*92.7*	*104.1*	*93.2*	**398.8**	*379.1*	*389.6*
Net energy for load (f)	**90.1**	**88.0**	**98.5**	**94.8**	*90.9*	*86.2*	*96.6*	*88.6*	*91.5*	*86.1*	*96.7*	*88.8*	**371.3**	*362.2*	*363.1*
Southwest															
Natural Gas	**9.6**	**12.9**	**18.6**	**13.1**	*12.9*	*15.7*	*22.5*	*10.8*	*8.4*	*12.6*	*20.1*	*9.3*	**54.2**	*61.8*	*50.5*
Coal	**6.1**	**6.3**	**8.1**	**6.2**	*4.9*	*3.7*	*5.1*	*5.7*	*5.5*	*3.9*	*5.4*	*5.3*	**26.7**	*19.6*	*20.0*
Nuclear	**8.2**	**7.5**	**8.7**	**7.6**	*8.5*	*7.5*	*8.6*	*7.5*	*8.5*	*7.4*	*8.6*	*7.6*	**32.0**	*32.1*	*32.1*
Conventional hydropower	**1.9**	**2.1**	**1.8**	**1.5**	*1.7*	*1.9*	*1.9*	*1.4*	*1.7*	*2.0*	*1.8*	*1.4*	**7.2**	*6.8*	*6.9*
Nonhydro renewables (d)	**4.6**	**5.7**	**3.9**	**3.9**	*4.5*	*6.1*	*4.1*	*4.6*	*5.7*	*7.2*	*5.0*	*5.2*	**18.1**	*19.3*	*23.0*
Other energy sources (e)	**0.0**	**0.1**	**0.1**	**0.1**	*0.0*	*0.1*	*0.1*	*0.0*	*0.0*	*0.0*	*0.1*	*0.0*	**0.2**	*0.2*	*0.1*
Total generation	**30.4**	**34.4**	**41.1**	**32.4**	*32.5*	*34.9*	*42.3*	*30.0*	*29.8*	*33.2*	*41.0*	*28.7*	**138.4**	*139.7*	*132.6*
Net energy for load (f)	**21.7**	**27.3**	**34.8**	**23.2**	*22.9*	*27.2*	*34.6*	*23.3*	*22.8*	*27.2*	*34.7*	*23.4*	**106.9**	*107.9*	*108.1*
California															
Natural Gas	**15.8**	**15.5**	**29.9**	**23.7**	*14.9*	*13.3*	*26.3*	*20.9*	*12.4*	*10.3*	*21.5*	*21.7*	**85.0**	*75.4*	*65.9*
Coal	**0.5**	**0.7**	**2.4**	**1.9**	*1.4*	*1.1*	*2.5*	*1.8*	*1.4*	*1.0*	*2.6*	*1.8*	**5.5**	*6.8*	*6.8*
Nuclear	**4.6**	**4.2**	**5.0**	**3.9**	*4.7*	*4.7*	*4.6*	*4.1*	*4.7*	*3.6*	*4.7*	*3.9*	**17.6**	*18.1*	*16.9*
Conventional hydropower	**3.6**	**5.3**	**5.3**	**2.7**	*4.3*	*7.7*	*7.2*	*3.8*	*4.7*	*8.3*	*7.7*	*4.1*	**16.9**	*23.0*	*24.8*
Nonhydro renewables (d)	**16.7**	**22.8**	**20.7**	**15.6**	*18.1*	*24.4*	*22.9*	*17.8*	*20.3*	*26.8*	*25.3*	*18.6*	**75.7**	*83.2*	*91.0*
Other energy sources (e)	**0.0**	**-0.2**	**0.1**	**-0.1**	*-0.1*	*-0.3*	*0.0*	*-0.2*	*-0.2*	*-0.5*	*-0.1*	*-0.2*	**-0.2**	*-0.6*	*-1.1*
Total generation	**41.2**	**48.2**	**63.4**	**47.6**	*43.3*	*51.0*	*63.5*	*48.2*	*43.3*	*49.5*	*61.7*	*49.9*	**200.5**	*206.0*	*204.4*
Net energy for load (f)	**57.3**	**62.0**	**79.5**	**61.3**	*57.7*	*62.0*	*75.3*	*59.6*	*58.3*	*62.0*	*75.4*	*59.7*	**260.2**	*254.6*	*255.4*

(a) Large-scale solar generation from power plants with more than 1 megawatt of capacity. Excludes generation from small-scale solar photovoltaic systems.

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

(c) Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, nonrenewable waste, and miscellaneous technologies.

(d) Wind, large-scale solar, biomass, and geothermal

(e) Pumped storage hydroelectric, petroleum, other gases, batteries, and other nonrenewable fuels. See notes (b) and (c).

(f) Regional generation from generating units operated by electric power sector, plus energy receipts from minus energy deliveries to U.S. balancing authorities outside region.

Notes: EIA completed modeling and analysis for this report on February 2, 2022.

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

Data reflect generation supplied by power plants with a combined capacity of at least 1 megawatt operated by electric utilities and independent power producers.

Historical data: Latest data available from U.S. Energy Information Administration databases supporting the following reports: *Electric Power Monthly* , DOE/EIA-0226; and *Electric Power Annual* , DOE/EIA-0348.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Electric Power Sector															
Geothermal	**0.036**	**0.035**	**0.037**	**0.038**	*0.038*	*0.034*	*0.038*	*0.037*	*0.032*	*0.025*	*0.038*	*0.035*	**0.146**	*0.147*	*0.130*
Hydroelectric Power (a)	**0.658**	**0.612**	**0.551**	**0.471**	*0.599*	*0.680*	*0.561*	*0.524*	*0.638*	*0.712*	*0.575*	*0.530*	**2.292**	*2.363*	*2.455*
Solar (b)	**0.259**	**0.394**	**0.384**	**0.245**	*0.313*	*0.492*	*0.494*	*0.335*	*0.443*	*0.680*	*0.697*	*0.443*	**1.283**	*1.634*	*2.262*
Waste Biomass (c)	**0.055**	**0.053**	**0.053**	**0.053**	*0.054*	*0.053*	*0.053*	*0.053*	*0.054*	*0.053*	*0.053*	*0.053*	**0.214**	*0.213*	*0.213*
Wood Biomass	**0.051**	**0.046**	**0.056**	**0.045**	*0.046*	*0.041*	*0.050*	*0.043*	*0.047*	*0.043*	*0.052*	*0.044*	**0.198**	*0.180*	*0.187*
Wind	**1.060**	**1.077**	**0.718**	**1.035**	*1.150*	*1.141*	*0.757*	*1.088*	*1.206*	*1.167*	*0.779*	*1.142*	**3.889**	*4.136*	*4.294*
Subtotal	**2.119**	**2.218**	**1.798**	**1.888**	*2.199*	*2.441*	*1.954*	*2.080*	*2.420*	*2.679*	*2.195*	*2.246*	**8.023**	*8.673*	*9.541*
Industrial Sector															
Biofuel Losses and Co-products (d)	**0.203**	**0.203**	**0.197**	**0.205**	*0.196*	*0.200*	*0.198*	*0.206*	*0.199*	*0.201*	*0.201*	*0.209*	**0.808**	*0.800*	*0.810*
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*
Hydroelectric Power (a)	**0.002**	**0.002**	**0.002**	**0.002**	*0.002*	*0.002*	*0.002*	*0.002*	*0.002*	*0.002*	*0.002*	*0.002*	**0.008**	*0.008*	*0.008*
Solar (b)	**0.008**	**0.011**	**0.012**	**0.008**	*0.008*	*0.012*	*0.012*	*0.009*	*0.009*	*0.013*	*0.013*	*0.009*	**0.039**	*0.041*	*0.045*
Waste Biomass (c)	**0.042**	**0.040**	**0.037**	**0.042**	*0.040*	*0.039*	*0.039*	*0.041*	*0.040*	*0.039*	*0.039*	*0.041*	**0.160**	*0.159*	*0.159*
Wood Biomass	**0.319**	**0.324**	**0.322**	**0.320**	*0.331*	*0.333*	*0.345*	*0.348*	*0.337*	*0.334*	*0.346*	*0.348*	**1.284**	*1.357*	*1.366*
Subtotal (e)	**0.580**	**0.586**	**0.576**	**0.583**	*0.583*	*0.592*	*0.603*	*0.611*	*0.594*	*0.596*	*0.607*	*0.616*	**2.324**	*2.390*	*2.413*
Commercial Sector															
Geothermal	**0.006**	**0.006**	**0.006**	**0.006**	*0.006*	*0.006*	*0.006*	*0.006*	*0.006*	*0.006*	*0.006*	*0.006*	**0.024**	*0.024*	*0.024*
Solar (b)	**0.033**	**0.048**	**0.048**	**0.032**	*0.038*	*0.056*	*0.057*	*0.040*	*0.046*	*0.066*	*0.067*	*0.047*	**0.162**	*0.189*	*0.226*
Waste Biomass (c)	**0.009**	**0.009**	**0.009**	**0.010**	*0.009*	*0.009*	*0.009*	*0.010*	*0.009*	*0.009*	*0.009*	*0.010*	**0.037**	*0.037*	*0.038*
Wood Biomass	**0.020**	**0.021**	**0.021**	**0.021**	*0.020*	*0.021*	*0.021*	*0.021*	*0.020*	*0.021*	*0.021*	*0.021*	**0.083**	*0.083*	*0.083*
Subtotal (e)	**0.077**	**0.092**	**0.093**	**0.076**	*0.081*	*0.100*	*0.101*	*0.084*	*0.089*	*0.110*	*0.112*	*0.091*	**0.338**	*0.365*	*0.402*
Residential Sector															
Geothermal	**0.010**	**0.010**	**0.010**	**0.010**	*0.010*	*0.010*	*0.010*	*0.010*	*0.010*	*0.010*	*0.010*	*0.010*	**0.040**	*0.040*	*0.040*
Solar (f)	**0.080**	**0.119**	**0.120**	**0.090**	*0.101*	*0.154*	*0.158*	*0.111*	*0.126*	*0.195*	*0.200*	*0.141*	**0.410**	*0.524*	*0.663*
Wood Biomass	**0.119**	**0.121**	**0.122**	**0.119**	*0.119*	*0.121*	*0.122*	*0.119*	*0.119*	*0.121*	*0.122*	*0.119*	**0.480**	*0.480*	*0.480*
Subtotal	**0.209**	**0.250**	**0.252**	**0.218**	*0.230*	*0.285*	*0.290*	*0.240*	*0.255*	*0.326*	*0.332*	*0.269*	**0.930**	*1.044*	*1.183*
Transportation Sector															
Biodiesel, Renewable Diesel, and Other (g)	**0.094**	**0.117**	**0.116**	**0.130**	*0.136*	*0.142*	*0.146*	*0.152*	*0.148*	*0.168*	*0.181*	*0.188*	**0.457**	*0.576*	*0.685*
Ethanol (g)	**0.259**	**0.281**	**0.279**	**0.283**	*0.258*	*0.281*	*0.281*	*0.284*	*0.264*	*0.281*	*0.282*	*0.285*	**1.102**	*1.104*	*1.112*
Subtotal	**0.353**	**0.397**	**0.395**	**0.413**	*0.388*	*0.423*	*0.427*	*0.436*	*0.413*	*0.448*	*0.462*	*0.474*	**1.558**	*1.675*	*1.797*
All Sectors Total															
Biodiesel, Renewable Diesel, and Other (g)	**0.094**	**0.117**	**0.116**	**0.130**	*0.136*	*0.142*	*0.146*	*0.152*	*0.148*	*0.168*	*0.181*	*0.188*	**0.457**	*0.576*	*0.685*
Biofuel Losses and Co-products (d)	**0.203**	**0.203**	**0.197**	**0.205**	*0.196*	*0.200*	*0.198*	*0.206*	*0.199*	*0.201*	*0.201*	*0.209*	**0.808**	*0.800*	*0.810*
Ethanol (f)	**0.271**	**0.293**	**0.292**	**0.291**	*0.272*	*0.294*	*0.294*	*0.297*	*0.276*	*0.293*	*0.294*	*0.298*	**1.147**	*1.156*	*1.162*
Geothermal	**0.053**	**0.052**	**0.054**	**0.053**	*0.055*	*0.051*	*0.055*	*0.054*	*0.049*	*0.042*	*0.055*	*0.052*	**0.212**	*0.215*	*0.198*
Hydroelectric Power (a)	**0.661**	**0.615**	**0.553**	**0.474**	*0.602*	*0.683*	*0.564*	*0.526*	*0.641*	*0.715*	*0.577*	*0.533*	**2.302**	*2.374*	*2.466*
Solar (b)(f)	**0.381**	**0.573**	**0.565**	**0.375**	*0.459*	*0.714*	*0.721*	*0.495*	*0.624*	*0.955*	*0.978*	*0.640*	**1.894**	*2.389*	*3.196*
Waste Biomass (c)	**0.106**	**0.102**	**0.099**	**0.105**	*0.103*	*0.101*	*0.101*	*0.103*	*0.103*	*0.102*	*0.101*	*0.103*	**0.412**	*0.409*	*0.409*
Wood Biomass	**0.509**	**0.511**	**0.521**	**0.505**	*0.516*	*0.515*	*0.539*	*0.530*	*0.524*	*0.519*	*0.542*	*0.532*	**2.046**	*2.100*	*2.116*
Wind	**1.060**	**1.077**	**0.718**	**1.035**	*1.150*	*1.141*	*0.757*	*1.088*	*1.206*	*1.167*	*0.779*	*1.142*	**3.889**	*4.136*	*4.294*
Total Consumption	**3.338**	**3.543**	**3.114**	**3.178**	*3.481*	*3.841*	*3.374*	*3.451*	*3.771*	*4.160*	*3.708*	*3.696*	**13.173**	*14.147*	*15.336*

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

(b) Solar consumption in the electric power, commercial, and industrial sectors includes energy produced from large scale (>1 MW) solar thermal and photovoltaic generators and small-scale (<1 MW) distrib

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

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

(e) Subtotals for the industrial and commercial sectors might not equal the sum of the components. The subtotal for the industrial sector includes ethanol consumption that is not shown separately. The subtotal for the commercial sector includes ethanol and hydroelectric consumption that are not shown separately.

(f) Solar consumption in the residential sector includes energy from small-scale (<1 MW) solar photovoltaic systems. Also includes solar heating consumption in all sectors.

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

- = no data available

Notes: EIA completed modeling and analysis for this report on February 2, 2022.

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*

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

Forecasts: EIA Short-Term Integrated Forecasting System.

Table 8b. U.S. Renewable Electricity Generation and Capacity

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Renewable Energy Electric Generating Capacity (megawatts, end of period)															
Electric Power Sector (a)															
Biomass	**6,083**	**6,083**	**6,019**	**5,987**	*5,984*	*6,020*	*6,020*	*6,001*	*6,001*	*6,020*	*6,020*	*6,020*	**5,987**	*6,001*	*6,020*
Waste	**3,648**	**3,649**	**3,585**	**3,552**	*3,549*	*3,585*	*3,585*	*3,583*	*3,583*	*3,602*	*3,602*	*3,602*	**3,552**	*3,583*	*3,602*
Wood	**2,435**	**2,435**	**2,435**	**2,435**	*2,435*	*2,435*	*2,435*	*2,419*	*2,419*	*2,419*	*2,419*	*2,419*	**2,435**	*2,419*	*2,419*
Conventional Hydroelectric	**79,645**	**79,649**	**79,649**	**79,500**	*79,699*	*79,713*	*79,739*	*79,766*	*79,766*	*79,772*	*79,772*	*79,774*	**79,500**	*79,766*	*79,774*
Geothermal	**2,523**	**2,540**	**2,578**	**2,578**	*2,603*	*2,603*	*2,603*	*2,603*	*2,603*	*2,603*	*2,603*	*2,603*	**2,578**	*2,603*	*2,603*
Large-Scale Solar (b)	**63,191**	**65,253**	**67,177**	**73,387**	*78,850*	*83,266*	*88,322*	*105,189*	*111,607*	*121,271*	*124,376*	*136,625*	**73,387**	*105,189*	*136,625*
Wind	**134,822**	**137,344**	**138,029**	**141,678**	*144,549*	*145,284*	*145,484*	*148,136*	*148,478*	*150,562*	*150,814*	*154,824*	**141,678**	*148,136*	*154,824*
Other Sectors (c)															
Biomass	**6,306**	**6,298**	**6,310**	**6,312**	*6,339*	*6,339*	*6,339*	*6,330*	*6,330*	*6,330*	*6,330*	*6,330*	**6,312**	*6,330*	*6,330*
Waste	**817**	**817**	**817**	**817**	*817*	*817*	*817*	*817*	*817*	*817*	*817*	*817*	**817**	*817*	*817*
Wood	**5,489**	**5,481**	**5,493**	**5,495**	*5,522*	*5,522*	*5,522*	*5,513*	*5,513*	*5,513*	*5,513*	*5,513*	**5,495**	*5,513*	*5,513*
Conventional Hydroelectric	**299**	**302**	**302**	**299**	*299*	*300*	*298*	*298*	*298*	*298*	*298*	*298*	**299**	*298*	*298*
Large-Scale Solar (b)	**559**	**569**	**571**	**583**	*588*	*597*	*643*	*643*	*643*	*643*	*643*	*643*	**583**	*643*	*643*
Small-Scale Solar (d)	**34,700**	**36,348**	**38,092**	**40,302**	*42,944*	*45,680*	*48,552*	*51,563*	*54,726*	*58,047*	*61,537*	*65,207*	**40,302**	*51,563*	*65,207*
Residential Sector	**22,293**	**23,588**	**24,993**	**26,837**	*28,916*	*31,069*	*33,333*	*35,710*	*38,210*	*40,840*	*43,611*	*46,531*	**26,837**	*35,710*	*46,531*
Commercial Sector	**10,175**	**10,502**	**10,807**	**11,122**	*11,624*	*12,144*	*12,689*	*13,259*	*13,857*	*14,482*	*15,133*	*15,814*	**11,122**	*13,259*	*15,814*
Industrial Sector	**2,232**	**2,257**	**2,291**	**2,343**	*2,404*	*2,466*	*2,529*	*2,594*	*2,659*	*2,726*	*2,793*	*2,862*	**2,343**	*2,594*	*2,862*
Wind	**125**	**125**	**125**	**125**	*125*	*125*	*125*	*125*	*125*	*125*	*125*	*125*	**125**	*125*	*125*
Renewable Electricity Generation (billion kilowatthours)															
Electric Power Sector (a)															
Biomass	**6.6**	**6.5**	**7.1**	**6.4**	*6.5*	*6.2*	*6.7*	*6.2*	*6.6*	*6.3*	*6.9*	*6.3*	**26.6**	*25.6*	*26.0*
Waste	**3.5**	**3.6**	**3.6**	**3.5**	*3.6*	*3.5*	*3.6*	*3.5*	*3.6*	*3.5*	*3.5*	*3.5*	**14.2**	*14.2*	*14.1*
Wood	**3.1**	**2.9**	**3.6**	**2.9**	*2.9*	*2.6*	*3.2*	*2.7*	*3.0*	*2.7*	*3.3*	*2.8*	**12.5**	*11.4*	*11.9*
Conventional Hydroelectric	**74.4**	**69.2**	**62.3**	**53.2**	*67.2*	*76.3*	*63.0*	*58.8*	*71.7*	*79.9*	*64.6*	*59.6*	**259.1**	*265.4*	*275.7*
Geothermal	**4.1**	**4.0**	**4.2**	**4.2**	*4.3*	*3.9*	*4.3*	*4.2*	*3.7*	*2.8*	*4.3*	*3.9*	**16.5**	*16.6*	*14.7*
Large-Scale Solar (b)	**29.1**	**44.3**	**43.2**	**27.5**	*35.1*	*55.3*	*55.5*	*37.6*	*49.7*	*76.3*	*78.3*	*49.8*	**144.1**	*183.5*	*254.1*
Wind	**119.0**	**121.0**	**80.6**	**116.2**	*129.1*	*128.1*	*85.0*	*122.2*	*135.4*	*131.0*	*87.5*	*128.2*	**436.8**	*464.4*	*482.2*
Other Sectors (c)															
Biomass	**6.7**	**6.8**	**6.8**	**6.6**	*6.7*	*6.8*	*6.8*	*6.6*	*6.8*	*6.8*	*6.8*	*6.6*	**26.9**	*26.9*	*27.0*
Waste	**0.7**	**0.7**	**0.7**	**0.7**	*0.7*	*0.7*	*0.7*	*0.7*	*0.7*	*0.7*	*0.7*	*0.7*	**2.8**	*2.8*	*2.8*
Wood	**6.0**	**6.1**	**6.2**	**5.8**	*6.0*	*6.1*	*6.2*	*5.8*	*6.1*	*6.1*	*6.2*	*5.8*	**24.1**	*24.1*	*24.1*
Conventional Hydroelectric	**0.3**	**0.3**	**0.3**	**0.3**	*0.3*	*0.3*	*0.3*	*0.3*	*0.3*	*0.3*	*0.3*	*0.3*	**1.2**	*1.2*	*1.2*
Large-Scale Solar (b)	**0.2**	**0.3**	**0.3**	**0.2**	*0.2*	*0.3*	*0.3*	*0.2*	*0.2*	*0.3*	*0.3*	*0.2*	**1.0**	*1.0*	*1.0*
Small-Scale Solar (d)	**12.0**	**17.7**	**17.8**	**12.9**	*14.8*	*22.5*	*23.0*	*16.2*	*18.6*	*28.4*	*29.0*	*20.4*	**60.5**	*76.4*	*96.4*
Residential Sector	**7.6**	**11.3**	**11.4**	**8.6**	*9.8*	*15.1*	*15.5*	*11.0*	*12.7*	*19.7*	*20.3*	*14.3*	**38.9**	*51.5*	*67.0*
Commercial Sector	**3.6**	**5.2**	**5.2**	**3.5**	*4.1*	*6.0*	*6.1*	*4.2*	*4.9*	*7.2*	*7.3*	*5.0*	**17.5**	*20.5*	*24.4*
Industrial Sector	**0.8**	**1.2**	**1.2**	**0.8**	*0.9*	*1.3*	*1.3*	*0.9*	*1.0*	*1.5*	*1.5*	*1.0*	**4.1**	*4.5*	*5.0*
Wind	**0.1**	**0.1**	**0.1**	**0.1**	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	**0.3**	*0.3*	*0.3*

(a) Power plants larger than or equal to one megawatt in size that are operated by electric utilities or independent power producers.

(b) Solar thermal and photovoltaic generating units at power plants larger than or equal to 1 megawatt.

(c) Businesses or individual households not primarily engaged in electric power production for sale to the public, whose generating capacity is at least one megawatt (except for small-scale solar photovoltaic data, which consists of systems smaller than 1 megawatt).

(d) Solar photovoltaic systems smaller than one megawatt.

- = no data available

Notes: EIA completed modeling and analysis for this report on February 2, 2022.

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 Electric Power Monthly, DOE/EIA-0226.

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

Forecasts: EIA Short-Term Integrated Forecasting System.

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

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Macroeconomic															
Real Gross Domestic Product															
(billion chained 2012 dollars - SAAR)	**19,924**	**19,895**	**20,055**	**20,170**	*20,103*	*20,090*	*20,184*	*20,304*	*20,412*	*20,532*	*20,650*	*20,765*	**20,011**	*20,170*	*20,590*
Real Personal Consumption Expend.															
(billion chained 2012 dollars - SAAR)	**14,028**	**14,099**	**14,179**	**14,303**	*14,337*	*14,364*	*14,422*	*14,479*	*14,531*	*14,598*	*14,679*	*14,756*	**14,152**	*14,401*	*14,641*
Real Private Fixed Investment															
(billion chained 2012 dollars - SAAR)	**3,629**	**3,582**	**3,550**	**3,500**	*3,441*	*3,401*	*3,403*	*3,431*	*3,465*	*3,501*	*3,536*	*3,571*	**3,565**	*3,419*	*3,518*
Business Inventory Change															
(billion chained 2012 dollars - SAAR)	**257**	**145**	**71**	**130**	*54*	*1*	*11*	*35*	*59*	*79*	*90*	*97*	**151**	*25*	*81*
Real Government Expenditures															
(billion chained 2012 dollars - SAAR)	**3,393**	**3,379**	**3,411**	**3,422**	*3,450*	*3,458*	*3,466*	*3,474*	*3,482*	*3,490*	*3,496*	*3,504*	**3,401**	*3,462*	*3,493*
Real Exports of Goods & Services															
(billion chained 2012 dollars - SAAR)	**2,437**	**2,517**	**2,604**	**2,570**	*2,565*	*2,590*	*2,629*	*2,670*	*2,701*	*2,731*	*2,764*	*2,794*	**2,532**	*2,614*	*2,748*
Real Imports of Goods & Services															
(billion chained 2012 dollars - SAAR)	**3,926**	**3,947**	**3,873**	**3,861**	*3,880*	*3,865*	*3,882*	*3,914*	*3,953*	*3,993*	*4,042*	*4,087*	**3,902**	*3,885*	*4,019*
Real Disposable Personal Income															
(billion chained 2012 dollars - SAAR)	**15,109**	**15,022**	**15,059**	**15,171**	*15,400*	*15,461*	*15,612*	*15,769*	*15,938*	*16,113*	*16,249*	*16,366*	**15,090**	*15,560*	*16,166*
Non-Farm Employment															
(millions)	**150.4**	**151.6**	**152.7**	**153.5**	*154.0*	*153.4*	*152.9*	*152.6*	*152.7*	*153.1*	*153.5*	*153.8*	**152.0**	*153.2*	*153.3*
Civilian Unemployment Rate															
(percent)	**3.8**	**3.6**	**3.6**	**3.6**	*3.7*	*4.3*	*4.7*	*4.9*	*4.8*	*4.6*	*4.4*	*4.2*	**3.6**	*4.4*	*4.5*
Housing Starts															
(millions - SAAR)	**1.72**	**1.65**	**1.45**	**1.40**	*1.26*	*1.19*	*1.19*	*1.19*	*1.23*	*1.27*	*1.31*	*1.38*	**1.56**	*1.21*	*1.30*
Industrial Production Indices (Index, 2017=100)															
Total Industrial Production	**102.9**	**104.1**	**104.6**	**104.1**	*103.9*	*103.1*	*103.0*	*103.4*	*103.8*	*104.3*	*105.0*	*105.6*	**103.9**	*103.3*	*104.7*
Manufacturing	**101.5**	**102.4**	**102.3**	**101.6**	*101.1*	*100.6*	*101.0*	*101.9*	*102.6*	*103.4*	*104.4*	*105.2*	**102.0**	*101.1*	*103.9*
Food	**105.5**	**105.1**	**104.6**	**105.2**	*105.4*	*105.6*	*105.8*	*106.0*	*106.2*	*106.4*	*106.9*	*107.3*	**105.1**	*105.7*	*106.7*
Paper	**96.4**	**97.3**	**92.8**	**89.0**	*88.3*	*88.4*	*88.1*	*88.3*	*88.2*	*88.3*	*88.5*	*88.8*	**93.9**	*88.3*	*88.5*
Petroleum and Coal Products	**94.2**	**94.2**	**95.7**	**95.5**	*95.0*	*94.9*	*94.7*	*94.7*	*94.4*	*94.3*	*94.5*	*94.6*	**94.9**	*94.8*	*94.5*
Chemicals	**102.4**	**103.0**	**103.0**	**102.3**	*102.0*	*102.5*	*102.3*	*102.8*	*103.2*	*103.7*	*104.3*	*105.0*	**102.7**	*102.4*	*104.0*
Nonmetallic Mineral Products	**102.9**	**103.2**	**104.7**	**105.9**	*104.0*	*102.9*	*102.5*	*102.7*	*103.2*	*103.9*	*104.6*	*105.3*	**104.2**	*103.0*	*104.2*
Primary Metals	**95.6**	**97.4**	**96.9**	**94.9**	*94.1*	*94.8*	*94.0*	*95.0*	*94.7*	*95.0*	*96.0*	*96.7*	**96.2**	*94.5*	*95.6*
Coal-weighted Manufacturing (a)	**96.2**	**96.7**	**96.4**	**95.5**	*94.6*	*94.7*	*94.1*	*94.5*	*94.5*	*94.7*	*95.3*	*95.7*	**96.2**	*94.5*	*95.1*
Distillate-weighted Manufacturing (a)	**99.8**	**100.3**	**100.1**	**99.3**	*98.1*	*97.6*	*97.4*	*97.8*	*98.2*	*98.6*	*99.3*	*99.9*	**99.9**	*97.7*	*99.0*
Electricity-weighted Manufacturing (a)	**98.0**	**98.6**	**97.9**	**96.6**	*96.0*	*96.3*	*96.1*	*96.5*	*96.7*	*97.1*	*97.7*	*98.2*	**97.8**	*96.2*	*97.4*
Natural Gas-weighted Manufacturing (a)	**95.2**	**95.4**	**94.3**	**92.6**	*92.1*	*92.4*	*92.0*	*92.3*	*92.3*	*92.6*	*93.1*	*93.5*	**94.4**	*92.2*	*92.9*
Price Indexes															
Consumer Price Index (all urban consumers)															
(index, 1982-1984=1.00)	**2.85**	**2.92**	**2.96**	**2.98**	*3.00*	*3.01*	*3.03*	*3.05*	*3.06*	*3.07*	*3.08*	*3.09*	**2.93**	*3.02*	*3.08*
Producer Price Index: All Commodities															
(index, 1982=1.00)	**2.53**	**2.73**	**2.70**	**2.59**	*2.51*	*2.46*	*2.44*	*2.43*	*2.43*	*2.39*	*2.39*	*2.40*	**2.64**	*2.46*	*2.40*
Producer Price Index: Petroleum															
(index, 1982=1.00)	**3.16**	**4.21**	**3.74**	**3.43**	*2.81*	*2.75*	*2.61*	*2.52*	*2.45*	*2.41*	*2.35*	*2.29*	**3.63**	*2.67*	*2.38*
GDP Implicit Price Deflator															
(index, 2012=100)	**124.2**	**126.9**	**128.3**	**129.4**	*130.2*	*131.0*	*131.7*	*132.5*	*133.2*	*133.7*	*134.2*	*134.9*	**127.2**	*131.4*	*134.0*
Miscellaneous															
Vehicle Miles Traveled (b)															
(million miles/day)	**8,372**	**9,164**	**9,319**	**8,869**	*8,417*	*9,323*	*9,448*	*9,036*	*8,579*	*9,401*	*9,558*	*9,192*	**8,933**	*9,059*	*9,183*
Air Travel Capacity															
(Available ton-miles/day, thousands)	**656**	**686**	**692**	**714**	*655*	*697*	*707*	*703*	*650*	*689*	*716*	*695*	**687**	*691*	*688*
Aircraft Utilization															
(Revenue ton-miles/day, thousands)	**356**	**419**	**422**	**398**	*374*	*428*	*423*	*410*	*376*	*424*	*427*	*418*	**399**	*409*	*411*
Airline Ticket Price Index															
(index, 1982-1984=100)	**225.6**	**328.7**	**293.1**	**285.2**	*232.9*	*295.0*	*289.6*	*299.1*	*278.4*	*324.9*	*304.2*	*302.6*	**283.1**	*279.1*	*302.5*
Raw Steel Production															
(million short tons per day)	**0.253**	**0.253**	**0.247**	**0.235**	*0.237*	*0.235*	*0.235*	*0.239*	*0.245*	*0.241*	*0.244*	*0.247*	**0.247**	*0.236*	*0.244*
Carbon Dioxide (CO2) Emissions (million metric tons)															
Petroleum	**562**	**564**	**576**	**570**	*545*	*564*	*568*	*571*	*561*	*567*	*575*	*576*	**2,272**	*2,248*	*2,279*
Natural Gas	**511**	**375**	**403**	**456**	*492*	*369*	*399*	*459*	*511*	*357*	*387*	*451*	**1,745**	*1,720*	*1,706*
Coal	**245**	**216**	**266**	**215**	*193*	*182*	*239*	*183*	*204*	*174*	*234*	*185*	**942**	*797*	*798*
Total Energy (c)	**1,321**	**1,157**	**1,248**	**1,244**	*1,233*	*1,118*	*1,209*	*1,216*	*1,278*	*1,101*	*1,199*	*1,215*	**4,971**	*4,776*	*4,794*

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

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

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

- = no data available

SAAR = Seasonally-adjusted annual rate

Notes: EIA completed modeling and analysis for this report on February 2, 2022.

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

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

Forecasts: EIA Short-Term Integrated Forecasting System. U.S. macroeconomic forecasts are based on the S&P Global model of the U.S. Economy.

Table 9b. U.S. Regional Macroeconomic Data

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Real Gross State Product (Billion $2012)															
New England	**1,032**	**1,024**	**1,031**	**1,037**	*1,033*	*1,032*	*1,036*	*1,041*	*1,046*	*1,051*	*1,056*	*1,061*	**1,031**	*1,036*	*1,054*
Middle Atlantic	**2,858**	**2,858**	**2,879**	**2,892**	*2,879*	*2,874*	*2,887*	*2,904*	*2,919*	*2,934*	*2,949*	*2,964*	**2,872**	*2,886*	*2,941*
E. N. Central	**2,596**	**2,583**	**2,592**	**2,602**	*2,593*	*2,594*	*2,604*	*2,618*	*2,628*	*2,641*	*2,653*	*2,664*	**2,593**	*2,602*	*2,647*
W. N. Central	**1,220**	**1,215**	**1,220**	**1,228**	*1,224*	*1,224*	*1,231*	*1,239*	*1,245*	*1,252*	*1,259*	*1,265*	**1,221**	*1,229*	*1,255*
S. Atlantic	**3,578**	**3,578**	**3,601**	**3,623**	*3,609*	*3,606*	*3,625*	*3,651*	*3,671*	*3,694*	*3,716*	*3,739*	**3,595**	*3,623*	*3,705*
E. S. Central	**884**	**883**	**887**	**892**	*888*	*888*	*891*	*896*	*899*	*903*	*907*	*912*	**886**	*891*	*905*
W. S. Central	**2,377**	**2,383**	**2,424**	**2,447**	*2,442*	*2,442*	*2,454*	*2,470*	*2,487*	*2,507*	*2,526*	*2,544*	**2,408**	*2,452*	*2,516*
Mountain	**1,359**	**1,354**	**1,366**	**1,375**	*1,371*	*1,370*	*1,375*	*1,384*	*1,392*	*1,402*	*1,411*	*1,421*	**1,363**	*1,375*	*1,407*
Pacific	**3,805**	**3,802**	**3,838**	**3,858**	*3,845*	*3,843*	*3,863*	*3,883*	*3,904*	*3,927*	*3,949*	*3,972*	**3,826**	*3,859*	*3,938*
Industrial Output, Manufacturing (Index, Year 2017=100)															
New England	**99.3**	**100.0**	**99.7**	**98.7**	*98.1*	*97.6*	*98.1*	*99.0*	*99.8*	*100.6*	*101.4*	*102.2*	**99.4**	*98.2*	*101.0*
Middle Atlantic	**96.6**	**97.3**	**96.9**	**96.2**	*95.5*	*94.9*	*95.1*	*95.8*	*96.4*	*97.0*	*97.7*	*98.4*	**96.8**	*95.3*	*97.4*
E. N. Central	**98.9**	**99.3**	**98.9**	**98.3**	*97.9*	*97.7*	*98.0*	*98.6*	*99.1*	*99.8*	*100.6*	*101.3*	**98.9**	*98.0*	*100.2*
W. N. Central	**102.0**	**102.5**	**102.4**	**102.0**	*101.4*	*100.9*	*101.3*	*102.3*	*103.1*	*103.9*	*104.9*	*105.7*	**102.2**	*101.5*	*104.4*
S. Atlantic	**103.4**	**104.5**	**104.7**	**103.8**	*103.3*	*102.7*	*102.9*	*103.9*	*104.7*	*105.5*	*106.5*	*107.4*	**104.1**	*103.2*	*106.1*
E. S. Central	**100.9**	**101.2**	**100.9**	**100.3**	*99.7*	*99.3*	*99.6*	*100.2*	*100.8*	*101.6*	*102.5*	*103.2*	**100.8**	*99.7*	*102.0*
W. S. Central	**103.5**	**104.9**	**105.4**	**104.8**	*104.2*	*103.9*	*104.4*	*105.4*	*106.2*	*107.0*	*107.9*	*108.8*	**104.7**	*104.5*	*107.5*
Mountain	**112.7**	**113.8**	**114.3**	**113.7**	*113.0*	*112.5*	*113.0*	*114.0*	*114.8*	*115.7*	*116.7*	*117.6*	**113.6**	*113.1*	*116.2*
Pacific	**97.8**	**98.6**	**98.4**	**97.7**	*97.3*	*96.8*	*97.3*	*98.3*	*99.3*	*100.2*	*101.3*	*102.2*	**98.1**	*97.4*	*100.7*
Real Personal Income (Billion $2012)															
New England	**949**	**939**	**942**	**949**	*951*	*951*	*954*	*959*	*965*	*972*	*979*	*984*	**945**	*954*	*975*
Middle Atlantic	**2,414**	**2,393**	**2,394**	**2,401**	*2,419*	*2,418*	*2,427*	*2,437*	*2,455*	*2,474*	*2,489*	*2,503*	**2,400**	*2,425*	*2,480*
E. N. Central	**2,448**	**2,430**	**2,426**	**2,435**	*2,451*	*2,452*	*2,461*	*2,473*	*2,493*	*2,514*	*2,532*	*2,547*	**2,435**	*2,459*	*2,522*
W. N. Central	**1,165**	**1,161**	**1,163**	**1,166**	*1,176*	*1,178*	*1,183*	*1,190*	*1,200*	*1,211*	*1,219*	*1,227*	**1,164**	*1,182*	*1,214*
S. Atlantic	**3,395**	**3,384**	**3,398**	**3,410**	*3,445*	*3,449*	*3,468*	*3,492*	*3,527*	*3,562*	*3,594*	*3,621*	**3,397**	*3,463*	*3,576*
E. S. Central	**943**	**937**	**935**	**935**	*943*	*942*	*945*	*949*	*956*	*963*	*970*	*976*	**937**	*945*	*966*
W. S. Central	**2,085**	**2,085**	**2,094**	**2,103**	*2,122*	*2,123*	*2,134*	*2,149*	*2,170*	*2,192*	*2,211*	*2,228*	**2,092**	*2,132*	*2,200*
Mountain	**1,307**	**1,306**	**1,320**	**1,320**	*1,326*	*1,326*	*1,331*	*1,338*	*1,349*	*1,361*	*1,372*	*1,382*	**1,313**	*1,330*	*1,366*
Pacific	**2,956**	**2,931**	**2,936**	**3,003**	*2,980*	*2,985*	*3,000*	*3,016*	*3,041*	*3,069*	*3,093*	*3,115*	**2,957**	*2,995*	*3,080*
Households (Thousands)															
New England	**6,101**	**6,100**	**6,098**	**6,100**	*6,113*	*6,123*	*6,131*	*6,138*	*6,146*	*6,153*	*6,160*	*6,166*	**6,100**	*6,138*	*6,166*
Middle Atlantic	**16,123**	**16,119**	**16,108**	**16,110**	*16,134*	*16,155*	*16,170*	*16,188*	*16,207*	*16,225*	*16,243*	*16,263*	**16,110**	*16,188*	*16,263*
E. N. Central	**19,057**	**19,063**	**19,063**	**19,074**	*19,101*	*19,129*	*19,157*	*19,185*	*19,211*	*19,237*	*19,261*	*19,285*	**19,074**	*19,185*	*19,285*
W. N. Central	**8,655**	**8,668**	**8,679**	**8,692**	*8,716*	*8,740*	*8,762*	*8,784*	*8,806*	*8,826*	*8,844*	*8,862*	**8,692**	*8,784*	*8,862*
S. Atlantic	**27,106**	**27,219**	**27,316**	**27,397**	*27,501*	*27,599*	*27,683*	*27,763*	*27,838*	*27,907*	*27,974*	*28,037*	**27,397**	*27,763*	*28,037*
E. S. Central	**7,826**	**7,847**	**7,864**	**7,886**	*7,917*	*7,946*	*7,972*	*7,999*	*8,024*	*8,047*	*8,069*	*8,090*	**7,886**	*7,999*	*8,090*
W. S. Central	**15,858**	**15,922**	**15,979**	**16,028**	*16,090*	*16,150*	*16,207*	*16,262*	*16,314*	*16,364*	*16,418*	*16,470*	**16,028**	*16,262*	*16,470*
Mountain	**9,792**	**9,826**	**9,858**	**9,883**	*9,925*	*9,965*	*10,002*	*10,039*	*10,075*	*10,112*	*10,147*	*10,184*	**9,883**	*10,039*	*10,184*
Pacific	**19,052**	**19,064**	**19,067**	**19,072**	*19,108*	*19,138*	*19,164*	*19,191*	*19,217*	*19,242*	*19,267*	*19,295*	**19,072**	*19,191*	*19,295*
Total Non-farm Employment (Millions)															
New England	**7.4**	**7.4**	**7.5**	**7.5**	*7.5*	*7.5*	*7.5*	*7.5*	*7.5*	*7.5*	*7.5*	*7.5*	**7.4**	*7.5*	*7.5*
Middle Atlantic	**19.4**	**19.6**	**19.7**	**19.8**	*19.9*	*19.8*	*19.7*	*19.7*	*19.7*	*19.7*	*19.7*	*19.8*	**19.6**	*19.7*	*19.7*
E. N. Central	**21.8**	**21.9**	**22.0**	**22.1**	*22.2*	*22.1*	*22.0*	*22.0*	*22.0*	*22.0*	*22.1*	*22.1*	**22.0**	*22.1*	*22.0*
W. N. Central	**10.6**	**10.7**	**10.7**	**10.8**	*10.8*	*10.8*	*10.8*	*10.8*	*10.8*	*10.8*	*10.8*	*10.8*	**10.7**	*10.8*	*10.8*
S. Atlantic	**29.5**	**29.8**	**30.1**	**30.2**	*30.3*	*30.2*	*30.1*	*30.0*	*30.1*	*30.2*	*30.3*	*30.4*	**29.9**	*30.1*	*30.2*
E. S. Central	**8.4**	**8.4**	**8.4**	**8.5**	*8.5*	*8.5*	*8.5*	*8.4*	*8.4*	*8.5*	*8.5*	*8.5*	**8.4**	*8.5*	*8.5*
W. S. Central	**18.1**	**18.3**	**18.5**	**18.6**	*18.7*	*18.6*	*18.5*	*18.5*	*18.5*	*18.6*	*18.7*	*18.7*	**18.4**	*18.6*	*18.6*
Mountain	**11.4**	**11.5**	**11.6**	**11.6**	*11.7*	*11.6*	*11.6*	*11.5*	*11.6*	*11.6*	*11.6*	*11.7*	**11.5**	*11.6*	*11.6*
Pacific	**23.6**	**23.9**	**24.1**	**24.2**	*24.3*	*24.2*	*24.1*	*24.0*	*24.0*	*24.1*	*24.1*	*24.2*	**23.9**	*24.1*	*24.1*

- = no data available

Notes: EIA completed modeling and analysis for this report on February 2, 2022.

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.

Forecasts: U.S. macroeconomic forecasts are based on the IHS Markit model of the U.S. Economy.

Table 9c. U.S. Regional Weather Data

U.S. Energy Information Administration | Short-Term Energy Outlook - February 2023

	2022				2023				2024				Year		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2022	2023	2024
Heating Degree Days															
New England	**3,141**	**787**	**115**	**1,989**	*2,901*	*865*	*136*	*2,210*	*3,128*	*853*	*137*	*2,210*	**6,032**	*6,113*	*6,327*
Middle Atlantic	**2,942**	**672**	**73**	**1,965**	*2,647*	*694*	*86*	*2,023*	*2,877*	*678*	*85*	*2,022*	**5,652**	*5,448*	*5,663*
E. N. Central	**3,268**	**753**	**100**	**2,225**	*2,917*	*734*	*122*	*2,251*	*3,061*	*714*	*122*	*2,251*	**6,345**	*6,025*	*6,148*
W. N. Central	**3,484**	**793**	**111**	**2,511**	*3,129*	*704*	*156*	*2,449*	*3,190*	*703*	*156*	*2,450*	**6,899**	*6,439*	*6,499*
South Atlantic	**1,338**	**188**	**13**	**975**	*1,213*	*192*	*13*	*972*	*1,405*	*193*	*13*	*970*	**2,514**	*2,391*	*2,581*
E. S. Central	**1,822**	**248**	**22**	**1,326**	*1,587*	*248*	*20*	*1,307*	*1,793*	*253*	*20*	*1,307*	**3,419**	*3,162*	*3,373*
W. S. Central	**1,341**	**56**	**2**	**799**	*1,013*	*77*	*5*	*828*	*1,195*	*92*	*5*	*827*	**2,198**	*1,923*	*2,119*
Mountain	**2,308**	**737**	**85**	**2,004**	*2,341*	*698*	*148*	*1,880*	*2,266*	*710*	*148*	*1,879*	**5,134**	*5,067*	*5,003*
Pacific	**1,426**	**607**	**50**	**1,281**	*1,577*	*607*	*91*	*1,231*	*1,544*	*607*	*91*	*1,233*	**3,364**	*3,506*	*3,475*
U.S. Average	**2,152**	**491**	**54**	**1,547**	*1,974*	*488*	*74*	*1,546*	*2,098*	*485*	*74*	*1,544*	**4,245**	*4,083*	*4,201*
Heating Degree Days, Prior 10-year Average															
New England	**3,100**	**853**	**107**	**2,104**	*3,151*	*859*	*106*	*2,095*	*3,130*	*861*	*103*	*2,086*	**6,164**	*6,211*	*6,179*
Middle Atlantic	**2,887**	**684**	**71**	**1,908**	*2,945*	*692*	*70*	*1,911*	*2,914*	*692*	*66*	*1,907*	**5,551**	*5,619*	*5,579*
E. N. Central	**3,133**	**727**	**97**	**2,162**	*3,215*	*741*	*93*	*2,168*	*3,178*	*739*	*94*	*2,148*	**6,119**	*6,218*	*6,158*
W. N. Central	**3,219**	**726**	**125**	**2,357**	*3,317*	*754*	*121*	*2,372*	*3,289*	*734*	*126*	*2,345*	**6,427**	*6,565*	*6,495*
South Atlantic	**1,380**	**187**	**11**	**905**	*1,401*	*190*	*10*	*903*	*1,370*	*188*	*10*	*902*	**2,483**	*2,504*	*2,470*
E. S. Central	**1,763**	**243**	**15**	**1,228**	*1,809*	*251*	*14*	*1,229*	*1,775*	*247*	*15*	*1,218*	**3,249**	*3,303*	*3,254*
W. S. Central	**1,145**	**93**	**3**	**754**	*1,189*	*95*	*3*	*763*	*1,173*	*89*	*3*	*744*	**1,995**	*2,049*	*2,009*
Mountain	**2,181**	**685**	**132**	**1,818**	*2,202*	*701*	*129*	*1,840*	*2,193*	*697*	*131*	*1,828*	**4,816**	*4,871*	*4,849*
Pacific	**1,455**	**523**	**79**	**1,136**	*1,442*	*523*	*76*	*1,147*	*1,444*	*534*	*76*	*1,147*	**3,193**	*3,188*	*3,202*
U.S. Average	**2,096**	**479**	**62**	**1,473**	*2,133*	*486*	*60*	*1,477*	*2,109*	*484*	*60*	*1,466*	**4,110**	*4,157*	*4,118*
Cooling Degree Days															
New England	**0**	**80**	**559**	**0**	*0*	*85*	*415*	*1*	*0*	*85*	*415*	*1*	**639**	*501*	*501*
Middle Atlantic	**0**	**153**	**683**	**1**	*0*	*152*	*540*	*4*	*0*	*152*	*540*	*4*	**837**	*696*	*696*
E. N. Central	**1**	**256**	**555**	**2**	*0*	*214*	*539*	*7*	*0*	*215*	*539*	*7*	**813**	*761*	*762*
W. N. Central	**3**	**305**	**734**	**8**	*3*	*266*	*677*	*10*	*3*	*266*	*677*	*10*	**1,050**	*956*	*956*
South Atlantic	**158**	**716**	**1,200**	**233**	*138*	*650*	*1,157*	*233*	*116*	*644*	*1,158*	*234*	**2,306**	*2,178*	*2,153*
E. S. Central	**28**	**599**	**1,067**	**37**	*25*	*511*	*1,047*	*66*	*28*	*507*	*1,047*	*66*	**1,731**	*1,649*	*1,647*
W. S. Central	**57**	**1,095**	**1,662**	**170**	*98*	*898*	*1,499*	*191*	*82*	*875*	*1,499*	*192*	**2,984**	*2,687*	*2,648*
Mountain	**15**	**465**	**1,021**	**67**	*15*	*423*	*917*	*71*	*15*	*421*	*918*	*71*	**1,568**	*1,426*	*1,426*
Pacific	**31**	**214**	**767**	**79**	*24*	*165*	*577*	*62*	*25*	*164*	*576*	*62*	**1,091**	*827*	*827*
U.S. Average	**47**	**466**	**952**	**90**	*47*	*405*	*855*	*93*	*41*	*401*	*857*	*94*	**1,554**	*1,400*	*1,393*
Cooling Degree Days, Prior 10-year Average															
New England	**0**	**87**	**471**	**2**	*0*	*87*	*479*	*2*	*0*	*86*	*476*	*2*	**560**	*568*	*564*
Middle Atlantic	**0**	**162**	**608**	**8**	*0*	*159*	*614*	*8*	*0*	*159*	*616*	*8*	**779**	*781*	*783*
E. N. Central	**3**	**238**	**571**	**9**	*1*	*234*	*561*	*10*	*1*	*234*	*568*	*10*	**821**	*805*	*813*
W. N. Central	**7**	**299**	**681**	**11**	*4*	*292*	*674*	*12*	*4*	*295*	*677*	*12*	**999**	*982*	*988*
South Atlantic	**147**	**668**	**1,189**	**269**	*144*	*676*	*1,193*	*273*	*147*	*681*	*1,204*	*271*	**2,272**	*2,286*	*2,304*
E. S. Central	**44**	**518**	**1,057**	**83**	*36*	*521*	*1,059*	*83*	*37*	*526*	*1,072*	*84*	**1,702**	*1,699*	*1,720*
W. S. Central	**113**	**853**	**1,536**	**224**	*101*	*861*	*1,548*	*223*	*104*	*873*	*1,546*	*225*	**2,726**	*2,733*	*2,748*
Mountain	**23**	**458**	**945**	**84**	*23*	*455*	*951*	*82*	*22*	*450*	*952*	*84*	**1,511**	*1,511*	*1,508*
Pacific	**31**	**208**	**665**	**86**	*32*	*213*	*676*	*86*	*31*	*208*	*674*	*87*	**989**	*1,006*	*1,000*
U.S. Average	**53**	**412**	**889**	**109**	*50*	*415*	*894*	*110*	*51*	*418*	*899*	*110*	**1,463**	*1,469*	*1,479*

- = no data available

Notes: EIA completed modeling and analysis for this report on February 2, 2022.

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

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

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).

Forecasts: Based on forecasts by the NOAA Climate Prediction Center (http://www.cpc.ncep.noaa.gov/pacdir/DDdir/NHOME3.shtml).

Appendix to the February 2022 *Short-Term Energy Outlook*

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

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

This appendix is published in the *Short-Term Energy Outlook* in even numbered months.

Table a1. Summary of Estimated Petroleum and Other Liquids Quantities

	Dec 2022	Jan 2023	Dec 2022 – Jan 2023 Average	Dec 2021 – Jan 2022 Average	2019 – 2021 Average
Global Petroleum and Other Liquids (million barrels per day)					
Global Petroleum and Other Liquids Production (a)	101.3	101.0	101.1	98.1	96.6
Global Petroleum and Other Liquids Consumption (b)	100.7	98.3	99.5	99.0	96.5
Biofuels Production (c)	2.3	2.3	2.3	2.3	2.7
Biofuels Consumption (c)	2.6	2.6	2.6	2.6	2.6
Iran Liquid Fuels Production	3.8	3.8	3.8	3.5	3.2
Iran Liquid Fuels Consumption	2.3	2.6	2.4	2.0	2.0
Petroleum and Petroleum Products Produced and Consumed in Countries Other Than Iran (million barrels per day)					
Production (d)	95.2	94.9	95.0	92.3	90.7
Consumption (d)	95.9	93.2	94.6	94.4	92.0
Production minus Consumption	-0.7	1.7	0.5	-2.1	-1.3
World Inventory Net Withdrawals Including Iran	-0.5	-2.6	-1.6	0.9	-0.1
Estimated OECD Inventory Level (e) (million barrels)	2,783	2,831	2,807	2,643	2,946
Surplus Production Capacity (million barrels per day)					
OPEC Surplus Crude Oil Production Capacity (f)	2.4	3.3	2.9	3.5	4.3

Note: The term "petroleum and other liquids" encompasses crude oil, lease condensate, natural gas liquids, biofuels, coal-to-liquids, gas-to-liquids, and refinery processing gains, which are important to consider in concert due to the inter-related supply, demand, and price dynamics of petroleum, petroleum products, and related fuels.

(a) Production includes crude oil (including lease condensates), natural gas liquids, other liquids, and refinery processing gains.

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

(c) Biofuels production and consumption are based on EIA estimates as published in the International Energy Statistics. Biofuels production in the third quarter tends to be at its highest level in the year as ethanol production in Brazil reaches its seasonal peak and is typically lowest in the first quarter as seasonal production falls in the South/South-Central region of Brazil.

(d) Global production of petroleum and petroleum products outside of Iran is derived by subtracting biofuels production and Iran liquid fuels production from global liquid fuels production. The same method is used to calculate global consumption outside of Iran.

(e) Estimated inventory level is for OECD countries only.

(f) EIA defines surplus oil production capacity as potential oil production that could be brought online within 30 days and sustained for at least 90 days, consistent with sound business practices. This does not include oil production increases that could not be sustained without degrading the future production capacity of a field.
Data source: U.S. Energy Information Administration.

Table a2. Crude Oil and Petroleum Product Price Data

Item	Dec 2022	Jan 2023	Dec 2022 – Jan 2023 Average	Dec 2021 – Jan 2022 Average	2019 – 2021 Average
Brent Front Month Futures Price ($ per barrel)	81.34	83.91	82.59	79.93	59.44
WTI Front Month Futures Price ($ per barrel)	76.52	78.16	77.32	77.07	54.82
Dubai Front Month Futures Price ($ per barrel)	77.36	80.94	79.11	78.42	58.86
Brent 1st - 13th Month Futures Spread ($ per barrel)	2.94	4.22	3.56	6.21	1.80
WTI 1st - 13th Month Futures Spread ($ per barrel)	2.50	2.89	2.69	6.77	1.37
RBOB Front Month Futures Price ($ per gallon)	2.23	2.48	2.35	2.26	1.67
Heating Oil Front Month Futures Price ($ per gallon)	3.12	3.23	3.17	2.42	1.75
RBOB - Brent Futures Crack Spread ($ per gallon)	0.29	0.49	0.39	0.36	0.25
Heating Oil - Brent Futures Crack Spread ($ per gallon)	1.19	1.23	1.21	0.52	0.34

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