

Table A1. World total primary energy consumption by region, High Oil Price Case

quadrillion Btu

Region	2018	2020	2025	2030	2035	2040	2045	2050	Average annual percent change, 2018–2050
OECD									
OECD Americas	125.2	125.9	125.3	124.6	127.6	131.4	135.5	142.3	0.4
United States	99.8	100.2	98.9	96.7	98.0	99.6	101.2	104.7	0.2
Canada	15.8	16.0	16.4	17.2	18.0	19.0	20.2	22.0	1.0
Mexico and Chile	9.6	9.7	10.0	10.7	11.7	12.8	14.1	15.6	1.5
OECD Europe	83.5	84.2	87.5	91.3	95.5	99.7	106.4	119.2	1.1
OECD Asia	41.0	40.8	43.2	46.1	49.0	51.8	55.6	61.2	1.3
Japan	20.2	19.8	20.3	21.1	21.6	21.9	22.2	23.3	0.4
South Korea	13.0	13.0	14.3	15.7	17.3	18.9	21.2	23.9	1.9
Australia and New Zealand	7.7	8.1	8.5	9.3	10.2	11.1	12.3	13.9	1.9
Total OECD	249.7	250.9	255.9	262.1	272.1	283.0	297.6	322.7	0.8
Non-OECD									
Non-OECD Europe and Eurasia	49.2	48.8	48.7	50.1	52.6	55.5	59.2	62.7	0.8
Russia	31.9	31.4	31.0	31.8	33.4	35.4	38.0	40.4	0.7
Other Europe/Eurasia	17.3	17.4	17.6	18.2	19.3	20.1	21.2	22.4	0.8
Non-OECD Asia	227.4	239.1	269.1	304.5	339.7	388.1	442.3	499.3	2.5
China	149.2	157.0	173.5	189.1	200.5	219.9	238.2	253.0	1.7
India	35.2	37.4	45.9	59.5	75.6	97.1	124.1	157.2	4.8
Other Asia	43.0	44.7	49.8	55.9	63.5	71.1	80.0	89.1	2.3
Middle East	37.4	38.8	42.0	46.2	50.0	53.2	57.5	62.9	1.6
Africa	24.5	25.4	28.3	32.0	36.4	41.6	47.8	56.1	2.6
Non-OECD Americas	32.2	32.3	35.3	38.2	41.2	44.6	47.9	51.6	1.5
Brazil	16.4	16.8	18.6	20.5	22.5	24.4	26.3	28.6	1.7
Other Non-OECD Americas	15.8	15.5	16.7	17.6	18.7	20.2	21.6	23.0	1.2
Total Non-OECD	370.8	384.4	423.4	470.9	519.8	583.0	654.7	732.7	2.2
Total World	620.5	635.4	679.3	733.0	792.0	865.9	952.3	1055.4	1.7

Totals may not equal sum of components as a result of independent rounding.

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System Plus (2019), run hp_190808_172237, and

Annual Energy Outlook 2019, (Washington, DC: January 2019), www.eia.gov/aeo

Table A2. World total energy consumption by region and fuel, High Oil Price Case

quadrillion Btu

Region/Fueltype	2018	2020	2025	2030	2035	2040	2045	2050	Average annual percent change, 2018–2050
OECD									
OECD Americas									
Liquids	47.6	47.2	44.5	42.0	41.1	41.0	41.3	42.5	-0.4
Natural gas	38.0	39.6	42.6	43.0	44.8	46.2	47.3	49.4	0.8
Coal	13.9	12.4	10.7	10.8	10.8	10.8	10.7	10.8	-0.8
Nuclear	9.5	9.3	7.8	7.9	7.9	7.6	7.5	7.3	-0.8
Other	16.2	17.5	19.7	20.9	23.0	25.8	28.7	32.3	2.2
Total	125.2	125.9	125.3	124.6	127.6	131.4	135.5	142.3	0.4
OECD Europe									
Liquids	28.2	28.4	27.5	26.1	24.9	24.3	24.6	26.2	-0.2
Natural gas	20.0	20.0	20.7	20.8	21.9	22.6	23.5	24.8	0.7
Coal	9.2	7.3	6.6	6.2	6.2	6.3	6.4	6.7	-1.0
Nuclear	8.4	8.2	7.7	7.6	7.3	7.2	7.2	7.2	-0.5
Other	17.7	20.4	24.9	30.6	35.3	39.3	44.8	54.4	3.6
Total	83.5	84.2	87.5	91.3	95.5	99.7	106.4	119.2	1.1
OECD Asia									
Liquids	15.4	14.9	14.9	14.9	15.1	15.4	16.3	17.7	0.4
Natural gas	9.1	9.6	9.7	10.3	10.5	10.8	11.1	11.5	0.7
Coal	10.0	8.5	8.7	8.9	9.1	9.4	9.8	10.4	0.1
Nuclear	2.3	2.8	3.7	3.8	3.8	3.5	3.3	3.3	1.1
Other	4.2	4.9	6.2	8.2	10.5	12.7	15.1	18.2	4.7
Total	41.0	40.8	43.2	46.1	49.0	51.8	55.6	61.2	1.3
Total OECD									
Liquids	91.2	90.5	86.8	83.0	81.1	80.7	82.2	86.4	-0.2
Natural gas	67.0	69.2	73.1	74.1	77.2	79.7	81.9	85.7	0.8
Coal	33.2	28.2	26.1	25.9	26.1	26.5	27.0	27.9	-0.5
Nuclear	20.2	20.2	19.2	19.3	18.9	18.3	18.0	17.8	-0.4
Other	38.1	42.8	50.8	59.7	68.9	77.8	88.5	104.9	3.2
Total	249.7	250.9	255.9	262.1	272.1	283.0	297.6	322.7	0.8
Non-OECD									
Non-OECD Europe and Eurasia									
Liquids	11.4	11.8	11.7	11.6	11.6	11.8	12.2	12.6	0.3
Natural gas	22.5	21.7	21.7	22.5	24.5	26.2	27.6	28.0	0.7
Coal	7.9	7.6	7.3	7.2	7.4	7.5	7.9	8.4	0.2
Nuclear	3.4	3.5	3.5	4.1	4.0	4.0	4.0	4.0	0.6
Other	4.0	4.2	4.5	4.7	5.2	6.0	7.5	9.7	2.8
Total	49.2	48.8	48.7	50.1	52.6	55.5	59.2	62.7	0.8
Non-OECD Asia									
Liquids	55.6	59.0	64.7	69.1	72.8	77.6	84.1	92.7	1.6
Natural gas	19.8	20.4	24.1	30.3	41.1	48.6	56.5	64.1	3.7
Coal	113.8	115.5	122.9	128.4	122.2	129.2	140.8	159.7	1.1
Nuclear	3.8	4.5	5.6	7.1	8.7	10.5	12.2	13.9	4.1
Other	34.3	39.7	51.8	69.7	94.8	122.2	148.7	169.0	5.1
Total	227.4	239.1	269.1	304.5	339.7	388.1	442.3	499.3	2.5
Middle East									
Liquids	18.0	18.5	19.0	19.5	19.9	20.4	21.6	23.6	0.9
Natural gas	18.5	18.8	20.3	23.3	26.1	28.2	30.9	33.9	1.9

Table A2. World total energy consumption by region and fuel, High Oil Price Case (continued)

quadrillion Btu

Region/Fueltype	2018	2020	2025	2030	2035	2040	2045	2050	Average annual percent change, 2018–2050
Coal	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	1.0
Nuclear	0.1	0.2	0.6	0.8	0.9	1.0	1.0	1.0	7.6
Other	0.6	1.1	1.8	2.4	2.8	3.3	3.7	4.1	6.2
Total	37.4	38.8	42.0	46.2	50.0	53.2	57.5	62.9	1.6
Africa									
Liquids	9.3	9.7	10.7	11.8	13.0	14.6	16.6	19.1	2.3
Natural gas	5.2	5.3	5.8	6.6	7.4	9.1	10.7	12.1	2.7
Coal	4.2	4.2	4.5	4.8	5.7	6.4	7.4	9.4	2.6
Nuclear	0.1	0.1	0.1	0.5	0.5	0.6	0.6	0.7	5.0
Other	5.7	6.0	7.0	8.4	9.8	11.0	12.5	14.8	3.0
Total	24.5	25.4	28.3	32.0	36.4	41.6	47.8	56.1	2.6
Non-OECD Americas									
Liquids	13.4	13.5	14.0	14.4	14.8	15.5	16.4	17.2	0.8
Natural gas	5.1	4.8	5.3	6.1	7.0	7.8	8.6	9.4	1.9
Coal	1.2	1.2	1.4	1.7	1.8	2.0	2.1	2.3	2.1
Nuclear	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.8
Other	12.3	12.6	14.2	15.6	17.2	18.9	20.5	22.3	1.9
Total	32.2	32.3	35.3	38.2	41.2	44.6	47.9	51.6	1.5
Total Non-OECD									
Liquids	107.7	112.5	120.3	126.3	132.1	140.0	150.9	165.2	1.3
Natural gas	71.1	71.1	77.1	88.7	106.1	119.9	134.2	147.6	2.3
Coal	127.3	128.7	136.4	142.3	137.4	145.4	158.5	180.1	1.1
Nuclear	7.7	8.5	10.3	12.8	14.4	16.4	18.1	19.9	3.0
Other	56.9	63.6	79.4	100.8	129.8	161.3	193.0	219.9	4.3
Total	370.8	384.4	423.4	470.9	519.8	583.0	654.7	732.7	2.2
Total World									
Liquids	198.9	203.0	207.1	209.3	213.1	220.7	233.1	251.6	0.7
Natural gas	138.2	140.2	150.2	162.9	183.3	199.6	216.1	233.2	1.6
Coal	160.5	156.9	162.4	168.2	163.5	171.9	185.5	208.0	0.8
Nuclear	28.0	28.7	29.4	32.1	33.3	34.7	36.0	37.7	0.9
Other	95.0	106.5	130.2	160.4	198.7	239.1	281.5	324.9	3.9
Total	620.5	635.4	679.3	733.0	792.0	865.9	952.3	1055.4	1.7

Totals may not equal sum of components as a result of independent rounding.

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System Plus (2019), run hp_190808_172237, and

Annual Energy Outlook 2019, (Washington, DC: January 2019), www.eia.gov/aeo

Table A3. World gross domestic product (GDP) by region expressed in purchasing power parity, High Oil Price Case

billion 2010 dollars

Region	2018	2020	2025	2030	2035	2040	2045	2050	Average annual percent change, 2018–2050
OECD									
OECD Americas	22,056	23,385	25,877	27,732	31,287	34,713	38,247	42,663	2.1
United States	17,797	18,917	20,741	21,855	24,575	27,074	29,611	32,905	1.9
Canada	1,598	1,656	1,872	2,100	2,345	2,602	2,874	3,171	2.2
Mexico and Chile	2,660	2,812	3,264	3,778	4,367	5,037	5,763	6,587	2.9
OECD Europe	21,501	22,322	24,724	27,128	29,313	31,733	34,509	39,053	1.9
OECD Asia	8,047	8,376	9,597	10,669	11,487	12,236	13,185	14,509	1.9
Japan	4,866	4,994	5,590	5,987	6,156	6,180	6,253	6,561	0.9
South Korea	1,861	1,981	2,356	2,721	3,039	3,389	3,834	4,344	2.7
Australia and New Zealand	1,320	1,401	1,651	1,961	2,292	2,667	3,097	3,604	3.2
Total OECD	51,604	54,083	60,198	65,529	72,088	78,682	85,941	96,224	2.0
Non-OECD									
Non-OECD Europe and Eurasia	5,891	6,178	7,097	7,995	9,286	10,378	11,431	12,383	2.3
Russia	3,612	3,751	4,239	4,691	5,431	5,935	6,365	6,647	1.9
Other Europe/Eurasia	2,280	2,426	2,858	3,304	3,855	4,442	5,067	5,736	2.9
Non-OECD Asia	42,196	47,984	64,294	83,883	106,715	134,221	167,152	206,813	5.1
China	22,052	25,190	33,552	42,896	53,135	64,917	78,264	93,086	4.6
India	9,027	10,499	14,930	20,912	28,581	38,517	51,243	68,250	6.5
Other Asia	11,117	12,295	15,812	20,076	24,999	30,787	37,644	45,477	4.5
Middle East	5,767	5,988	7,133	8,507	10,149	11,667	13,096	14,347	2.9
Africa	5,959	6,462	8,220	10,358	12,983	16,259	20,194	24,988	4.6
Non-OECD Americas	6,343	6,605	8,057	9,381	10,684	12,060	13,468	15,119	2.8
Brazil	2,938	3,142	3,756	4,335	4,864	5,364	5,823	6,378	2.5
Other Non-OECD Americas	3,405	3,463	4,301	5,046	5,820	6,696	7,645	8,741	3.0
Total Non-OECD	66,157	73,217	94,800	120,123	149,817	184,584	225,342	273,649	4.5
Total World	117,761	127,300	154,998	185,653	221,904	263,267	311,283	369,874	3.6

Totals may not equal sum of components as a result of independent rounding.

Sources: Derived from Oxford Economic Model (February 2019), www.oxfordeconomics.com (subscription site); and*Annual Energy Outlook 2019*, (Washington, DC: January 2019), www.eia.gov/aeo

Table A4. World gross domestic product (GDP) by region expressed in market exchange rates, High Oil Price Case

billion 2010 dollars

Region	2018	2020	2025	2030	2035	2040	2045	2050	Average annual percent change, 2018–2050
OECD									
OECD Americas	21299.9	22579.9	24933.5	26628.1	29996.2	33203.7	36500.2	40643.2	2.0
United States	17797.2	18917.3	20740.7	21854.5	24574.8	27073.7	29610.5	32904.5	1.9
Canada	1906.7	1975.2	2233.3	2504.7	2797.5	3103.9	3427.6	3782.8	2.2
Mexico and Chile	1596.0	1687.4	1959.4	2268.9	2624.0	3026.1	3462.1	3955.8	2.9
OECD Europe	21509.1	22322.0	24608.1	26836.7	28838.8	31052.6	33655.1	38175.6	1.8
OECD Asia	9305.6	9664.0	11032.6	12220.3	13110.4	13899.3	14895.6	16339.5	1.8
Japan	6188.7	6350.8	7109.7	7613.7	7828.6	7859.6	7952.8	8344.1	0.9
South Korea	1381.7	1471.2	1749.2	2020.8	2256.9	2516.9	2847.4	3226.0	2.7
Australia and New Zealand	1735.3	1842.0	2173.7	2585.7	3024.9	3522.7	4095.5	4769.4	3.2
Total OECD	52114.6	54565.9	60574.2	65685.1	71945.4	78155.7	85051.0	95158.3	1.9
Non-OECD									
Non-OECD Europe and Eurasia	2922.2	3064.2	3514.7	3953.0	4580.6	5107.7	5609.9	6055.1	2.3
Russia	1824.2	1894.6	2141.0	2369.5	2742.9	2997.7	3214.5	3357.0	1.9
Other Europe/Eurasia	1098.0	1169.6	1373.7	1583.5	1837.7	2109.9	2395.4	2698.1	2.8
Non-OECD Asia	18001.5	20430.3	27195.4	35164.0	44297.3	55167.0	68022.5	83225.7	4.9
China	10798.5	12335.5	16430.0	21005.7	26019.8	31789.3	38325.2	45583.1	4.6
India	2703.2	3143.8	4470.7	6262.0	8558.7	11534.3	15345.5	20438.7	6.5
Other Asia	4499.8	4951.1	6294.8	7896.3	9718.8	11843.3	14351.8	17203.8	4.3
Middle East	2500.2	2602.0	3091.4	3657.9	4334.0	4955.6	5545.5	6068.0	2.8
Africa	2500.6	2682.8	3365.7	4207.0	5228.9	6499.2	8037.5	9899.0	4.4
Non-OECD Americas	4355.4	4545.4	5528.8	6422.6	7292.2	8194.2	9102.9	10166.2	2.7
Brazil	2312.5	2473.0	2956.2	3411.8	3828.4	4221.6	4583.1	5019.5	2.5
Other Non-OECD Americas	2042.9	2072.3	2572.5	3010.8	3463.8	3972.6	4519.9	5146.8	2.9
Total Non-OECD	30279.9	33324.7	42696.0	53404.4	65732.9	79923.7	96318.4	115413.9	4.3
Total World	82394.5	87890.6	103270.2	119089.5	137678.3	158079.4	181369.4	210572.2	3.0

Totals may not equal sum of components as a result of independent rounding.

Sources: Derived from Oxford Economic Model (February 2019), www.oxfordeconomics.com (subscription site); and

Annual Energy Outlook 2019, (Washington, DC: January 2019), www.eia.gov/aeo

Table A5. World liquids consumption by region, High Oil Price Case

million barrels per day

Region	2018	2020	2025	2030	2035	2040	2045	2050	Average annual percent change, 2018–2050
OECD									
OECD Americas	25.2	25.0	23.7	22.4	22.1	22.0	22.2	22.8	-0.3
United States	20.4	20.2	19.0	17.9	17.5	17.3	17.2	17.6	-0.5
Canada	2.4	2.4	2.3	2.3	2.3	2.4	2.4	2.5	0.1
Mexico and Chile	2.3	2.3	2.3	2.3	2.3	2.3	2.5	2.7	0.5
OECD Europe	14.5	14.6	14.1	13.4	12.8	12.5	12.6	13.5	-0.2
OECD Asia	7.7	7.5	7.4	7.5	7.5	7.7	8.1	8.8	0.4
Japan	3.8	3.6	3.4	3.3	3.2	3.2	3.2	3.4	-0.4
South Korea	2.5	2.5	2.6	2.7	2.8	3.0	3.2	3.5	1.1
Australia and New Zealand	1.4	1.4	1.4	1.4	1.5	1.6	1.7	1.9	1.0
Total OECD	47.4	47.1	45.2	43.3	42.3	42.2	42.9	45.1	-0.1
Non-OECD									
Non-OECD Europe and Eurasia	5.7	5.9	5.9	5.8	5.8	5.9	6.1	6.3	0.3
Russia	3.8	3.9	3.8	3.7	3.7	3.7	3.8	3.9	0.1
Other Europe/Eurasia	1.9	2.0	2.0	2.0	2.1	2.2	2.3	2.4	0.7
Non-OECD Asia	27.5	29.1	32.0	34.1	36.0	38.4	41.6	45.8	1.6
China	13.9	14.8	16.1	16.6	16.7	16.9	17.2	17.5	0.7
India	4.8	5.2	6.1	7.0	8.0	9.0	10.2	12.0	2.9
Other Asia	8.8	9.2	9.9	10.5	11.2	12.5	14.2	16.2	1.9
Middle East	8.5	8.7	8.9	9.2	9.4	9.6	10.2	11.1	0.9
Africa	4.4	4.6	5.1	5.6	6.2	7.0	7.9	9.1	2.3
Non-OECD Americas	6.5	6.5	6.8	7.0	7.2	7.5	7.9	8.4	0.8
Brazil	3.0	3.1	3.3	3.5	3.7	3.9	4.1	4.3	1.1
Other Non-OECD Americas	3.5	3.4	3.5	3.4	3.5	3.6	3.8	4.1	0.5
Total Non-OECD	52.6	54.9	58.7	61.7	64.5	68.4	73.7	80.7	1.3
Total World	99.9	102.0	104.0	105.0	106.9	110.6	116.7	125.8	0.7

Totals may not equal sum of components as a result of independent rounding.

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System Plus (2019), run hp_190808_172237, and

Annual Energy Outlook 2019, (Washington, DC: January 2019), www.eia.gov/aeo

Table A6. World natural gas consumption by region, High Oil Price Case

trillion cubic feet

Region	2018	2020	2025	2030	2035	2040	2045	2050	Average annual percent change, 2018–2050
OECD									
OECD Americas	36.7	38.3	41.2	41.7	43.5	44.9	46.0	48.0	0.8
United States	29.4	31.0	33.7	33.7	34.9	35.4	35.7	36.3	0.7
Canada	4.2	4.1	4.2	4.2	4.4	4.9	5.2	6.0	1.1
Mexico and Chile	3.1	3.2	3.3	3.8	4.2	4.6	5.1	5.7	1.9
OECD Europe	19.4	19.3	20.1	20.2	21.2	22.0	22.8	24.1	0.7
OECD Asia	8.5	9.0	9.1	9.6	9.8	10.1	10.4	10.7	0.7
Japan	4.8	4.7	4.6	4.9	4.8	4.6	4.5	4.4	-0.3
South Korea	1.8	2.2	2.5	2.6	2.6	2.9	3.1	3.3	2.0
Australia and New Zealand	1.9	2.0	2.0	2.1	2.4	2.6	2.9	3.1	1.5
Total OECD	64.6	66.6	70.4	71.5	74.5	77.0	79.2	82.8	0.8
Non-OECD									
Non-OECD Europe and Eurasia	22.0	21.2	21.1	21.9	23.9	25.5	26.9	27.3	0.7
Russia	15.5	14.7	14.3	14.8	16.1	17.3	18.3	18.4	0.5
Other Europe/Eurasia	6.5	6.5	6.8	7.1	7.8	8.2	8.6	8.9	1.0
Non-OECD Asia	19.2	19.8	23.3	29.3	39.7	46.9	54.4	61.8	3.7
China	7.6	8.1	9.9	13.0	19.0	21.7	24.8	27.7	4.1
India	2.0	2.0	2.7	3.7	5.5	7.6	9.9	12.5	6.0
Other Asia	9.7	9.6	10.7	12.6	15.3	17.6	19.8	21.6	2.5
Middle East	17.6	17.9	19.3	22.2	24.8	26.8	29.3	32.2	1.9
Africa	4.9	5.1	5.5	6.2	7.0	8.7	10.2	11.5	2.7
Non-OECD Americas	4.8	4.5	5.0	5.8	6.6	7.4	8.1	8.9	1.9
Brazil	1.2	1.1	1.2	1.3	1.5	1.8	2.1	2.5	2.3
Other Non-OECD Americas	3.6	3.5	3.8	4.5	5.1	5.6	6.0	6.4	1.8
Total Non-OECD	68.5	68.4	74.2	85.4	102.0	115.3	129.0	141.7	2.3
Total World	133.1	135.1	144.6	156.9	176.5	192.2	208.1	224.5	1.6

Totals may not equal sum of components as a result of independent rounding.

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System Plus (2019), run hp_190808_172237, and

Annual Energy Outlook 2019, (Washington, DC: January 2019), www.eia.gov/aeo

Table A7. World coal consumption by region, High Oil Price Case

quadrillion Btu

Region	2018	2020	2025	2030	2035	2040	2045	2050	Average annual percent change, 2018–2050
OECD									
OECD Americas	13.9	12.4	10.7	10.8	10.8	10.8	10.7	10.8	-0.8
United States	13.2	11.7	10.1	10.2	10.1	10.1	10.0	10.1	-0.8
Canada	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	-0.4
Mexico and Chile	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.1
OECD Europe	9.2	7.3	6.6	6.2	6.2	6.3	6.4	6.7	-1.0
OECD Asia	10.0	8.5	8.7	8.9	9.1	9.4	9.8	10.4	0.1
Japan	4.7	4.2	4.3	4.4	4.4	4.4	4.3	4.4	-0.2
South Korea	3.4	2.4	2.5	2.7	3.0	3.2	3.6	4.1	0.5
Australia and New Zealand	1.9	1.9	1.9	1.8	1.7	1.8	1.9	1.9	0.0
Total OECD	33.2	28.2	26.1	25.9	26.1	26.5	27.0	27.9	-0.5
Non-OECD									
Non-OECD Europe and Eurasia	7.9	7.6	7.3	7.2	7.4	7.5	7.9	8.4	0.2
Russia	4.1	4.0	4.2	4.1	4.2	4.3	4.5	4.9	0.6
Other Europe/Eurasia	3.7	3.5	3.1	3.1	3.2	3.2	3.4	3.5	-0.2
Non-OECD Asia	113.8	115.5	122.9	128.4	122.2	129.2	140.8	159.7	1.1
China	87.5	87.7	89.9	87.7	75.9	76.9	78.2	79.9	-0.3
India	17.5	18.1	21.8	27.9	32.5	37.4	45.6	60.3	3.9
Other Asia	8.9	9.7	11.3	12.7	13.8	15.0	17.1	19.5	2.5
Middle East	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	1.0
Africa	4.2	4.2	4.5	4.8	5.7	6.4	7.4	9.4	2.6
Non-OECD Americas	1.2	1.2	1.4	1.7	1.8	2.0	2.1	2.3	2.1
Brazil	0.8	0.9	1.0	1.2	1.3	1.4	1.5	1.7	2.1
Other Non-OECD Americas	0.3	0.3	0.4	0.5	0.5	0.6	0.6	0.6	1.8
Total Non-OECD	127.3	128.7	136.4	142.3	137.4	145.4	158.5	180.1	1.1
Total World	160.5	156.9	162.4	168.2	163.5	171.9	185.5	208.0	0.8

Totals may not equal sum of components as a result of independent rounding.

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System Plus (2019), run hp_190808_172237, and

Annual Energy Outlook 2019, (Washington, DC: January 2019), www.eia.gov/aeo

Table A8. World nuclear energy consumption by region (net nuclear electricity generation), High Oil Price Case

billion kilowatthours

Region	2018	2020	2025	2030	2035	2040	2045	2050	Average annual percent change, 2018–2050
OECD									
OECD Americas	909.3	883.7	746.1	752.3	749.0	727.7	714.3	698.9	-0.8
United States	808.6	785.1	663.3	654.9	647.9	652.9	657.8	654.1	-0.7
Canada	89.4	87.3	71.5	77.8	73.0	51.5	39.8	28.1	-3.6
Mexico and Chile	11.3	11.3	11.3	19.7	28.1	23.4	16.8	16.8	1.2
OECD Europe	787.0	764.9	721.5	710.7	681.4	674.9	675.8	675.8	-0.5
OECD Asia	217.9	259.4	343.2	359.9	358.4	330.1	311.0	311.0	1.1
Japan	28.9	63.5	115.6	132.3	132.3	113.9	94.9	94.9	3.8
South Korea	189.0	195.9	227.6	227.6	226.1	216.1	216.1	216.1	0.4
Australia and New Zealand	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total OECD	1914.2	1908.0	1810.8	1822.9	1788.8	1732.7	1701.2	1685.8	-0.4
Non-OECD									
Non-OECD Europe and Eurasia	315.3	328.3	331.4	381.0	374.2	375.3	375.3	378.3	0.6
Russia	203.2	210.8	206.0	237.0	224.4	225.5	225.5	218.8	0.2
Other Europe/Eurasia	112.1	117.4	125.4	144.0	149.7	149.7	149.7	159.5	1.1
Non-OECD Asia	360.8	419.4	527.4	665.0	812.4	982.8	1144.4	1307.9	4.1
China	275.4	331.4	438.2	558.4	698.7	839.1	979.5	1119.8	4.5
India	38.5	43.5	51.9	69.3	76.4	106.4	127.7	150.8	4.4
Other Asia	46.8	44.5	37.3	37.3	37.3	37.3	37.3	37.3	-0.7
Middle East	8.9	14.7	56.3	73.5	82.6	91.9	91.9	91.9	7.6
Africa	12.9	12.9	12.9	44.3	42.9	52.4	52.4	61.8	5.0
Non-OECD Americas	25.2	25.2	34.3	39.7	37.2	37.2	32.3	32.3	0.8
Brazil	13.4	13.4	22.2	22.2	22.2	22.2	17.3	17.3	0.8
Other Non-OECD Americas	11.8	11.8	12.0	17.4	15.0	15.0	15.0	15.0	0.7
Total Non-OECD	723.1	800.5	962.3	1203.5	1349.3	1539.5	1696.2	1872.2	3.0
Total World	2637.2	2708.5	2773.1	3026.4	3138.1	3272.2	3397.4	3558.0	0.9

Totals may not equal sum of components as a result of independent rounding.

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System Plus (2019), run hp_190808_172237, and

Annual Energy Outlook 2019, (Washington, DC: January 2019), www.eia.gov/aeo

Table A9. World consumption of hydroelectricity and other renewable energy by region, High Oil Price Case

quadrillion Btu

Region	2018	2020	2025	2030	2035	2040	2045	2050	Average annual percent change, 2018–2050
OECD									
OECD Americas	16.2	17.5	19.7	20.9	23.0	25.8	28.7	32.3	2.2
United States	9.7	10.6	11.9	12.1	13.1	14.6	16.1	18.3	2.0
Canada	5.1	5.5	6.2	6.9	7.6	8.2	9.1	10.0	2.1
Mexico and Chile	1.3	1.4	1.6	1.9	2.4	3.0	3.5	4.0	3.5
OECD Europe	17.7	20.4	24.9	30.6	35.3	39.3	44.8	54.4	3.6
OECD Asia	4.2	4.9	6.2	8.2	10.5	12.7	15.1	18.2	4.7
Japan	2.6	2.7	3.0	3.5	4.2	5.0	5.7	6.5	3.0
South Korea	0.5	0.8	1.3	2.2	3.3	4.2	5.3	6.7	8.5
Australia and New Zealand	1.1	1.4	1.9	2.5	3.1	3.5	4.1	5.0	4.8
Total OECD	38.1	42.8	50.8	59.7	68.9	77.8	88.5	104.9	3.2
Non-OECD									
Non-OECD Europe and Eurasia	4.0	4.2	4.5	4.7	5.2	6.0	7.5	9.7	2.8
Russia	2.2	2.2	2.4	2.5	2.8	3.5	4.7	6.5	3.4
Other Europe/Eurasia	1.8	2.0	2.1	2.2	2.3	2.5	2.8	3.3	1.9
Non-OECD Asia	34.3	39.7	51.8	69.7	94.8	122.2	148.7	169.0	5.1
China	22.8	27.3	36.1	48.4	63.5	77.3	89.1	96.9	4.6
India	5.6	6.3	8.6	12.8	20.5	32.5	46.1	58.0	7.6
Other Asia	5.8	6.2	7.2	8.6	10.9	12.4	13.6	14.1	2.8
Middle East	0.6	1.1	1.8	2.4	2.8	3.3	3.7	4.1	6.2
Africa	5.7	6.0	7.0	8.4	9.8	11.0	12.5	14.8	3.0
Non-OECD Americas	12.3	12.6	14.2	15.6	17.2	18.9	20.5	22.3	1.9
Brazil	8.0	8.4	9.4	10.6	11.9	13.0	14.1	15.4	2.1
Other Non-OECD Americas	4.2	4.2	4.8	5.0	5.4	5.9	6.4	6.9	1.5
Total Non-OECD	56.9	63.6	79.4	100.8	129.8	161.3	193.0	219.9	4.3
Total World	95.0	106.5	130.2	160.4	198.7	239.1	281.5	324.9	3.9

Other renewable energy includes wind, geothermal, solar, biomass, and waste.

Totals may not equal sum of components as a result of independent rounding.

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System Plus (2019), run hp_190808_172237, and

Annual Energy Outlook 2019, (Washington, DC: January 2019), www.eia.gov/aeo

Table A10. World carbon dioxide emissions by region, High Oil Price Case

million metric tons carbon dioxide

Region	2018	2020	2025	2030	2035	2040	2045	2050	Average annual percent change, 2018–2050
OECD									
OECD Americas	6,342	6,192	5,956	5,802	5,830	5,875	5,924	6,084	-0.1
United States	5,238	5,095	4,867	4,700	4,699	4,675	4,652	4,695	-0.3
Canada	601	591	580	577	586	623	648	706	0.5
Mexico and Chile	504	505	509	526	545	577	624	683	1.0
OECD Europe	3,823	3,656	3,577	3,457	3,427	3,438	3,510	3,710	-0.1
OECD Asia	2,317	2,180	2,192	2,233	2,267	2,329	2,439	2,594	0.4
Japan	1,149	1,074	1,056	1,060	1,045	1,026	1,021	1,040	-0.3
South Korea	701	636	667	697	732	781	853	946	0.9
Australia and New Zealand	467	471	470	476	489	522	565	608	0.8
Total OECD	12,482	12,028	11,724	11,493	11,524	11,642	11,873	12,388	0.0
Non-OECD									
Non-OECD Europe and Eurasia	2,695	2,652	2,619	2,648	2,774	2,891	3,021	3,120	0.5
Russia	1,715	1,685	1,665	1,678	1,752	1,828	1,910	1,963	0.4
Other Europe/Eurasia	980	968	955	970	1,022	1,062	1,111	1,157	0.5
Non-OECD Asia	15,473	15,875	17,155	18,305	18,565	19,940	21,900	24,705	1.5
China	10,390	10,558	11,013	11,036	10,276	10,518	10,830	11,189	0.2
India	2,472	2,595	3,119	3,915	4,593	5,317	6,416	8,242	3.8
Other Asia	2,610	2,722	3,023	3,355	3,696	4,106	4,654	5,273	2.2
Middle East	2,151	2,210	2,320	2,507	2,670	2,806	3,020	3,302	1.3
Africa	1,304	1,342	1,474	1,610	1,826	2,087	2,407	2,836	2.5
Non-OECD Americas	1,247	1,237	1,319	1,406	1,489	1,593	1,705	1,825	1.2
Brazil	518	527	572	621	666	718	772	834	1.5
Other Non-OECD Americas	729	711	747	784	823	875	933	991	1.0
Total Non-OECD	22,870	23,318	24,889	26,476	27,323	29,317	32,052	35,788	1.4
Total World	35,353	35,346	36,613	37,969	38,847	40,958	43,925	48,176	1.0

Totals may not equal sum of components as a result of independent rounding.

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System Plus (2019), run hp_190808_172237, and

Annual Energy Outlook 2019, (Washington, DC: January 2019), www.eia.gov/aeo

Table A11. World carbon dioxide emissions from liquids use by region, High Oil Price Case

million metric tons carbon dioxide

Region	2018	2020	2025	2030	2035	2040	2045	2050	Average annual percent change, 2018–2050
OECD									
OECD Americas	3,028	2,940	2,707	2,525	2,464	2,437	2,435	2,482	-0.6
United States	2,394	2,301	2,085	1,912	1,851	1,809	1,781	1,788	-0.9
Canada	332	334	323	320	322	330	337	351	0.2
Mexico and Chile	303	305	299	293	290	298	317	343	0.4
OECD Europe	1,911	1,925	1,866	1,778	1,694	1,656	1,672	1,779	-0.2
OECD Asia	915	886	877	871	874	893	944	1,026	0.4
Japan	449	420	397	380	370	365	370	388	-0.5
South Korea	281	281	290	298	305	318	343	378	0.9
Australia and New Zealand	185	185	190	193	200	210	231	260	1.1
Total OECD	5,854	5,751	5,450	5,174	5,032	4,986	5,051	5,286	-0.3
Non-OECD									
Non-OECD Europe and Eurasia	761	789	791	780	781	796	823	852	0.4
Russia	489	511	500	487	483	487	496	504	0.1
Other Europe/Eurasia	273	278	291	293	297	309	328	348	0.8
Non-OECD Asia	3,698	3,910	4,287	4,565	4,795	5,094	5,507	6,062	1.6
China	1,798	1,910	2,066	2,123	2,129	2,134	2,152	2,191	0.6
India	626	683	804	934	1,055	1,177	1,332	1,553	2.9
Other Asia	1,274	1,317	1,417	1,508	1,610	1,782	2,023	2,318	1.9
Middle East	1,149	1,191	1,220	1,247	1,263	1,286	1,356	1,474	0.8
Africa	649	679	750	823	908	1,020	1,158	1,329	2.3
Non-OECD Americas	869	875	910	931	956	1,002	1,059	1,119	0.8
Brazil	373	386	414	441	464	489	514	540	1.2
Other Non-OECD Americas	496	488	495	490	492	513	545	578	0.5
Total Non-OECD	7,126	7,445	7,958	8,346	8,703	9,196	9,904	10,835	1.3
Total World	12,980	13,195	13,408	13,520	13,735	14,182	14,955	16,121	0.7

Totals may not equal sum of components as a result of independent rounding.

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System Plus (2019), run hp_190808_172237, and

Annual Energy Outlook 2019, (Washington, DC: January 2019), www.eia.gov/aeo

Table A12. World carbon dioxide emissions from natural gas use by region, High Oil Price Case

million metric tons carbon dioxide

Region	2018	2020	2025	2030	2035	2040	2045	2050	Average annual percent change, 2018–2050
OECD									
OECD Americas	1,988	2,074	2,232	2,252	2,347	2,422	2,477	2,587	0.8
United States	1,588	1,678	1,823	1,818	1,882	1,906	1,919	1,954	0.6
Canada	235	230	232	235	244	272	288	332	1.1
Mexico and Chile	165	167	177	200	220	243	270	301	1.9
OECD Europe	1,058	1,057	1,098	1,102	1,158	1,200	1,244	1,314	0.7
OECD Asia	482	508	514	547	557	572	591	609	0.7
Japan	274	268	262	277	273	262	254	248	-0.3
South Korea	103	131	145	155	152	169	180	193	2.0
Australia and New Zealand	105	110	106	115	132	141	156	168	1.5
Total OECD	3,529	3,639	3,844	3,901	4,062	4,193	4,312	4,510	0.8
Non-OECD									
Non-OECD Europe and Eurasia	1,194	1,152	1,148	1,191	1,298	1,388	1,461	1,481	0.7
Russia	843	798	780	806	876	944	996	1,001	0.5
Other Europe/Eurasia	351	353	368	384	423	444	464	480	1.0
Non-OECD Asia	1,050	1,080	1,274	1,604	2,180	2,575	2,993	3,399	3.7
China	420	451	549	719	1,053	1,203	1,374	1,536	4.1
India	111	115	155	212	310	431	562	706	6.0
Other Asia	518	513	570	673	818	941	1,057	1,156	2.5
Middle East	981	999	1,078	1,237	1,383	1,495	1,637	1,799	1.9
Africa	273	282	308	347	391	482	566	642	2.7
Non-OECD Americas	270	253	278	323	369	414	455	499	1.9
Brazil	67	61	65	74	85	101	118	140	2.3
Other Non-OECD Americas	203	192	213	250	285	313	336	359	1.8
Total Non-OECD	3,768	3,765	4,086	4,702	5,621	6,354	7,111	7,820	2.3
Total World	7,297	7,404	7,930	8,603	9,683	10,547	11,423	12,329	1.7

Totals may not equal sum of components as a result of independent rounding.

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System Plus (2019), run hp_190808_172237, and

Annual Energy Outlook 2019, (Washington, DC: January 2019), www.eia.gov/aeo

Table A13. World carbon dioxide emissions from coal use by region, High Oil Price Case

million metric tons carbon dioxide

Region	2018	2020	2025	2030	2035	2040	2045	2050	Average annual percent change, 2018–2050
OECD									
OECD Americas	1,326	1,178	1,017	1,025	1,020	1,016	1,012	1,015	-0.8
United States	1,256	1,117	959	969	966	960	953	954	-0.9
Canada	33	28	25	22	20	21	23	23	-1.1
Mexico and Chile	36	33	33	34	34	35	36	38	0.1
OECD Europe	854	675	612	578	575	582	594	618	-1.0
OECD Asia	920	785	802	815	835	864	904	960	0.1
Japan	426	385	397	402	402	398	397	405	-0.2
South Korea	317	225	232	244	275	294	329	375	0.5
Australia and New Zealand	177	176	173	169	158	172	178	180	0.0
Total OECD	3,100	2,638	2,431	2,418	2,430	2,463	2,510	2,592	-0.6
Non-OECD									
Non-OECD Europe and Eurasia	739	711	680	678	695	707	737	787	0.2
Russia	383	375	386	385	393	398	419	458	0.6
Other Europe/Eurasia	356	336	295	293	302	309	319	329	-0.2
Non-OECD Asia	10,725	10,885	11,594	12,136	11,590	12,271	13,399	15,245	1.1
China	8,172	8,197	8,398	8,194	7,094	7,181	7,304	7,463	-0.3
India	1,735	1,796	2,160	2,769	3,228	3,708	4,522	5,982	3.9
Other Asia	818	892	1,036	1,174	1,267	1,382	1,574	1,800	2.5
Middle East	21	21	23	24	25	26	27	28	1.0
Africa	383	381	416	440	527	585	682	866	2.6
Non-OECD Americas	108	109	132	151	164	178	192	207	2.1
Brazil	78	79	93	107	117	128	140	153	2.1
Other Non-OECD Americas	30	30	39	45	47	49	51	53	1.8
Total Non-OECD	11,976	12,108	12,844	13,428	12,999	13,767	15,037	17,133	1.1
Total World	15,076	14,746	15,275	15,846	15,430	16,229	17,547	19,725	0.8

Totals may not equal sum of components as a result of independent rounding.

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System Plus (2019), run hp_190808_172237, and

Annual Energy Outlook 2019, (Washington, DC: January 2019), www.eia.gov/aeo

Table A14. World population by region, High Oil Price Case

millions

Region	2018	2020	2025	2030	2035	2040	2045	2050	Average annual percent change, 2018–2050
OECD									
OECD Americas	515	523	545	564	581	596	609	621	0.6
United States	328	333	345	355	365	374	381	389	0.5
Canada	37	38	40	41	43	44	46	47	0.8
Mexico and Chile	149	153	160	167	173	178	182	185	0.7
OECD Europe	583	588	596	602	608	612	614	615	0.2
OECD Asia	208	209	209	209	208	206	204	201	-0.1
Japan	127	126	124	122	118	115	112	109	-0.5
South Korea	51	52	52	53	53	52	52	50	0.0
Australia and New Zealand	30	31	33	35	37	39	40	42	1.1
Total OECD	1,306	1,320	1,349	1,375	1,397	1,414	1,427	1,437	0.3
Non-OECD									
Non-OECD Europe and Eurasia	334	334	332	328	323	319	316	313	-0.2
Russia	144	144	143	140	138	136	134	133	-0.3
Other Europe/Eurasia	190	190	189	188	185	184	182	180	-0.2
Non-OECD Asia	4,001	4,069	4,221	4,346	4,445	4,517	4,565	4,590	0.4
China	1,416	1,425	1,439	1,441	1,433	1,417	1,394	1,364	-0.1
India	1,356	1,385	1,453	1,514	1,566	1,606	1,637	1,659	0.6
Other Asia	1,230	1,259	1,328	1,391	1,446	1,494	1,534	1,567	0.8
Middle East	244	251	269	284	299	313	327	340	1.0
Africa	1,269	1,328	1,484	1,650	1,825	2,010	2,200	2,393	2.0
Non-OECD Americas	500	508	527	544	557	568	575	580	0.5
Brazil	211	214	221	226	229	232	233	233	0.3
Other Non-OECD Americas	289	294	307	318	328	336	342	347	0.6
Total Non-OECD	6,348	6,491	6,833	7,152	7,450	7,727	7,983	8,216	0.8
Total World	7,654	7,811	8,183	8,527	8,846	9,141	9,410	9,653	0.7

Totals may not equal sum of components as a result of independent rounding.

Sources: Derived from Oxford Economic Model (February 2019), www.oxfordeconomics.com (subscription site); and*Annual Energy Outlook 2019*, (Washington, DC: January 2019), www.eia.gov/aeo

Table G1. World petroleum and other liquids production, High Oil Price Case

million barrels per day

									Average annual percent change 2018-2050
Liquid Fuel	2018	2020	2025	2030	2035	2040	2045	2050	
Crude Oil	82.9	84.2	85.0	85.4	86.7	89.9	95.4	103.6	0.7
Other Liquids	17.7	18.3	19.0	19.6	20.1	20.6	21.2	22.2	0.7
Total Liquids	100.6	102.5	104.0	105.0	106.9	110.6	116.7	125.8	0.7

Crude Oil includes crude oil and lease and plant condensate.

Other Liquids includes natural gas plant liquids, liquids from renewable sources, liquids from coal, liquids from natural gas, refinery gain, and other components.

Totals may not equal sum of components as a result of independent rounding.

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System Plus (2019), run r_190808_161601, and *Annual Energy Outlook 2019*, (Washington, DC: January 2019), www.eia.gov/aeo

Table G2. World crude oil production by region and country, High Oil Price Case

million barrels per day

Region	2018	2020	2025	2030	2035	2040	2045	2050	Average annual percent change 2018-2050
OPEC									
OPEC Middle East	26.8	25.6	25.8	28.4	29.7	30.2	32.3	35.6	0.9
OPEC North Africa	2.3	2.3	2.3	2.3	2.2	2.2	2.3	2.3	0.1
OPEC Central and West Africa	4.0	4.0	4.4	4.7	3.9	2.6	2.2	2.3	-1.7
OPEC South America	2.0	0.9	1.0	1.3	1.6	1.9	2.5	2.9	1.2
Total OPEC	35.0	32.8	33.5	36.8	37.5	36.9	39.3	43.2	0.7
Non-OPEC									
OECD									
United States	11.0	14.5	17.8	17.0	16.2	15.3	13.7	13.0	0.5
Canada	4.3	4.5	4.8	4.8	5.2	6.1	8.1	10.5	2.8
Mexico and Chile	1.9	1.7	1.6	1.6	1.8	2.0	2.6	3.1	1.6
OECD Europe	2.9	2.8	2.6	2.1	1.8	1.6	1.4	0.9	-3.7
Australia and New Zealand	0.3	0.4	0.3	0.2	0.2	0.3	0.4	0.5	1.6
Other OECD Asia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.6
Non-OECD									
Russia	10.8	10.5	8.4	7.6	9.3	13.1	14.7	16.4	1.3
Caspian Area	2.2	2.2	1.9	1.8	1.9	2.2	2.7	3.4	1.3
Other non-OECD Europe and Eurasia	1.0	0.9	0.8	0.6	0.6	0.6	0.6	0.5	-1.8
China	3.8	3.8	3.6	3.0	2.8	2.9	2.7	2.5	-1.3
India	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.2
Other non-OECD Asia	2.1	2.0	2.0	2.4	2.2	1.5	0.9	0.8	-3.0
Oman	1.0	1.0	0.8	0.7	0.7	0.9	1.0	1.1	0.5
Other Middle East	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.1
Non-OPEC Africa	1.7	1.7	1.2	1.0	1.0	1.2	1.3	1.4	-0.5
Brazil	2.6	3.1	3.7	3.9	3.6	3.5	4.2	4.4	1.7
Other non-OECD Americas	1.6	1.6	1.2	1.0	1.0	1.0	0.9	1.0	-1.3
Total Non-OPEC	47.9	51.3	51.5	48.7	49.3	53.1	56.1	60.5	0.7
Total World	82.9	84.2	85.0	85.4	86.7	89.9	95.4	103.6	0.7

Crude Oil includes crude oil and lease and plant condensate.

OPEC Middle East: Iran, Iraq, Kuwait, Saudi Arabia, United Arab Emirates. Note: Qatar exited OPEC in December 2018, but is included in OPEC in this analysis.

OPEC North Africa: Algeria, Libya

OPEC Central and West Africa: Angola, Equatorial Guinea, Gabon, Nigeria. Note: The Republic of the Congo joined OPEC in June 2018, but is excluded from OPEC in this analysis.

OPEC South America: Ecuador, Venezuela

Caspian Area: Afghanistan, Kazakhstan, Kyrgyzstan, Pakistan, Tajikistan, Turkmenistan, Uzbekistan

Totals may not equal sum of components as a result of independent rounding.

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System Plus (2019), run r_190808_161601, and

Annual Energy Outlook 2019, (Washington, DC: January 2019), www.eia.gov/aeo

Table G3. World other liquid fuels production, High Oil Price Case

million barrels per day

									Average annual percent change
Liquid Fuel	2018	2020	2025	2030	2035	2040	2045	2050	2018-2050
Natural gas plant liquids	11.1	12.2	13.0	13.3	13.7	14.1	14.5	15.2	1.0
Liquids from renewable sources	2.4	2.5	2.5	2.6	2.6	2.6	2.6	2.7	0.4
Liquids from coal	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	1.5
Liquids from natural gas	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	1.9
Refinery gain	2.7	2.9	2.9	3.0	3.1	3.2	3.3	3.4	0.8
Other	1.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	-
Total Other Liquids	17.7	18.3	19.0	19.6	20.1	20.6	21.2	22.2	0.7

Other liquids includes natural gas plant liquids, liquids from renewable sources, liquids from coal, liquids from natural gas, refinery gain, and other components.

Totals may not equal sum of components as a result of independent rounding.

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System Plus (2019), run r_190808_161601, and

Annual Energy Outlook 2019, (Washington, DC: January 2019), www.eia.gov/aeo