

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

quadrillion British thermal units

Region	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
OECD								
OECD Americas	118.2	126.6	129.7	134.3	139.2	145.2	151.5	0.8
United States	92.9	98.9	100.2	102.5	105.0	108.2	111.7	0.6
Canada	14.6	15.6	16.5	17.4	18.5	19.7	20.9	1.2
Mexico and other OECD Americas	10.6	12.1	13.1	14.4	15.7	17.3	18.9	2.0
OECD Europe	77.6	82.8	85.2	88.7	92.3	96.9	102.6	0.9
OECD Asia	37.2	40.3	41.5	42.8	43.8	45.3	46.8	0.8
Japan	18.3	19.0	18.9	19.1	18.9	18.9	19.0	0.1
South Korea	12.0	13.6	14.2	14.7	15.1	15.8	16.3	1.0
Australia and New Zealand	6.9	7.8	8.3	9.0	9.8	10.6	11.4	1.7
Total OECD	232.9	249.8	256.4	265.8	275.3	287.4	300.8	0.9
Non-OECD								
Non-OECD Europe and Eurasia	52.6	56.3	60.2	65.1	70.2	75.3	80.2	1.4
Russia	34.4	37.4	40.1	43.3	46.4	49.5	52.2	1.4
Other Europe and Eurasia	18.2	18.9	20.1	21.8	23.7	25.8	28.0	1.4
Non-OECD Asia	230.4	276.9	314.9	358.1	403.6	453.3	503.2	2.6
China	156.4	174.6	186.5	201.2	215.6	230.8	243.6	1.5
India	31.5	49.2	66.0	84.2	103.9	126.3	150.1	5.3
Other Asia	42.5	53.1	62.4	72.7	84.2	96.1	109.5	3.2
Middle East	35.2	41.2	43.9	47.8	52.4	55.9	58.5	1.7
Africa	22.9	27.3	31.4	36.0	41.7	48.4	56.5	3.1
Non-OECD Americas	27.6	31.4	34.9	38.1	41.7	45.5	49.5	2.0
Brazil	14.9	17.2	19.0	20.8	22.4	24.0	25.7	1.8
Other Non-OECD Americas	12.7	14.2	15.9	17.3	19.3	21.5	23.8	2.1
Total Non-OECD	368.6	433.0	485.2	545.1	609.6	678.3	748.0	2.4
Total World	601.6	682.8	741.6	810.9	884.8	965.7	1,048.8	1.9

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run hp_210719.163813; and EIA, *Annual Energy Outlook 2021*, (February 2021), www.eia.gov/aeo

Notes:

* Totals may not equal sum of components due to independent rounding.

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

quadrillion British thermal units

Region and fuel	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
OECD								
OECD Americas								
Liquid fuels	42.4	46.1	45.9	46.3	46.9	48.1	49.5	0.5
Natural gas	39.7	42.2	43.2	46.1	49.4	52.5	55.0	1.1
Coal	10.2	8.4	7.9	7.5	7.2	7.1	7.2	-1.2
Nuclear	9.4	8.7	7.7	7.4	7.1	7.0	6.8	-1.1
Other	16.6	21.2	25.0	27.1	28.6	30.6	33.0	2.3
Total	118.2	126.6	129.7	134.3	139.2	145.2	151.5	0.8
OECD Europe								
Liquid fuels	26.0	28.2	27.5	27.1	27.1	27.6	28.6	0.3
Natural gas	19.6	20.9	21.4	21.7	22.4	23.4	24.5	0.8
Coal	8.1	7.9	7.3	7.3	6.7	7.0	7.3	-0.4
Nuclear	7.9	8.1	7.5	7.3	6.7	5.1	4.0	-2.2
Other	16.1	17.8	21.4	25.3	29.3	33.8	38.2	2.9
Total	77.6	82.8	85.2	88.7	92.3	96.9	102.6	0.9
OECD Asia								
Liquid fuels	13.9	14.5	14.2	14.0	13.8	13.9	14.1	0.0
Natural gas	8.7	8.8	9.0	8.9	8.8	8.7	8.9	0.1
Coal	8.5	8.8	8.9	9.4	9.4	9.0	8.3	-0.1
Nuclear	2.1	3.7	4.0	4.0	3.5	3.1	3.1	1.3
Other	4.0	4.6	5.4	6.6	8.4	10.6	12.4	3.8
Total	37.2	40.3	41.5	42.8	43.8	45.3	46.8	0.8
Total OECD								
Liquid fuels	82.3	88.7	87.6	87.3	87.8	89.6	92.2	0.4
Natural gas	67.9	71.8	73.7	76.6	80.6	84.6	88.5	0.9
Coal	26.8	25.1	24.1	24.1	23.3	23.1	22.7	-0.5
Nuclear	19.3	20.5	19.2	18.7	17.3	15.2	13.9	-1.1
Other	36.7	43.7	51.8	59.1	66.3	74.9	83.5	2.8
Total	232.9	249.8	256.4	265.8	275.3	287.4	300.8	0.9
Non-OECD								
Non-OECD Europe and Eurasia								
Liquid fuels	11.1	12.5	13.2	14.2	15.2	16.3	17.3	1.5
Natural gas	25.0	26.6	28.8	30.4	32.2	34.3	36.2	1.2
Coal	9.6	9.7	10.1	11.3	12.2	12.7	13.6	1.2
Nuclear	3.4	3.9	4.1	4.2	4.2	4.2	4.2	0.7
Other	3.5	3.6	4.1	5.1	6.4	7.8	8.9	3.2
Total	52.6	56.3	60.2	65.1	70.2	75.3	80.2	1.4
Non-OECD Asia								
Liquid fuels	54.2	66.9	76.0	84.1	91.0	97.3	102.6	2.1
Natural gas	23.8	30.3	38.7	41.3	46.7	52.9	60.0	3.1
Coal	114.6	125.6	126.5	134.9	143.7	157.0	169.6	1.3
Nuclear	4.3	5.6	7.1	8.6	10.2	11.6	12.9	3.7
Other	33.4	48.5	66.7	89.2	112.0	134.5	158.1	5.3
Total	230.4	276.9	314.9	358.1	403.6	453.3	503.2	2.6
Middle East								
Liquid fuels	15.5	17.5	17.3	18.1	19.2	20.2	21.0	1.0
Natural gas	19.2	22.5	24.2	25.4	27.4	28.8	30.2	1.5
Coal	0.1	0.2	0.5	0.5	0.3	0.5	0.5	4.7
Nuclear	0.1	0.4	0.6	0.8	0.9	0.9	0.9	9.0

Other	0.2	0.6	1.4	2.9	4.6	5.4	5.9	11.6
Total	35.2	41.2	43.9	47.8	52.4	55.9	58.5	1.7
Africa								
Liquid fuels	8.4	9.9	10.7	11.9	13.5	15.6	18.1	2.6
Natural gas	5.7	6.3	7.4	8.5	9.7	10.3	11.8	2.5
Coal	3.9	4.7	5.2	5.6	5.5	5.5	6.1	1.5
Nuclear	0.1	0.1	0.3	0.5	0.6	0.6	0.7	6.0
Other	4.8	6.3	7.8	9.5	12.4	16.5	19.9	4.8
Total	22.9	27.3	31.4	36.0	41.7	48.4	56.5	3.1
Non-OECD Americas								
Liquid fuels	10.9	12.9	13.9	14.9	16.1	17.4	18.8	1.8
Natural gas	5.7	6.0	6.3	6.9	7.1	7.5	8.2	1.2
Coal	0.7	0.9	1.0	1.0	1.2	1.3	1.3	2.1
Nuclear	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.6
Other	10.1	11.3	13.2	15.0	16.9	18.9	20.9	2.5
Total	27.6	31.4	34.9	38.1	41.7	45.5	49.5	2.0
Total Non-OECD								
Liquid fuels	100.1	119.7	131.0	143.1	155.0	166.8	177.8	1.9
Natural gas	79.3	91.7	105.3	112.5	123.1	133.7	146.5	2.1
Coal	128.9	141.0	143.2	153.3	162.8	177.0	191.0	1.3
Nuclear	8.2	10.3	12.5	14.4	16.2	17.6	19.0	2.8
Other	52.1	70.3	93.2	121.7	152.4	183.2	213.7	4.8
Total	368.6	433.0	485.2	545.1	609.6	678.3	748.0	2.4
World								
Liquid fuels	182.4	208.5	218.6	230.5	242.8	256.5	270.0	1.3
Natural gas	147.2	163.5	179.0	189.1	203.7	218.4	234.9	1.6
Coal	155.7	166.1	167.4	177.4	186.0	200.1	213.7	1.1
Nuclear	27.5	30.9	31.8	33.1	33.6	32.8	32.9	0.6
Other	88.7	113.9	144.9	180.8	218.7	258.1	297.3	4.1
Total	601.6	682.8	741.6	810.9	884.8	965.7	1,048.8	1.9

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run hp_210719.163813; and EIA, *Annual Energy Outlook 2021* , (February 2021), www.eia.gov/aeo

Notes:

* Totals may not equal sum of components due to independent rounding.

* Electricity generation from renewable sources such as hydroelectric, wind, or solar is converted to British thermal units at a rate of 8,124 British thermal units per kilowatthour, which reflects the average projected conversion efficiency of the U.S. fossil-fueled generating fleet in the Annual Energy Outlook 2021.

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

billion 2015 dollars

Region	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
OECD								
OECD Americas	\$23,951	\$28,365	\$31,719	\$35,323	\$38,981	\$43,050	\$47,354	2.3
United States	\$19,014	\$22,418	\$24,995	\$27,708	\$30,382	\$33,416	\$36,635	2.2
Canada	\$1,638	\$1,936	\$2,160	\$2,420	\$2,705	\$3,021	\$3,362	2.4
Mexico and other OECD Americas	\$3,298	\$4,011	\$4,563	\$5,196	\$5,893	\$6,613	\$7,357	2.7
OECD Europe	\$22,771	\$26,818	\$29,315	\$31,957	\$34,835	\$38,015	\$41,496	2.0
OECD Asia	\$8,568	\$9,714	\$10,525	\$11,193	\$11,836	\$12,514	\$13,233	1.5
Japan	\$5,043	\$5,594	\$5,866	\$6,045	\$6,229	\$6,420	\$6,640	0.9
South Korea	\$2,136	\$2,487	\$2,757	\$2,955	\$3,121	\$3,303	\$3,475	1.6
Australia and New Zealand	\$1,389	\$1,633	\$1,902	\$2,193	\$2,485	\$2,791	\$3,118	2.7
Total OECD	\$55,290	\$64,897	\$71,558	\$78,473	\$85,651	\$93,578	\$102,082	2.1
Non-OECD								
Non-OECD Europe and Eurasia	\$6,489	\$7,943	\$9,231	\$10,962	\$12,833	\$14,927	\$17,278	3.3
Russia	\$3,600	\$4,212	\$4,720	\$5,408	\$6,085	\$6,764	\$7,463	2.5
Other Europe and Eurasia	\$2,889	\$3,730	\$4,511	\$5,555	\$6,748	\$8,162	\$9,815	4.2
Non-OECD Asia	\$44,262	\$61,863	\$81,774	\$104,618	\$129,940	\$158,762	\$190,160	5.0
China	\$23,672	\$32,683	\$41,708	\$51,641	\$62,093	\$73,607	\$85,265	4.4
India	\$8,634	\$13,093	\$19,257	\$26,488	\$34,775	\$44,464	\$55,706	6.4
Other Asia	\$11,956	\$16,086	\$20,809	\$26,489	\$33,072	\$40,691	\$49,189	4.8
Middle East	\$4,659	\$5,803	\$6,776	\$7,878	\$9,034	\$10,331	\$11,690	3.1
Africa	\$6,270	\$7,936	\$9,894	\$12,263	\$15,103	\$18,403	\$22,228	4.3
Non-OECD Americas	\$5,470	\$6,775	\$8,007	\$9,234	\$10,507	\$11,897	\$13,384	3.0
Brazil	\$2,912	\$3,464	\$3,968	\$4,472	\$4,921	\$5,335	\$5,736	2.3
Other Non-OECD Americas	\$2,558	\$3,310	\$4,039	\$4,762	\$5,586	\$6,562	\$7,648	3.7
Total Non-OECD	\$67,150	\$90,320	\$115,683	\$144,955	\$177,416	\$214,320	\$254,740	4.5
Total World	\$122,439	\$155,217	\$187,241	\$223,428	\$263,068	\$307,899	\$356,822	3.6

Sources: Table by the U.S. Energy Information Administration (EIA), based on the Oxford Global Economic Model, (February 2021), www.oxfordeconomics.com (subscription site); EIA, World Energy Projection System (2021), run hp_210719.163813; and EIA, *Annual Energy Outlook 2021*, (February 2021), www.eia.gov/ao

Notes:

* Totals may not equal sum of components due to independent rounding.

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

billion 2015 dollars

Region	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
OECD								
OECD Americas	\$22,393	\$26,469	\$29,558	\$32,854	\$36,171	\$39,888	\$43,829	2.3
United States	\$19,014	\$22,418	\$24,995	\$27,708	\$30,382	\$33,416	\$36,635	2.2
Canada	\$1,599	\$1,890	\$2,108	\$2,362	\$2,640	\$2,948	\$3,282	2.4
Mexico and other OECD Americas	\$1,780	\$2,161	\$2,455	\$2,785	\$3,148	\$3,524	\$3,913	2.7
OECD Europe	\$18,706	\$21,977	\$23,927	\$25,983	\$28,244	\$30,769	\$33,525	2.0
OECD Asia	\$7,505	\$8,516	\$9,252	\$9,877	\$10,483	\$11,121	\$11,800	1.5
Japan	\$4,363	\$4,840	\$5,075	\$5,230	\$5,389	\$5,555	\$5,744	0.9
South Korea	\$1,619	\$1,885	\$2,090	\$2,240	\$2,366	\$2,504	\$2,634	1.6
Australia and New Zealand	\$1,523	\$1,791	\$2,086	\$2,406	\$2,727	\$3,062	\$3,421	2.7
Total OECD	\$48,605	\$56,962	\$62,736	\$68,713	\$74,897	\$81,777	\$89,155	2.0
Non-OECD								
Non-OECD Europe and Eurasia	\$2,482	\$3,043	\$3,542	\$4,212	\$4,938	\$5,748	\$6,656	3.3
Russia	\$1,393	\$1,630	\$1,827	\$2,093	\$2,355	\$2,618	\$2,888	2.5
Other Europe and Eurasia	\$1,088	\$1,412	\$1,715	\$2,119	\$2,583	\$3,130	\$3,768	4.2
Non-OECD Asia	\$21,669	\$30,041	\$39,081	\$49,310	\$60,469	\$73,026	\$86,400	4.7
China	\$14,503	\$20,024	\$25,554	\$31,639	\$38,043	\$45,098	\$52,240	4.4
India	\$2,522	\$3,817	\$5,613	\$7,722	\$10,137	\$12,962	\$16,240	6.4
Other Asia	\$4,643	\$6,199	\$7,914	\$9,949	\$12,288	\$14,966	\$17,921	4.6
Middle East	\$2,076	\$2,580	\$3,010	\$3,501	\$4,009	\$4,572	\$5,151	3.1
Africa	\$2,379	\$3,026	\$3,762	\$4,644	\$5,695	\$6,919	\$8,335	4.3
Non-OECD Americas	\$3,279	\$4,040	\$4,747	\$5,471	\$6,216	\$7,028	\$7,893	3.0
Brazil	\$1,739	\$2,069	\$2,369	\$2,670	\$2,938	\$3,186	\$3,425	2.3
Other Non-OECD Americas	\$1,541	\$1,971	\$2,378	\$2,800	\$3,278	\$3,842	\$4,468	3.6
Total Non-OECD	\$31,885	\$42,729	\$54,141	\$67,136	\$81,327	\$97,292	\$114,436	4.4
Total World	\$80,490	\$99,691	\$116,877	\$135,850	\$156,225	\$179,070	\$203,590	3.1

Sources: Table by the U.S. Energy Information Administration (EIA), based on the Oxford Global Economic Model, (February 2021), www.oxfordeconomics.com (subscription site); EIA, World Energy Projection System (2021), run hp_210719.163813; and EIA, *Annual Energy Outlook 2021*, (February 2021), www.eia.gov/ao

Notes:

* Totals may not equal sum of components due to independent rounding.

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

million barrels per day

Region	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
OECD								
OECD Americas	22.5	24.8	24.8	25.2	25.7	26.4	27.2	0.6
United States	18.1	19.9	19.9	20.1	20.3	20.8	21.2	0.5
Canada	2.1	2.3	2.3	2.4	2.4	2.5	2.6	0.8
Mexico and other OECD Americas	2.3	2.6	2.6	2.7	2.9	3.1	3.3	1.2
OECD Europe	12.7	13.7	13.4	13.2	13.2	13.5	13.9	0.3
OECD Asia	6.9	7.1	7.0	6.9	6.8	6.8	6.9	0.0
Japan	3.3	3.2	2.9	2.8	2.6	2.5	2.4	-1.1
South Korea	2.4	2.6	2.6	2.6	2.6	2.7	2.7	0.4
Australia and New Zealand	1.2	1.4	1.4	1.5	1.5	1.6	1.8	1.4
Total OECD	42.0	45.6	45.2	45.2	45.6	46.7	48.0	0.5
Non-OECD								
Non-OECD Europe and Eurasia	5.7	6.4	6.7	7.2	7.8	8.3	8.8	1.5
Russia	3.7	4.3	4.5	4.8	5.2	5.5	5.8	1.5
Other Europe and Eurasia	1.9	2.1	2.2	2.4	2.6	2.8	3.0	1.5
Non-OECD Asia	27.1	33.4	38.0	42.0	45.4	48.6	51.2	2.1
China	14.3	16.9	18.3	19.1	19.3	19.4	19.3	1.0
India	4.4	6.2	8.2	10.1	12.0	13.8	15.5	4.3
Other Asia	8.4	10.3	11.5	12.8	14.1	15.4	16.5	2.3
Middle East	7.8	8.7	8.6	9.0	9.6	10.1	10.5	1.0
Africa	4.2	4.9	5.3	5.9	6.7	7.7	9.0	2.6
Non-OECD Americas	5.5	6.5	7.0	7.5	8.1	8.8	9.5	1.8
Brazil	2.9	3.4	3.6	3.8	4.1	4.3	4.6	1.5
Other Non-OECD Americas	2.6	3.1	3.4	3.7	4.0	4.5	4.9	2.2
Total Non-OECD	50.1	59.9	65.6	71.6	77.6	83.5	89.0	1.9
Total World	92.1	105.6	110.8	116.9	123.2	130.2	137.0	1.3

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run hp_210719.163813; and EIA, *Annual Energy Outlook 2021*, (February 2021), www.eia.gov/aeo

; and EIA, *Short-Term Energy Outlook*, (April 2021),

Notes:

* Totals may not equal sum of components due to independent rounding.

* *Liquid fuels* includes motor gasoline, distillate, residual, kerosene, jet fuel, liquid petroleum gases, sequestered petroleum, other petroleum, petroleum coke, crude oil (including lease and plant condensate), ethanol, and other biofuels across all demand sectors. Refer to EIA's glossary for descriptions of individual liquids components.

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

trillion cubic feet

Region	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
OECD								
OECD Americas	38.4	40.8	41.8	44.6	47.8	50.8	53.2	1.1
United States	30.7	31.7	31.7	33.2	35.1	37.0	38.7	0.8
Canada	4.3	4.8	5.3	5.9	6.8	7.6	8.2	2.2
Mexico and other OECD Americas	3.4	4.2	4.8	5.5	5.9	6.3	6.3	2.1
OECD Europe	19.0	20.3	20.8	21.0	21.8	22.8	23.8	0.8
OECD Asia	7.8	7.9	8.2	8.0	8.0	7.9	8.1	0.1
Japan	3.8	3.6	3.6	3.4	3.3	3.3	3.3	-0.5
South Korea	2.2	2.3	2.5	2.5	2.5	2.3	2.4	0.3
Australia and New Zealand	1.8	2.0	2.1	2.1	2.2	2.3	2.4	0.9
Total OECD	65.2	68.9	70.8	73.7	77.5	81.5	85.2	0.9
Non-OECD								
Non-OECD Europe and Eurasia	24.4	25.9	28.1	29.6	31.4	33.4	35.3	1.2
Russia	17.6	18.5	20.4	21.5	23.0	24.4	25.7	1.3
Other Europe and Eurasia	6.8	7.4	7.7	8.1	8.4	9.0	9.6	1.2
Non-OECD Asia	23.0	29.3	37.3	39.8	45.0	50.9	57.8	3.1
China	11.0	15.1	20.9	21.4	24.0	26.9	29.7	3.4
India	2.0	2.9	3.9	5.0	6.2	7.7	9.5	5.4
Other Asia	10.1	11.3	12.5	13.4	14.8	16.4	18.6	2.1
Middle East	18.3	21.4	23.0	24.2	26.0	27.4	28.7	1.5
Africa	5.4	6.0	7.0	8.1	9.2	9.8	11.2	2.5
Non-OECD Americas	5.4	5.8	6.1	6.6	6.8	7.2	7.9	1.2
Brazil	1.3	1.7	1.7	1.7	1.7	1.7	1.9	1.4
Other Non-OECD Americas	4.2	4.1	4.3	4.9	5.1	5.4	6.0	1.2
Total Non-OECD	76.5	88.3	101.4	108.3	118.5	128.7	140.9	2.1
Total World	141.6	157.3	172.2	182.0	196.0	210.1	226.1	1.6

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run hp_210719.163813; and EIA, *Annual Energy Outlook 2021*, (February 2021), www.eia.gov/aeo

Notes:

* Totals may not equal sum of components due to independent rounding.

* Natural gas consumption excludes non-hydrocarbon gases.

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

million short tons

Region	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
OECD								
OECD Americas	524	429	406	380	359	349	354	-1.3
United States	468	380	369	346	323	311	313	-1.3
Canada	27	25	13	7	8	8	9	-3.6
Mexico and other OECD Americas	30	24	25	26	28	30	33	0.3
OECD Europe	528	501	457	448	398	412	428	-0.7
OECD Asia	421	420	415	430	432	414	373	-0.4
Japan	186	218	212	236	241	215	177	-0.2
South Korea	126	122	131	135	142	151	154	0.7
Australia and New Zealand	109	80	72	58	49	49	42	-3.1
Total OECD	1,473	1,350	1,278	1,258	1,189	1,175	1,156	-0.8
Non-OECD								
Non-OECD Europe and Eurasia	518	501	515	583	623	650	692	1.0
Russia	244	268	279	329	347	350	366	1.4
Other Europe and Eurasia	274	232	236	254	276	299	326	0.6
Non-OECD Asia	5,730	6,342	6,428	6,904	7,411	8,178	8,895	1.5
China	4,382	4,410	4,108	4,170	4,154	4,196	4,244	-0.1
India	893	1,290	1,506	1,748	2,040	2,485	2,777	3.9
Other Asia	456	642	813	986	1,217	1,497	1,874	4.8
Middle East	5	6	23	24	11	25	24	5.1
Africa	190	229	255	275	267	267	296	1.5
Non-OECD Americas	30	40	44	41	48	52	52	1.8
Brazil	23	29	34	36	31	32	33	1.1
Other Non-OECD Americas	7	11	10	6	17	21	19	3.6
Total Non-OECD	6,474	7,118	7,265	7,828	8,361	9,171	9,959	1.4
Total World	7,947	8,468	8,542	9,086	9,550	10,346	11,114	1.1

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run hp_210719.163813; and EIA, *Annual Energy Outlook 2021*, (February 2021), www.eia.gov/aeo

Notes:

* Totals may not equal sum of components due to independent rounding.

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

billion kilowatthours

Region	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
OECD								
OECD Americas	883	827	735	702	678	664	646	-1.0
United States	785	745	638	602	604	608	601	-0.9
Canada	87	71	77	72	51	39	28	-3.7
Mexico and other OECD Americas	11	11	20	28	23	17	17	1.3
OECD Europe	741	728	674	658	607	459	363	-2.3
OECD Asia	236	343	367	365	317	289	285	0.6
Japan	58	115	139	139	121	102	102	1.9
South Korea	178	228	228	226	196	186	183	0.1
Australia and New Zealand	0	0	0	0	0	0	0	0.0
Total OECD	1,859	1,898	1,776	1,725	1,602	1,412	1,294	-1.2
Non-OECD								
Non-OECD Europe and Eurasia	321	355	374	380	380	380	383	0.6
Russia	204	229	234	234	234	234	227	0.4
Other Europe and Eurasia	118	126	140	146	146	146	156	0.9
Non-OECD Asia	405	504	643	786	937	1,068	1,188	3.7
China	331	416	538	674	795	905	1,002	3.8
India	36	52	69	76	106	128	151	4.9
Other Asia	37	36	36	36	36	36	36	-0.1
Middle East	6	41	58	73	83	83	83	9.2
Africa	13	13	30	43	52	52	62	5.4
Non-OECD Americas	26	26	41	38	38	33	33	0.8
Brazil	14	14	23	23	23	18	18	0.9
Other Non-OECD Americas	12	12	18	15	15	15	15	0.8
Total Non-OECD	771	939	1,146	1,320	1,490	1,617	1,749	2.8
Total World	2,630	2,836	2,922	3,046	3,092	3,028	3,043	0.5

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run hp_210719.163813; and EIA, *Annual Energy Outlook 2021*, (February 2021), www.eia.gov/aeo

Notes:

* Totals may not equal sum of components due to independent rounding.

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

quadrillion British thermal units

Region	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
OECD								
OECD Americas	16.6	21.2	25.0	27.1	28.6	30.6	33.0	2.3
United States	10.3	14.6	17.5	18.9	19.7	20.5	21.5	2.5
Canada	4.4	4.6	5.0	5.4	5.7	6.0	6.3	1.2
Mexico and other OECD Americas	1.8	2.1	2.4	2.8	3.3	4.1	5.1	3.5
OECD Europe	16.1	17.8	21.4	25.3	29.3	33.8	38.2	2.9
OECD Asia	4.0	4.6	5.4	6.6	8.4	10.6	12.4	3.8
Japan	2.5	2.3	2.4	2.6	3.2	4.1	5.1	2.3
South Korea	0.4	0.5	0.7	1.0	1.6	2.3	2.6	6.8
Australia and New Zealand	1.1	1.8	2.3	3.0	3.6	4.1	4.7	5.0
Total OECD	36.7	43.7	51.8	59.1	66.3	74.9	83.5	2.8
Non-OECD								
Non-OECD Europe and Eurasia	3.5	3.6	4.1	5.1	6.4	7.8	8.9	3.2
Russia	2.0	2.0	2.1	2.5	3.1	3.8	4.4	2.7
Other Europe and Eurasia	1.5	1.7	2.0	2.6	3.3	4.0	4.5	3.8
Non-OECD Asia	33.4	48.5	66.7	89.2	112.0	134.5	158.1	5.3
China	22.1	29.3	37.0	47.1	57.4	67.6	76.1	4.2
India	5.2	11.2	19.1	28.0	37.6	47.4	60.6	8.5
Other Asia	6.2	8.0	10.6	14.1	17.1	19.5	21.4	4.2
Middle East	0.2	0.6	1.4	2.9	4.6	5.4	5.9	11.6
Africa	4.8	6.3	7.8	9.5	12.4	16.5	19.9	4.8
Non-OECD Americas	10.1	11.3	13.2	15.0	16.9	18.9	20.9	2.5
Brazil	7.2	7.9	9.1	10.4	11.7	12.7	13.8	2.2
Other Non-OECD Americas	2.9	3.3	4.2	4.5	5.3	6.2	7.1	3.0
Total Non-OECD	52.1	70.3	93.2	121.7	152.4	183.2	213.7	4.8
Total World	88.7	113.9	144.9	180.8	218.7	258.1	297.3	4.1

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run hp_210719.163813; and EIA, *Annual Energy Outlook 2021*, (February 2021), www.eia.gov/aeo

Notes:

* Totals may not equal sum of components due to independent rounding.

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

million metric tons carbon dioxide

Region	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
OECD								
OECD Americas	5,654	5,804	5,767	5,860	6,012	6,210	6,412	0.4
United States	4,556	4,575	4,502	4,511	4,557	4,645	4,752	0.1
Canada	547	603	612	642	697	751	803	1.3
Mexico and other OECD Americas	552	626	654	707	759	814	856	1.5
OECD Europe	3,594	3,793	3,718	3,696	3,674	3,788	3,935	0.3
OECD Asia	2,253	2,323	2,321	2,341	2,330	2,294	2,250	0.0
Japan	1,089	1,131	1,099	1,111	1,082	1,015	937	-0.5
South Korea	757	789	820	832	846	860	877	0.5
Australia and New Zealand	407	403	403	399	402	419	437	0.2
Total OECD	11,501	11,920	11,807	11,897	12,016	12,292	12,597	0.3
Non-OECD								
Non-OECD Europe and Eurasia	2,930	3,099	3,285	3,543	3,773	3,991	4,221	1.2
Russia	1,861	2,021	2,160	2,339	2,486	2,604	2,727	1.3
Other Europe and Eurasia	1,068	1,079	1,125	1,204	1,287	1,387	1,494	1.1
Non-OECD Asia	15,535	17,737	18,841	20,290	21,849	23,843	25,763	1.7
China	10,910	11,505	11,423	11,635	11,769	12,000	12,197	0.4
India	2,137	3,087	3,753	4,458	5,221	6,227	7,016	4.0
Other Asia	2,488	3,145	3,665	4,197	4,858	5,615	6,550	3.3
Middle East	2,028	2,317	2,406	2,516	2,660	2,824	2,944	1.3
Africa	1,250	1,465	1,622	1,800	1,962	2,138	2,445	2.3
Non-OECD Americas	1,106	1,285	1,372	1,465	1,572	1,688	1,815	1.7
Brazil	503	603	647	675	698	735	776	1.5
Other Non-OECD Americas	603	682	725	790	874	953	1,039	1.8
Total Non-OECD	22,849	25,904	27,527	29,614	31,816	34,484	37,189	1.6
Total World	34,349	37,823	39,334	41,511	43,832	46,776	49,786	1.2

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run hp_210719.163813; and EIA, *Annual Energy Outlook 2021*, (February 2021), www.eia.gov/aeo

Notes:

* Values presented are gross CO₂ emissions; CO₂ captured by CCS, accounting for less than 0.2% of the 2050 world total, is not subtracted

* Totals may not equal sum of components due to independent rounding.

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

million metric tons carbon dioxide

Region	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
OECD								
OECD Americas	2,590	2,787	2,746	2,737	2,746	2,785	2,846	0.3
United States	2,016	2,143	2,107	2,078	2,056	2,055	2,069	0.1
Canada	261	290	289	294	300	310	323	0.7
Mexico and other OECD Americas	313	354	349	364	390	420	454	1.2
OECD Europe	1,790	1,938	1,886	1,854	1,846	1,883	1,945	0.3
OECD Asia	991	1,029	1,006	989	979	982	994	0.0
Japan	464	449	418	391	368	350	337	-1.1
South Korea	368	394	397	398	400	408	414	0.4
Australia and New Zealand	160	185	191	201	211	224	243	1.4
Total OECD	5,372	5,755	5,637	5,580	5,571	5,649	5,785	0.2
Non-OECD								
Non-OECD Europe and Eurasia	696	776	809	861	916	971	1,017	1.3
Russia	435	488	504	534	562	589	610	1.1
Other Europe and Eurasia	262	288	305	327	354	382	407	1.5
Non-OECD Asia	3,372	4,164	4,721	5,216	5,632	6,013	6,330	2.1
China	1,723	2,029	2,205	2,295	2,318	2,319	2,303	1.0
India	565	799	1,041	1,285	1,515	1,731	1,933	4.2
Other Asia	1,085	1,335	1,475	1,636	1,799	1,963	2,094	2.2
Middle East	994	1,108	1,076	1,115	1,179	1,240	1,291	0.9
Africa	585	691	740	820	933	1,077	1,246	2.6
Non-OECD Americas	734	870	933	1,000	1,076	1,163	1,251	1.8
Brazil	382	447	475	502	531	563	593	1.5
Other Non-OECD Americas	352	423	458	498	545	600	658	2.1
Total Non-OECD	6,382	7,610	8,279	9,012	9,737	10,464	11,135	1.9
Total World	11,753	13,364	13,917	14,591	15,308	16,113	16,920	1.2

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run hp_210719.163813; and EIA, *Annual Energy Outlook 2021*, (February 2021), www.eia.gov/aeo

Notes:

* Totals may not equal sum of components due to independent rounding.

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

million metric tons carbon dioxide

Region	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
OECD								
OECD Americas	2,088	2,215	2,269	2,418	2,590	2,756	2,886	1.1
United States	1,672	1,726	1,720	1,801	1,903	2,005	2,096	0.8
Canada	237	266	295	330	377	420	458	2.2
Mexico and other OECD Americas	179	223	253	288	310	331	333	2.1
OECD Europe	1,037	1,107	1,137	1,150	1,190	1,244	1,302	0.8
OECD Asia	461	465	480	471	468	460	474	0.1
Japan	232	219	220	205	198	200	202	-0.5
South Korea	130	139	148	151	150	137	141	0.3
Australia and New Zealand	99	107	112	115	119	124	131	0.9
Total OECD	3,586	3,787	3,885	4,038	4,248	4,461	4,663	0.9
Non-OECD								
Non-OECD Europe and Eurasia	1,326	1,409	1,526	1,612	1,709	1,817	1,922	1.2
Russia	956	1,010	1,109	1,170	1,250	1,329	1,400	1.3
Other Europe and Eurasia	370	400	418	442	459	488	522	1.2
Non-OECD Asia	1,261	1,608	2,053	2,191	2,479	2,805	3,185	3.1
China	610	837	1,158	1,184	1,329	1,491	1,646	3.4
India	110	164	223	283	351	434	538	5.4
Other Asia	541	606	672	724	799	881	1,001	2.1
Middle East	1,020	1,193	1,281	1,350	1,453	1,530	1,601	1.5
Africa	300	334	393	451	514	546	627	2.5
Non-OECD Americas	301	321	335	365	377	396	436	1.2
Brazil	65	87	90	86	87	90	98	1.4
Other Non-OECD Americas	236	234	245	279	290	306	338	1.2
Total Non-OECD	4,209	4,865	5,588	5,969	6,532	7,095	7,771	2.1
Total World	7,795	8,652	9,474	10,007	10,780	11,556	12,434	1.6

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run hp_210719.163813; and EIA, *Annual Energy Outlook 2021*, (February 2021), www.eia.gov/aeo

Notes:

* Values presented are gross CO₂ emissions; CO₂ captured by CCS, accounting for less than 0.2% of the 2050 world total, is not subtracted

* Totals may not equal sum of components due to independent rounding.

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

million metric tons carbon dioxide

Region	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
OECD								
OECD Americas	976	802	752	706	676	669	680	-1.2
United States	868	707	674	633	598	586	588	-1.3
Canada	48	47	27	18	20	21	22	-2.5
Mexico and other OECD Americas	60	49	51	55	59	62	69	0.5
OECD Europe	766	747	696	693	638	661	688	-0.4
OECD Asia	800	829	836	881	884	852	782	-0.1
Japan	393	463	461	515	516	465	397	0.0
South Korea	259	256	275	283	296	316	322	0.7
Australia and New Zealand	148	110	100	83	71	71	62	-2.8
Total OECD	2,543	2,378	2,284	2,280	2,198	2,182	2,149	-0.6
Non-OECD								
Non-OECD Europe and Eurasia	908	914	950	1,070	1,148	1,203	1,282	1.2
Russia	471	523	548	635	673	686	717	1.4
Other Europe and Eurasia	437	391	402	435	474	517	565	0.9
Non-OECD Asia	10,902	11,965	12,067	12,883	13,737	15,024	16,248	1.3
China	8,578	8,638	8,060	8,156	8,122	8,190	8,248	-0.1
India	1,462	2,123	2,489	2,890	3,355	4,063	4,545	3.9
Other Asia	862	1,204	1,518	1,837	2,260	2,771	3,455	4.7
Middle East	13	15	49	52	28	53	53	4.7
Africa	365	440	489	529	515	516	572	1.5
Non-OECD Americas	71	94	104	100	119	129	128	2.0
Brazil	55	69	82	87	80	82	85	1.4
Other Non-OECD Americas	15	25	23	13	39	47	44	3.5
Total Non-OECD	12,258	13,429	13,660	14,633	15,546	16,925	18,284	1.3
Total World	14,801	15,807	15,943	16,913	17,744	19,107	20,433	1.1

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run hp_210719.163813; and EIA, *Annual Energy Outlook 2021*, (February 2021), www.eia.gov/aeo

Notes:

* Totals may not equal sum of components due to independent rounding.

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

million persons

Region	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
OECD								
OECD Americas	570	591	611	629	644	657	669	0.5
United States	330	342	353	362	371	379	386	0.5
Canada	38	40	42	44	46	47	49	0.8
Mexico and other OECD Americas	202	210	217	223	228	232	234	0.5
OECD Europe	590	597	602	607	611	613	613	0.1
OECD Asia	208	208	207	205	202	199	195	-0.2
Japan	126	124	121	117	114	110	106	-0.6
South Korea	51	51	51	51	50	48	47	-0.3
Australia and New Zealand	31	32	34	37	39	41	42	1.1
Total OECD	1,369	1,396	1,420	1,441	1,457	1,469	1,478	0.3
Non-OECD								
Non-OECD Europe and Eurasia	342	344	343	343	343	342	341	0.0
Russia	146	145	143	141	139	137	136	-0.2
Other Europe and Eurasia	196	199	200	202	204	205	206	0.2
Non-OECD Asia	3,972	4,120	4,242	4,339	4,409	4,453	4,473	0.4
China	1,440	1,458	1,464	1,461	1,449	1,429	1,402	-0.1
India	1,382	1,447	1,505	1,555	1,594	1,621	1,640	0.6
Other Asia	1,151	1,215	1,273	1,323	1,367	1,403	1,432	0.7
Middle East	287	317	344	369	393	415	436	1.4
Africa	1,302	1,465	1,638	1,822	2,014	2,212	2,413	2.1
Non-OECD Americas	452	472	489	503	514	522	528	0.5
Brazil	213	219	224	227	229	230	229	0.2
Other Non-OECD Americas	239	253	265	276	285	292	299	0.7
Total Non-OECD	6,354	6,718	7,058	7,376	7,672	7,945	8,191	0.9
Total World	7,723	8,113	8,478	8,817	9,130	9,414	9,669	0.8

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run hp_210719.163813; and EIA, *Annual Energy Outlook 2021*, (February 2021), www.eia.gov/aeo

Notes:

* Totals may not equal sum of components due to independent rounding.

billion 2015 dollars

million 2013 dollars

								Average annual percentage change, 2020–2050
Region and sector	2020	2025	2030	2035	2040	2045	2050	
OECD								
United States								
Energy-intensive manufacturing	\$2,575	\$3,027	\$3,333	\$3,627	\$3,904	\$4,224	\$4,563	1.9
Non-energy-intensive manufacturing	\$3,666	\$4,626	\$5,164	\$5,775	\$6,407	\$7,157	\$7,979	2.6
Nonmanufacturing	\$2,456	\$2,901	\$3,199	\$3,494	\$3,778	\$4,110	\$4,459	2.0
Services	\$25,509	\$30,932	\$34,511	\$38,303	\$42,030	\$46,219	\$50,640	2.3
Total	\$34,206	\$41,486	\$46,207	\$51,199	\$56,119	\$61,711	\$67,641	2.3
Canada								
Energy-intensive manufacturing	\$245	\$305	\$347	\$396	\$449	\$508	\$572	2.9
Non-energy-intensive manufacturing	\$311	\$406	\$455	\$511	\$574	\$645	\$722	2.8
Nonmanufacturing	\$458	\$527	\$584	\$649	\$713	\$778	\$848	2.1
Services	\$1,577	\$2,032	\$2,260	\$2,520	\$2,813	\$3,136	\$3,485	2.7
Total	\$2,590	\$3,270	\$3,646	\$4,076	\$4,549	\$5,068	\$5,627	2.6
Mexico and other OECD Americas								
Energy-intensive manufacturing	\$811	\$955	\$1,078	\$1,215	\$1,360	\$1,517	\$1,686	2.5
Non-energy-intensive manufacturing	\$926	\$1,196	\$1,342	\$1,519	\$1,730	\$1,981	\$2,286	3.1
Nonmanufacturing	\$755	\$892	\$1,004	\$1,135	\$1,279	\$1,413	\$1,531	2.4
Services	\$2,888	\$3,657	\$4,205	\$4,837	\$5,534	\$6,256	\$6,999	3.0
Total	\$5,380	\$6,700	\$7,629	\$8,706	\$9,904	\$11,167	\$12,502	2.9
OECD Europe								
Energy-intensive manufacturing	\$4,488	\$5,104	\$5,458	\$5,851	\$6,253	\$6,677	\$7,133	1.6
Non-energy-intensive manufacturing	\$7,156	\$8,871	\$9,743	\$10,791	\$11,934	\$13,207	\$14,623	2.4
Nonmanufacturing	\$4,159	\$4,871	\$5,300	\$5,741	\$6,198	\$6,680	\$7,190	1.8
Services	\$27,308	\$32,160	\$35,188	\$38,313	\$41,715	\$45,478	\$49,604	2.0
Total	\$43,112	\$51,006	\$55,689	\$60,695	\$66,100	\$72,042	\$78,550	2.0
Japan								
Energy-intensive manufacturing	\$1,013	\$1,125	\$1,144	\$1,147	\$1,151	\$1,158	\$1,169	0.5
Non-energy-intensive manufacturing	\$2,584	\$3,191	\$3,349	\$3,476	\$3,613	\$3,757	\$3,914	1.4
Nonmanufacturing	\$630	\$689	\$697	\$699	\$702	\$701	\$701	0.4
Services	\$5,566	\$6,096	\$6,381	\$6,547	\$6,715	\$6,890	\$7,098	0.8
Total	\$9,793	\$11,101	\$11,570	\$11,869	\$12,180	\$12,507	\$12,882	0.9
South Korea								
Energy-intensive manufacturing	\$1,084	\$1,236	\$1,342	\$1,427	\$1,495	\$1,566	\$1,631	1.4
Non-energy-intensive manufacturing	\$1,508	\$1,861	\$2,074	\$2,232	\$2,369	\$2,526	\$2,682	1.9
Nonmanufacturing	\$372	\$429	\$477	\$520	\$557	\$593	\$629	1.8
Services	\$2,345	\$2,715	\$3,017	\$3,236	\$3,419	\$3,618	\$3,805	1.6
Total	\$5,309	\$6,242	\$6,910	\$7,415	\$7,839	\$8,304	\$8,747	1.7
Australia and New Zealand								
Energy-intensive manufacturing	\$175	\$185	\$200	\$217	\$234	\$250	\$264	1.4
Non-energy-intensive manufacturing	\$123	\$135	\$147	\$161	\$175	\$188	\$199	1.6
Nonmanufacturing	\$527	\$652	\$758	\$886	\$1,013	\$1,152	\$1,310	3.1
Services	\$1,801	\$2,112	\$2,432	\$2,768	\$3,095	\$3,418	\$3,737	2.5
Total	\$2,626	\$3,084	\$3,538	\$4,033	\$4,518	\$5,008	\$5,509	2.5
Total OECD								
Energy-intensive manufacturing	\$10,390	\$11,936	\$12,902	\$13,881	\$14,847	\$15,900	\$17,019	1.7
Non-energy-intensive manufacturing	\$16,274	\$20,286	\$22,275	\$24,465	\$26,800	\$29,461	\$32,404	2.3
Nonmanufacturing	\$9,358	\$10,961	\$12,019	\$13,125	\$14,240	\$15,428	\$16,667	1.9
Services	\$66,994	\$79,705	\$87,994	\$96,523	\$105,322	\$115,016	\$125,368	2.1
Total	\$103,016	\$122,889	\$135,189	\$147,993	\$161,209	\$175,806	\$191,457	2.1
Non-OECD								
Russia								

Energy-intensive manufacturing	\$721	\$886	\$999	\$1,128	\$1,258	\$1,383	\$1,492	2.5
Non-energy-intensive manufacturing	\$578	\$741	\$820	\$930	\$1,050	\$1,173	\$1,304	2.7
Nonmanufacturing	\$1,192	\$1,458	\$1,605	\$1,749	\$1,875	\$1,991	\$2,101	1.9
Services	\$3,553	\$4,408	\$4,767	\$5,369	\$6,010	\$6,735	\$7,604	2.6
Total	\$6,044	\$7,494	\$8,191	\$9,176	\$10,194	\$11,283	\$12,500	2.5
Other Europe and Eurasia								
Energy-intensive manufacturing	\$584	\$698	\$792	\$922	\$1,067	\$1,221	\$1,385	2.9
Non-energy-intensive manufacturing	\$460	\$578	\$653	\$752	\$862	\$981	\$1,110	3.0
Nonmanufacturing	\$996	\$1,204	\$1,418	\$1,678	\$1,970	\$2,281	\$2,606	3.3
Services	\$2,672	\$3,438	\$4,032	\$4,788	\$5,632	\$6,595	\$7,727	3.6
Total	\$4,712	\$5,917	\$6,894	\$8,140	\$9,531	\$11,079	\$12,827	3.4
China								
Energy-intensive manufacturing	\$13,218	\$16,891	\$19,612	\$22,049	\$24,210	\$26,354	\$28,286	2.6
Non-energy-intensive manufacturing	\$23,190	\$31,666	\$38,662	\$45,982	\$52,836	\$59,718	\$65,688	3.5
Nonmanufacturing	\$10,745	\$13,337	\$15,395	\$17,337	\$19,062	\$20,729	\$22,499	2.5
Services	\$29,694	\$43,241	\$57,205	\$72,942	\$89,998	\$109,101	\$128,548	5.0
Total	\$76,846	\$105,135	\$130,874	\$158,310	\$186,106	\$215,902	\$245,020	3.9
India								
Energy-intensive manufacturing	\$3,317	\$5,250	\$8,008	\$11,309	\$15,101	\$19,512	\$24,596	6.9
Non-energy-intensive manufacturing	\$2,531	\$4,435	\$6,858	\$9,708	\$13,135	\$17,312	\$22,466	7.5
Nonmanufacturing	\$3,801	\$5,780	\$7,412	\$9,599	\$12,462	\$15,787	\$19,652	5.6
Services	\$6,641	\$10,040	\$15,372	\$21,522	\$28,356	\$36,354	\$45,627	6.6
Total	\$16,290	\$25,505	\$37,650	\$52,137	\$69,054	\$88,965	\$112,341	6.6
Other Asia								
Energy-intensive manufacturing	\$3,226	\$4,217	\$5,283	\$6,615	\$8,174	\$9,923	\$11,838	4.4
Non-energy-intensive manufacturing	\$6,063	\$8,134	\$10,146	\$12,443	\$14,927	\$17,572	\$20,364	4.1
Nonmanufacturing	\$4,109	\$5,361	\$6,885	\$8,721	\$10,927	\$13,472	\$16,317	4.7
Services	\$11,758	\$15,952	\$20,765	\$26,283	\$32,608	\$39,819	\$47,705	4.8
Total	\$25,156	\$33,664	\$43,079	\$54,062	\$66,636	\$80,786	\$96,224	4.6
Middle East								
Energy-intensive manufacturing	\$1,392	\$1,758	\$1,993	\$2,229	\$2,443	\$2,631	\$2,796	2.4
Non-energy-intensive manufacturing	\$383	\$520	\$610	\$697	\$779	\$851	\$919	3.0
Nonmanufacturing	\$2,435	\$2,849	\$3,133	\$3,406	\$3,682	\$3,972	\$4,266	1.9
Services	\$4,545	\$6,064	\$7,370	\$8,840	\$10,394	\$12,132	\$13,887	3.8
Total	\$8,755	\$11,192	\$13,106	\$15,173	\$17,297	\$19,586	\$21,867	3.1
Africa								
Energy-intensive manufacturing	\$1,256	\$1,551	\$1,945	\$2,441	\$3,035	\$3,699	\$4,462	4.3
Non-energy-intensive manufacturing	\$921	\$1,199	\$1,503	\$1,878	\$2,323	\$2,810	\$3,346	4.4
Nonmanufacturing	\$3,114	\$3,653	\$4,336	\$5,093	\$5,956	\$6,853	\$7,864	3.1
Services	\$6,095	\$7,564	\$9,407	\$11,643	\$14,357	\$17,462	\$21,075	4.2
Total	\$11,386	\$13,968	\$17,191	\$21,054	\$25,670	\$30,824	\$36,747	4.0
Brazil								
Energy-intensive manufacturing	\$777	\$940	\$1,087	\$1,217	\$1,318	\$1,402	\$1,477	2.2
Non-energy-intensive manufacturing	\$481	\$660	\$763	\$859	\$941	\$1,017	\$1,091	2.8
Nonmanufacturing	\$668	\$807	\$915	\$1,034	\$1,158	\$1,287	\$1,422	2.6
Services	\$2,997	\$3,541	\$4,056	\$4,575	\$5,033	\$5,450	\$5,847	2.3
Total	\$4,922	\$5,948	\$6,821	\$7,685	\$8,450	\$9,156	\$9,837	2.3
Other Non-OECD Americas								
Energy-intensive manufacturing	\$449	\$537	\$632	\$709	\$779	\$853	\$925	2.4
Non-energy-intensive manufacturing	\$473	\$604	\$714	\$817	\$924	\$1,044	\$1,174	3.1
Nonmanufacturing	\$677	\$825	\$953	\$1,066	\$1,181	\$1,303	\$1,428	2.5
Services	\$2,295	\$2,952	\$3,644	\$4,331	\$5,135	\$6,054	\$7,061	3.8
Total	\$3,895	\$4,918	\$5,943	\$6,923	\$8,020	\$9,254	\$10,589	3.4
Total Non-OECD								
Energy-intensive manufacturing	\$24,939	\$32,728	\$40,350	\$48,618	\$57,384	\$66,978	\$77,258	3.8
Non-energy-intensive manufacturing	\$35,080	\$48,538	\$60,728	\$74,065	\$87,776	\$102,478	\$117,461	4.1
Nonmanufacturing	\$27,736	\$35,274	\$42,052	\$49,683	\$58,274	\$67,676	\$78,155	3.5
Services	\$70,250	\$97,201	\$126,619	\$160,293	\$197,524	\$239,701	\$285,080	4.8

Total	\$158,006	\$213,740	\$269,749	\$332,659	\$400,957	\$476,834	\$557,953	4.3
World								
Energy-intensive manufacturing	\$35,329	\$44,664	\$53,252	\$62,499	\$72,231	\$82,879	\$94,276	3.3
Non-energy-intensive manufacturing	\$51,354	\$68,824	\$83,003	\$98,530	\$114,576	\$131,939	\$149,864	3.6
Nonmanufacturing	\$37,094	\$46,235	\$54,071	\$62,808	\$72,513	\$83,105	\$94,822	3.2
Services	\$137,244	\$176,906	\$214,612	\$256,816	\$302,846	\$354,717	\$410,448	3.7
Total	\$261,021	\$336,628	\$404,939	\$480,652	\$562,166	\$652,640	\$749,410	3.6

Sources: Table by the U.S. Energy Information Administration (EIA), based on Oxford Global Industry Model, (March 2021), www.oxfordeconomics.com (subscription site); EIA, World Energy Projection System (2021), run hp_210719.163813; and EIA, *Annual Energy Outlook 2021*, (February 2021), www.eia.gov/aeo

Notes:

* Totals may not equal sum of components due to independent rounding.

* *Gross output* is sales or revenue, including final and intermediate goods and services, measured in purchasing power parity (PPP).