

Table A1. World total primary energy consumption by region, High Economic Growth case

quadrillion British thermal units

Region	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
OECD								
OECD Americas	118.2	129.1	132.9	138.4	145.5	153.4	162.4	1.1
United States	92.9	101.1	102.9	105.9	110.4	115.4	121.5	0.9
Canada	14.6	15.7	16.6	17.7	18.8	20.0	21.2	1.2
Mexico and other OECD Americas	10.6	12.2	13.4	14.8	16.3	18.0	19.7	2.1
OECD Europe	77.6	83.6	86.3	90.3	94.2	99.1	104.7	1.0
OECD Asia	37.2	40.7	42.0	43.4	44.5	46.0	47.5	0.8
Japan	18.3	19.1	19.2	19.3	19.2	19.2	19.4	0.2
South Korea	12.0	13.8	14.4	15.0	15.4	16.1	16.6	1.1
Australia and New Zealand	6.9	7.8	8.4	9.1	9.9	10.7	11.5	1.7
Total OECD	232.9	253.3	261.2	272.1	284.1	298.5	314.5	1.0
Non-OECD								
Non-OECD Europe and Eurasia	52.6	56.3	60.2	64.9	69.7	74.6	79.5	1.4
Russia	34.4	37.3	40.1	43.2	46.4	49.3	52.2	1.4
Other Europe and Eurasia	18.2	19.0	20.1	21.7	23.4	25.3	27.3	1.4
Non-OECD Asia	230.4	279.5	318.1	361.9	408.9	458.3	507.5	2.7
China	156.4	176.3	188.0	202.6	217.5	232.5	245.0	1.5
India	31.5	49.5	66.7	85.3	105.4	128.0	152.6	5.4
Other Asia	42.5	53.7	63.4	73.9	86.0	97.8	109.9	3.2
Middle East	35.2	41.3	44.0	47.9	52.7	56.2	58.8	1.7
Africa	22.9	27.4	31.7	36.6	42.5	49.7	57.9	3.1
Non-OECD Americas	27.6	31.6	35.2	38.7	42.5	46.5	50.5	2.0
Brazil	14.9	17.3	19.2	21.2	22.9	24.7	26.4	1.9
Other Non-OECD Americas	12.8	14.3	16.0	17.5	19.6	21.8	24.1	2.2
Total Non-OECD	368.6	436.1	489.2	550.1	616.4	685.3	754.2	2.4
Total World	601.6	689.4	750.4	822.2	900.5	983.8	1,068.7	1.9

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run hm_210719.163753; 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 Economic Growth 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	48.5	49.3	50.6	52.4	54.6	57.3	1.0
Natural gas	39.7	42.0	43.6	46.0	49.6	52.8	56.1	1.2
Coal	10.2	9.2	8.8	8.5	8.4	8.3	8.5	-0.6
Nuclear	9.4	8.7	7.9	7.7	7.5	7.2	7.1	-0.9
Other	16.6	20.7	23.3	25.6	27.6	30.5	33.4	2.4
Total	118.2	129.1	132.9	138.4	145.5	153.4	162.4	1.1
OECD Europe								
Liquid fuels	26.0	29.0	28.8	28.9	29.3	30.1	31.2	0.6
Natural gas	19.5	20.9	21.5	21.7	22.3	23.2	24.3	0.7
Coal	8.1	7.7	7.1	7.1	6.8	7.0	7.3	-0.3
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	29.1	33.7	37.8	2.9
Total	77.6	83.6	86.3	90.3	94.2	99.1	104.7	1.0
OECD Asia								
Liquid fuels	13.9	14.8	14.8	14.8	14.9	15.1	15.4	0.3
Natural gas	8.7	8.7	8.9	8.6	8.4	8.2	8.4	-0.1
Coal	8.5	8.8	9.0	9.6	9.7	9.4	8.9	0.2
Nuclear	2.1	3.7	4.0	4.0	3.5	3.1	3.1	1.3
Other	4.0	4.6	5.4	6.5	8.1	10.1	11.6	3.6
Total	37.2	40.7	42.0	43.4	44.5	46.0	47.5	0.8
Total OECD								
Liquid fuels	82.3	92.4	92.8	94.3	96.6	99.9	103.9	0.8
Natural gas	67.9	71.5	74.0	76.3	80.3	84.1	88.8	0.9
Coal	26.8	25.7	24.9	25.2	24.8	24.8	24.7	-0.3
Nuclear	19.3	20.5	19.4	19.0	17.7	15.5	14.2	-1.0
Other	36.7	43.2	50.1	57.4	64.8	74.3	82.9	2.8
Total	232.9	253.3	261.2	272.1	284.1	298.5	314.5	1.0
Non-OECD								
Non-OECD Europe and Eurasia								
Liquid fuels	11.1	12.6	13.3	14.2	15.2	16.3	17.2	1.5
Natural gas	25.0	26.5	28.7	30.2	31.9	33.7	35.4	1.2
Coal	9.6	9.7	10.1	11.3	12.1	12.6	13.7	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	9.0	3.2
Total	52.6	56.3	60.2	64.9	69.7	74.6	79.5	1.4
Non-OECD Asia								
Liquid fuels	54.2	68.7	78.8	88.5	97.8	107.1	115.8	2.6
Natural gas	23.8	30.6	38.4	40.8	46.1	51.9	58.0	3.0
Coal	114.6	126.1	127.8	136.8	145.5	155.4	168.0	1.3
Nuclear	4.3	5.6	7.1	8.6	10.2	11.6	12.9	3.7
Other	33.4	48.6	66.1	87.2	109.3	132.3	152.8	5.2
Total	230.4	279.5	318.1	361.9	408.9	458.3	507.5	2.7
Middle East								
Liquid fuels	15.5	17.8	17.7	18.5	19.8	20.9	21.7	1.1
Natural gas	19.2	22.3	24.2	25.2	27.1	28.7	29.9	1.5
Coal	0.1	0.2	0.2	0.5	0.3	0.5	0.5	4.8
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	5.3	5.8	11.6
Total	35.2	41.3	44.0	47.9	52.7	56.2	58.8	1.7
Africa								
Liquid fuels	8.4	10.1	11.0	12.4	14.3	16.6	19.3	2.8
Natural gas	5.7	6.3	7.4	8.5	9.6	10.2	11.7	2.4
Coal	3.9	4.6	5.2	5.7	5.7	5.7	6.3	1.6
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	16.6	19.9	4.8
Total	22.9	27.4	31.7	36.6	42.5	49.7	57.9	3.1
Non-OECD Americas								
Liquid fuels	10.9	13.1	14.2	15.4	16.8	18.3	19.8	2.0
Natural gas	5.7	6.0	6.3	6.8	7.1	7.5	8.2	1.2
Coal	0.7	0.9	1.0	1.1	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	13.3	15.0	17.0	19.0	20.9	2.5
Total	27.6	31.6	35.2	38.7	42.5	46.5	50.5	2.0
Total Non-OECD								
Liquid fuels	100.1	122.2	134.9	149.1	163.9	179.1	193.9	2.2
Natural gas	79.3	91.7	104.9	111.4	121.8	132.0	143.2	2.0
Coal	128.9	141.6	144.3	155.5	164.8	175.5	189.7	1.3
Nuclear	8.2	10.3	12.5	14.4	16.2	17.6	19.0	2.8
Other	52.1	70.3	92.5	119.7	149.6	181.0	208.4	4.7
Total	368.6	436.1	489.2	550.1	616.4	685.3	754.2	2.4
World								
Liquid fuels	182.4	214.6	227.7	243.3	260.5	279.0	297.8	1.6
Natural gas	147.2	163.2	179.0	187.7	202.1	216.1	232.0	1.5
Coal	155.7	167.3	169.2	180.6	189.6	200.3	214.4	1.1
Nuclear	27.5	30.9	32.0	33.4	33.9	33.0	33.2	0.6
Other	88.7	113.5	142.6	177.1	214.3	255.3	291.2	4.0
Total	601.6	689.4	750.4	822.2	900.5	983.8	1,068.7	1.9

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run hm_210719.163753; 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 Economic Growth case

billion 2015 dollars

Region	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
OECD								
OECD Americas	\$24,067	\$29,169	\$32,822	\$37,158	\$41,852	\$46,841	\$52,428	2.6
United States	\$19,131	\$23,210	\$26,091	\$29,524	\$33,236	\$37,189	\$41,688	2.6
Canada	\$1,638	\$1,941	\$2,163	\$2,426	\$2,712	\$3,027	\$3,375	2.4
Mexico and other OECD Americas	\$3,298	\$4,018	\$4,568	\$5,208	\$5,904	\$6,625	\$7,365	2.7
OECD Europe	\$22,771	\$26,968	\$29,503	\$32,187	\$35,128	\$38,370	\$41,986	2.1
OECD Asia	\$8,568	\$9,755	\$10,555	\$11,221	\$11,868	\$12,546	\$13,281	1.5
Japan	\$5,043	\$5,616	\$5,883	\$6,061	\$6,246	\$6,436	\$6,663	0.9
South Korea	\$2,136	\$2,501	\$2,766	\$2,963	\$3,131	\$3,312	\$3,488	1.6
Australia and New Zealand	\$1,389	\$1,639	\$1,905	\$2,197	\$2,492	\$2,799	\$3,130	2.7
Total OECD	\$55,406	\$65,892	\$72,879	\$80,566	\$88,849	\$97,758	\$107,694	2.2
Non-OECD								
Non-OECD Europe and Eurasia	\$6,489	\$7,948	\$9,208	\$10,866	\$12,656	\$14,640	\$16,880	3.2
Russia	\$3,600	\$4,204	\$4,717	\$5,409	\$6,092	\$6,780	\$7,489	2.5
Other Europe and Eurasia	\$2,889	\$3,744	\$4,491	\$5,457	\$6,564	\$7,861	\$9,391	4.0
Non-OECD Asia	\$44,262	\$62,039	\$81,979	\$104,898	\$130,275	\$159,050	\$190,572	5.0
China	\$23,672	\$32,808	\$41,836	\$51,825	\$62,284	\$73,743	\$85,471	4.4
India	\$8,634	\$13,093	\$19,257	\$26,488	\$34,775	\$44,464	\$55,706	6.4
Other Asia	\$11,956	\$16,138	\$20,886	\$26,585	\$33,217	\$40,843	\$49,396	4.8
Middle East	\$4,659	\$5,746	\$6,713	\$7,838	\$8,992	\$10,304	\$11,656	3.1
Africa	\$6,270	\$7,948	\$9,916	\$12,299	\$15,185	\$18,477	\$22,312	4.3
Non-OECD Americas	\$5,470	\$6,836	\$8,105	\$9,404	\$10,808	\$12,330	\$14,013	3.2
Brazil	\$2,912	\$3,467	\$3,972	\$4,475	\$4,921	\$5,330	\$5,727	2.3
Other Non-OECD Americas	\$2,558	\$3,369	\$4,133	\$4,929	\$5,888	\$7,000	\$8,287	4.0
Total Non-OECD	\$67,150	\$90,518	\$115,921	\$145,305	\$177,916	\$214,801	\$255,433	4.6
Total World	\$122,556	\$156,410	\$188,800	\$225,871	\$266,765	\$312,558	\$363,128	3.7

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 hm_210719.163753; 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 A4. World gross domestic product (GDP) by region expressed in market exchange rates, High Economic Growth case

billion 2015 dollars

Region	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
OECD								
OECD Americas	\$22,510	\$27,271	\$30,662	\$34,687	\$39,043	\$43,680	\$48,909	2.6
United States	\$19,131	\$23,210	\$26,091	\$29,524	\$33,236	\$37,189	\$41,688	2.6
Canada	\$1,599	\$1,894	\$2,111	\$2,367	\$2,647	\$2,954	\$3,294	2.4
Mexico and other OECD Americas	\$1,780	\$2,167	\$2,460	\$2,796	\$3,160	\$3,538	\$3,927	2.7
OECD Europe	\$18,706	\$22,085	\$24,054	\$26,134	\$28,430	\$30,987	\$33,826	2.0
OECD Asia	\$7,505	\$8,552	\$9,278	\$9,901	\$10,511	\$11,150	\$11,843	1.5
Japan	\$4,363	\$4,859	\$5,090	\$5,244	\$5,404	\$5,568	\$5,764	0.9
South Korea	\$1,619	\$1,896	\$2,097	\$2,246	\$2,373	\$2,511	\$2,645	1.6
Australia and New Zealand	\$1,523	\$1,797	\$2,090	\$2,411	\$2,734	\$3,071	\$3,434	2.7
Total OECD	\$48,722	\$57,907	\$63,993	\$70,722	\$77,984	\$85,817	\$94,578	2.2
Non-OECD								
Non-OECD Europe and Eurasia	\$2,482	\$3,045	\$3,532	\$4,173	\$4,867	\$5,634	\$6,498	3.3
Russia	\$1,393	\$1,627	\$1,825	\$2,093	\$2,358	\$2,624	\$2,898	2.5
Other Europe and Eurasia	\$1,088	\$1,418	\$1,707	\$2,080	\$2,509	\$3,011	\$3,600	4.1
Non-OECD Asia	\$21,669	\$30,141	\$39,192	\$49,464	\$60,645	\$73,173	\$86,614	4.7
China	\$14,503	\$20,101	\$25,632	\$31,752	\$38,160	\$45,181	\$52,366	4.4
India	\$2,522	\$3,817	\$5,613	\$7,722	\$10,137	\$12,962	\$16,240	6.4
Other Asia	\$4,643	\$6,223	\$7,947	\$9,991	\$12,348	\$15,030	\$18,009	4.6
Middle East	\$2,076	\$2,554	\$2,982	\$3,482	\$3,990	\$4,558	\$5,131	3.1
Africa	\$2,379	\$3,030	\$3,770	\$4,658	\$5,725	\$6,950	\$8,372	4.3
Non-OECD Americas	\$3,279	\$4,075	\$4,802	\$5,565	\$6,383	\$7,266	\$8,238	3.1
Brazil	\$1,739	\$2,070	\$2,372	\$2,672	\$2,938	\$3,182	\$3,419	2.3
Other Non-OECD Americas	\$1,541	\$2,005	\$2,431	\$2,893	\$3,445	\$4,084	\$4,819	3.9
Total Non-OECD	\$31,885	\$42,844	\$54,278	\$67,342	\$81,610	\$97,580	\$114,853	4.4
Total World	\$80,606	\$100,751	\$118,272	\$138,065	\$159,594	\$183,398	\$209,431	3.2

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 hm_210719.163753; 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 A5. World liquids consumption by region, High Economic Growth case

million barrels per day

Region	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
OECD								
OECD Americas	22.5	26.0	26.6	27.3	28.3	29.5	30.9	1.1
United States	18.1	20.9	21.4	21.9	22.6	23.3	24.3	1.0
Canada	2.1	2.4	2.4	2.5	2.6	2.7	2.8	1.0
Mexico and other OECD Americas	2.3	2.7	2.7	2.9	3.2	3.5	3.8	1.6
OECD Europe	12.7	14.1	14.0	14.1	14.3	14.7	15.2	0.6
OECD Asia	6.9	7.3	7.3	7.3	7.3	7.4	7.6	0.3
Japan	3.3	3.3	3.1	2.9	2.8	2.7	2.7	-0.7
South Korea	2.4	2.6	2.7	2.8	2.8	2.9	2.9	0.6
Australia and New Zealand	1.2	1.4	1.5	1.6	1.7	1.8	2.0	1.8
Total OECD	42.0	47.5	47.8	48.7	49.9	51.6	53.7	0.8
Non-OECD								
Non-OECD Europe and Eurasia	5.7	6.4	6.8	7.2	7.7	8.3	8.8	1.5
Russia	3.7	4.3	4.5	4.8	5.1	5.4	5.8	1.4
Other Europe and Eurasia	1.9	2.2	2.3	2.5	2.6	2.8	3.0	1.5
Non-OECD Asia	27.1	34.3	39.4	44.2	48.9	53.5	57.8	2.6
China	14.3	17.3	18.8	19.7	20.2	20.5	20.8	1.3
India	4.4	6.4	8.6	10.9	13.2	15.5	17.7	4.8
Other Asia	8.4	10.6	12.0	13.6	15.5	17.4	19.3	2.8
Middle East	7.8	8.9	8.8	9.2	9.9	10.4	10.8	1.1
Africa	4.2	5.0	5.5	6.1	7.1	8.2	9.5	2.8
Non-OECD Americas	5.5	6.6	7.2	7.8	8.5	9.2	10.0	2.0
Brazil	2.9	3.4	3.7	4.0	4.3	4.6	4.9	1.8
Other Non-OECD Americas	2.6	3.1	3.4	3.8	4.1	4.6	5.1	2.3
Total Non-OECD	50.1	61.2	67.5	74.6	82.0	89.6	97.0	2.2
Total World	92.1	108.6	115.4	123.3	131.9	141.2	150.7	1.7

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run hm_210719.163753; 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 Economic Growth case

trillion cubic feet

Region	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
OECD								
OECD Americas	38.4	40.6	42.2	44.5	48.0	51.1	54.3	1.2
United States	30.7	31.6	32.1	33.2	35.5	37.7	40.0	0.9
Canada	4.3	4.8	5.3	5.9	6.8	7.5	8.1	2.2
Mexico and other OECD Americas	3.4	4.3	4.8	5.4	5.8	6.0	6.2	2.0
OECD Europe	19.0	20.2	20.9	21.0	21.6	22.5	23.6	0.7
OECD Asia	7.8	7.8	8.1	7.8	7.6	7.4	7.6	-0.1
Japan	3.8	3.6	3.5	3.2	3.1	3.0	3.0	-0.8
South Korea	2.2	2.3	2.5	2.4	2.3	2.2	2.3	0.1
Australia and New Zealand	1.8	2.0	2.1	2.1	2.2	2.2	2.4	0.9
Total OECD	65.1	68.7	71.1	73.4	77.3	81.0	85.5	0.9
Non-OECD								
Non-OECD Europe and Eurasia	24.4	25.8	28.0	29.4	31.1	32.9	34.5	1.2
Russia	17.6	18.5	20.3	21.5	23.0	24.3	25.4	1.2
Other Europe and Eurasia	6.8	7.3	7.7	8.0	8.1	8.6	9.1	1.0
Non-OECD Asia	23.0	29.5	37.0	39.3	44.4	50.0	55.9	3.0
China	11.0	15.4	20.5	20.9	23.4	26.1	28.8	3.3
India	2.0	2.9	4.0	5.0	6.2	7.5	8.9	5.2
Other Asia	10.1	11.3	12.5	13.4	14.8	16.4	18.1	2.0
Middle East	18.3	21.2	23.0	24.0	25.8	27.3	28.5	1.5
Africa	5.4	5.9	7.0	8.1	9.1	9.7	11.1	2.4
Non-OECD Americas	5.4	5.8	6.1	6.5	6.8	7.2	7.9	1.2
Brazil	1.3	1.7	1.7	1.7	1.7	1.8	1.9	1.3
Other Non-OECD Americas	4.2	4.1	4.3	4.8	5.1	5.4	6.0	1.2
Total Non-OECD	76.5	88.3	101.1	107.3	117.2	127.0	137.8	2.0
Total World	141.6	157.0	172.2	180.7	194.5	208.0	223.3	1.5

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run hm_210719.163753; 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 Economic Growth case

million short tons

Region	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
OECD								
OECD Americas	525	468	453	432	419	411	415	-0.8
United States	468	419	415	399	383	372	373	-0.8
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	489	439	435	401	414	431	-0.7
OECD Asia	421	421	419	445	448	434	408	-0.1
Japan	186	216	219	240	241	223	195	0.2
South Korea	126	128	131	140	147	153	157	0.8
Australia and New Zealand	109	77	69	65	60	58	56	-2.2
Total OECD	1,473	1,378	1,311	1,313	1,268	1,259	1,254	-0.5
Non-OECD								
Non-OECD Europe and Eurasia	518	503	514	581	618	641	696	1.0
Russia	244	267	280	331	348	349	379	1.5
Other Europe and Eurasia	274	236	234	249	270	292	317	0.5
Non-OECD Asia	5,730	6,368	6,493	7,009	7,518	8,087	8,808	1.4
China	4,382	4,441	4,148	4,204	4,170	4,202	4,247	-0.1
India	893	1,286	1,534	1,855	2,191	2,530	2,972	4.1
Other Asia	456	641	811	951	1,156	1,356	1,589	4.3
Middle East	5	6	9	21	14	25	25	5.1
Africa	190	228	255	279	279	278	306	1.6
Non-OECD Americas	30	40	45	49	50	53	52	1.9
Brazil	23	29	35	38	30	33	33	1.1
Other Non-OECD Americas	7	11	10	11	20	21	19	3.6
Total Non-OECD	6,474	7,145	7,316	7,940	8,479	9,085	9,887	1.4
Total World	7,947	8,523	8,627	9,252	9,746	10,343	11,142	1.1

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run hm_210719.163753; 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 Economic Growth case

billion kilowatthours

Region	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
OECD								
OECD Americas	883	827	752	734	710	688	678	-0.9
United States	785	745	655	634	636	632	634	-0.7
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	1,793	1,758	1,635	1,435	1,326	-1.1
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	2,939	3,078	3,125	3,052	3,075	0.5

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run hm_210719.163753; 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 Economic Growth case

quadrillion British thermal units

Region	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
OECD								
OECD Americas	16.6	20.7	23.3	25.6	27.6	30.5	33.4	2.4
United States	10.3	14.1	15.8	17.4	18.5	20.0	21.8	2.5
Canada	4.4	4.6	5.0	5.4	5.7	6.0	6.4	1.2
Mexico and other OECD Americas	1.8	2.1	2.5	2.8	3.4	4.4	5.2	3.5
OECD Europe	16.1	17.8	21.4	25.3	29.1	33.7	37.8	2.9
OECD Asia	4.0	4.6	5.4	6.5	8.1	10.1	11.6	3.6
Japan	2.5	2.3	2.4	2.6	3.2	4.0	4.8	2.1
South Korea	0.4	0.5	0.7	1.1	1.7	2.3	2.6	6.7
Australia and New Zealand	1.1	1.8	2.3	2.8	3.3	3.8	4.2	4.6
Total OECD	36.7	43.2	50.1	57.4	64.8	74.3	82.9	2.8
Non-OECD								
Non-OECD Europe and Eurasia	3.5	3.6	4.1	5.1	6.4	7.8	9.0	3.2
Russia	2.0	2.0	2.1	2.5	3.1	3.9	4.6	2.8
Other Europe and Eurasia	1.5	1.7	2.0	2.5	3.3	3.9	4.4	3.7
Non-OECD Asia	33.4	48.6	66.1	87.2	109.3	132.3	152.8	5.2
China	22.1	29.3	37.0	47.2	57.9	67.7	74.8	4.1
India	5.2	11.3	18.5	25.9	34.3	45.0	56.1	8.3
Other Asia	6.2	8.0	10.6	14.1	17.2	19.7	21.9	4.3
Middle East	0.2	0.6	1.4	2.9	4.6	5.3	5.8	11.6
Africa	4.8	6.3	7.8	9.5	12.4	16.6	19.9	4.8
Non-OECD Americas	10.1	11.3	13.3	15.0	17.0	19.0	20.9	2.5
Brazil	7.2	8.0	9.1	10.4	11.6	12.7	13.7	2.2
Other Non-OECD Americas	2.9	3.3	4.2	4.6	5.3	6.2	7.1	3.0
Total Non-OECD	52.1	70.3	92.5	119.7	149.6	181.0	208.4	4.7
Total World	88.7	113.5	142.6	177.1	214.3	255.3	291.2	4.0

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run hm_210719.163753; 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 Economic Growth 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	6,014	6,090	6,234	6,507	6,794	7,122	0.8
United States	4,556	4,769	4,794	4,844	5,000	5,178	5,394	0.6
Canada	547	608	623	658	714	768	820	1.4
Mexico and other OECD Americas	552	637	673	733	793	848	907	1.7
OECD Europe	3,593	3,839	3,790	3,803	3,825	3,950	4,110	0.4
OECD Asia	2,252	2,349	2,366	2,405	2,411	2,391	2,380	0.2
Japan	1,089	1,139	1,122	1,128	1,103	1,054	995	-0.3
South Korea	756	806	833	852	871	882	904	0.6
Australia and New Zealand	407	404	411	424	437	455	480	0.5
Total OECD	11,500	12,202	12,246	12,442	12,744	13,134	13,611	0.6
Non-OECD								
Non-OECD Europe and Eurasia	2,930	3,106	3,287	3,534	3,748	3,951	4,185	1.2
Russia	1,861	2,016	2,159	2,336	2,476	2,589	2,722	1.3
Other Europe and Eurasia	1,068	1,090	1,129	1,198	1,272	1,362	1,463	1.1
Non-OECD Asia	15,535	17,914	19,126	20,726	22,429	24,267	26,354	1.8
China	10,910	11,625	11,544	11,750	11,879	12,117	12,381	0.4
India	2,137	3,104	3,852	4,727	5,617	6,523	7,591	4.3
Other Asia	2,488	3,185	3,731	4,249	4,933	5,627	6,382	3.2
Middle East	2,028	2,326	2,405	2,533	2,689	2,857	2,978	1.3
Africa	1,251	1,470	1,647	1,847	2,033	2,227	2,540	2.4
Non-OECD Americas	1,106	1,297	1,395	1,510	1,627	1,755	1,885	1.8
Brazil	503	610	661	703	735	781	822	1.7
Other Non-OECD Americas	603	687	734	807	892	974	1,062	1.9
Total Non-OECD	22,849	26,113	27,861	30,150	32,525	35,056	37,943	1.7
Total World	34,349	38,315	40,107	42,591	45,269	48,190	51,554	1.4

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run hm_210719.163753; 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 Economic Growth 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	2,932	2,957	3,011	3,110	3,236	3,385	0.9
United States	2,016	2,273	2,284	2,306	2,361	2,432	2,525	0.8
Canada	261	295	301	309	318	332	348	1.0
Mexico and other OECD Americas	313	365	372	396	431	471	512	1.7
OECD Europe	1,790	1,998	1,974	1,975	1,999	2,055	2,128	0.6
OECD Asia	991	1,057	1,048	1,048	1,055	1,071	1,092	0.3
Japan	464	464	436	414	398	387	380	-0.7
South Korea	368	403	410	417	424	433	440	0.6
Australia and New Zealand	160	190	202	217	233	251	271	1.8
Total OECD	5,372	5,987	5,978	6,034	6,164	6,361	6,604	0.7
Non-OECD								
Non-OECD Europe and Eurasia	696	783	815	864	913	970	1,015	1.3
Russia	435	489	503	528	551	580	599	1.1
Other Europe and Eurasia	262	294	313	336	363	390	416	1.6
Non-OECD Asia	3,372	4,277	4,899	5,497	6,073	6,645	7,182	2.6
China	1,723	2,075	2,258	2,361	2,419	2,461	2,496	1.2
India	565	826	1,098	1,385	1,674	1,959	2,227	4.7
Other Asia	1,085	1,376	1,542	1,751	1,980	2,225	2,459	2.8
Middle East	994	1,126	1,101	1,143	1,216	1,282	1,337	1.0
Africa	585	701	764	858	989	1,145	1,329	2.8
Non-OECD Americas	734	882	955	1,036	1,128	1,225	1,321	2.0
Brazil	382	454	489	528	568	606	641	1.7
Other Non-OECD Americas	352	428	467	508	560	618	679	2.2
Total Non-OECD	6,382	7,768	8,535	9,398	10,318	11,267	12,184	2.2
Total World	11,754	13,755	14,513	15,432	16,482	17,628	18,788	1.6

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run hm_210719.163753; 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 Economic Growth 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	2,206	2,290	2,414	2,601	2,765	2,934	1.1
United States	1,672	1,717	1,745	1,803	1,922	2,037	2,159	0.9
Canada	237	266	295	330	376	415	450	2.2
Mexico and other OECD Americas	179	224	250	282	303	314	325	2.0
OECD Europe	1,037	1,107	1,140	1,151	1,183	1,229	1,289	0.7
OECD Asia	461	459	474	456	446	433	445	-0.1
Japan	232	217	215	197	187	183	183	-0.8
South Korea	130	135	146	143	139	129	134	0.1
Australia and New Zealand	99	108	113	116	119	122	128	0.9
Total OECD	3,585	3,773	3,904	4,021	4,230	4,427	4,668	0.9
Non-OECD								
Non-OECD Europe and Eurasia	1,326	1,405	1,522	1,601	1,692	1,789	1,878	1.2
Russia	956	1,006	1,106	1,168	1,250	1,324	1,382	1.2
Other Europe and Eurasia	370	399	416	433	442	465	495	1.0
Non-OECD Asia	1,261	1,621	2,037	2,164	2,447	2,752	3,080	3.0
China	610	852	1,138	1,157	1,299	1,449	1,599	3.3
India	110	162	224	284	349	423	505	5.2
Other Asia	541	607	675	723	799	881	976	2.0
Middle East	1,020	1,185	1,282	1,338	1,439	1,521	1,588	1.5
Africa	300	332	392	451	507	544	619	2.4
Non-OECD Americas	301	321	334	360	375	399	435	1.2
Brazil	65	87	90	87	88	91	96	1.3
Other Non-OECD Americas	236	234	245	273	287	308	339	1.2
Total Non-OECD	4,209	4,864	5,567	5,913	6,460	7,005	7,600	2.0
Total World	7,794	8,637	9,472	9,934	10,690	11,432	12,268	1.5

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run hm_210719.163753; 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 Economic Growth case

million metric tons carbon dioxide

Region	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
OECD								
OECD Americas	976	875	843	809	796	793	803	-0.7
United States	868	780	765	735	718	709	711	-0.7
Canada	48	47	27	19	20	21	22	-2.5
Mexico and other OECD Americas	60	49	51	55	59	63	69	0.5
OECD Europe	766	734	676	677	642	665	693	-0.3
OECD Asia	800	833	844	900	911	887	843	0.2
Japan	393	458	471	517	518	484	432	0.3
South Korea	259	268	276	292	308	321	331	0.8
Australia and New Zealand	148	106	97	91	85	82	80	-2.0
Total OECD	2,543	2,442	2,363	2,386	2,350	2,346	2,339	-0.3
Non-OECD								
Non-OECD Europe and Eurasia	908	918	950	1,069	1,142	1,192	1,292	1.2
Russia	471	521	550	640	676	685	740	1.5
Other Europe and Eurasia	437	397	400	429	467	507	552	0.8
Non-OECD Asia	10,902	12,016	12,191	13,065	13,909	14,870	16,092	1.3
China	8,578	8,698	8,147	8,231	8,162	8,207	8,286	-0.1
India	1,462	2,116	2,530	3,058	3,594	4,142	4,859	4.1
Other Asia	862	1,202	1,513	1,776	2,153	2,521	2,947	4.2
Middle East	13	15	22	52	34	54	53	4.8
Africa	365	437	491	538	537	538	592	1.6
Non-OECD Americas	71	94	106	115	124	131	129	2.0
Brazil	55	69	83	89	79	84	85	1.5
Other Non-OECD Americas	15	25	23	26	45	47	44	3.6
Total Non-OECD	12,258	13,481	13,758	14,839	15,747	16,784	18,159	1.3
Total World	14,801	15,923	16,122	17,225	18,097	19,130	20,498	1.1

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run hm_210719.163753; 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 Economic Growth case

million persons

Region	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
OECD								
OECD Americas	571	595	620	642	663	681	697	0.7
United States	331	346	361	376	389	402	414	0.8
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	1,400	1,429	1,454	1,475	1,493	1,506	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	392	415	435	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	6,717	7,057	7,376	7,672	7,944	8,191	0.8
Total World	7,723	8,117	8,486	8,830	9,147	9,437	9,697	0.8

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run hm_210719.163753; 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	\$3,141	\$3,496	\$3,893	\$4,313	\$4,752	\$5,247	2.4
Non-energy-intensive manufacturing	\$3,666	\$4,829	\$5,429	\$6,226	\$7,120	\$8,105	\$9,274	3.1
Nonmanufacturing	\$2,456	\$3,009	\$3,349	\$3,734	\$4,161	\$4,623	\$5,170	2.5
Services	\$25,509	\$32,004	\$35,993	\$40,769	\$45,894	\$51,314	\$57,423	2.7
Total	\$34,206	\$42,983	\$48,267	\$54,623	\$61,489	\$68,794	\$77,113	2.7
Canada								
Energy-intensive manufacturing	\$245	\$307	\$349	\$399	\$453	\$513	\$579	2.9
Non-energy-intensive manufacturing	\$311	\$410	\$457	\$515	\$579	\$650	\$730	2.9
Nonmanufacturing	\$458	\$526	\$583	\$649	\$712	\$779	\$853	2.1
Services	\$1,577	\$2,038	\$2,264	\$2,528	\$2,822	\$3,144	\$3,497	2.7
Total	\$2,590	\$3,281	\$3,654	\$4,091	\$4,567	\$5,087	\$5,658	2.6
Mexico and other OECD Americas								
Energy-intensive manufacturing	\$811	\$960	\$1,083	\$1,224	\$1,372	\$1,531	\$1,703	2.5
Non-energy-intensive manufacturing	\$926	\$1,207	\$1,347	\$1,527	\$1,737	\$1,985	\$2,291	3.1
Nonmanufacturing	\$755	\$891	\$1,003	\$1,136	\$1,279	\$1,414	\$1,532	2.4
Services	\$2,888	\$3,660	\$4,203	\$4,840	\$5,533	\$6,253	\$6,988	3.0
Total	\$5,380	\$6,718	\$7,636	\$8,726	\$9,922	\$11,183	\$12,514	2.9
OECD Europe								
Energy-intensive manufacturing	\$4,488	\$5,140	\$5,498	\$5,893	\$6,302	\$6,728	\$7,197	1.6
Non-energy-intensive manufacturing	\$7,156	\$8,944	\$9,816	\$10,876	\$12,042	\$13,335	\$14,816	2.5
Nonmanufacturing	\$4,159	\$4,898	\$5,327	\$5,777	\$6,250	\$6,743	\$7,279	1.9
Services	\$27,308	\$32,327	\$35,408	\$38,582	\$42,062	\$45,886	\$50,160	2.0
Total	\$43,112	\$51,309	\$56,049	\$61,127	\$66,655	\$72,692	\$79,452	2.1
Japan								
Energy-intensive manufacturing	\$1,013	\$1,132	\$1,152	\$1,157	\$1,161	\$1,169	\$1,182	0.5
Non-energy-intensive manufacturing	\$2,584	\$3,211	\$3,366	\$3,496	\$3,637	\$3,783	\$3,950	1.4
Nonmanufacturing	\$630	\$692	\$696	\$698	\$702	\$702	\$704	0.4
Services	\$5,566	\$6,111	\$6,392	\$6,556	\$6,723	\$6,896	\$7,106	0.8
Total	\$9,793	\$11,146	\$11,607	\$11,907	\$12,224	\$12,550	\$12,942	0.9
South Korea								
Energy-intensive manufacturing	\$1,084	\$1,251	\$1,358	\$1,444	\$1,516	\$1,588	\$1,658	1.4
Non-energy-intensive manufacturing	\$1,508	\$1,875	\$2,084	\$2,242	\$2,380	\$2,538	\$2,700	2.0
Nonmanufacturing	\$372	\$432	\$476	\$520	\$557	\$594	\$631	1.8
Services	\$2,345	\$2,728	\$3,025	\$3,241	\$3,424	\$3,621	\$3,811	1.6
Total	\$5,309	\$6,286	\$6,943	\$7,447	\$7,877	\$8,341	\$8,800	1.7
Australia and New Zealand								
Energy-intensive manufacturing	\$175	\$187	\$205	\$223	\$241	\$258	\$275	1.5
Non-energy-intensive manufacturing	\$123	\$137	\$150	\$165	\$180	\$194	\$207	1.7
Nonmanufacturing	\$527	\$646	\$739	\$859	\$980	\$1,111	\$1,256	2.9
Services	\$1,801	\$2,142	\$2,487	\$2,843	\$3,190	\$3,535	\$3,892	2.6
Total	\$2,626	\$3,112	\$3,581	\$4,089	\$4,591	\$5,098	\$5,630	2.6
Total OECD								
Energy-intensive manufacturing	\$10,390	\$12,119	\$13,141	\$14,232	\$15,359	\$16,539	\$17,840	1.8
Non-energy-intensive manufacturing	\$16,274	\$20,613	\$22,650	\$25,047	\$27,676	\$30,590	\$33,967	2.5
Nonmanufacturing	\$9,358	\$11,094	\$12,173	\$13,372	\$14,641	\$15,967	\$17,423	2.1
Services	\$66,994	\$81,010	\$89,773	\$99,360	\$109,649	\$120,649	\$132,879	2.3
Total	\$103,016	\$124,835	\$137,736	\$152,011	\$167,325	\$183,744	\$202,109	2.3
Non-OECD								
Russia								

Energy-intensive manufacturing	\$721	\$891	\$1,010	\$1,142	\$1,275	\$1,403	\$1,517	2.5
Non-energy-intensive manufacturing	\$578	\$746	\$831	\$944	\$1,067	\$1,194	\$1,332	2.8
Nonmanufacturing	\$1,192	\$1,424	\$1,562	\$1,709	\$1,839	\$1,956	\$2,062	1.8
Services	\$3,553	\$4,425	\$4,836	\$5,486	\$6,166	\$6,925	\$7,822	2.7
Total	\$6,044	\$7,486	\$8,239	\$9,282	\$10,347	\$11,478	\$12,732	2.5
Other Europe and Eurasia								
Energy-intensive manufacturing	\$584	\$702	\$785	\$898	\$1,022	\$1,158	\$1,306	2.7
Non-energy-intensive manufacturing	\$460	\$580	\$636	\$705	\$779	\$860	\$948	2.4
Nonmanufacturing	\$996	\$1,193	\$1,392	\$1,633	\$1,900	\$2,182	\$2,475	3.1
Services	\$2,672	\$3,456	\$4,028	\$4,730	\$5,496	\$6,375	\$7,417	3.5
Total	\$4,712	\$5,931	\$6,841	\$7,966	\$9,198	\$10,576	\$12,146	3.2
China								
Energy-intensive manufacturing	\$13,218	\$17,008	\$19,749	\$22,213	\$24,388	\$26,508	\$28,472	2.6
Non-energy-intensive manufacturing	\$23,190	\$31,918	\$38,951	\$46,324	\$53,235	\$60,110	\$66,227	3.6
Nonmanufacturing	\$10,745	\$13,363	\$15,378	\$17,311	\$19,003	\$20,629	\$22,398	2.5
Services	\$29,694	\$43,409	\$57,447	\$73,266	\$90,334	\$109,362	\$128,879	5.0
Total	\$76,846	\$105,698	\$131,525	\$159,114	\$186,960	\$216,608	\$245,976	4.0
India								
Energy-intensive manufacturing	\$3,317	\$5,262	\$8,028	\$11,336	\$15,138	\$19,557	\$24,660	6.9
Non-energy-intensive manufacturing	\$2,531	\$4,442	\$6,862	\$9,709	\$13,138	\$17,321	\$22,494	7.6
Nonmanufacturing	\$3,801	\$5,770	\$7,391	\$9,570	\$12,435	\$15,774	\$19,644	5.6
Services	\$6,641	\$10,041	\$15,379	\$21,532	\$28,362	\$36,351	\$45,616	6.6
Total	\$16,290	\$25,516	\$37,660	\$52,147	\$69,073	\$89,003	\$112,415	6.7
Other Asia								
Energy-intensive manufacturing	\$3,226	\$4,237	\$5,312	\$6,671	\$8,258	\$10,026	\$11,989	4.5
Non-energy-intensive manufacturing	\$6,063	\$8,183	\$10,179	\$12,507	\$15,017	\$17,682	\$20,535	4.2
Nonmanufacturing	\$4,109	\$5,372	\$6,889	\$8,724	\$10,927	\$13,452	\$16,288	4.7
Services	\$11,758	\$16,008	\$20,829	\$26,336	\$32,698	\$39,889	\$47,800	4.8
Total	\$25,156	\$33,799	\$43,209	\$54,239	\$66,900	\$81,049	\$96,612	4.6
Middle East								
Energy-intensive manufacturing	\$1,392	\$1,756	\$1,995	\$2,236	\$2,457	\$2,656	\$2,827	2.4
Non-energy-intensive manufacturing	\$383	\$519	\$611	\$701	\$785	\$862	\$932	3.0
Nonmanufacturing	\$2,435	\$2,825	\$3,113	\$3,392	\$3,674	\$3,966	\$4,257	1.9
Services	\$4,545	\$5,989	\$7,279	\$8,755	\$10,327	\$12,079	\$13,790	3.8
Total	\$8,755	\$11,089	\$12,999	\$15,083	\$17,244	\$19,564	\$21,806	3.1
Africa								
Energy-intensive manufacturing	\$1,256	\$1,561	\$1,957	\$2,456	\$3,067	\$3,769	\$4,546	4.4
Non-energy-intensive manufacturing	\$921	\$1,200	\$1,507	\$1,886	\$2,342	\$2,856	\$3,391	4.4
Nonmanufacturing	\$3,114	\$3,655	\$4,339	\$5,100	\$5,979	\$6,950	\$7,972	3.2
Services	\$6,095	\$7,549	\$9,393	\$11,636	\$14,393	\$17,550	\$21,191	4.2
Total	\$11,386	\$13,965	\$17,197	\$21,078	\$25,782	\$31,125	\$37,100	4.0
Brazil								
Energy-intensive manufacturing	\$777	\$945	\$1,093	\$1,225	\$1,331	\$1,418	\$1,496	2.2
Non-energy-intensive manufacturing	\$481	\$662	\$765	\$861	\$944	\$1,020	\$1,096	2.8
Nonmanufacturing	\$668	\$805	\$914	\$1,034	\$1,157	\$1,285	\$1,419	2.5
Services	\$2,997	\$3,545	\$4,060	\$4,576	\$5,029	\$5,439	\$5,830	2.2
Total	\$4,922	\$5,957	\$6,832	\$7,696	\$8,461	\$9,162	\$9,842	2.3
Other Non-OECD Americas								
Energy-intensive manufacturing	\$449	\$540	\$638	\$712	\$788	\$863	\$934	2.5
Non-energy-intensive manufacturing	\$473	\$607	\$715	\$818	\$930	\$1,048	\$1,178	3.1
Nonmanufacturing	\$677	\$827	\$956	\$1,070	\$1,190	\$1,311	\$1,436	2.5
Services	\$2,295	\$2,960	\$3,650	\$4,367	\$5,206	\$6,155	\$7,187	3.9
Total	\$3,895	\$4,935	\$5,959	\$6,967	\$8,114	\$9,378	\$10,735	3.4
Total Non-OECD								
Energy-intensive manufacturing	\$24,939	\$32,903	\$40,568	\$48,889	\$57,725	\$67,358	\$77,748	3.9
Non-energy-intensive manufacturing	\$35,080	\$48,857	\$61,058	\$74,454	\$88,237	\$102,952	\$118,132	4.1
Nonmanufacturing	\$27,736	\$35,234	\$41,933	\$49,543	\$58,104	\$67,507	\$77,951	3.5
Services	\$70,250	\$97,382	\$126,901	\$160,685	\$198,013	\$240,126	\$285,533	4.8

Total	\$158,006	\$214,376	\$270,461	\$333,571	\$402,079	\$477,943	\$559,364	4.3
World								
Energy-intensive manufacturing	\$35,329	\$45,022	\$53,708	\$63,121	\$73,084	\$83,896	\$95,587	3.4
Non-energy-intensive manufacturing	\$51,354	\$69,470	\$83,708	\$99,501	\$115,914	\$133,543	\$152,099	3.7
Nonmanufacturing	\$37,094	\$46,328	\$54,106	\$62,915	\$72,745	\$83,474	\$95,374	3.2
Services	\$137,244	\$178,392	\$216,674	\$260,044	\$307,662	\$360,775	\$418,412	3.8
Total	\$261,021	\$339,211	\$408,197	\$485,582	\$569,404	\$661,687	\$761,473	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 hm_210719.163753; 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).