

Table A1. World total primary energy consumption by region, Low 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	123.1	122.3	123.8	125.8	128.9	132.2	0.4
United States	92.9	96.0	94.4	94.7	95.6	97.4	99.7	0.2
Canada	14.6	15.2	15.5	16.0	16.3	16.7	17.0	0.5
Mexico and other OECD Americas	10.6	11.9	12.4	13.2	13.9	14.8	15.5	1.3
OECD Europe	77.6	80.8	81.1	82.0	82.6	83.6	85.1	0.3
OECD Asia	37.2	39.2	39.0	38.7	38.1	37.6	37.2	0.0
Japan	18.3	18.4	17.7	17.1	16.5	15.9	15.4	-0.6
South Korea	12.0	13.3	13.5	13.4	13.2	13.1	13.0	0.3
Australia and New Zealand	6.9	7.6	7.8	8.2	8.4	8.6	8.7	0.8
Total OECD	232.9	243.0	242.4	244.5	246.5	250.1	254.4	0.3
Non-OECD								
Non-OECD Europe and Eurasia	52.6	53.1	53.5	54.3	54.6	54.8	54.7	0.1
Russia	34.4	35.1	35.3	35.6	35.5	35.2	34.7	0.0
Other Europe and Eurasia	18.2	18.0	18.2	18.7	19.1	19.5	19.9	0.3
Non-OECD Asia	230.3	257.4	271.5	285.6	299.6	313.3	321.7	1.1
China	156.4	163.6	163.1	162.4	163.2	163.8	161.8	0.1
India	31.5	44.4	54.6	64.8	74.3	83.9	91.9	3.6
Other Asia	42.5	49.4	53.8	58.4	62.2	65.6	68.0	1.6
Middle East	35.2	39.1	39.0	38.7	39.7	39.7	39.1	0.4
Africa	22.9	25.7	27.9	30.3	32.6	35.2	37.8	1.7
Non-OECD Americas	27.6	29.9	30.8	31.5	32.7	34.2	35.9	0.9
Brazil	14.9	16.2	16.5	16.6	16.8	17.1	17.4	0.5
Other Non-OECD Americas	12.8	13.8	14.3	15.0	15.9	17.1	18.5	1.3
Total Non-OECD	368.6	405.3	422.6	440.4	459.1	477.2	489.3	0.9
Total World	601.6	648.3	665.0	684.9	705.7	727.4	743.7	0.7

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run Im_210719.163843; 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, Low 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	45.6	44.6	44.3	44.3	44.7	45.4	0.2
Natural gas	39.7	40.0	40.2	41.0	42.1	43.0	44.3	0.4
Coal	10.2	8.3	8.0	7.6	7.3	7.3	6.8	-1.4
Nuclear	9.4	8.7	7.3	7.1	6.6	6.4	6.3	-1.3
Other	16.6	20.4	22.2	23.9	25.5	27.5	29.4	1.9
Total	118.2	123.1	122.3	123.8	125.8	128.9	132.2	0.4
OECD Europe								
Liquid fuels	26.0	28.2	27.0	25.9	25.1	24.6	24.3	-0.2
Natural gas	19.5	20.3	20.4	20.0	19.8	19.9	20.2	0.1
Coal	8.1	6.6	6.0	6.0	6.1	6.2	6.1	-0.9
Nuclear	7.9	8.1	7.5	7.3	6.8	5.1	4.0	-2.2
Other	16.1	17.6	20.2	22.7	24.9	27.8	30.4	2.1
Total	77.6	80.8	81.1	82.0	82.6	83.6	85.1	0.3
OECD Asia								
Liquid fuels	13.9	14.4	13.7	13.1	12.5	12.1	11.7	-0.6
Natural gas	8.7	8.3	8.2	7.6	7.2	6.8	6.7	-0.9
Coal	8.5	8.2	8.0	8.2	8.2	7.9	7.5	-0.4
Nuclear	2.1	3.7	4.0	4.0	3.5	3.1	3.1	1.3
Other	4.0	4.5	5.1	5.8	6.7	7.7	8.3	2.5
Total	37.2	39.2	39.0	38.7	38.1	37.6	37.2	0.0
Total OECD								
Liquid fuels	82.3	88.1	85.3	83.3	82.0	81.5	81.4	0.0
Natural gas	67.9	68.7	68.8	68.7	69.1	69.8	71.2	0.2
Coal	26.8	23.2	22.0	21.9	21.5	21.3	20.4	-0.9
Nuclear	19.3	20.5	18.8	18.4	16.8	14.6	13.4	-1.2
Other	36.7	42.5	47.5	52.3	57.1	63.0	68.1	2.1
Total	232.9	243.0	242.4	244.5	246.5	250.1	254.4	0.3
Non-OECD								
Non-OECD Europe and Eurasia								
Liquid fuels	11.1	11.9	11.9	12.0	12.0	12.0	11.9	0.2
Natural gas	25.0	24.9	25.2	25.2	25.1	25.0	24.8	0.0
Coal	9.6	8.9	8.8	9.1	9.2	9.3	9.3	-0.1
Nuclear	3.4	3.9	4.1	4.2	4.2	4.2	4.2	0.7
Other	3.5	3.5	3.6	3.8	4.1	4.4	4.5	0.8
Total	52.6	53.1	53.5	54.3	54.6	54.8	54.7	0.1
Non-OECD Asia								
Liquid fuels	54.2	64.5	68.9	71.7	73.4	74.1	74.0	1.0
Natural gas	23.8	26.0	28.9	30.9	31.9	32.7	33.8	1.2
Coal	114.6	114.3	109.8	110.4	110.8	111.6	110.0	-0.1
Nuclear	4.3	5.6	7.1	8.6	10.2	11.6	12.9	3.7
Other	33.4	47.0	56.8	64.0	73.3	83.3	91.1	3.4
Total	230.3	257.4	271.5	285.6	299.6	313.3	321.7	1.1
Middle East								
Liquid fuels	15.5	16.8	15.5	14.8	14.4	13.9	13.4	-0.5
Natural gas	19.2	21.2	21.7	21.1	20.9	20.6	20.1	0.2
Coal	0.1	0.1	0.1	0.5	0.5	0.4	0.4	3.9
Nuclear	0.1	0.4	0.6	0.8	0.9	0.9	0.9	9.0

Other	0.2	0.6	1.0	1.6	3.0	3.9	4.3	10.5
Total	35.2	39.1	39.0	38.7	39.7	39.7	39.1	0.4
Africa								
Liquid fuels	8.4	9.7	10.1	10.6	11.4	12.3	13.3	1.5
Natural gas	5.7	6.0	6.3	6.9	6.9	7.0	7.4	0.9
Coal	3.9	3.9	4.2	4.5	4.7	4.9	4.6	0.6
Nuclear	0.1	0.1	0.3	0.5	0.6	0.6	0.6	5.4
Other	4.8	5.9	7.0	7.8	9.0	10.5	12.0	3.1
Total	22.9	25.7	27.9	30.3	32.6	35.2	37.8	1.7
Non-OECD Americas								
Liquid fuels	10.9	12.4	12.6	12.7	13.1	13.6	14.3	0.9
Natural gas	5.7	5.7	5.7	5.5	5.6	5.8	6.1	0.2
Coal	0.7	0.9	0.8	0.8	0.8	1.0	1.0	1.4
Nuclear	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.6
Other	10.1	10.6	11.3	12.1	12.7	13.4	14.1	1.1
Total	27.6	29.9	30.8	31.5	32.7	34.2	35.9	0.9
Total Non-OECD								
Liquid fuels	100.1	115.3	118.9	121.8	124.2	126.0	126.8	0.8
Natural gas	79.3	83.9	87.7	89.6	90.4	91.0	92.1	0.5
Coal	128.9	128.2	123.7	125.2	126.0	127.2	125.3	-0.1
Nuclear	8.2	10.3	12.5	14.4	16.2	17.6	18.9	2.8
Other	52.1	67.6	79.6	89.5	102.2	115.4	126.1	3.0
Total	368.6	405.3	422.6	440.4	459.1	477.2	489.3	0.9
World								
Liquid fuels	182.4	203.4	204.2	205.1	206.2	207.5	208.2	0.4
Natural gas	147.2	152.6	156.5	158.2	159.5	160.8	163.3	0.3
Coal	155.7	151.4	145.8	147.1	147.6	148.5	145.7	-0.2
Nuclear	27.5	30.9	31.4	32.8	33.1	32.2	32.3	0.5
Other	88.7	110.2	127.2	141.8	159.4	178.4	194.2	2.6
Total	601.6	648.3	665.0	684.9	705.7	727.4	743.7	0.7

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run Im_210719.163843; 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, Low Economic Growth case

billion 2015 dollars

Region	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
OECD								
OECD Americas	\$23,842	\$26,736	\$28,667	\$31,014	\$33,296	\$35,747	\$38,092	1.6
United States	\$18,905	\$21,068	\$22,560	\$24,449	\$26,270	\$28,284	\$30,226	1.6
Canada	\$1,638	\$1,846	\$1,959	\$2,081	\$2,205	\$2,332	\$2,457	1.4
Mexico and other OECD Americas	\$3,298	\$3,822	\$4,147	\$4,484	\$4,821	\$5,131	\$5,409	1.7
OECD Europe	\$22,770	\$25,618	\$26,656	\$27,580	\$28,548	\$29,555	\$30,646	1.0
OECD Asia	\$8,568	\$9,276	\$9,557	\$9,637	\$9,658	\$9,676	\$9,699	0.4
Japan	\$5,043	\$5,338	\$5,321	\$5,200	\$5,079	\$4,962	\$4,867	-0.1
South Korea	\$2,136	\$2,378	\$2,511	\$2,551	\$2,553	\$2,558	\$2,551	0.6
Australia and New Zealand	\$1,389	\$1,560	\$1,725	\$1,885	\$2,026	\$2,156	\$2,281	1.7
Total OECD	\$55,180	\$61,630	\$64,879	\$68,231	\$71,502	\$74,978	\$78,437	1.2
Non-OECD								
Non-OECD Europe and Eurasia	\$6,489	\$7,239	\$7,697	\$8,314	\$8,864	\$9,356	\$9,802	1.4
Russia	\$3,600	\$3,795	\$3,842	\$3,968	\$4,021	\$4,027	\$4,011	0.4
Other Europe and Eurasia	\$2,889	\$3,444	\$3,855	\$4,346	\$4,843	\$5,329	\$5,791	2.3
Non-OECD Asia	\$44,263	\$56,205	\$67,409	\$78,015	\$87,793	\$97,155	\$105,341	2.9
China	\$23,672	\$29,632	\$34,234	\$38,229	\$41,490	\$44,332	\$46,328	2.3
India	\$8,634	\$11,885	\$15,786	\$19,709	\$23,466	\$27,201	\$30,699	4.3
Other Asia	\$11,957	\$14,688	\$17,388	\$20,076	\$22,838	\$25,623	\$28,313	2.9
Middle East	\$4,659	\$5,264	\$5,648	\$5,932	\$6,176	\$6,391	\$6,528	1.1
Africa	\$6,270	\$7,276	\$8,267	\$9,302	\$10,394	\$11,536	\$12,777	2.4
Non-OECD Americas	\$5,470	\$6,201	\$6,727	\$7,122	\$7,508	\$7,950	\$8,402	1.4
Brazil	\$2,912	\$3,145	\$3,254	\$3,292	\$3,301	\$3,313	\$3,326	0.4
Other Non-OECD Americas	\$2,558	\$3,056	\$3,472	\$3,830	\$4,207	\$4,637	\$5,075	2.3
Total Non-OECD	\$67,151	\$82,186	\$95,747	\$108,684	\$120,735	\$132,387	\$142,849	2.5
Total World	\$122,331	\$143,816	\$160,626	\$176,915	\$192,237	\$207,365	\$221,286	2.0

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 Im_210719.163843; 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, Low Economic Growth case

billion 2015 dollars

Region	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
OECD								
OECD Americas	\$22,284	\$24,930	\$26,705	\$28,888	\$31,004	\$33,304	\$35,513	1.6
United States	\$18,905	\$21,068	\$22,560	\$24,449	\$26,270	\$28,284	\$30,226	1.6
Canada	\$1,599	\$1,801	\$1,912	\$2,031	\$2,152	\$2,276	\$2,398	1.4
Mexico and other OECD Americas	\$1,780	\$2,060	\$2,232	\$2,407	\$2,582	\$2,744	\$2,889	1.6
OECD Europe	\$18,705	\$20,992	\$21,747	\$22,411	\$23,123	\$23,896	\$24,716	0.9
OECD Asia	\$7,505	\$8,132	\$8,400	\$8,502	\$8,553	\$8,597	\$8,648	0.5
Japan	\$4,363	\$4,618	\$4,603	\$4,499	\$4,394	\$4,292	\$4,211	-0.1
South Korea	\$1,619	\$1,803	\$1,904	\$1,934	\$1,936	\$1,940	\$1,934	0.6
Australia and New Zealand	\$1,523	\$1,711	\$1,893	\$2,069	\$2,223	\$2,365	\$2,503	1.7
Total OECD	\$48,495	\$54,054	\$56,852	\$59,801	\$62,680	\$65,797	\$68,877	1.2
Non-OECD								
Non-OECD Europe and Eurasia	\$2,482	\$2,772	\$2,950	\$3,190	\$3,404	\$3,597	\$3,773	1.4
Russia	\$1,393	\$1,469	\$1,487	\$1,536	\$1,556	\$1,558	\$1,552	0.4
Other Europe and Eurasia	\$1,088	\$1,303	\$1,463	\$1,654	\$1,848	\$2,039	\$2,221	2.4
Non-OECD Asia	\$21,669	\$27,276	\$32,180	\$36,694	\$40,723	\$44,484	\$47,611	2.7
China	\$14,503	\$18,155	\$20,975	\$23,422	\$25,420	\$27,161	\$28,384	2.3
India	\$2,522	\$3,464	\$4,602	\$5,745	\$6,840	\$7,929	\$8,949	4.3
Other Asia	\$4,644	\$5,657	\$6,604	\$7,526	\$8,462	\$9,394	\$10,277	2.7
Middle East	\$2,076	\$2,343	\$2,515	\$2,640	\$2,741	\$2,828	\$2,870	1.1
Africa	\$2,379	\$2,777	\$3,150	\$3,536	\$3,943	\$4,371	\$4,839	2.4
Non-OECD Americas	\$3,279	\$3,692	\$3,971	\$4,191	\$4,402	\$4,641	\$4,885	1.3
Brazil	\$1,739	\$1,878	\$1,943	\$1,965	\$1,971	\$1,978	\$1,986	0.4
Other Non-OECD Americas	\$1,541	\$1,814	\$2,028	\$2,225	\$2,430	\$2,663	\$2,899	2.1
Total Non-OECD	\$31,885	\$38,861	\$44,766	\$50,250	\$55,213	\$59,921	\$63,978	2.3
Total World	\$80,380	\$92,915	\$101,618	\$110,051	\$117,893	\$125,718	\$132,856	1.7

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 Im_210719.163843; 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, Low 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	24.5	24.0	24.0	24.0	24.3	24.7	0.3
United States	18.1	19.5	19.1	19.0	19.0	19.1	19.3	0.2
Canada	2.1	2.3	2.3	2.3	2.3	2.4	2.4	0.4
Mexico and other OECD Americas	2.3	2.6	2.6	2.6	2.7	2.8	3.0	0.9
OECD Europe	12.7	13.7	13.2	12.6	12.2	12.0	11.8	-0.2
OECD Asia	6.9	7.1	6.7	6.4	6.2	5.9	5.7	-0.6
Japan	3.3	3.2	2.8	2.6	2.4	2.2	2.0	-1.6
South Korea	2.4	2.5	2.5	2.4	2.3	2.2	2.1	-0.4
Australia and New Zealand	1.2	1.4	1.4	1.5	1.5	1.5	1.6	1.0
Total OECD	42.0	45.3	43.9	43.0	42.4	42.2	42.2	0.0
Non-OECD								
Non-OECD Europe and Eurasia	5.7	6.1	6.1	6.1	6.1	6.1	6.0	0.2
Russia	3.7	4.0	4.0	4.0	4.0	3.9	3.9	0.1
Other Europe and Eurasia	1.9	2.0	2.1	2.1	2.1	2.2	2.2	0.4
Non-OECD Asia	27.1	32.2	34.4	35.8	36.7	37.0	36.9	1.0
China	14.3	16.3	16.6	16.3	15.6	14.8	13.9	-0.1
India	4.4	5.9	7.3	8.5	9.5	10.4	10.9	3.1
Other Asia	8.4	10.1	10.5	11.0	11.5	11.8	12.1	1.2
Middle East	7.8	8.4	7.7	7.4	7.2	7.0	6.7	-0.5
Africa	4.2	4.8	5.0	5.2	5.6	6.1	6.6	1.5
Non-OECD Americas	5.5	6.2	6.3	6.4	6.6	6.9	7.2	0.9
Brazil	2.9	3.2	3.2	3.2	3.1	3.1	3.1	0.3
Other Non-OECD Americas	2.6	3.0	3.1	3.3	3.5	3.8	4.1	1.5
Total Non-OECD	50.1	57.7	59.5	61.0	62.2	63.1	63.4	0.8
Total World	92.1	103.0	103.4	104.0	104.6	105.3	105.7	0.5

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run lm_210719.163843; 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, Low 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	38.7	38.9	39.7	40.8	41.6	42.9	0.4
United States	30.7	30.1	29.9	30.2	30.9	31.7	32.8	0.2
Canada	4.3	4.5	4.6	4.8	5.1	5.3	5.4	0.8
Mexico and other OECD Americas	3.4	4.1	4.3	4.6	4.8	4.6	4.7	1.1
OECD Europe	19.0	19.7	19.8	19.4	19.2	19.3	19.6	0.1
OECD Asia	7.8	7.5	7.4	6.9	6.5	6.2	6.1	-0.8
Japan	3.8	3.5	3.5	3.1	2.9	2.7	2.5	-1.4
South Korea	2.2	2.1	2.1	2.0	1.9	1.8	1.9	-0.5
Australia and New Zealand	1.8	1.9	1.9	1.8	1.8	1.7	1.7	-0.2
Total OECD	65.1	65.9	66.1	66.0	66.4	67.1	68.5	0.2
Non-OECD								
Non-OECD Europe and Eurasia	24.4	24.3	24.5	24.6	24.5	24.4	24.2	0.0
Russia	17.6	17.2	17.5	17.5	17.6	17.5	17.3	0.0
Other Europe and Eurasia	6.8	7.0	7.0	7.1	6.9	6.9	6.9	0.0
Non-OECD Asia	23.0	25.1	27.9	29.8	30.7	31.5	32.5	1.2
China	11.0	11.9	13.7	15.1	15.5	15.6	15.9	1.2
India	2.0	2.6	3.2	3.7	4.2	4.7	5.1	3.3
Other Asia	10.1	10.6	11.0	11.0	11.1	11.2	11.5	0.5
Middle East	18.3	20.2	20.6	20.0	19.9	19.6	19.1	0.2
Africa	5.4	5.7	5.9	6.6	6.6	6.6	7.0	0.9
Non-OECD Americas	5.4	5.5	5.5	5.3	5.4	5.5	5.8	0.2
Brazil	1.3	1.6	1.6	1.4	1.3	1.2	1.2	-0.2
Other Non-OECD Americas	4.2	3.9	3.9	3.9	4.1	4.3	4.6	0.3
Total Non-OECD	76.5	80.9	84.5	86.3	87.1	87.6	88.7	0.5
Total World	141.6	146.8	150.6	152.3	153.5	154.8	157.2	0.3

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run lm_210719.163843; 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, Low Economic Growth case

million short tons

Region	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
OECD								
OECD Americas	525	426	414	391	369	361	336	-1.5
United States	469	377	378	360	336	315	301	-1.5
Canada	27	25	12	7	7	7	7	-4.2
Mexico and other OECD Americas	30	23	24	25	25	39	28	-0.2
OECD Europe	528	401	359	359	360	368	363	-1.2
OECD Asia	421	393	375	383	385	372	352	-0.6
Japan	186	197	183	185	184	171	152	-0.7
South Korea	126	125	131	132	137	140	141	0.4
Australia and New Zealand	109	71	60	66	63	61	60	-2.0
Total OECD	1,473	1,220	1,148	1,134	1,113	1,101	1,052	-1.1
Non-OECD								
Non-OECD Europe and Eurasia	518	458	445	465	469	473	473	-0.3
Russia	244	246	246	257	254	248	241	0.0
Other Europe and Eurasia	274	212	199	207	216	224	232	-0.5
Non-OECD Asia	5,730	5,758	5,557	5,653	5,720	5,792	5,713	0.0
China	4,382	4,117	3,722	3,491	3,372	3,315	3,216	-1.0
India	892	1,094	1,197	1,399	1,555	1,666	1,663	2.1
Other Asia	456	547	639	764	793	812	834	2.0
Middle East	5	6	6	22	20	15	18	4.1
Africa	190	193	208	219	229	237	225	0.6
Non-OECD Americas	30	37	34	32	34	41	42	1.1
Brazil	23	26	25	27	22	22	22	-0.2
Other Non-OECD Americas	7	11	9	5	12	19	20	3.7
Total Non-OECD	6,474	6,451	6,251	6,390	6,472	6,559	6,471	0.0
Total World	7,947	7,671	7,399	7,524	7,586	7,660	7,523	-0.2

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run Im_210719.163843; 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), Low Economic Growth case

billion kilowatthours

Region	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
OECD								
OECD Americas	883	827	696	670	629	607	597	-1.3
United States	785	745	599	569	555	551	553	-1.2
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	608	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	1,737	1,693	1,555	1,354	1,245	-1.3
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	52	4.8
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	1,739	2.7
Total World	2,630	2,836	2,883	3,013	3,045	2,971	2,984	0.4

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run lm_210719.163843; 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, Low 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	20.4	22.2	23.9	25.5	27.5	29.4	1.9
United States	10.3	13.9	15.1	16.1	17.0	18.3	19.3	2.1
Canada	4.4	4.5	4.9	5.2	5.5	5.7	6.0	1.0
Mexico and other OECD Americas	1.8	2.0	2.2	2.6	3.0	3.5	4.0	2.6
OECD Europe	16.1	17.6	20.2	22.7	24.9	27.8	30.4	2.1
OECD Asia	4.0	4.5	5.1	5.8	6.7	7.7	8.3	2.5
Japan	2.5	2.3	2.3	2.5	2.8	3.4	3.9	1.4
South Korea	0.4	0.5	0.6	0.9	1.3	1.4	1.5	4.7
Australia and New Zealand	1.1	1.8	2.1	2.3	2.6	2.8	2.9	3.4
Total OECD	36.7	42.5	47.5	52.3	57.1	63.0	68.1	2.1
Non-OECD								
Non-OECD Europe and Eurasia	3.5	3.5	3.6	3.8	4.1	4.4	4.5	0.8
Russia	2.0	2.0	1.9	1.9	1.9	2.0	2.0	-0.1
Other Europe and Eurasia	1.5	1.6	1.7	1.9	2.2	2.4	2.5	1.8
Non-OECD Asia	33.4	47.0	56.8	64.0	73.3	83.3	91.1	3.4
China	22.1	28.9	32.7	34.8	38.0	40.4	41.0	2.1
India	5.2	10.7	15.5	19.2	23.2	28.5	34.6	6.5
Other Asia	6.2	7.4	8.7	10.0	12.2	14.4	15.4	3.1
Middle East	0.2	0.6	1.0	1.6	3.0	3.9	4.3	10.5
Africa	4.8	5.9	7.0	7.8	9.0	10.5	12.0	3.1
Non-OECD Americas	10.1	10.6	11.3	12.1	12.7	13.4	14.1	1.1
Brazil	7.2	7.4	7.7	8.1	8.5	8.9	9.2	0.8
Other Non-OECD Americas	2.9	3.3	3.6	4.1	4.2	4.5	5.0	1.8
Total Non-OECD	52.1	67.6	79.6	89.5	102.2	115.4	126.1	3.0
Total World	88.7	110.2	127.2	141.8	159.4	178.4	194.2	2.6

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run lm_210719.163843; 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, Low 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	5,661	5,546	5,506	5,520	5,580	5,626	0.0
United States	4,556	4,455	4,350	4,284	4,258	4,266	4,298	-0.2
Canada	547	585	570	573	592	606	614	0.4
Mexico and other OECD Americas	552	620	625	649	671	708	714	0.9
OECD Europe	3,593	3,643	3,507	3,414	3,343	3,325	3,313	-0.3
OECD Asia	2,252	2,242	2,162	2,107	2,043	1,961	1,884	-0.6
Japan	1,089	1,081	1,006	960	911	841	771	-1.1
South Korea	756	772	775	756	742	733	724	-0.1
Australia and New Zealand	407	389	380	391	390	387	389	-0.2
Total OECD	11,500	11,545	11,214	11,027	10,907	10,866	10,823	-0.2
Non-OECD								
Non-OECD Europe and Eurasia	2,930	2,908	2,903	2,939	2,942	2,940	2,923	0.0
Russia	1,861	1,885	1,892	1,906	1,895	1,873	1,839	0.0
Other Europe and Eurasia	1,068	1,022	1,011	1,032	1,047	1,067	1,084	0.0
Non-OECD Asia	15,534	16,290	16,292	16,645	16,853	17,029	16,923	0.3
China	10,910	10,676	10,049	9,605	9,289	9,066	8,762	-0.7
India	2,136	2,711	3,095	3,608	4,017	4,334	4,434	2.5
Other Asia	2,488	2,902	3,148	3,431	3,547	3,629	3,727	1.4
Middle East	2,028	2,206	2,138	2,085	2,048	1,996	1,942	-0.1
Africa	1,250	1,365	1,433	1,522	1,596	1,681	1,744	1.1
Non-OECD Americas	1,106	1,231	1,232	1,227	1,261	1,322	1,380	0.7
Brazil	503	575	565	551	534	530	530	0.2
Other Non-OECD Americas	603	656	667	675	727	792	850	1.2
Total Non-OECD	22,848	24,000	23,997	24,417	24,700	24,969	24,912	0.3
Total World	34,348	35,545	35,211	35,443	35,606	35,835	35,735	0.1

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run Im_210719.163843; 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, Low 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	2,759	2,664	2,622	2,612	2,627	2,655	0.1
United States	2,016	2,114	2,027	1,979	1,955	1,949	1,952	-0.1
Canada	261	289	289	289	289	292	295	0.4
Mexico and other OECD Americas	313	355	348	354	368	386	407	0.9
OECD Europe	1,790	1,941	1,854	1,777	1,721	1,684	1,659	-0.3
OECD Asia	991	1,023	974	928	888	855	824	-0.6
Japan	464	448	404	365	333	308	287	-1.6
South Korea	368	387	376	363	350	338	324	-0.4
Australia and New Zealand	160	188	193	200	205	209	213	1.0
Total OECD	5,372	5,722	5,492	5,327	5,220	5,166	5,138	-0.1
Non-OECD								
Non-OECD Europe and Eurasia	696	745	739	740	739	736	727	0.1
Russia	435	467	458	454	446	438	427	-0.1
Other Europe and Eurasia	262	279	282	286	293	299	301	0.5
Non-OECD Asia	3,372	4,021	4,295	4,471	4,576	4,626	4,617	1.1
China	1,723	1,960	2,010	1,972	1,891	1,792	1,684	-0.1
India	565	760	928	1,081	1,214	1,320	1,383	3.0
Other Asia	1,085	1,301	1,357	1,418	1,472	1,513	1,550	1.2
Middle East	994	1,066	972	919	891	863	833	-0.6
Africa	585	675	700	734	788	853	917	1.5
Non-OECD Americas	734	836	846	856	878	913	954	0.9
Brazil	382	426	421	413	409	408	409	0.2
Other Non-OECD Americas	352	410	425	443	469	505	545	1.5
Total Non-OECD	6,382	7,344	7,552	7,720	7,872	7,992	8,048	0.8
Total World	11,753	13,066	13,045	13,047	13,092	13,158	13,186	0.4

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run Im_210719.163843; 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, Low 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	2,087	2,105	2,112	2,154	2,214	2,262	2,328	0.4
United States	1,671	1,638	1,628	1,643	1,678	1,724	1,780	0.2
Canada	237	249	255	267	285	296	300	0.8
Mexico and other OECD Americas	179	218	228	244	250	242	248	1.1
OECD Europe	1,037	1,077	1,080	1,063	1,048	1,056	1,072	0.1
OECD Asia	461	443	437	406	382	363	355	-0.9
Japan	232	214	210	191	175	162	152	-1.4
South Korea	130	126	125	116	111	109	111	-0.5
Australia and New Zealand	99	102	102	99	96	92	92	-0.2
Total OECD	3,585	3,625	3,629	3,623	3,644	3,680	3,756	0.2
Non-OECD								
Non-OECD Europe and Eurasia	1,326	1,320	1,336	1,338	1,331	1,326	1,316	0.0
Russia	956	938	953	954	955	952	943	0.0
Other Europe and Eurasia	370	382	382	384	376	374	373	0.0
Non-OECD Asia	1,261	1,380	1,534	1,637	1,690	1,733	1,791	1.2
China	610	662	758	836	857	867	881	1.2
India	110	146	182	211	237	264	289	3.3
Other Asia	541	572	594	591	597	601	621	0.5
Middle East	1,020	1,126	1,152	1,118	1,111	1,095	1,067	0.2
Africa	300	320	332	367	367	371	393	0.9
Non-OECD Americas	301	305	300	293	298	306	322	0.2
Brazil	65	84	81	71	66	63	62	-0.2
Other Non-OECD Americas	236	221	220	222	231	243	260	0.3
Total Non-OECD	4,209	4,451	4,654	4,752	4,797	4,830	4,889	0.5
Total World	7,794	8,076	8,283	8,376	8,441	8,511	8,645	0.3

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run Im_210719.163843; 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, Low 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	977	796	769	729	695	691	643	-1.4
United States	869	703	695	662	625	593	566	-1.4
Canada	48	46	26	17	18	18	19	-3.1
Mexico and other OECD Americas	60	47	49	51	53	79	59	-0.1
OECD Europe	766	625	572	573	574	585	581	-0.9
OECD Asia	800	776	751	774	773	744	705	-0.4
Japan	393	418	392	405	402	371	332	-0.6
South Korea	259	259	274	277	282	287	289	0.4
Australia and New Zealand	148	99	85	92	89	86	84	-1.9
Total OECD	2,544	2,198	2,092	2,076	2,042	2,019	1,930	-0.9
Non-OECD								
Non-OECD Europe and Eurasia	908	842	828	861	872	878	880	-0.1
Russia	471	481	481	499	493	484	470	0.0
Other Europe and Eurasia	437	362	347	362	379	395	411	-0.2
Non-OECD Asia	10,901	10,889	10,464	10,536	10,586	10,671	10,515	-0.1
China	8,578	8,054	7,281	6,798	6,541	6,407	6,197	-1.1
India	1,461	1,805	1,985	2,316	2,566	2,750	2,762	2.1
Other Asia	862	1,029	1,197	1,422	1,478	1,514	1,556	2.0
Middle East	13	14	14	47	47	38	42	3.9
Africa	365	370	401	421	441	458	434	0.6
Non-OECD Americas	71	90	85	78	85	102	103	1.3
Brazil	55	65	64	67	59	59	58	0.2
Other Non-OECD Americas	15	24	21	11	26	44	45	3.7
Total Non-OECD	12,257	12,205	11,791	11,944	12,031	12,146	11,975	-0.1
Total World	14,801	14,403	13,883	14,020	14,073	14,166	13,904	-0.2

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run Im_210719.163843; 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, Low Economic Growth case

million persons

Region	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
OECD								
OECD Americas	570	589	606	621	633	643	651	0.4
United States	330	339	347	354	360	364	368	0.4
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	1,368	1,393	1,415	1,433	1,446	1,455	1,460	0.2
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	315	339	360	379	396	411	1.2
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	6,715	7,053	7,367	7,659	7,926	8,166	0.8
Total World	7,723	8,108	8,467	8,800	9,105	9,381	9,626	0.7

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run Im_210719.163843; 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 A15. Gross output by region and sector, Low Economic Growth case

billion 2015 dollars

Region and sector	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
OECD								
United States								
Energy-intensive manufacturing	\$2,575	\$2,841	\$2,993	\$3,174	\$3,337	\$3,522	\$3,694	1.2
Non-energy-intensive manufacturing	\$3,666	\$4,320	\$4,651	\$5,107	\$5,565	\$6,097	\$6,627	2.0
Nonmanufacturing	\$2,456	\$2,760	\$2,968	\$3,219	\$3,451	\$3,709	\$3,956	1.6
Services	\$25,509	\$29,042	\$31,070	\$33,654	\$36,145	\$38,886	\$41,510	1.6
Total	\$34,206	\$38,964	\$41,682	\$45,153	\$48,498	\$52,214	\$55,786	1.6
Canada								
Energy-intensive manufacturing	\$245	\$290	\$313	\$338	\$362	\$387	\$411	1.7
Non-energy-intensive manufacturing	\$311	\$385	\$409	\$436	\$463	\$492	\$519	1.7
Nonmanufacturing	\$458	\$512	\$550	\$589	\$621	\$650	\$678	1.3
Services	\$1,577	\$1,933	\$2,041	\$2,155	\$2,278	\$2,403	\$2,526	1.6
Total	\$2,590	\$3,120	\$3,314	\$3,518	\$3,724	\$3,932	\$4,134	1.6
Mexico and other OECD Americas								
Energy-intensive manufacturing	\$811	\$912	\$981	\$1,054	\$1,124	\$1,195	\$1,267	1.5
Non-energy-intensive manufacturing	\$926	\$1,128	\$1,209	\$1,300	\$1,404	\$1,524	\$1,663	2.0
Nonmanufacturing	\$755	\$863	\$939	\$1,019	\$1,096	\$1,158	\$1,198	1.5
Services	\$2,888	\$3,472	\$3,791	\$4,125	\$4,460	\$4,768	\$5,043	1.9
Total	\$5,380	\$6,375	\$6,920	\$7,498	\$8,084	\$8,645	\$9,171	1.8
OECD Europe								
Energy-intensive manufacturing	\$4,488	\$4,907	\$5,034	\$5,157	\$5,269	\$5,377	\$5,503	0.7
Non-energy-intensive manufacturing	\$7,156	\$8,462	\$8,841	\$9,273	\$9,725	\$10,204	\$10,717	1.4
Nonmanufacturing	\$4,159	\$4,678	\$4,845	\$4,963	\$5,065	\$5,152	\$5,233	0.8
Services	\$27,308	\$30,766	\$32,111	\$33,287	\$34,529	\$35,826	\$37,237	1.0
Total	\$43,111	\$48,813	\$50,831	\$52,680	\$54,588	\$56,559	\$58,691	1.0
Japan								
Energy-intensive manufacturing	\$1,013	\$1,082	\$1,044	\$989	\$936	\$888	\$846	-0.6
Non-energy-intensive manufacturing	\$2,584	\$3,040	\$3,054	\$3,015	\$2,972	\$2,929	\$2,894	0.4
Nonmanufacturing	\$630	\$661	\$638	\$611	\$586	\$561	\$539	-0.5
Services	\$5,566	\$5,853	\$5,866	\$5,758	\$5,648	\$5,545	\$5,468	-0.1
Total	\$9,793	\$10,637	\$10,603	\$10,373	\$10,143	\$9,923	\$9,746	0.0
South Korea								
Energy-intensive manufacturing	\$1,084	\$1,183	\$1,230	\$1,244	\$1,242	\$1,240	\$1,237	0.4
Non-energy-intensive manufacturing	\$1,508	\$1,787	\$1,911	\$1,958	\$1,970	\$1,987	\$1,994	0.9
Nonmanufacturing	\$372	\$415	\$439	\$456	\$465	\$473	\$479	0.8
Services	\$2,345	\$2,587	\$2,729	\$2,769	\$2,768	\$2,772	\$2,762	0.5
Total	\$5,309	\$5,972	\$6,309	\$6,427	\$6,445	\$6,472	\$6,472	0.7
Australia and New Zealand								
Energy-intensive manufacturing	\$175	\$179	\$186	\$193	\$199	\$203	\$207	0.6
Non-energy-intensive manufacturing	\$123	\$129	\$135	\$142	\$148	\$152	\$155	0.8
Nonmanufacturing	\$527	\$622	\$680	\$744	\$793	\$834	\$865	1.7
Services	\$1,801	\$2,023	\$2,235	\$2,437	\$2,620	\$2,788	\$2,963	1.7
Total	\$2,626	\$2,953	\$3,236	\$3,515	\$3,759	\$3,978	\$4,190	1.6
Total OECD								
Energy-intensive manufacturing	\$10,390	\$11,394	\$11,781	\$12,150	\$12,469	\$12,813	\$13,166	0.8
Non-energy-intensive manufacturing	\$16,274	\$19,252	\$20,211	\$21,232	\$22,247	\$23,385	\$24,570	1.4
Nonmanufacturing	\$9,358	\$10,512	\$11,061	\$11,600	\$12,077	\$12,538	\$12,947	1.1
Services	\$66,994	\$75,677	\$79,843	\$84,184	\$88,449	\$92,988	\$97,508	1.3
Total	\$103,015	\$116,834	\$122,895	\$129,165	\$135,241	\$141,723	\$148,191	1.2
Non-OECD								
Russia								

Energy-intensive manufacturing	\$721	\$802	\$821	\$840	\$848	\$844	\$827	0.5
Non-energy-intensive manufacturing	\$578	\$666	\$665	\$678	\$687	\$689	\$690	0.6
Nonmanufacturing	\$1,192	\$1,333	\$1,339	\$1,332	\$1,303	\$1,267	\$1,224	0.1
Services	\$3,553	\$3,877	\$3,650	\$3,499	\$3,258	\$2,969	\$2,675	-0.9
Total	\$6,044	\$6,677	\$6,476	\$6,349	\$6,096	\$5,768	\$5,416	-0.4
Other Europe and Eurasia								
Energy-intensive manufacturing	\$584	\$638	\$664	\$710	\$755	\$793	\$828	1.2
Non-energy-intensive manufacturing	\$460	\$526	\$547	\$577	\$607	\$633	\$656	1.2
Nonmanufacturing	\$996	\$1,094	\$1,158	\$1,213	\$1,254	\$1,284	\$1,309	0.9
Services	\$2,672	\$3,116	\$3,306	\$3,508	\$3,660	\$3,761	\$3,829	1.2
Total	\$4,712	\$5,375	\$5,675	\$6,008	\$6,276	\$6,471	\$6,622	1.1
China								
Energy-intensive manufacturing	\$13,218	\$15,321	\$16,191	\$16,534	\$16,498	\$16,273	\$15,831	0.6
Non-energy-intensive manufacturing	\$23,190	\$28,626	\$31,883	\$34,543	\$36,144	\$37,104	\$37,092	1.6
Nonmanufacturing	\$10,745	\$12,545	\$13,572	\$14,267	\$14,642	\$14,823	\$14,966	1.1
Services	\$29,694	\$39,681	\$48,239	\$56,413	\$63,929	\$71,177	\$77,206	3.2
Total	\$76,846	\$96,174	\$109,885	\$121,757	\$131,214	\$139,376	\$145,094	2.1
India								
Energy-intensive manufacturing	\$3,311	\$4,527	\$6,098	\$7,679	\$9,126	\$10,494	\$11,659	4.3
Non-energy-intensive manufacturing	\$2,526	\$3,816	\$5,225	\$6,640	\$8,041	\$9,454	\$10,817	5.0
Nonmanufacturing	\$3,750	\$5,151	\$6,503	\$7,796	\$9,030	\$10,187	\$11,062	3.7
Services	\$6,692	\$9,379	\$12,847	\$16,397	\$19,845	\$23,316	\$26,697	4.7
Total	\$16,278	\$22,874	\$30,673	\$38,513	\$46,042	\$53,452	\$60,235	4.5
Other Asia								
Energy-intensive manufacturing	\$3,226	\$3,867	\$4,445	\$5,101	\$5,784	\$6,469	\$7,140	2.7
Non-energy-intensive manufacturing	\$6,062	\$7,382	\$8,408	\$9,340	\$10,196	\$10,937	\$11,548	2.2
Nonmanufacturing	\$4,109	\$4,982	\$5,875	\$6,774	\$7,722	\$8,662	\$9,556	2.9
Services	\$11,758	\$14,333	\$16,829	\$19,139	\$21,389	\$23,542	\$25,469	2.6
Total	\$25,156	\$30,564	\$35,557	\$40,353	\$45,091	\$49,609	\$53,713	2.6
Middle East								
Energy-intensive manufacturing	\$1,392	\$1,632	\$1,765	\$1,864	\$1,926	\$1,942	\$1,929	1.1
Non-energy-intensive manufacturing	\$383	\$475	\$524	\$553	\$575	\$589	\$600	1.5
Nonmanufacturing	\$2,435	\$2,744	\$2,939	\$3,108	\$3,284	\$3,467	\$3,642	1.4
Services	\$4,545	\$5,269	\$5,814	\$6,257	\$6,644	\$7,028	\$7,348	1.6
Total	\$8,755	\$10,120	\$11,041	\$11,782	\$12,429	\$13,026	\$13,520	1.5
Africa								
Energy-intensive manufacturing	\$1,256	\$1,412	\$1,604	\$1,815	\$2,033	\$2,251	\$2,477	2.3
Non-energy-intensive manufacturing	\$921	\$1,086	\$1,225	\$1,373	\$1,520	\$1,662	\$1,799	2.3
Nonmanufacturing	\$3,114	\$3,507	\$3,986	\$4,468	\$4,964	\$5,471	\$5,996	2.2
Services	\$6,095	\$6,908	\$7,713	\$8,483	\$9,257	\$9,973	\$10,663	1.9
Total	\$11,386	\$12,913	\$14,526	\$16,140	\$17,773	\$19,356	\$20,934	2.1
Brazil								
Energy-intensive manufacturing	\$777	\$856	\$900	\$911	\$911	\$910	\$910	0.5
Non-energy-intensive manufacturing	\$481	\$601	\$632	\$643	\$649	\$658	\$667	1.1
Nonmanufacturing	\$668	\$748	\$776	\$790	\$818	\$868	\$932	1.1
Services	\$2,997	\$3,199	\$3,297	\$3,331	\$3,323	\$3,299	\$3,264	0.3
Total	\$4,922	\$5,405	\$5,606	\$5,674	\$5,700	\$5,735	\$5,773	0.5
Other Non-OECD Americas								
Energy-intensive manufacturing	\$449	\$505	\$566	\$610	\$658	\$712	\$769	1.8
Non-energy-intensive manufacturing	\$473	\$556	\$621	\$679	\$748	\$833	\$932	2.3
Nonmanufacturing	\$677	\$788	\$873	\$938	\$1,005	\$1,076	\$1,148	1.8
Services	\$2,295	\$2,645	\$2,936	\$3,115	\$3,299	\$3,491	\$3,683	1.6
Total	\$3,895	\$4,494	\$4,996	\$5,342	\$5,711	\$6,113	\$6,532	1.7
Total Non-OECD								
Energy-intensive manufacturing	\$24,934	\$29,560	\$33,053	\$36,063	\$38,538	\$40,687	\$42,369	1.8
Non-energy-intensive manufacturing	\$35,074	\$43,734	\$49,730	\$55,026	\$59,167	\$62,557	\$64,801	2.1
Nonmanufacturing	\$27,685	\$32,891	\$37,021	\$40,686	\$44,023	\$47,104	\$49,834	2.0
Services	\$70,300	\$88,409	\$104,631	\$120,142	\$134,603	\$148,558	\$160,834	2.8

Total	\$157,994	\$194,593	\$224,435	\$251,918	\$276,331	\$298,906	\$317,838	2.4
World								
Energy-intensive manufacturing	\$35,323	\$40,954	\$44,834	\$48,213	\$51,006	\$53,500	\$55,534	1.5
Non-energy-intensive manufacturing	\$51,348	\$62,986	\$69,940	\$76,257	\$81,414	\$85,942	\$89,371	1.9
Nonmanufacturing	\$37,043	\$43,402	\$48,082	\$52,286	\$56,100	\$59,642	\$62,782	1.8
Services	\$137,294	\$164,085	\$184,473	\$204,326	\$223,052	\$241,545	\$258,342	2.1
Total	\$261,009	\$311,428	\$347,330	\$381,083	\$411,572	\$440,630	\$466,029	2.0

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 Im_210719.163843; 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).