

Table A1. World total primary energy consumption by region, Low Zero-carbon Technology Cost case

quadrillion British thermal units

| Region | 2022 | 2025 | 2030 | 2035 | 2040 | 2045 | 2050 | Average annual percentage change, 2022–2050 |
|-------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---|
| Americas | 152.6 | 152.3 | 156.1 | 160.7 | 165.3 | 171.1 | 179.2 | 0.6% |
| United States | 98.9 | 97.4 | 97.8 | 98.8 | 99.7 | 101.7 | 106.0 | 0.2% |
| Canada | 14.7 | 14.8 | 15.5 | 16.4 | 17.6 | 18.8 | 19.8 | 1.1% |
| Mexico | 7.7 | 7.8 | 8.4 | 8.8 | 9.3 | 9.9 | 10.5 | 1.1% |
| Brazil | 14.9 | 15.6 | 16.5 | 17.4 | 17.9 | 18.3 | 18.7 | 0.8% |
| Other Americas | 16.4 | 16.8 | 18.0 | 19.3 | 20.7 | 22.4 | 24.1 | 1.4% |
| Europe and Eurasia | 130.0 | 133.8 | 134.1 | 137.8 | 142.8 | 148.0 | 154.1 | 0.6% |
| Western Europe | 84.2 | 87.2 | 86.7 | 88.4 | 90.9 | 93.3 | 96.4 | 0.5% |
| Russia | 33.5 | 33.8 | 34.0 | 35.2 | 36.4 | 37.8 | 39.2 | 0.6% |
| Eastern Europe and Eurasia | 12.3 | 12.8 | 13.4 | 14.2 | 15.4 | 16.9 | 18.6 | 1.5% |
| Asia Pacific | 292.6 | 309.0 | 336.4 | 360.4 | 381.4 | 404.4 | 427.0 | 1.4% |
| Japan | 18.5 | 18.5 | 17.0 | 16.5 | 16.2 | 16.1 | 15.9 | -0.5% |
| South Korea | 13.0 | 13.4 | 13.8 | 14.1 | 14.2 | 14.3 | 14.4 | 0.4% |
| Australia and New Zealand | 7.2 | 7.2 | 7.7 | 8.0 | 8.4 | 8.8 | 9.2 | 0.9% |
| China | 172.4 | 179.8 | 186.9 | 191.1 | 192.6 | 195.4 | 197.6 | 0.5% |
| India | 38.3 | 43.2 | 56.2 | 69.5 | 82.5 | 96.4 | 110.4 | 3.9% |
| Other Asia Pacific | 43.2 | 46.9 | 54.7 | 61.3 | 67.4 | 73.5 | 79.6 | 2.2% |
| Africa and Middle East | 62.5 | 67.0 | 71.3 | 77.2 | 83.6 | 90.9 | 98.8 | 1.6% |
| Africa | 24.3 | 26.0 | 29.3 | 33.3 | 37.6 | 42.6 | 48.2 | 2.5% |
| Middle East | 38.2 | 41.0 | 42.0 | 43.9 | 45.9 | 48.3 | 50.6 | 1.0% |
| World | 637.7 | 662.2 | 697.9 | 736.1 | 772.9 | 814.5 | 859.1 | 1.1% |

Data source: U.S. Energy Information Administration, World Energy Projection System (2023), run lz_230821.151531 and Annual Energy Outlook 2023 (March 2023), www.eia.gov/aeo

Note: Totals may not equal sum of components due to independent rounding. We converted electricity generation from renewable sources such as hydroelectric, wind, or solar 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 over the projection period (2022–2050).