

Table A2. World total primary energy consumption by region and fuel, Low Zero-carbon Technology Cost case

quadrillion British thermal units

| Region and fuel | 2022 | 2025 | 2030 | 2035 | 2040 | 2045 | 2050 | Average annual percentage change, 2022–2050 |
|-------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---|
| Americas | | | | | | | | |
| Liquid fuels | 57.6 | 57.7 | 56.8 | 56.5 | 57.3 | 58.8 | 60.8 | 0.2% |
| Natural gas | 45.7 | 43.3 | 42.8 | 42.1 | 43.5 | 43.9 | 43.7 | -0.2% |
| Coal | 11.3 | 10.2 | 5.5 | 5.1 | 4.9 | 4.2 | 3.6 | -4.0% |
| Nuclear | 9.4 | 9.7 | 9.6 | 8.8 | 7.5 | 6.3 | 8.4 | -0.4% |
| Other | 28.6 | 31.4 | 41.3 | 48.2 | 52.1 | 57.9 | 62.9 | 2.8% |
| Total | 152.6 | 152.3 | 156.1 | 160.7 | 165.3 | 171.1 | 179.2 | 0.6% |
| Europe and Eurasia | | | | | | | | |
| Liquid fuels | 38.0 | 38.4 | 37.4 | 36.6 | 36.7 | 37.3 | 38.2 | 0.0% |
| Natural gas | 43.7 | 44.3 | 45.9 | 47.1 | 49.0 | 51.1 | 53.3 | 0.7% |
| Coal | 16.5 | 16.1 | 14.6 | 14.8 | 14.9 | 15.6 | 16.4 | 0.0% |
| Nuclear | 10.4 | 12.2 | 11.4 | 11.3 | 11.2 | 11.0 | 10.7 | 0.1% |
| Other | 21.4 | 22.8 | 24.8 | 28.0 | 31.0 | 32.9 | 35.6 | 1.8% |
| Total | 130.0 | 133.8 | 134.1 | 137.8 | 142.8 | 148.0 | 154.1 | 0.6% |
| Asia Pacific | | | | | | | | |
| Liquid fuels | 71.4 | 77.0 | 83.2 | 88.5 | 92.9 | 97.7 | 101.8 | 1.3% |
| Natural gas | 35.2 | 37.5 | 40.3 | 42.5 | 45.3 | 47.9 | 50.7 | 1.3% |
| Coal | 133.7 | 132.9 | 140.0 | 141.2 | 136.2 | 130.7 | 122.9 | -0.3% |
| Nuclear | 7.6 | 9.0 | 10.7 | 12.2 | 13.7 | 16.7 | 22.7 | 4.0% |
| Other | 44.6 | 52.6 | 62.2 | 76.0 | 93.2 | 111.5 | 128.8 | 3.9% |
| Total | 292.6 | 309.0 | 336.4 | 360.4 | 381.4 | 404.4 | 427.0 | 1.4% |
| Africa and Middle East | | | | | | | | |
| Liquid fuels | 23.3 | 24.7 | 24.7 | 25.6 | 27.2 | 29.1 | 31.1 | 1.0% |
| Natural gas | 28.6 | 29.8 | 31.3 | 33.6 | 35.8 | 37.7 | 39.0 | 1.1% |
| Coal | 4.6 | 4.5 | 4.9 | 5.6 | 6.6 | 6.9 | 7.4 | 1.7% |
| Nuclear | 0.4 | 0.9 | 1.0 | 1.2 | 1.4 | 1.4 | 1.4 | 4.9% |
| Other | 5.7 | 7.1 | 9.2 | 11.1 | 12.6 | 15.7 | 19.9 | 4.6% |
| Total | 62.5 | 67.0 | 71.3 | 77.2 | 83.6 | 90.9 | 98.8 | 1.6% |
| World | | | | | | | | |
| Liquid fuels | 190.3 | 197.9 | 202.1 | 207.3 | 214.1 | 222.9 | 231.9 | 0.7% |
| Natural gas | 153.2 | 155.0 | 160.3 | 165.4 | 173.6 | 180.6 | 186.7 | 0.7% |
| Coal | 166.0 | 163.7 | 165.1 | 166.7 | 162.6 | 157.4 | 150.2 | -0.4% |
| Nuclear | 27.7 | 31.7 | 32.7 | 33.6 | 33.8 | 35.4 | 43.2 | 1.6% |
| Other | 100.4 | 114.0 | 137.6 | 163.2 | 188.9 | 218.2 | 247.2 | 3.3% |
| Total | 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).