

**Table A9. World consumption of renewable energy 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 |
|-------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---|
| <b>Americas</b>               | <b>28.6</b>  | <b>31.4</b>  | <b>41.3</b>  | <b>48.2</b>  | <b>52.1</b>  | <b>57.9</b>  | <b>62.9</b>  | <b>2.8%</b>                                 |
| United States                 | 11.4         | 14.1         | 22.5         | 27.5         | 29.5         | 33.0         | 35.6         | 4.1%  |
| Canada                        | 4.3          | 4.4          | 4.6          | 4.9          | 5.6          | 6.4          | 7.2          | 1.8%  |
| Mexico                        | 1.0          | 0.8          | 1.1          | 1.2          | 1.4          | 1.7          | 2.0          | 2.6%  |
| Brazil                        | 7.4          | 7.6          | 8.1          | 8.9          | 9.4          | 9.8          | 10.2         | 1.1%  |
| Other Americas                | 4.5          | 4.6          | 5.1          | 5.6          | 6.2          | 7.0          | 7.9          | 2.0%  |
| <b>Europe and Eurasia</b>     | <b>21.4</b>  | <b>22.8</b>  | <b>24.8</b>  | <b>28.0</b>  | <b>31.0</b>  | <b>32.9</b>  | <b>35.6</b>  | <b>1.8%</b>                                 |
| Western Europe                | 18.4         | 19.7         | 21.7         | 24.5         | 27.6         | 29.4         | 31.7         | 2.0%  |
| Russia                        | 2.2          | 2.1          | 2.1          | 2.4          | 2.2          | 2.2          | 2.2          | 0.1%  |
| Eastern Europe and Eurasia    | 0.9          | 1.0          | 1.0          | 1.1          | 1.1          | 1.4          | 1.7          | 2.4%  |
| <b>Asia Pacific</b>           | <b>44.6</b>  | <b>52.6</b>  | <b>62.2</b>  | <b>76.0</b>  | <b>93.2</b>  | <b>111.5</b> | <b>128.8</b> | <b>3.9%</b>                                 |
| Japan                         | 2.4          | 2.2          | 2.4          | 2.6          | 3.0          | 3.3          | 3.4          | 1.3%  |
| South Korea                   | 0.6          | 0.6          | 0.8          | 1.1          | 1.3          | 1.6          | 1.8          | 3.9%  |
| Australia and New Zealand     | 1.4          | 1.5          | 1.7          | 1.9          | 2.2          | 2.6          | 2.9          | 2.7%  |
| China                         | 26.6         | 31.4         | 35.0         | 38.4         | 44.4         | 50.3         | 55.2         | 2.6%  |
| India                         | 7.4          | 9.3          | 13.0         | 20.1         | 27.0         | 36.1         | 44.6         | 6.6%  |
| Other Asia Pacific            | 6.3          | 7.5          | 9.4          | 11.8         | 15.3         | 17.6         | 20.9         | 4.4%  |
| <b>Africa and Middle East</b> | <b>5.7</b>   | <b>7.1</b>   | <b>9.2</b>   | <b>11.1</b>  | <b>12.6</b>  | <b>15.7</b>  | <b>19.9</b>  | <b>4.6%</b>                                 |
| Africa                        | 5.3          | 6.3          | 7.9          | 9.6          | 10.9         | 13.5         | 16.5         | 4.1%  |
| Middle East                   | 0.4          | 0.8          | 1.3          | 1.5          | 1.7          | 2.2          | 3.5          | 8.1%  |
| <b>World</b>                  | <b>100.4</b> | <b>114.0</b> | <b>137.6</b> | <b>163.2</b> | <b>188.9</b> | <b>218.2</b> | <b>247.2</b> | <b>3.3%</b>                                 |

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](http://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).