

Table A13. World carbon dioxide emissions from coal use by region, High Zero-carbon Technology Cost case

million metric tons of carbon dioxide

| Region | 2022 | 2025 | 2030 | 2035 | 2040 | 2045 | 2050 | Average annual percentage change, 2022–2050 |
|-------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---|
| Americas | 1,085 | 992 | 752 | 782 | 788 | 799 | 781 | -1.2% |
| United States | 929 | 847 | 587 | 570 | 526 | 509 | 477 | -2.4% |
| Canada | 45 | 29 | 13 | 13 | 14 | 14 | 14 | -4.2% |
| Mexico | 19 | 19 | 32 | 34 | 35 | 35 | 36 | 2.4% |
| Brazil | 57 | 60 | 61 | 65 | 71 | 68 | 69 | 0.6% |
| Other Americas | 35 | 38 | 59 | 99 | 142 | 173 | 186 | 6.1% |
| Europe and Eurasia | 1,570 | 1,542 | 1,398 | 1,406 | 1,415 | 1,533 | 1,557 | 0.0% |
| Western Europe | 813 | 780 | 641 | 646 | 631 | 723 | 718 | -0.4% |
| Russia | 449 | 465 | 444 | 427 | 434 | 442 | 450 | 0.0% |
| Eastern Europe and Eurasia | 308 | 297 | 314 | 333 | 350 | 368 | 389 | 0.8% |
| Asia Pacific | 12,719 | 12,680 | 13,370 | 13,772 | 13,756 | 13,654 | 13,777 | 0.3% |
| Japan | 409 | 402 | 287 | 289 | 278 | 267 | 257 | -1.7% |
| South Korea | 240 | 236 | 245 | 255 | 260 | 264 | 264 | 0.3% |
| Australia and New Zealand | 145 | 134 | 150 | 158 | 163 | 165 | 164 | 0.4% |
| China | 9,181 | 9,007 | 8,943 | 8,801 | 8,297 | 7,791 | 7,555 | -0.7% |
| India | 1,699 | 1,819 | 2,320 | 2,603 | 2,846 | 2,998 | 3,112 | 2.2% |
| Other Asia Pacific | 1,045 | 1,082 | 1,424 | 1,665 | 1,912 | 2,169 | 2,425 | 3.1% |
| Africa and Middle East | 429 | 426 | 488 | 545 | 601 | 682 | 744 | 2.0% |
| Africa | 403 | 400 | 462 | 518 | 574 | 655 | 717 | 2.1% |
| Middle East | 26 | 26 | 25 | 26 | 27 | 27 | 27 | 0.1% |
| World | 15,804 | 15,640 | 16,008 | 16,505 | 16,560 | 16,669 | 16,860 | 0.2% |

Data source: U.S. Energy Information Administration, World Energy Projection System (2023), run hz_230821.151430 and Annual Energy Outlook 2023 (March 2023), www.eia.gov/aeo

Note: Totals may not equal sum of components due to independent rounding.