

**Table A10. World carbon dioxide emissions 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
<b>Americas</b>	<b>6,991</b>	<b>6,779</b>	<b>6,520</b>	<b>6,518</b>	<b>6,647</b>	<b>6,859</b>	<b>7,071</b>	<b>0.0%</b>
United States	4,842	4,582	4,267	4,161	4,145	4,216	4,297	-0.4%
Canada	548	537	515	536	566	600	631	0.5%
Mexico	419	428	446	457	480	501	524	0.8%
Brazil	439	467	487	490	497	500	504	0.5%
Other Americas	744	766	806	873	958	1,043	1,114	1.5%
<b>Europe and Eurasia</b>	<b>6,363</b>	<b>6,393</b>	<b>6,248</b>	<b>6,254</b>	<b>6,351</b>	<b>6,616</b>	<b>6,821</b>	<b>0.2%</b>
Western Europe	3,805	3,810	3,649	3,576	3,531	3,635	3,667	-0.1%
Russia	1,815	1,829	1,824	1,862	1,930	2,006	2,083	0.5%
Eastern Europe and Eurasia	742	754	775	816	890	975	1,071	1.3%
<b>Asia Pacific</b>	<b>18,703</b>	<b>19,138</b>	<b>20,359</b>	<b>21,218</b>	<b>21,655</b>	<b>22,084</b>	<b>22,678</b>	<b>0.7%</b>
Japan	1,036	1,015	861	822	781	760	737	-1.2%
South Korea	639	647	651	648	642	637	630	0.0%
Australia and New Zealand	404	395	421	428	436	448	458	0.5%
China	11,498	11,556	11,636	11,613	11,198	10,814	10,662	-0.3%
India	2,446	2,673	3,421	3,970	4,489	4,907	5,270	2.8%
Other Asia Pacific	2,680	2,852	3,370	3,737	4,108	4,518	4,920	2.2%
<b>Africa and Middle East</b>	<b>3,606</b>	<b>3,769</b>	<b>3,896</b>	<b>4,136</b>	<b>4,421</b>	<b>4,765</b>	<b>5,090</b>	<b>1.2%</b>
Africa	1,331	1,380	1,515	1,675	1,861	2,098	2,327	2.0%
Middle East	2,275	2,389	2,381	2,461	2,559	2,667	2,763	0.7%
<b>World</b>	<b>35,662</b>	<b>36,079</b>	<b>37,023</b>	<b>38,127</b>	<b>39,074</b>	<b>40,325</b>	<b>41,659</b>	<b>0.6%</b>

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/ao](http://www.eia.gov/ao)

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