

Table A10. World carbon dioxide emissions by region, Reference case

million metric tons of carbon dioxide

Region	2022	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2022–2050
Americas	6,992	6,746	6,251	6,238	6,353	6,513	6,674	-0.2%
United States	4,842	4,542	3,999	3,891	3,865	3,896	3,938	-0.7%
Canada	548	543	516	534	562	593	624	0.5%
Mexico	419	428	446	459	482	503	526	0.8%
Brazil	439	467	486	490	497	498	503	0.5%
Other Americas	743	765	803	865	947	1,023	1,083	1.4%
Europe and Eurasia	6,367	6,409	6,256	6,263	6,360	6,586	6,815	0.2%
Western Europe	3,808	3,819	3,657	3,585	3,538	3,608	3,672	-0.1%
Russia	1,817	1,833	1,825	1,862	1,932	2,005	2,077	0.5%
Eastern Europe and Eurasia	742	757	774	816	891	974	1,066	1.3%
Asia Pacific	18,705	19,121	20,318	21,051	21,375	21,842	22,405	0.6%
Japan	1,039	1,019	864	821	782	762	739	-1.2%
South Korea	639	649	649	648	641	636	630	-0.1%
Australia and New Zealand	404	395	422	433	438	449	461	0.5%
China	11,500	11,530	11,644	11,594	11,150	10,788	10,601	-0.3%
India	2,447	2,677	3,408	3,860	4,328	4,807	5,210	2.7%
Other Asia Pacific	2,676	2,851	3,331	3,695	4,035	4,401	4,765	2.1%
Africa and Middle East	3,606	3,776	3,900	4,172	4,408	4,744	5,060	1.2%
Africa	1,331	1,380	1,504	1,697	1,837	2,066	2,283	1.9%
Middle East	2,275	2,396	2,397	2,474	2,571	2,678	2,777	0.7%
World	35,669	36,053	36,726	37,724	38,497	39,685	40,954	0.5%

Data source: U.S. Energy Information Administration, World Energy Projection System (2023), run r_230822.081459 and Annual Energy Outlook 2023 (March 2023), www.eia.gov/ao

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