

Table G1. World petroleum and other liquid fuels production, Reference case

million barrels per day

Liquid fuel	2022	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2022–2050
Crude oil	80.4	81.3	80.7	82.7	85.4	89.0	92.7	0.5%
Other liquid fuels	18.6	21.9	24.9	25.8	26.7	27.7	28.7	1.6%
Total liquid fuels	99.1	103.2	105.5	108.5	112.1	116.7	121.5	0.7%

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/aeo

Note: Totals may not equal sum of components due to independent rounding. Crude oil includes crude oil and lease and plant condensate. Other liquid fuels includes natural gas plant liquids, liquid fuels from renewable sources, liquids from coal, liquids from natural gas, refinery gain, and other components.

Table G2. World crude oil production by region and country, Reference case

million barrels per day

Region and country	2022	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2022–2050
OPEC								
Middle East	24.7	21.4	19.6	20.8	21.8	24.6	28.3	0.5%
North Africa	2.3	2.4	2.5	2.5	2.5	2.5	2.5	0.3%
West Africa	3.1	3.2	3.2	3.2	3.2	3.2	3.2	0.2%
Venezuela	0.7	0.9	1.0	1.3	1.6	1.5	1.5	2.6%
Total OPEC	30.7	28.0	26.4	27.8	29.2	31.9	35.5	0.5%
Non-OPEC								
Americas								
United States	11.8	12.9	13.3	13.2	13.0	13.1	13.2	0.4%
Canada	4.5	5.1	5.4	5.4	5.4	5.3	5.3	0.6%
Mexico	1.7	1.8	1.8	1.8	1.8	1.8	1.8	0.2%
Brazil	3.0	3.5	3.3	3.2	3.4	4.3	4.5	1.4%
Other Non-OPEC Americas	2.3	2.8	2.9	3.3	4.3	4.0	3.8	1.9%
Europe and Eurasia								
Western Europe	2.9	3.6	3.6	3.6	3.6	3.6	3.6	0.8%
Eastern Europe	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.2%
Russia	10.3	10.3	10.3	10.3	10.3	10.3	10.3	0.0%
Eurasia	2.0	2.1	2.1	2.1	2.1	2.1	2.1	0.3%
Asia Pacific								
Australia and New Zealand	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3%
Japan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6%
South Korea	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0%
China	4.1	4.2	4.2	4.2	4.2	4.2	4.2	0.1%
India	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.1%
Other Non-OPEC Asia Pacific	1.7	1.7	1.7	1.7	1.7	1.7	1.7	0.0%
Africa and Middle East								
Non-OPEC Africa	1.1	1.0	1.3	1.7	2.2	2.2	2.2	2.7%
Non-OPEC Middle East	2.7	2.7	2.7	2.7	2.7	2.7	2.7	0.0%
Total Non-OPEC	49.7	53.4	54.3	54.9	56.2	57.1	57.3	0.5%
Total World	80.4	81.3	80.7	82.7	85.4	89.0	92.7	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/aeo

Note: Totals may not equal sum of components due to independent rounding. "--" means not applicable. Crude oil includes crude oil and lease and plant condensate.

OPEC Middle East: Iran, Iraq, Kuwait, Saudi Arabia, and United Arab Emirates.

OPEC North Africa: Algeria and Libya.

OPEC West Africa: Angola, Congo, Equatorial Guinea, Gabon, and Nigeria.

Table G3. World Other liquid fuels production, Reference case

million barrels per day

Liquid fuel	2022	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2022–2050
Natural gas plant liquid fuels	11.9	12.0	13.6	14.3	14.9	15.5	16.2	1.1%
Liquid fuels from renewable sources	2.6	2.9	3.1	3.1	3.1	3.1	3.2	0.8%
Liquid fuels from coal	0.2	0.3	0.3	0.3	0.3	0.3	0.4	1.5%
Liquid fuels from Natural gas	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.0%
Refinery gain	4.0	4.5	4.9	5.0	5.2	5.3	5.5	1.1%
Other liquid fuels	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0.0%
Refinery balance	-2.8	-0.5	0.2	0.3	0.5	0.6	0.8	--
Total liquid fuels	18.6	21.9	24.9	25.8	26.7	27.7	28.7	1.6%

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/aeo

Note: Totals may not equal sum of components due to independent rounding. "--" means not applicable. Other liquid fuels includes still gas and methanol production. Refinery balance reports the overproduction or underproduction of liquid fuels from refineries in a specific year relative to the total demand for refined products.