

Table F17. Delivered energy consumption in Africa by end-use sector and fuel, Reference case

quadrillion British thermal units

Sector and fuel	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
Residential								
Liquid fuels	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.3
Natural gas	0.5	0.5	0.6	0.7	0.8	0.8	0.9	1.7
Coal	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5
Electricity	0.8	1.0	1.2	1.5	1.8	2.1	2.5	3.7
Renewables	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
Total	2.2	2.4	2.7	3.1	3.5	3.8	4.3	2.3
Commercial								
Liquid fuels	0.1	0.1	0.1	0.1	0.1	0.1	0.1	-0.1
Natural gas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
Coal	0.1	0.1	0.1	0.1	0.1	0.2	0.2	1.5
Electricity	0.4	0.5	0.6	0.6	0.7	0.8	0.9	2.2
Renewables	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
Total	0.6	0.7	0.8	0.9	0.9	1.0	1.1	1.9
Industrial								
Liquid fuels	1.4	1.6	1.8	2.1	2.3	2.6	2.9	2.5
Natural gas	2.1	2.4	2.6	3.0	3.4	3.8	4.1	2.3
Coal	1.6	1.9	2.0	2.2	2.5	2.8	3.1	2.2
Electricity	1.0	1.1	1.2	1.3	1.5	1.7	1.9	2.3
Renewables	3.3	3.7	4.1	4.6	5.2	5.8	6.4	2.2
Total	9.4	10.6	11.8	13.3	15.0	16.7	18.5	2.3
Transportation								
Liquid fuels	4.8	6.0	6.8	7.6	8.4	9.5	10.6	2.7
Natural gas	0.0	0.1	0.1	0.1	0.1	0.2	0.2	6.0
Coal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Electricity	0.0	0.0	0.0	0.0	0.0	0.1	0.1	2.4
Renewables	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	4.9	6.1	6.9	7.7	8.6	9.7	10.9	2.7
All end-use sectors								
Liquid fuels	6.9	8.2	9.3	10.4	11.5	12.8	14.3	2.5
Natural gas	2.6	3.0	3.3	3.8	4.3	4.7	5.2	2.3
Coal	1.9	2.2	2.4	2.6	2.9	3.2	3.5	2.0
Electricity	2.3	2.7	3.0	3.5	4.1	4.6	5.3	2.9
Renewables	3.3	3.7	4.1	4.6	5.2	5.8	6.4	2.2
Delivered energy	17.1	19.8	22.2	24.9	28.0	31.3	34.9	2.4
Electricity-related losses	5.0	5.8	6.3	7.0	7.7	8.3	9.4	2.1
Discrepancy	0.8	1.0	1.1	1.2	1.4	1.5	1.7	2.6
Total	22.9	26.6	29.6	33.2	37.0	41.1	46.0	2.4
Electric power								
Liquid fuels	0.7	0.7	0.2	0.0	0.0	0.0	0.0	-16.7
Natural gas	3.1	3.3	3.6	3.9	3.8	3.6	4.1	0.9
Coal	1.9	2.0	2.1	2.3	2.2	1.7	1.4	-1.0
Nuclear	0.1	0.1	0.3	0.4	0.5	0.5	0.5	5.4
Renewables	1.4	2.3	3.1	3.9	5.2	7.0	8.7	6.2
Total	7.2	8.4	9.4	10.6	11.7	12.9	14.7	2.4
Total energy consumption								
Liquid fuels	8.4	9.9	10.5	11.5	12.7	14.1	15.7	2.1
Natural gas	5.7	6.2	6.8	7.6	8.0	8.3	9.2	1.6
Coal	3.9	4.3	4.6	5.0	5.2	5.0	5.0	0.9
Nuclear	0.1	0.1	0.3	0.5	0.6	0.6	0.6	5.4
Renewables	4.8	6.1	7.3	8.6	10.6	13.1	15.5	4.0

Total	22.9	26.6	29.6	33.2	37.0	41.1	46.0	2.4
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Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run r_210719.163829; and EIA, *Annual Energy Outlook 2021* , (February 2021), www.eia.gov/aeo

Notes:

- * Totals may not equal sum of components due to independent rounding.
- * End-use sector electricity consumption does not include electrical system energy losses incurred in the generation, transmission, and distribution of electricity.
- * End-use sector delivered energy consumption does not include electrical system energy losses incurred in the generation, transmission, and distribution of electricity.
- * Electricity-related losses include energy losses during generation due to thermal efficiency, energy losses during transmission and distribution, and parasitic load.