

Table E19.gen. Electricity generation: Africa and Middle East, Low Zero-carbon Technology Cost case

billion kilowatthours

Fuel	2022	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2022–2050
Liquid fuels	348	354	179	80	35	13	3	-15.3%
Natural gas	1,349	1,398	1,416	1,622	1,772	1,846	1,820	1.1%
Coal	214	184	200	227	269	247	223	0.1%
Nuclear	37	81	96	116	135	135	135	4.8%
Renewables	269	403	574	701	784	1,064	1,466	6.2%
Hydro	188	235	256	295	295	303	317	1.9%
Wind	30	65	113	126	130	163	190	6.8%
Geothermal	6	6	34	47	47	47	63	8.6%
Solar	42	92	166	231	312	551	892	11.5%
Other	2	4	4	3	0	0	4	1.5%
Net generation to grid	2,217	2,420	2,466	2,746	2,994	3,305	3,648	1.8%

Data source: U.S. Energy Information Administration, World Energy Projection System (2023), run lz_230821.151531

Note: Totals may not equal sum of components due to independent rounding. Net generation to grid represents gross generation minus losses from thermal efficiency and parasitic load.