

Table E19.gen. Electricity generation: Africa and Middle East, Reference case

billion kilowatthours

Fuel	2022	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2022–2050
Liquid fuels	348	354	179	87	35	13	3	-15.3%
Natural gas	1,349	1,398	1,426	1,623	1,783	1,944	2,076	1.6%
Coal	214	190	215	270	243	275	276	0.9%
Nuclear	37	54	87	116	135	135	135	4.8%
Renewables	269	402	570	650	729	896	1,074	5.1%
Hydro	188	232	253	268	291	358	435	3.0%
Wind	30	65	114	121	122	126	126	5.2%
Geothermal	6	6	33	46	63	63	63	8.6%
Solar	42	95	165	206	250	346	446	8.8%
Other	2	4	4	8	2	3	4	2.1%
Net generation to grid	2,217	2,398	2,478	2,746	2,924	3,264	3,565	1.7%

Data source: U.S. Energy Information Administration, World Energy Projection System (2023), run r_230822.081459

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.