

Table E19.gen. Electricity generation: Africa and Middle East, High 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	180	80	35	13	3	-15.3%
Natural gas	1,349	1,398	1,422	1,654	1,849	2,054	2,216	1.8%
Coal	214	190	222	241	249	276	276	0.9%
Nuclear	37	54	87	116	135	135	135	4.8%
Renewables	269	403	569	636	707	821	911	4.4%
Hydro	188	232	251	268	292	344	383	2.6%
Wind	30	65	113	121	122	126	126	5.2%
Geothermal	6	6	33	46	63	63	63	8.6%
Solar	42	95	165	198	228	284	335	7.7%
Other	2	4	5	3	2	5	3	1.2%
Net generation to grid	2,217	2,399	2,480	2,727	2,975	3,299	3,541	1.7%

Data source: U.S. Energy Information Administration, World Energy Projection System (2023), run hz_230821.151430

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.