



Africa's net exports fall significantly even as production rises, due to its own consumption growing strongly; renewables become the largest source of power generation in 2040

1. The share of renewables in the African fuel mix grows from 1% today to 16% by 2040.
2. Electricity demand almost triples with renewables becoming the largest source of power generation by 2040.
3. African energy production as a share of consumption declines from 176% in 2017 to 119% by 2040.

+127%

Growth in African energy consumption

6%

Share of global energy consumption in 2040

+54%

Growth in African energy production

7%

Share of global energy production in 2040

- ▶ Energy consumption grows by 3.6% p.a. with energy use in power generation growing by 4.4% p.a. Growth accelerates markedly compared with the previous 20 years (+2.8% p.a.).
- ▶ Consumption growth is strong across all sectors: buildings (+149%), industry and non-combusted uses (+139% each) and transport (+85%).
- ▶ By fuel and on a Mtoe basis, gas (+167 Mtoe), renewables (+156 Mtoe) and oil (+149 Mtoe) grow the most over the Outlook.
- ▶ Oil remains the leading fuel, accounting for 34% of African energy consumption by 2040, down from 44% today. Renewables (16% in 2040) gain considerable market share while coal loses significant share, accounting for 13% of energy use in 2040, down from 21% in 2017.
- ▶ Electricity demand almost triples by 2040, to reach 2306 TWh. In 2040 renewables have the largest share in the electricity generation mix (32%) followed by gas (30%) and coal and hydro (16% each).
- ▶ Renewables surpass coal as the second largest source of power generation (by fuel input) around 2030.
- ▶ Domestic energy production increases by 54%, driven by natural gas (+109%), renewables (+2795%) and coal (+36%) more than offsetting the decline in oil (-12%).
- ▶ Africa remains an important oil producer of oil and becomes an increasingly important producer of gas. Oil production decreases by 1 Mb/d over the outlook to reach 7 Mb/d by 2040. Natural gas production increases by 245 Bcm to 470 Bcm in 2040.
- ▶ Energy intensity (the amount of energy required per unit of GDP) declines by 12% over the outlook, half the decline seen over 1995-2017 (-27%) and about a third of the global decline over the period to 2040 (-36%).
- ▶ High energy consumption combined with a large share of fossil fuels drive the increase in CO₂ emissions from energy use of 77% by 2040. Per capita CO₂ emissions by 2040 remain a small fraction (27%) of the global average.



BP Energy Outlook – 2019

Insights from the Evolving transition scenario – Africa



	Level		Shares		Change (abs.)		Change (%)		Change (annual)*	
	2017	2040	2017	2040	1995-2017	2017-2040	1995-2017	2017-2040	1995-2017	2017-2040
Primary energy consumption (units in Mtoe unless otherwise noted)										
Total	449	1019			206	569	85%	127%	2.8%	3.6%
Oil† (Mb/d)	4	7	44%	34%	2	3	85%	77%	2.8%	2.5%
Gas (Bcm)	142	336	27%	28%	96	195	207%	137%	5.2%	3.8%
Coal	93	136	21%	13%	14	43	17%	46%	0.7%	1.7%
Nuclear	4	8	1%	1%	1	5	39%	126%	1.5%	3.6%
Hydro	29	80	6%	8%	16	51	115%	174%	3.5%	4.5%
Renewables (including biofuels)	6	161	1%	16%	5	156	>1000%	>1000%	>10%	>10%
Transport^	126	234	28%	23%	67	108	115%	85%	3.5%	2.7%
Industry^	178	425	40%	42%	67	247	60%	139%	2.2%	3.9%
Non-combusted^	20	47	4%	5%	6	28	40%	139%	1.6%	3.9%
Buildings^	125	312	28%	31%	66	187	111%	149%	3.4%	4.1%
Power	185	502	41%	49%	87	317	90%	171%	2.9%	4.4%
Production										
Oil† (Mb/d)	8	7			1	-1	16%	-12%	0.7%	-0.5%
Gas (Bcm)	225	470			138	245	158%	109%	4.4%	3.3%
Coal	155	211			33	56	27%	36%	1.1%	1.4%

* Compound annual growth rate.

† Oil supply includes crude oil, shale oil, oil sands, natural gas liquids, liquid fuels derived from coal and gas, and refinery gains, but excludes biofuels. Oil demand includes consumption of all liquid hydrocarbons but excludes biofuels.

^ Includes electricity and the associated conversion losses in power generation.



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