



ELECTRICITY LAWYER
TRANSMISSION CAPACITY DATA FOR SUB-SAHARAN
AFRICAN COUNTRIES

Electricity Transmission can be defined as the process through which large amounts of electricity produced at power plants or within a national power grid, are transported over long distances for final consumption by end-users. Flowing from this, it is accepted that electricity transmission forms a major part of electricity supply within the value chain and thus, for a reader to fully understand the scope of electricity transmission in the power sector of any given country, information regarding how much electricity generated can be transferred on the grid, in terms of wheeling capacity is critical; because a country may have sufficient generation capacity to match electricity demand; however, the transmission capacity may pose as a limiting factor in attaining the anticipated demand-supply balance..

Based on the above, Electricity Lawyer (EL) has aggregated the transmission capacity data of countries across Sub-Saharan Africa, measured in Megawatt (MW) and Megavolt-Ampere (MVA).

The data presented has been aggregated from various reputable and accredited sources referenced herein such as the World Bank, African Development Bank, USAID, Reuters, ESI Africa, National Authorities in the respective SSA countries, etc.

Conversions from MW to MVA and vice-versa were undertaken assuming a power factor of 0.85, given that transmission capacity is expressed using both voltage and complex power.

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COUNTRY		TRANSMISSION CAPACITY (MW)	TRANSMISSION CAPACITY (MVA)
WEST AFRICA			
SERIAL NUMBER			
1	Nigeria	7, 300 MW ⁴ (2020)	8,588.23 MVA (2020)
2	Ghana	6, 112. 52 MW (2019)	7,191.20 MVA ⁵ (2019)
3	Togo	312. 1 MW (2015)	367.18 MVA (2015) ⁶
4	Benin	140 MW (2019) ⁷	164.71 MVA (2019)
5	Burkina Faso	395 MW ⁸ (2019)	464.71 MVA (2019)
6	Cape Verde	70 MW ⁹ (2018)	82.35 MVA (2018)
7	Côte d'Ivoire	1,350 MW (2020) ¹⁰	1,588.24 MVA (2020)
8	Guinea	458 MW ¹¹ (2018)	538.82 MVA (2018)
9	Guinea-Bissau	40 MW ¹² (2018)	47.06 MVA (2018)
10	Liberia	126 MW ¹³ (2020)	148.24 MVA (2020)
11	Mali	410. 12 MW (2017)	482.49MVA ¹⁴ (2017)
12	Niger	190 MW (2018) ¹⁵	223.53 MVA (2018)
13	Senegal	957. 95 MW (2013)	1,127.00 MVA ¹⁶ (2013)
14	Gambia	40 MW (2019) ¹⁷	47.06 MVA (2019)
15	Sierra Leone	50. 83 MW (2016) ¹⁸	59.80 MVA (2016)
SOUTHERN AFRICA			
16	South Africa	129, 314. 8 MW (2019)	152,135.06 MVA ¹⁹ (2019)
17	Boswana	392 MW (2016) ²⁰	461.18 MVA (2016)
18	Namibia	1, 200 MW (2007) ²¹	1,411.76 MVA (2007)
19	Lesotho	120 MW (2018) ²²	141. 18 MVA (2018)
20	Swaziland	311.5 MW (2013)	366.47 MVA (2013) ²³

NORTH AFRICA

21	Sudan	9, 008. 3 MW (2018)	10,598 MVA ²⁴ (2018)
22	Mauritania	170 MW (2014) ²⁵	200 MVA (2014)
23	South Sudan	130 MW (2021) ²⁶	152.9 MVA (2021)

EAST AFRICA

24	Somalia	100 MW (2015) ²⁷	117.65 MVA (2015)
25	Zimbabwe	7, 504. 7 MW (2012)	8,829.06 MVA ²⁸ (2012)
26	Burundi	48.64 MW ²⁹ (2012)	57.22 MVA (2012)
27	Comoros	11 MW ³⁰ (2013)	12.94 MVA (2013)
28	Djibouti	16 MW ³¹ (2018)	18.82 MVA (2018)
30	Eritrea	122 MW ³² (2018)	143.53 MVA (2018)
31	Ethiopia	2,208 MW ³³ (2018)	2,597.65 MVA (2018)
32	Madagascar	506 MW (2021) ³⁴	595.29 MVA (2021)
33	Malawi	687.65 MW (2018)	809 MVA ³⁵ (2018)
34	Mozambique	500 MW (2019) ³⁶	588.24 MVA (2021)
35	Rwanda	79. 73 MW (2019)	93.80 MVA (2019) ³⁷
36	Seychelles	119 MW (2016) ³⁹	140 MVA (2016)
37	Kenya	2, 236 MW (2015) ⁴⁰	2, 630. 59 MVA (2015)
38	Uganda	16, 830 MW (2020)	19,800 MVA ⁴¹ (2020)
39	Tanzania	3, 300. 9 MW (2010) ⁴³	3,883.41 MVA (2010) ⁴²
40	Zambia	2, 424 MW (2019) ⁴³	2,851.76 MVA (2019)

CENTRAL AFRICA

41	Angola	1800 MW ⁴⁴ (2020)	2,117.65 MVA (2020)
42	Cameroon	1, 133. 1 MW (2019)	1,333.06 MVA ⁴⁵ (2019)
43	Central African Republic	45 MW ⁴⁶ (2019)	52.94 MVA (2019)
44	Congo (Brazzaville)	150 MW (2019) ⁴⁷	176.47 MVA (2019)
45	Equatorial Guinea	279 MW ⁴⁸ (2018)	328.24 MVA (2018)
46	Gabon	720 MW (2020) ⁴⁹	847.06 MVA (2020)
47	Sao Tome and Principe	20. 3 MW (2017) ⁵⁰	23.88 MVA (2017)
48	Congo	2, 566 MW (2013) ⁵¹	3,018.82 MVA (2013)
49	Chad	22 MW (2021) ⁵²	25.88 MVA (2021)



Wheeling to boost our transmission capacity **data?**

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source reference to
insights@electricitylawyer.com

*Please note that information sent across is subject to our internal verification process.

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- ² The distribution segment of the value chain, although critical, has not been captured.
- ³ Where available transmission capacity data is not stated in MVA, it is converted using a power factor of 0.85. [MVA = MW / 0.85; MW = MVA x 0.85]. (Where 1 MW=1000 MVA, with MVA being the Megavolt-Ampere and the SI unit (VA) for complex power)
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