Equatorial Guinea

IRENA
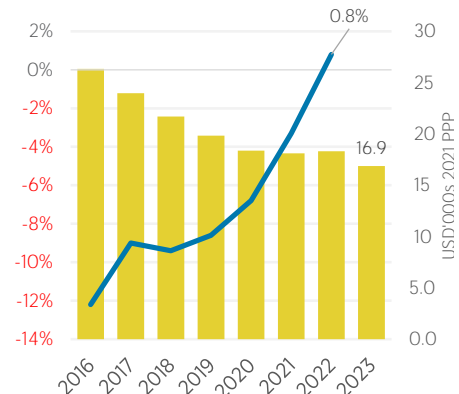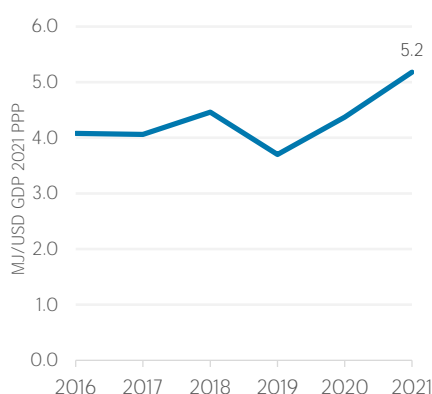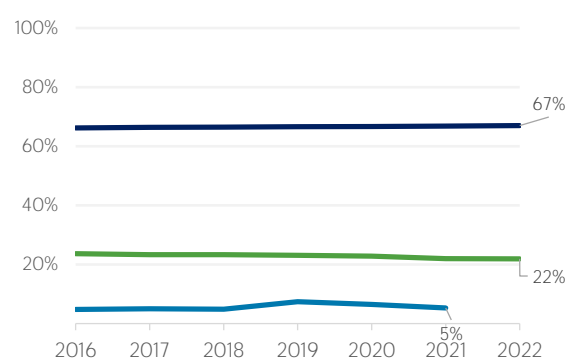International Renewable Energy Agency
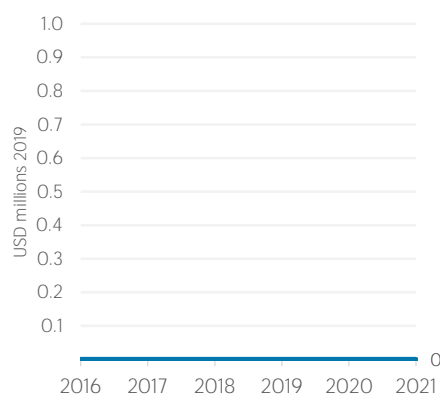
COUNTRY INDICATORS AND SDGS
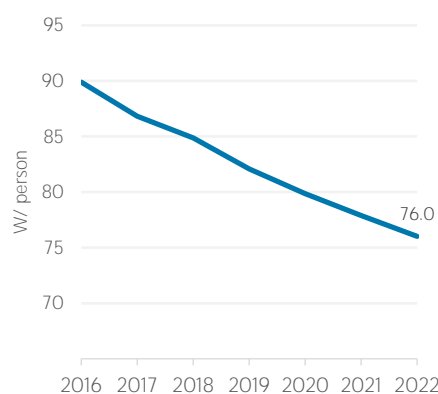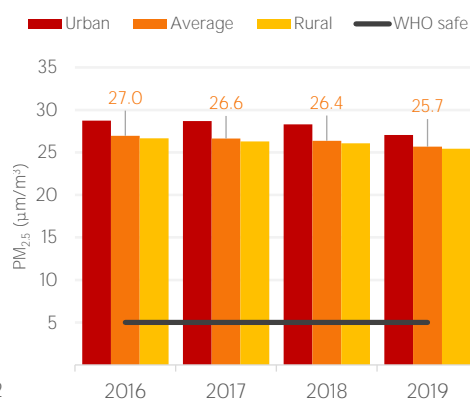
GDP per capita — 8.1.1 Real GDP growth rate

7.3.1 Energy intensity

7.1.1 Access to electricity (% population)
7.1.2 Access to clean cooking (% population)
7.2.1 Renewable energy (% TFEC)

7.a.1 Public flows to renewables

7.b.1 Per capita renewable capacity
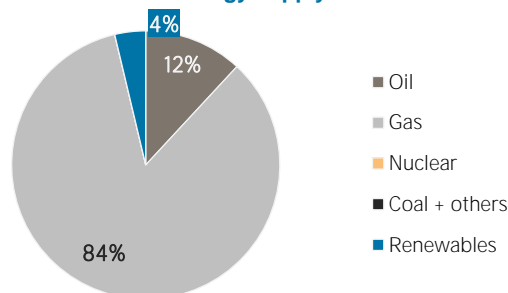
11.6.2 Air particulate matter (PM$_{2.5}$)

Urban — Average — Rural — WHO safe

TOTAL ENERGY SUPPLY (TES)

Total Energy Supply (TES)	2016	2021
Non-renewable (TJ)	117 459	117 583
Renewable (TJ)	4 542	4 540
Total (TJ)	122 001	122 123
Renewable share (%)	4	4

Growth in TES	2016-21	2020-21
Non-renewable (%)	+0.1	+42.7
Renewable (%)	-0.0	-0.0
Total (%)	+0.1	+40.5

Primary energy trade	2016	2021
Imports (TJ)	12 669	10 616
Exports (TJ)	658 943	432 048
Net trade (TJ)	646 274	421 432
Imports (% of supply)	10	9
Exports (% of production)	86	80
Energy self-sufficiency (%)	625	442

Total energy supply in 2021

Oil
Gas
Nuclear
Coal + others
Renewables

4%
12%
84%

Renewable energy supply in 2021

Hydro/marine
Wind
Solar
Bioenergy
Geothermal

0%
10%
90%
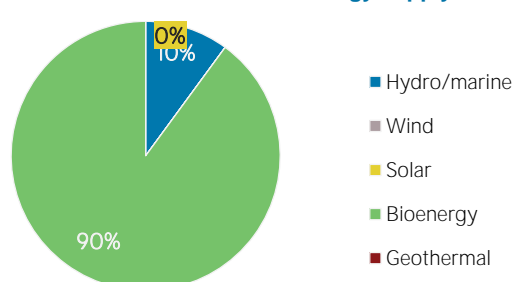
RENEWABLE ENERGY CONSUMPTION (TFEC)

Renewable TFEC trend

- Electricity
- Commercial heat
- Bioenergy
- Geothermal
- Solar direct

Renewable energy consumption in 2021

- Industry
- Transport
- Households
- Other
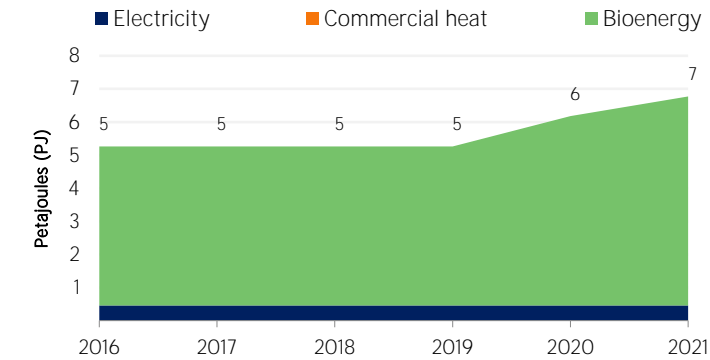
Consumption by sector	2016	2021
Industry (TJ)	147	181
Transport (TJ)	0	0
Households (TJ)	3 977	3 982
Other (TJ)	1 138	2 608
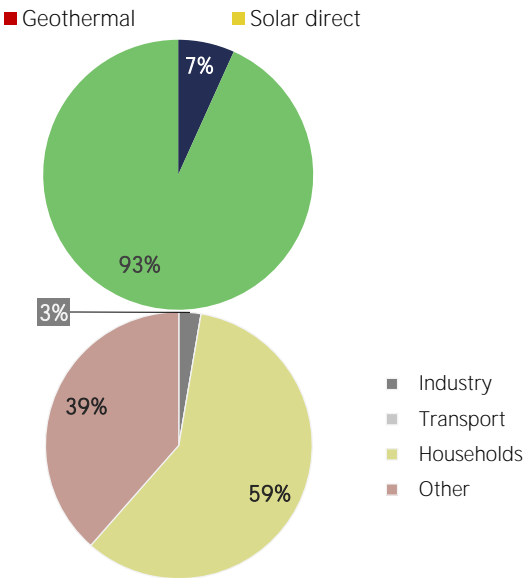
ELECTRICITY CAPACITY

Installed capacity trend

- Fossil fuels
- Nuclear
- Other Non-RE
- Hydro/marine
- Wind
- Solar
- Bioenergy
- Geothermal
- Renewable share

Renewable capacity in 2023

- Hydro/marine
- Solar
- Wind
- Bioenergy
- Geothermal
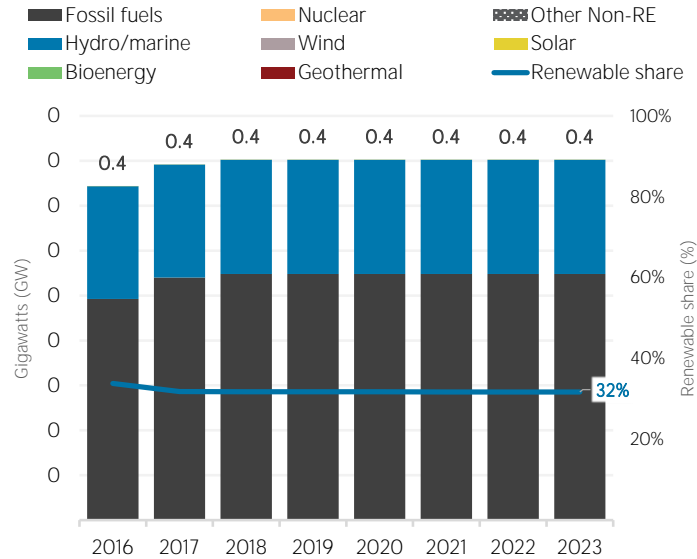
Net capacity change in 2023 (MW)

Non-renewable	0	Hydro and marine	0
Solar	0	Wind	0
Bioenergy	0	Geothermal	0
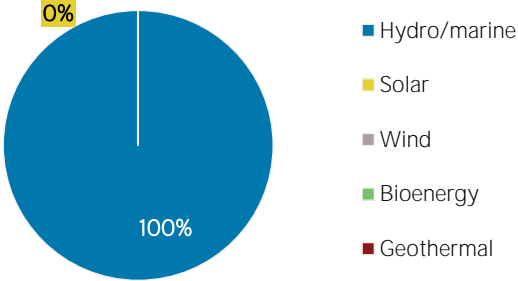
Net capacity change (GW)

- Fossil fuels
- Renewable
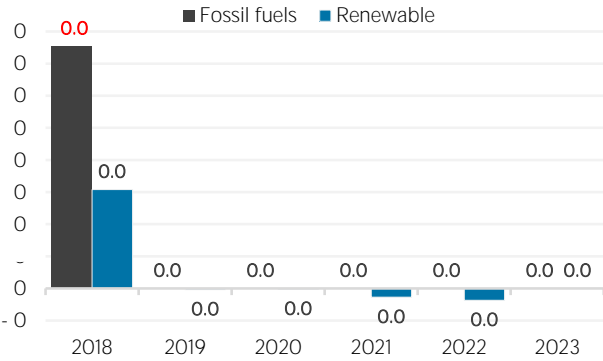
Capacity utilisation in 2022 (%)
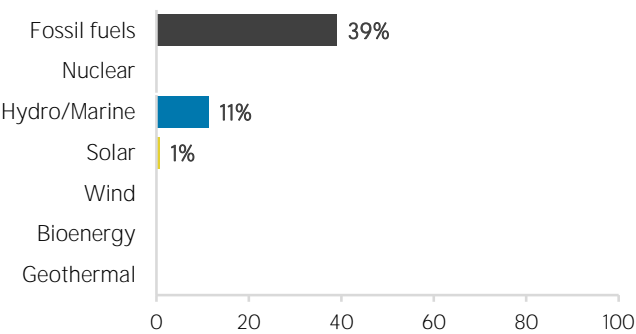
Generation in 2022	GWh	%
Non-renewable	937	88
Renewable	127	12
Hydro and marine	127	12
Solar	0	0
Wind	0	0
Bioenergy	0	0
Geothermal	0	0
Total	1 064	100

Per capita electricity generation (kWh)
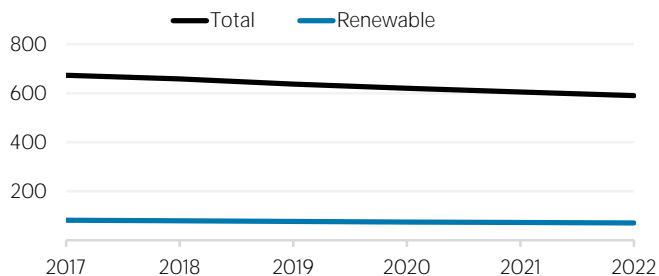
Electricity generation trend

Legend: Fossil fuels, Nuclear, Other Non-RE, Hydro/marine, Wind, Solar, Bioenergy, Geothermal, Renewable share
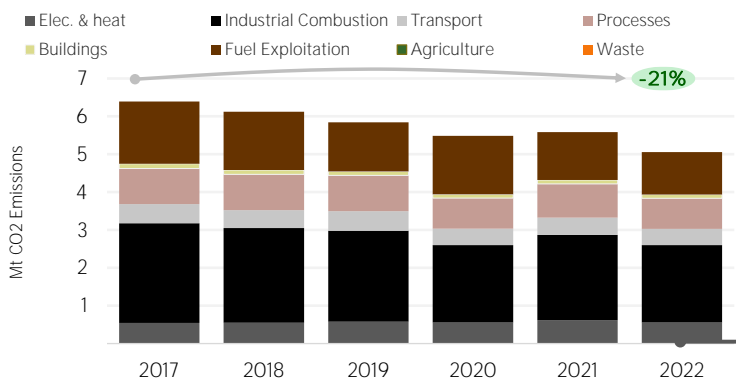

12%
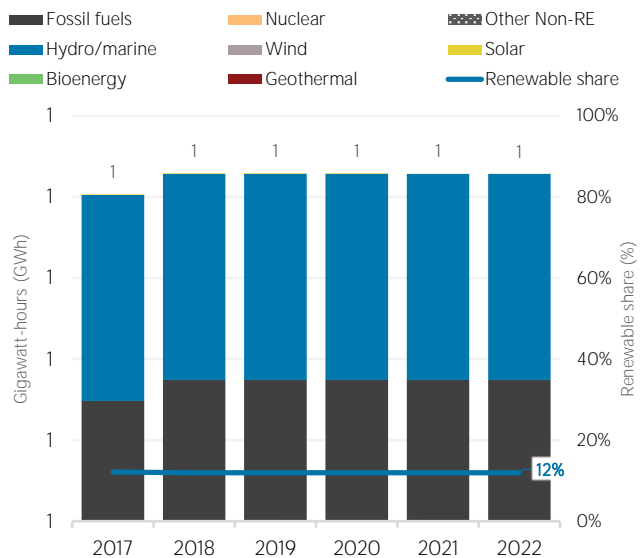
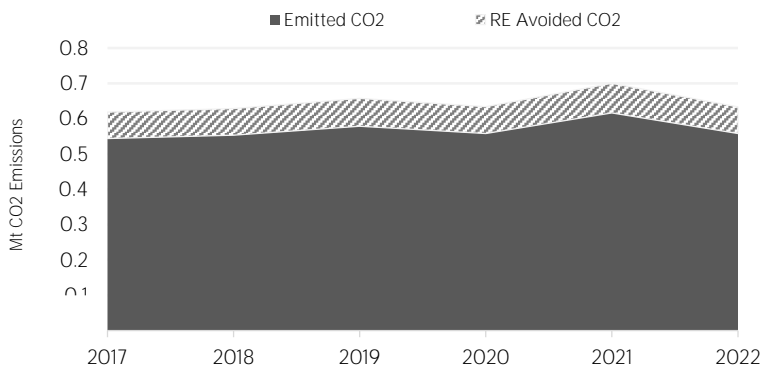## LATEST POLICIES, PROGRAMMES AND LEGISLATION

1 Ministerial Order No 04/2013 - Petroleum Operations Regulations — **2020**

2 Hydrocarbons Law No 08/2006 — **2006**

3 Law 7/2003. Regulation on Equatorial Guinea's Environment — **2003**

4

5

ENERGY AND EMISSIONS

CO$_2$ emissions by sector

Legend: Elec. & heat, Industrial Combustion, Transport, Processes, Buildings, Fuel Exploitation, Agriculture, Waste

-21%

Elec. & heat generation CO$_2$ emissions in

0.6 Mt CO$_2$

Coal + others, Gas, Oil

1% / 99%

Avoided emissions from renewable elec. & heat

Legend: Emitted CO2, RE Avoided CO2

Avoided emissions based on fossil fuel mix used for power
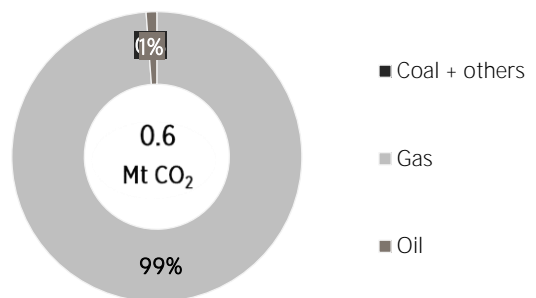
CO$_2$ emission factor for elec. & heat generation

Legend: GNQ, Africa, World

517 ... 524
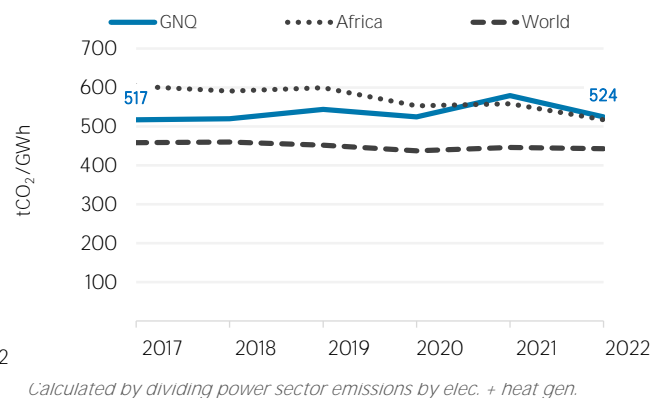
Calculated by dividing power sector emissions by elec. + heat gen.

Distribution of solar potential

Legend: World — Eq Guinea

Proportion of land area (y-axis): 100%, 80%, 60%, 40%, 20%

Annual generation per unit of installed PV capacity (MWh/kWp) (x-axis): <1.2, 1.2 - 1.4, 1.4 - 1.6, 1.6 - 1.8, 1.8 - 1.9, 1.9 - 2.0, >2.0
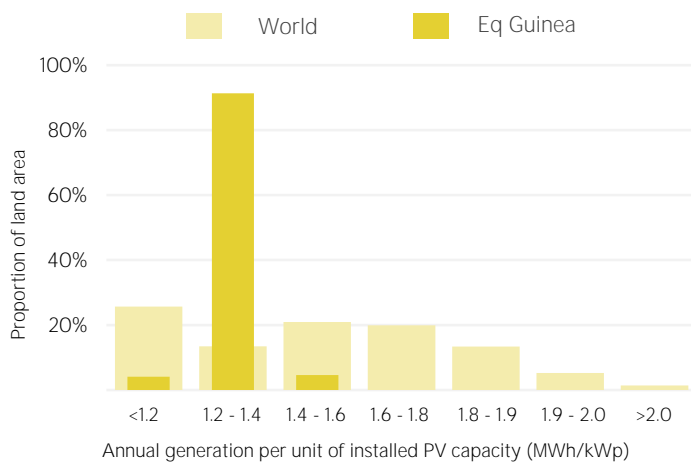
Distribution of wind potential

Legend: World — Eq Guinea

Proportion of land area (y-axis): 100%, 80%, 60%, 40%, 20%

Wind power density at 100m height (W/m^2) (x-axis): <260, 260-420, 420-560, 560-670, 670-820, 820-1060, >1060
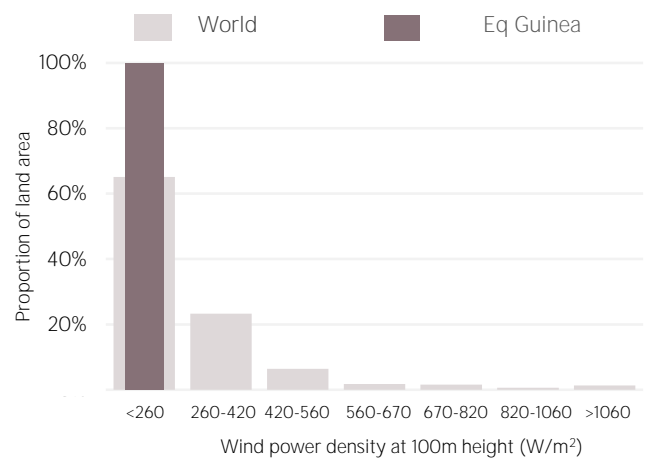
Biomass potential: net primary production

Gauge reading: **1.5 tC/ha/yr**

● = Global average of 3-4 tC/ha/yr
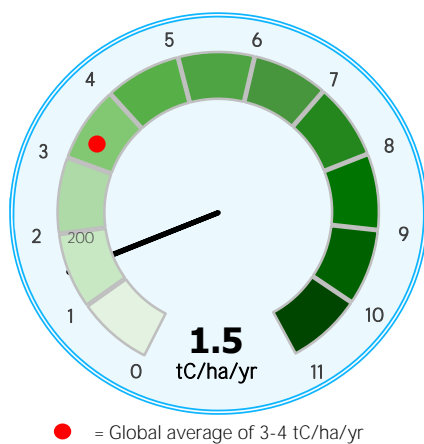
Indicators of renewable resource potential

Solar PV: Solar resource potential has been divided into seven classes, each representing a range of annual PV output per unit of capacity (kWh/kWp/yr). The bar chart shows the proportion of a country's land area in each of these classes and the global distribution of land area across the classes (for comparison).

Onshore wind: Potential wind power density (W/m^2) is shown in the seven classes used by NREL, measured at a height of 100m. The bar chart shows the distribution of the country's land area in each of these classes compared to the global distribution of wind resources. Areas in the third class or above are considered to be a good wind resource.

Biomass: Net primary production (NPP) is the amount of carbon fixed by plants and accumulated as biomass each year. It is a basic measure of biomass productivity. The chart shows the average NPP in the country (tC/ha/yr), compared to the global average NPP of 3-4 tonnes of carbon

IRENA
International Renewable Energy Agency

IRENA Headquarters
Masdar City
P.O. Box 236, Abu Dhabi
United Arab Emirates
www.irena.org