Algeria

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$_{2.5}$)
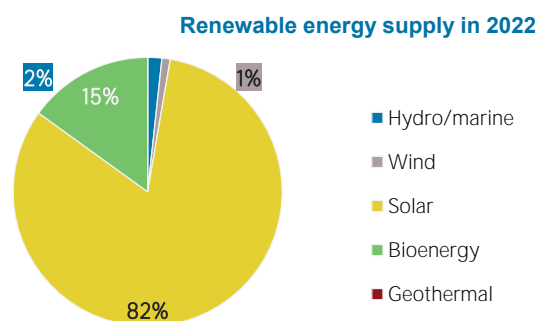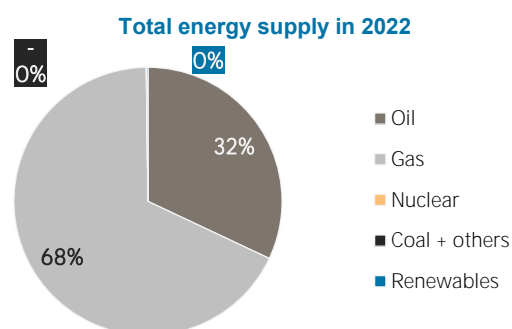
Urban   Average   Rural   — WHO safe
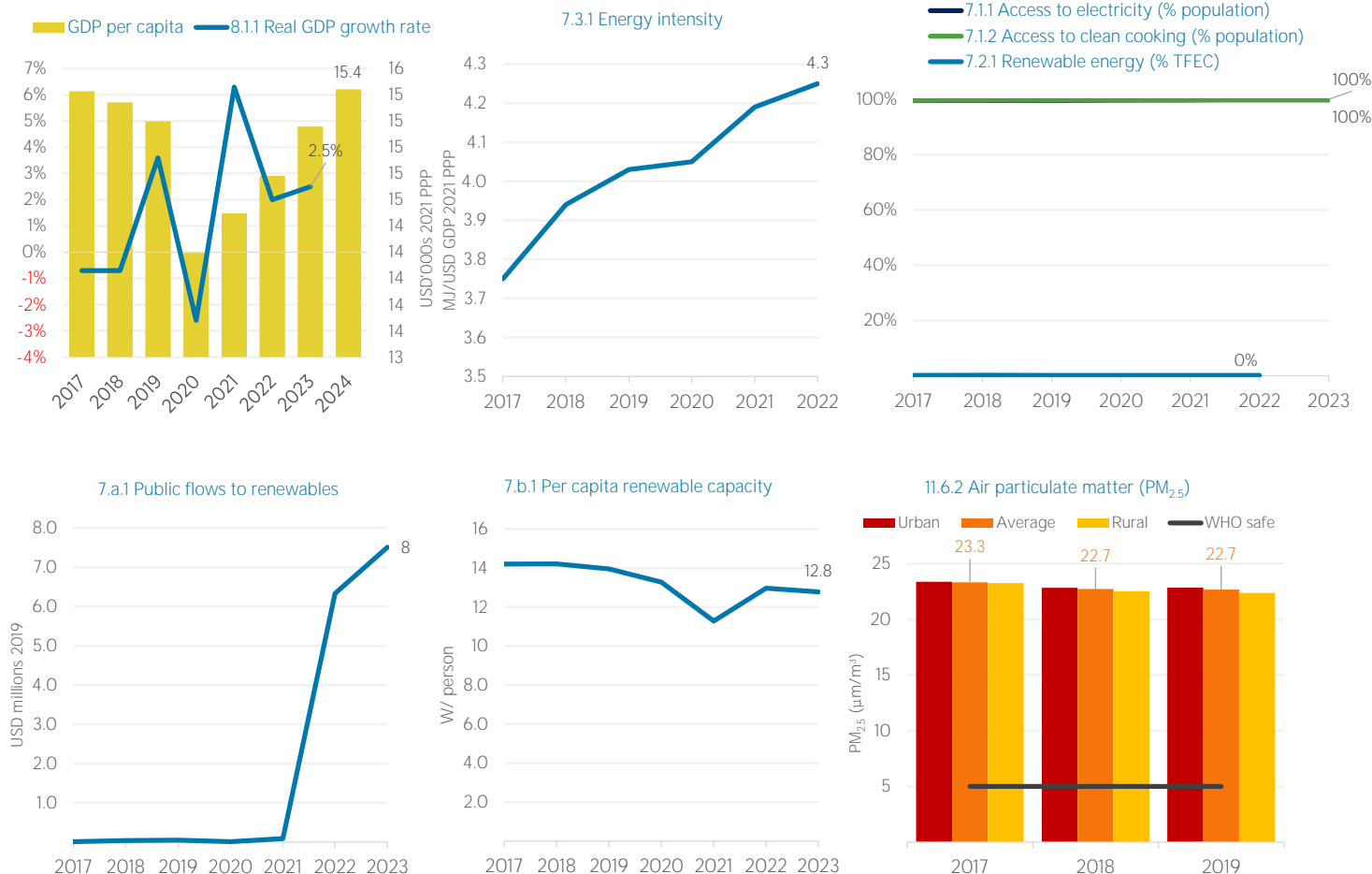
TOTAL ENERGY SUPPLY (TES)

Total Energy Supply (TES)	2017	2022
Non-renewable (TJ)	2 284 978	2 729 589
Renewable (TJ)	4 375	4 837
Total (TJ)	2 289 353	2 734 426
Renewable share (%)	0	0

Growth in TES	2017-22	2021-22
Non-renewable (%)	+19.5	+7.0
Renewable (%)	+10.6	+19.2
Total (%)	+19.4	+7.0

Primary energy trade	2017	2022
Imports (TJ)	168 947	34 388
Exports (TJ)	4 129 191	3 570 546
Net trade (TJ)	3 960 244	3 536 158
Imports (% of supply)	7	1
Exports (% of production)	66	57
Energy self-sufficiency (%)	275	230

Total energy supply in 2022

Oil
Gas
Nuclear
Coal + others
Renewables

Renewable energy supply in 2022

Hydro/marine
Wind
Solar
Bioenergy
Geothermal

RENEWABLE ENERGY CONSUMPTION (TFEC)

Renewable TFEC trend

Legend: ■ Electricity ■ Commercial heat ■ Bioenergy

Y-axis: Petajoules (PJ), 1–8

Values above chart: 6 (2017), 7 (2018), 7 (2019), 6 (2020), 6 (2021), 7 (2022)

X-axis: 2017, 2018, 2019, 2020, 2021, 2022

Renewable energy consumption in 2022

Legend: ■ Geothermal ■ Solar direct

Pie 1: 49%, 51%

Pie 2: Industry 25%, Transport 1%, Households 23%, Other 50%

Legend: ■ Industry ■ Transport ■ Households ■ Other
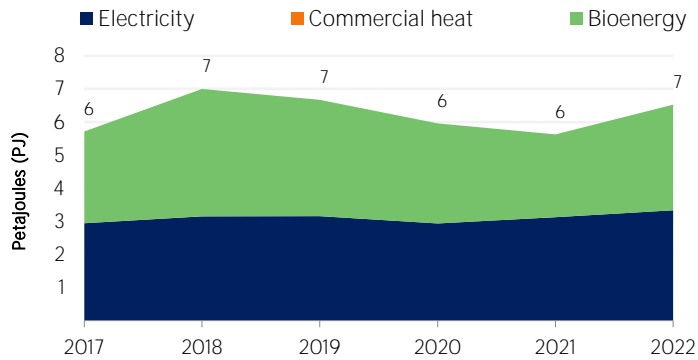
Consumption by sector	2017	2022
Industry (TJ)	1 381	1 624
Transport (TJ)	56	98
Households (TJ)	1 291	1 522
Other (TJ)	2 983	3 284
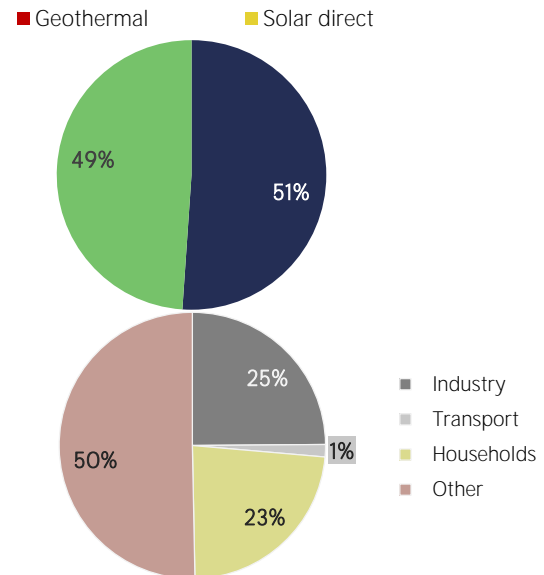
ELECTRICITY CAPACITY

Installed capacity trend

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

Y-axis left: Gigawatts (GW) 0–35
Y-axis right: Renewable share (%) 0%–100%

Values: 21 (2017), 22 (2018), 25 (2019), 25 (2020), 26 (2021), 27 (2022), 28 (2023), 29 (2024)

Renewable share: 2%

X-axis: 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
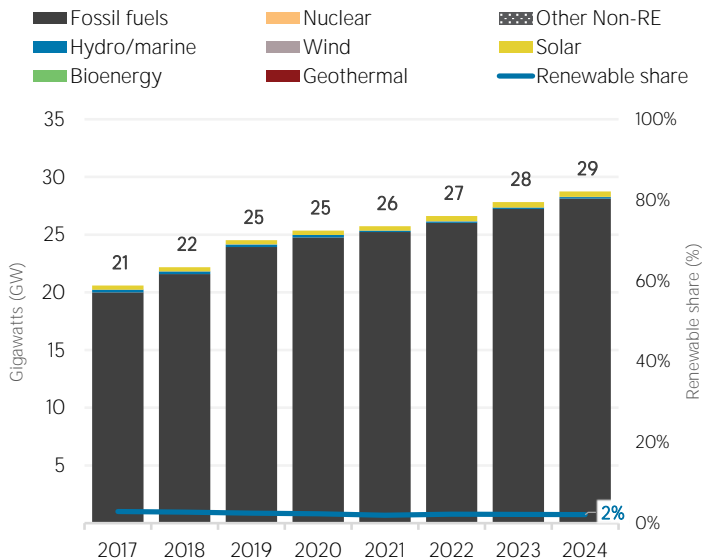
Renewable capacity in 2024

2%, 21%, 77%

Legend: ■ Hydro/marine ■ Solar ■ Wind ■ Bioenergy ■ Geothermal

Net capacity change (MW)

Legend: ■ Fossil fuels ■ Renewable

Year	Fossil fuels	Renewable
2019	2 340	0.0
2020	840	-19.4
2021	456	-79.7
2022	800	84
2023	1 200	11
2024	914	0.0
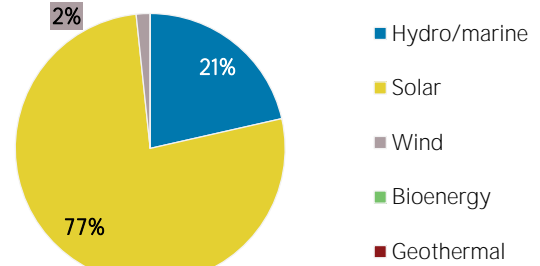
Net capacity change in 2024 (MW)

Non-renewable	Hydro and marine
+ 914	0

Solar	Wind
0	0
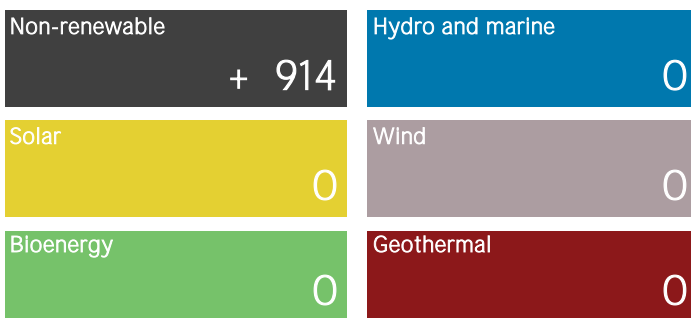
Bioenergy	Geothermal
0	0
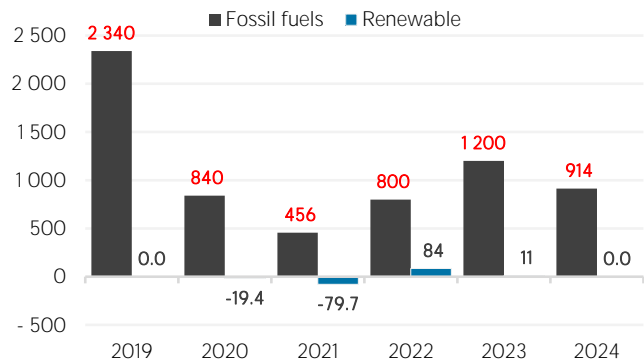
Capacity utilisation in 2023 (%)

- Fossil fuels: 41%
- Nuclear:
- Hydro/Marine: 2%
- Solar: 22%
- Wind: 15%
- Bioenergy:
- Geothermal:

X-axis: 0, 20, 40, 60, 80, 100
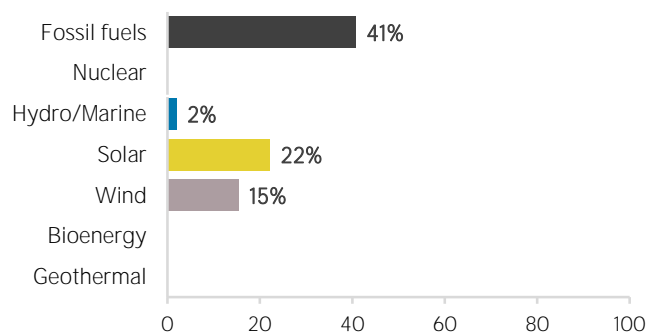
ELECTRICITY GENERATION

Generation in 2023	GWh	%
Non-renewable	94 904	99
Renewable	926	1
Hydro and marine	23	0
Solar	889	1
Wind	14	0
Bioenergy	0	0
Geothermal	0	0
Total	95 830	100

Electricity generation trend

Per capita electricity generation (kWh)
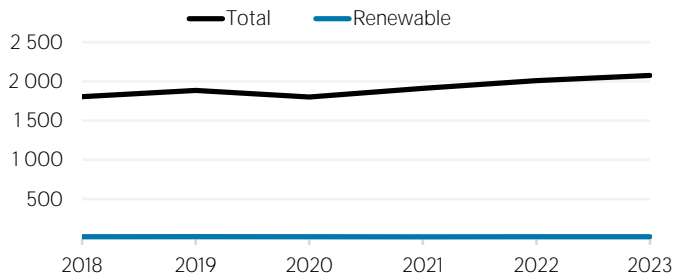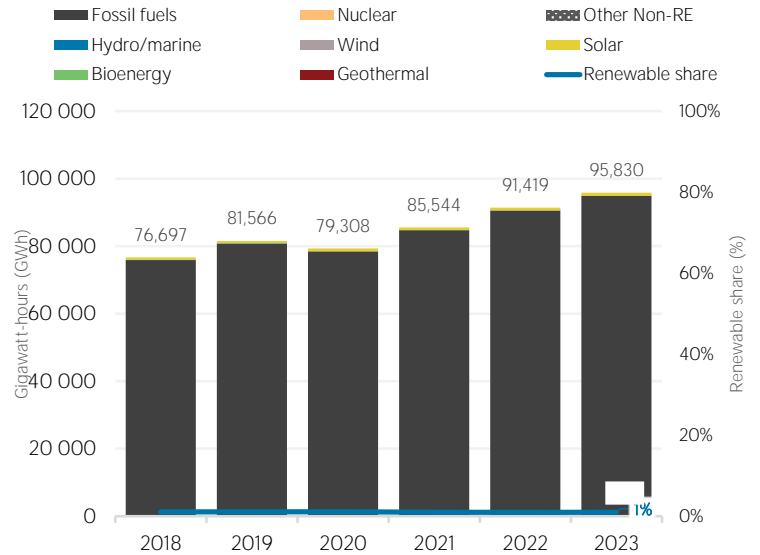
LATEST POLICIES, PROGRAMMES AND LEGISLATION

1 Creation of a High Energy Council — **2022**

2 Executive Decree 21-330,2021 — **2021**

3 First National Determined Contribution (NDC) — **2021**

4 Foreign direct investment rules for renewable energy projects — **2020**

5 African Continental Free Trade Area (AFCFTA) — **2019**

ENERGY AND EMISSIONS

CO_2 emissions by sector

Elec. & heat generation CO_2 emissions in
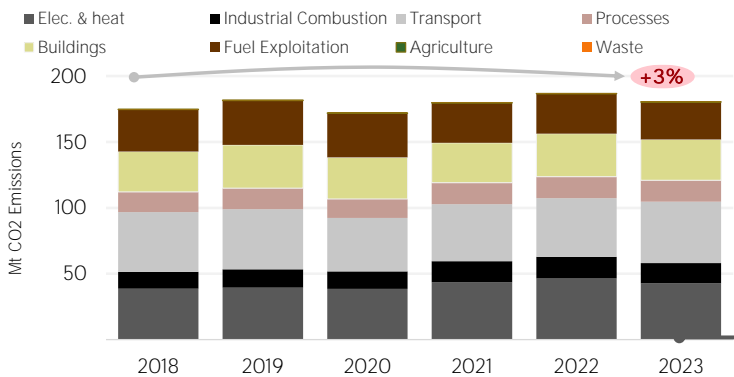
Avoided emissions from renewable elec. & heat
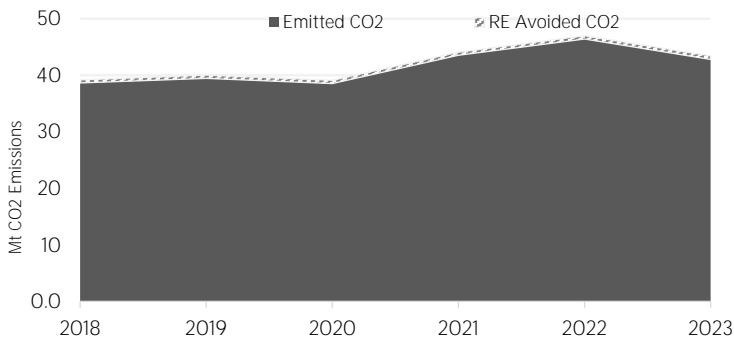
Avoided emissions based on fossil fuel mix used for power
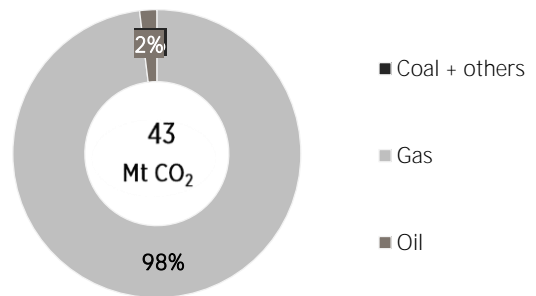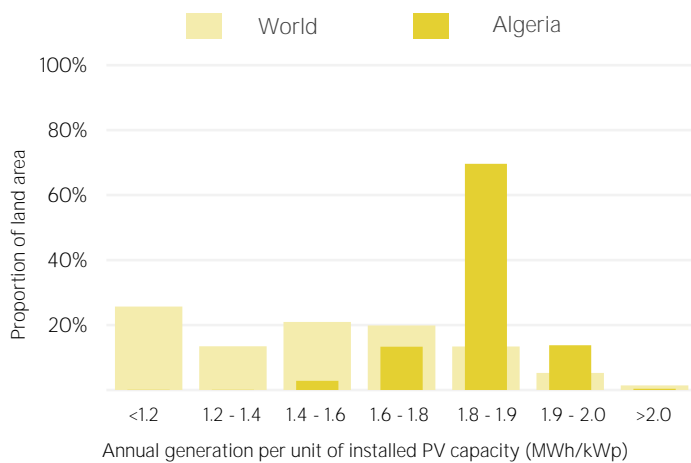
CO_2 emission factor for elec. & heat generation
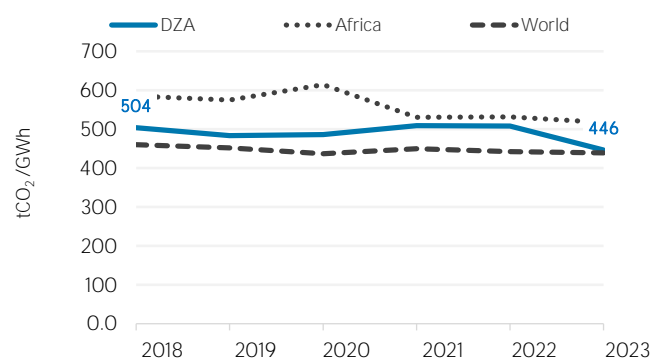
Calculated by dividing power sector emissions by elec. + heat gen.
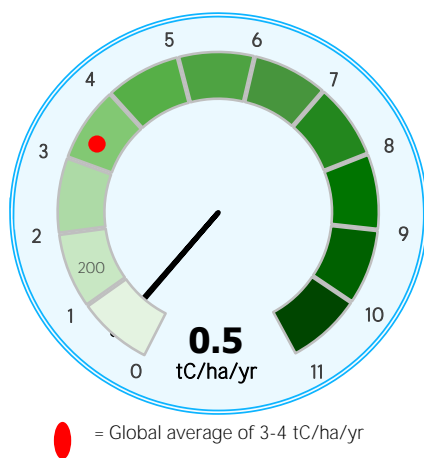
Distribution of solar potential

World   Algeria

Proportion of land area

100%
80%
20%

<1.2 | 1.2 - 1.4 | 1.4 - 1.6 | 1.6 - 1.8 | 1.8 - 1.9 | 1.9 - 2.0 | >2.0

Annual generation per unit of installed PV capacity (MWh/kWp)

Distribution of wind potential

World   Algeria

Proportion of land area

100%
80%
60%
40%
20%
0%

<260 | 260-420 | 420-560 | 560-670 | 670-820 | 820-1060 | >1060

Wind power density at 100m height (W/m²)
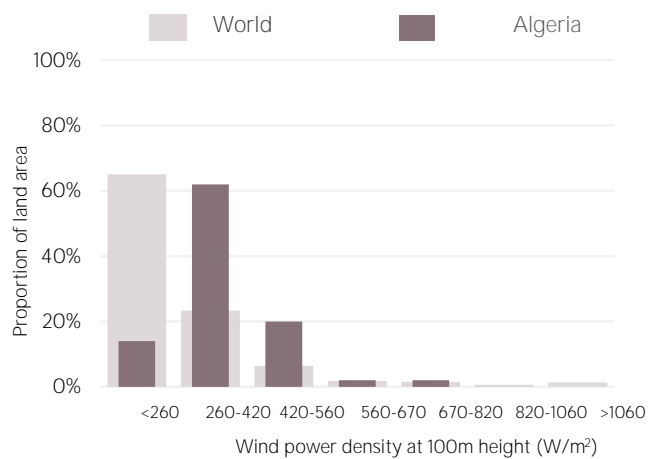
Biomass potential: net primary production

5   6   7
4   8
3   9
2   200   10
1   11
0

0.5
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/m²) 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

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