Togo

GDP per capita —8.1.1 Real GDP growth rate 3.4% / 2.8 2.9 4% 2.8 3% 2.7 ddd 1202 s000,0SN 2.4 S 2% 1% 0% -1% 2.3 2.2 -2% 2018 2016 2011 2019 202 202 202 202

7.3.1 Energy intensity 9.6 9.4 9.2 dd 9.0 d 9.0 8.8 8.8 8.6 02 d05 021 8.4 8.2 8.2 8.6 8.0 7.8 7.6 2016 2021 2017 2018 2019 2020

COUNTRY INDICATORS AND SDGS

-7.1.1 Access to electricity (% population) -7.1.2 Access to clean cooking (% population) -7.2.1 Renewable energy (% TFEC) 100% 80% 75% _□ 57% 60% 40% 20% <u></u>12%

2020

2021

2022

International Renewable Energy Agency





11.6.2 Air particulate matter (PM_{2.5})



TOTAL ENERGY SUPPLY (TES)

Total energy supply in 2021







Total Energy Supply (TES) 2021 2016 Non-renewable (TJ) 22 150 28 094 Renewable (TJ) 116 009 129 568 Total (TJ) 138 160 157 662 Renewable share (%) 84 82

Growth in TES	2016-21	2020-21
Non-renewable (%)	+26.8	+13.5
Renewable (%)	+11.7	+2.4
Total (%)	+14.1	+4.2

2021
1 958
0
1 958
20
0
82



2016 2017 2018 2019 Rural Urban Average

RENEWABLE ENERGY CONSUMPTION (TFEC)

Renewable TFEC trend Electricity Commercial heat Bioenergy 140 130 127 116 115 115 120 108 100 Petajoules (PJ) 80 60 40 20 2016 2017 2018 2019 2020 2021 **Consumption by sector** 2016 2021 Industry (TJ) 519 904 Transport (TJ) 0 0 Households (TJ) 54 570 61 757 Other (TJ) 61 288 67 104



ELECTRICITY CAPACITY



Net capacity change in 2023 (MW)



Renewable capacity in 2023



Net capacity change (GW)



Capacity utilisation in 2022 (%)



Renewable energy consumption in 2021

ELECTRICITY GENERATION







RENEWABLE RESOURCE POTENTIAL



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

Biomass potential: net primary production



 World
 Togo

 100%
 80%

 60%
 60%

 40%
 500

 20%
 20%

 <260</td>
 260-420
 420-560

 560-670
 670-820
 820-1060

 Wind power density at 100m height (W/m²)

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.

Blomass: 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

Sources: IRENA statistics, plus data from the following sources: UN SDG Database (original sources: WHO; World Bank; IEA; IRENA; and UNSD); UN World Population Prospects: UNSD Energy Balances; UN COMTRADE; World Bank World Development Indicators; EDGAR; REN21 Global Status Report; IEA-IRENA Joint Policies and Measures Database; IRENA Global Atlas; and World Bank Global Solar Atlas and Global Wind Atlas.

Additional notes: Capacity per capita and public investments SDGs only apply to developing areas. Energy self-sufficiency has been defined as total primary energy production divided by total primary energy supply. Energy trade includes all commodities in Chapter 27 of the Harmonised System (H5). Capacity utilisation is calculated as annual generation divided by year-end capacity x 8.760h/year. Avoided emissions from renewable power is calculated as renewable generation divided by fossil fuel generation multiplied by reported emissions from the power sector. This assumes that, if renewable power did not exist, fossil fuels would be used in its place to generate the same amount of power and using the same mix of fossil fuels. In countries and years where no fossil fuel generation occurs, an average fossil fuel emission factor has been used to calculate the avoided emissions.

These profiles have been produced to provide an overview of developments in renewable energy in different countries and areas. The IRENA statistics team would welcome comments and feedback on its structure and content, which can be sent to statistics@irena.org.

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