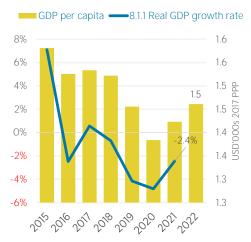
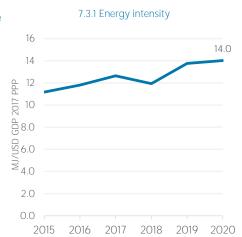
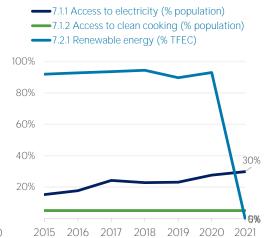
# Liberia



#### COUNTRY INDICATORS AND SDGS







7.a.1 Public flows to renewables

300

250

60200

50

150

50

2015

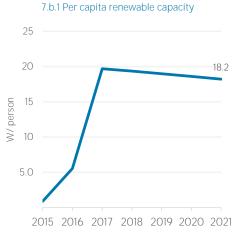
2016

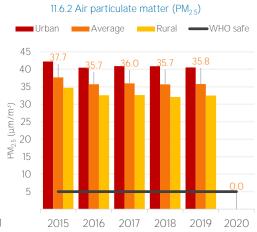
2017

2018

2019

2020





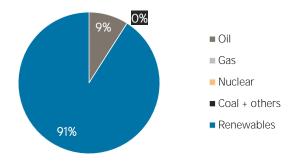
## TOTAL ENERGY SUPPLY (TES)

Total Energy Supply (TES)	2015	2020
Non-renewable (TJ)	15 725	8 937
Renewable (TJ)	76 136	89 787
Total (TJ)	91 861	98 724
Renewable share (%)	83	91

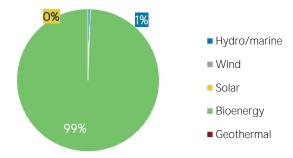
Growth in TES	2015-20	2019-20
Non-renewable (%)	-43.2	-36.6
Renewable (%)	+17.9	+3.3
Total (%)	+7.5	-2.3

Primary energy trade	2015	2020
Imports (TJ)	16 269	9 370
Exports (TJ)	12	6
Net trade (TJ)	- 16 257	- 9 364
Imports (% of supply)	18	9
Exports (% of production)	0	0
Energy self-sufficiency (%)	83	91

### Total energy supply in 2020



#### Renewable energy supply in 2020

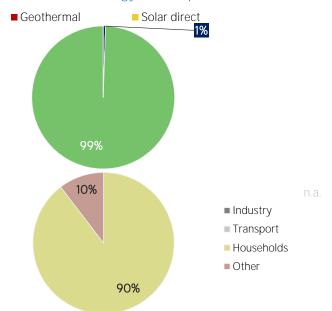


#### RENEWABLE ENERGY CONSUMPTION (TFEC)

#### Renewable TFEC trend

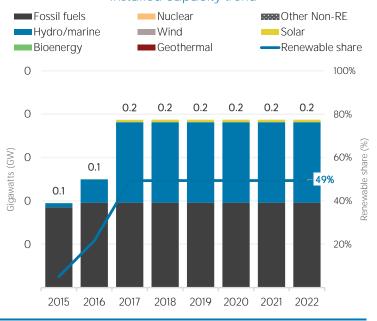
#### ■ Electricity ■ Commercial heat ■ Bioenergy 100 90 87 85 82 79 76 80 Petajoules (PJ) 60 40 20 2017 2019 2015 2016 2018 2020 Consumption by sector 2015 2020 Industry (TJ) 0 0 Transport (TJ) 0 0 Households (TJ) 68 916 80 845 Other (TJ) 7 363 9 363

#### Renewable energy consumption in 2020

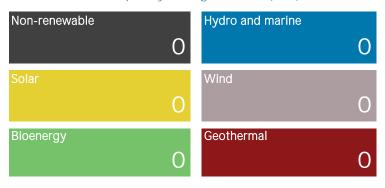


#### **ELECTRICITY CAPACITY**

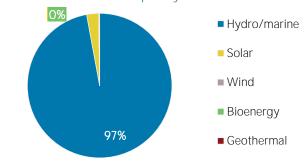
#### Installed capacity trend



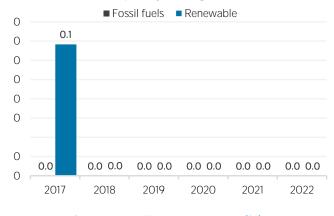




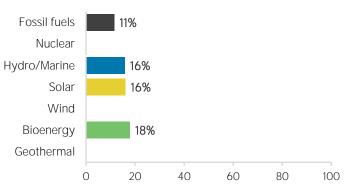
#### Renewable capacity in 2022



#### Net capacity change (GW)



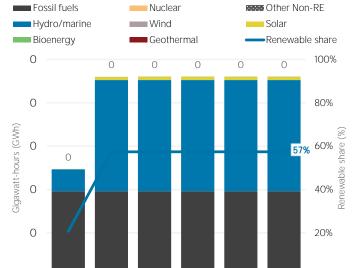
#### Capacity utilisation in 2021 (%)



#### **ELECTRICITY GENERATION**

Generation in 2021	GWh	%
Non-renewable	98	43
Renewable	132	57
Hydro and marine	128	56
Solar	4	2
Wind	0	0
Bioenergy	0	0
Geothermal	0	0
Total	230	100

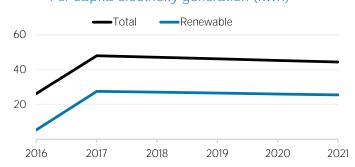




0%

2021

#### Per capita electricity generation (kWh)



### LATEST POLICIES, PROGRAMMES AND LEGISLATION

0

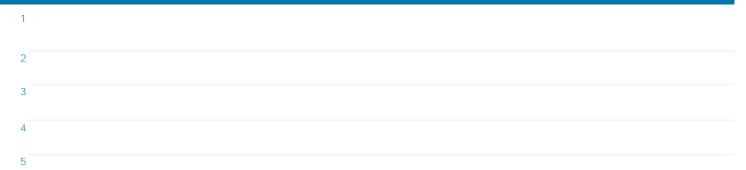
2016

2017

2018

2019

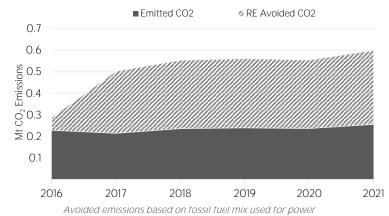
2020



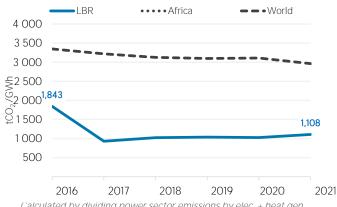
#### **ENERGY AND EMISSIONS**

#### Elec. & heat generation CO<sub>2</sub> emissions in Energy-related CO<sub>2</sub> emissions by sector ■ Elec. & heat ■ Other Industrial ■ Transport ■ Other Buildings +11% (0% 2 ■ Coal + others 1 1 0.3 1 ■ Gas Mt CO2 0.8 0.6 0.4 ■ Oil 100% 0.2 2016 2017 2018 2019 2020 2021

#### Avoided emissions from renewable elec. & heat

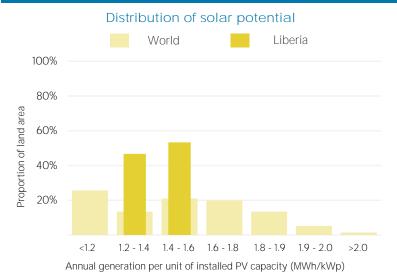


#### CO<sub>2</sub> emission factor for elec. & heat generation

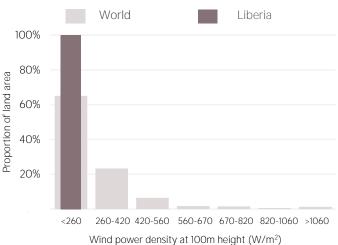


Calculated by dividing power sector emissions by elec. + heat gen.

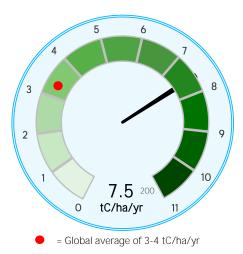
#### RENEWABLE RESOURCE POTENTIAL



## Distribution of wind potential



#### Biomass potential: net primary production



#### 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

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 (HS). 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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