# Suriname

5.0

2016

2017



### COUNTRY INDICATORS AND SDGS ■7.1.1 Access to electricity (% population) 7.3.1 Energy intensity GDP per capita —8.1.1 Real GDP growth rate 7.1.2 Access to clean cooking (% population) 4.7 ■7.2.1 Renewable energy (% TFEC) 5.0 5% 25 99% 4.5 100% 19.0 4.0 0% 20 96% 4.0 4.0 3.5 3.0 2.5 2.0 1.5 15 10 USD 000 USD 15 10 USD 15 10 USD 15 USD 80% -5% 60% -10% 40% 5.0 -15% 1.0 20% -20% 0.0 14% , 501, 508, 508, 505, 505, 505, 505, 2016 2019 2020 2021 2016 2018 2019 2020 2021 2022 2017 2018 11.6.2 Air particulate matter ( $PM_{2.5}$ ) 7.b.1 Per capita renewable capacity 7.a.1 Public flows to renewables Average Rural **─**WHO safe 30 325 16 25 320 14 USD millions 2019 20 12 315 W/ person $(\mu m/m^3)$ 10 15 8 310 PM<sub>2.5</sub> 6

# TOTAL ENERGY SUPPLY (TES)

1%

2016 2017 2018 2019 2020 2021 2022

Total Energy Supply (TES)	2016	2021
Non-renewable (TJ)	33 750	37 338
Renewable (TJ)	5 061	4 570
Total (TJ)	38 811	41 908
Renewable share (%)	13	11

2020 2021

2018 2019

305

Growth in TES	2016-21	2020-21
Non-renewable (%)	+10.6	-9.4
Renewable (%)	-9.7	+0.1
Total (%)	+8.0	-8.5

Primary energy trade	2016	2021
Imports (TJ)	22 278	11 624
Exports (TJ)	18 730	10 001
Net trade (TJ)	- 3 548	- 1 623
Imports (% of supply)	57	28
Exports (% of production)	47	23
Energy self-sufficiency (%)	102	104

## Total energy supply in 2021

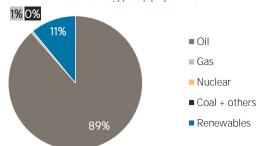
2017

2018

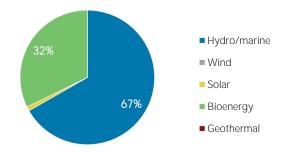
2019

2016

4



### Renewable energy supply in 2021



# RENEWABLE ENERGY CONSUMPTION (TFEC)

### Renewable TFEC trend ■ Electricity ■ Commercial heat ■ Bioenergy 10 8 8 8 8 Petajoules (PJ) 6 4 2 2016 2017 2018 2019 2020 2021 Consumption by sector 2016 2021 Industry (TJ) 2 366 1849 Transport (TJ) 0 0 Households (TJ) 1863 2 258 Other (TJ) 3 704 3 580

# Renewable energy consumption in 2021 Geothermal Solar direct 41% Industry Transport Households Other

### **ELECTRICITY CAPACITY**

Solar

Wind Bioenergy

0

Geothermal

14%

20

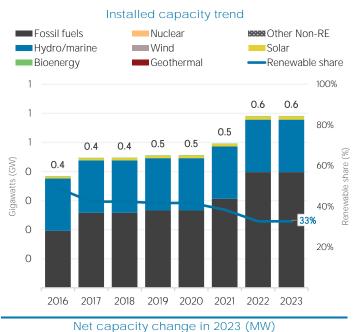
46%

60

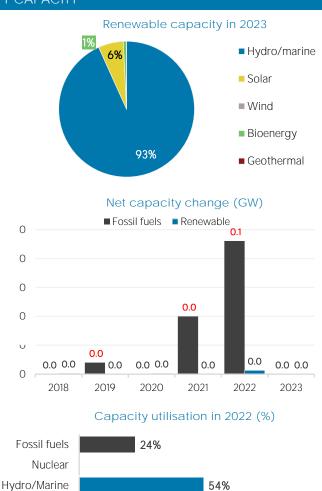
80

100

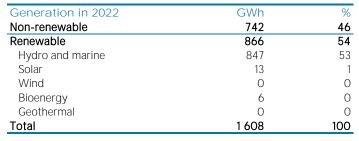
40

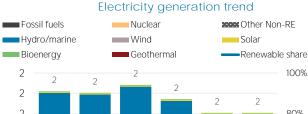




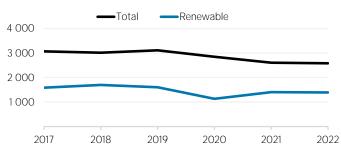


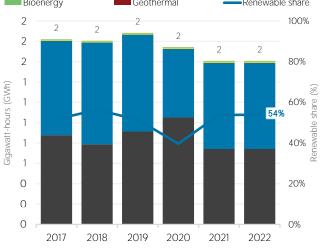
### **ELECTRICITY GENERATION**











### LATEST POLICIES, PROGRAMMES AND LEGISLATION

1 Capacity Building Program on RETs 2013

2 Caribbean Community (CARICOM) Energy Policy 2013

3 Development of Renewable Energy, Energy Efficiency and Electrification 2013

5

2

1

2017

2018

2019 Avoided emissions based on tossil tuel mix used for power

2020

2021

0.5

4

### **ENERGY AND EMISSIONS** CO<sub>2</sub> emissions by sector Elec. & heat generation CO<sub>2</sub> emissions in ■ Elec. & heat ■ Industrial Combustion ■ Transport ■ Processes Buildings ■ Fuel Exploitation ■ Agriculture ■Waste 02% 4 +34% ■ Coal + others 3 3 Mt CO2 Emissions 1 ■ Gas 2 Mt CO<sub>2</sub> 2 1 ■ Oil 98% 0.5 2017 2018 2019 2020 2021 2022 Avoided emissions from renewable elec. & heat CO<sub>2</sub> emission factor for elec. & heat generation ■ Emitted CO2 ■ RF Avoided CO2 SUR •••••South America - • World 4 900 832 800 3 700 3 Mt CO2 Emissions tCO<sub>2</sub>/GWh 600 **525** 2 500

2022

400

300

200

100

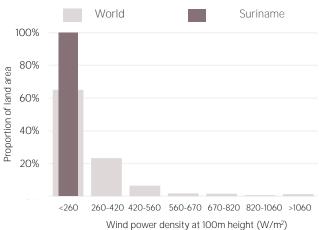
2017 2018 2019 2020 2021 Calculated by dividing power sector emissions by elec. + heat gen.

2022

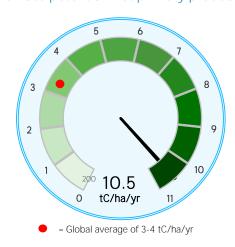
### RENEWABLE RESOURCE POTENTIAL

# Distribution of solar potential Suriname World 100% 80% Proportion of land area 60% 40% 20% <1.2 1.2 - 1.41.4 - 1.6 1.6 - 1.8 1.8 - 1.9 1.9 - 2.0Annual generation per unit of installed PV capacity (MWh/kWp)

### 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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