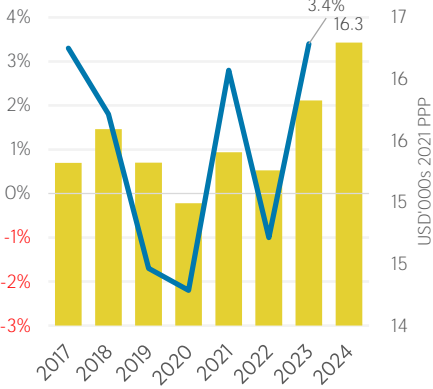
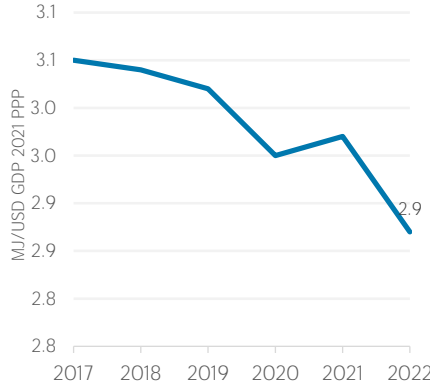


COUNTRY INDICATORS AND SDGS

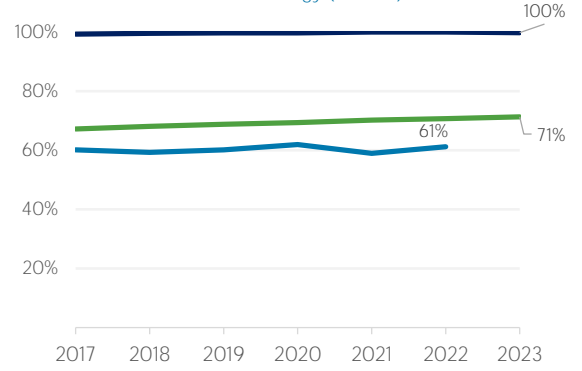
GDP per capita 8.1.1 Real GDP growth rate



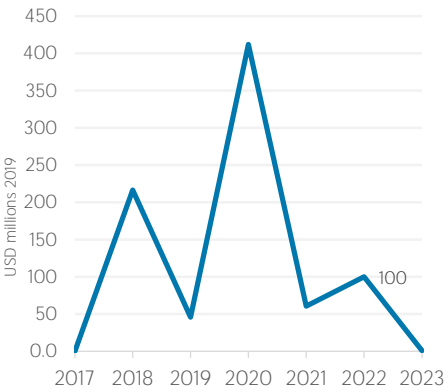
7.3.1 Energy intensity



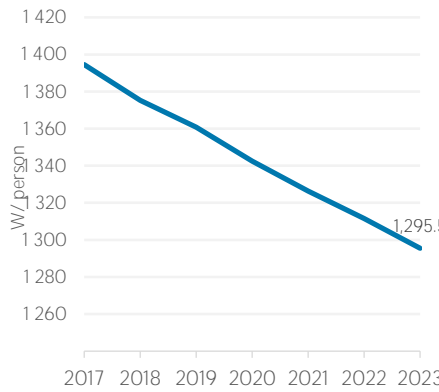
7.1.1 Access to electricity (% population)  
7.1.2 Access to clean cooking (% population)  
7.2.1 Renewable energy (% TFE)



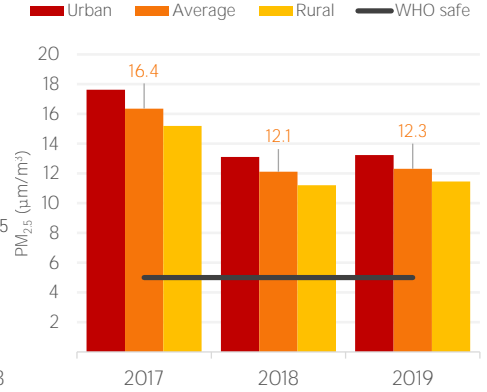
7.a.1 Public flows to renewables



7.b.1 Per capita renewable capacity



11.6.2 Air particulate matter (PM<sub>2.5</sub>)



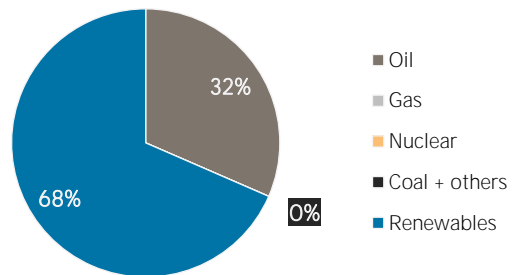
TOTAL ENERGY SUPPLY (TES)

Total Energy Supply (TES)	2017	2022
Non-renewable (TJ)	110 474	102 935
Renewable (TJ)	200 577	223 578
Total (TJ)	311 051	326 513
Renewable share (%)	64	68

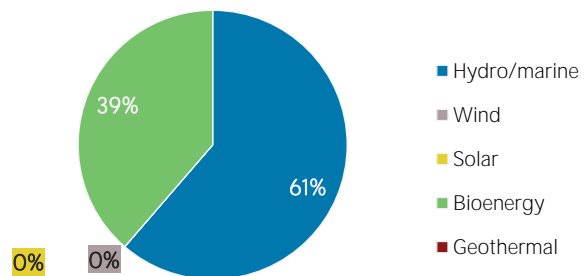
Growth in TES	2017-22	2021-22
Non-renewable (%)	-6.8	-9.0
Renewable (%)	+11.5	+10.4
Total (%)	+5.0	+3.5

Primary energy trade	2017	2022
Imports (TJ)	107 929	105 118
Exports (TJ)	160 170	91 232
Net trade (TJ)	52 241	- 13 886
Imports (% of supply)	35	32
Exports (% of production)	44	29
Energy self-sufficiency (%)	116	96

Total energy supply in 2022

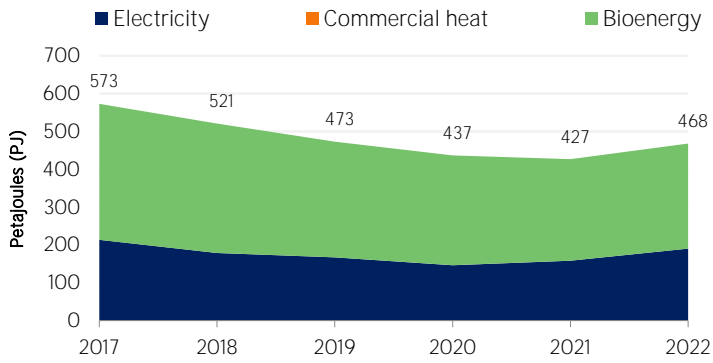


Renewable energy supply in 2022



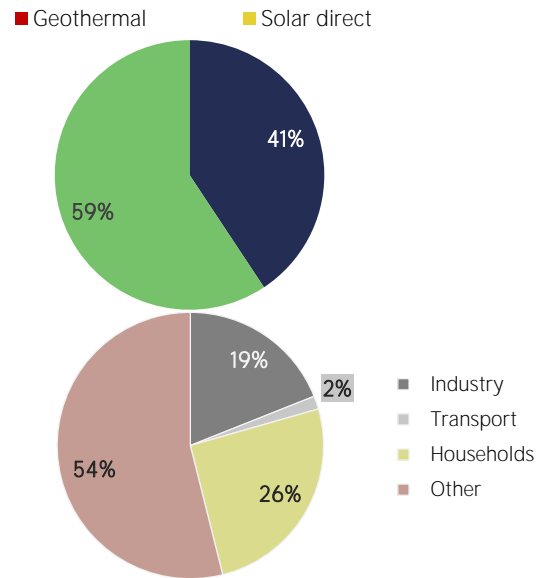
## RENEWABLE ENERGY CONSUMPTION (TFEC)

### Renewable TFEC trend



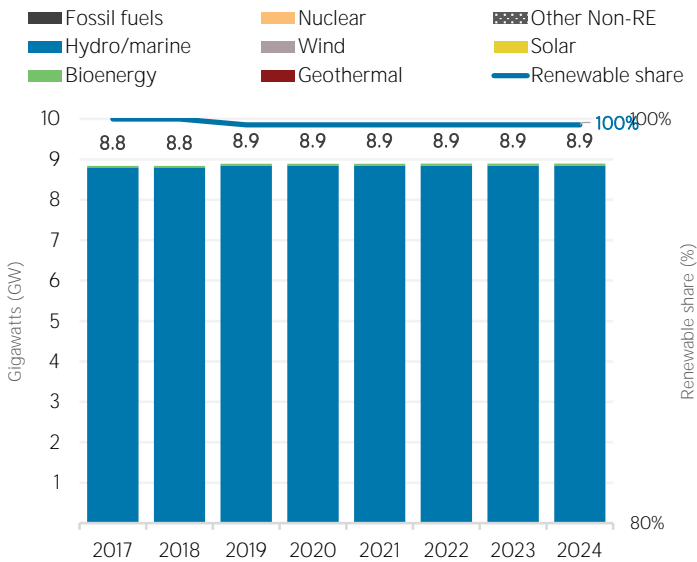
Consumption by sector	2017	2022
Industry (TJ)	139 419	88 874
Transport (TJ)	6 439	7 468
Households (TJ)	135 528	119 491
Other (TJ)	291 612	252 476

### Renewable energy consumption in 2022

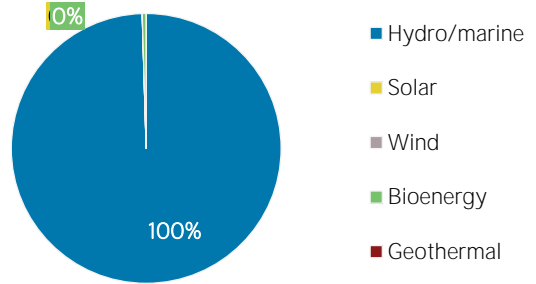


## ELECTRICITY CAPACITY

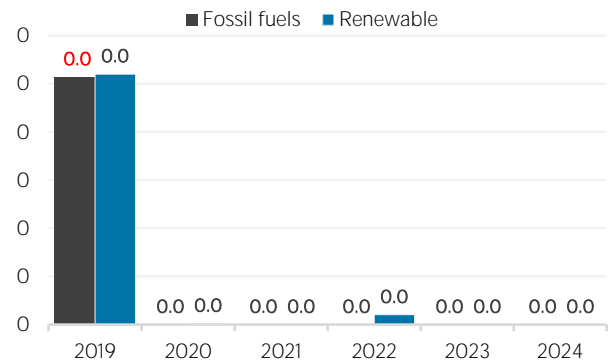
### Installed capacity trend



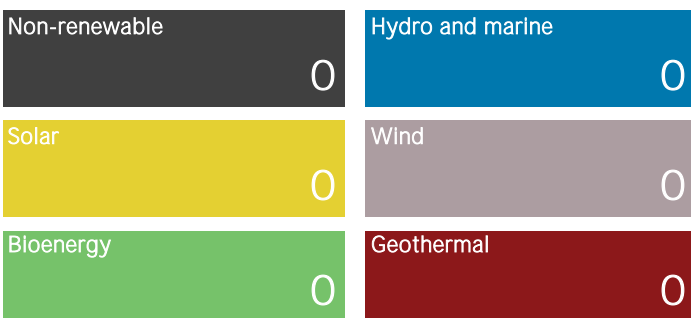
### Renewable capacity in 2024



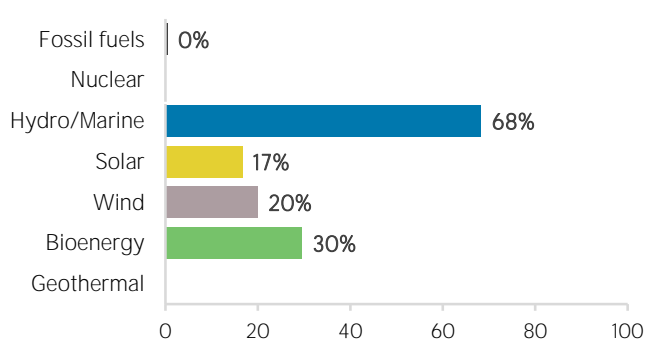
### Net capacity change (GW)



### Net capacity change in 2024 (MW)



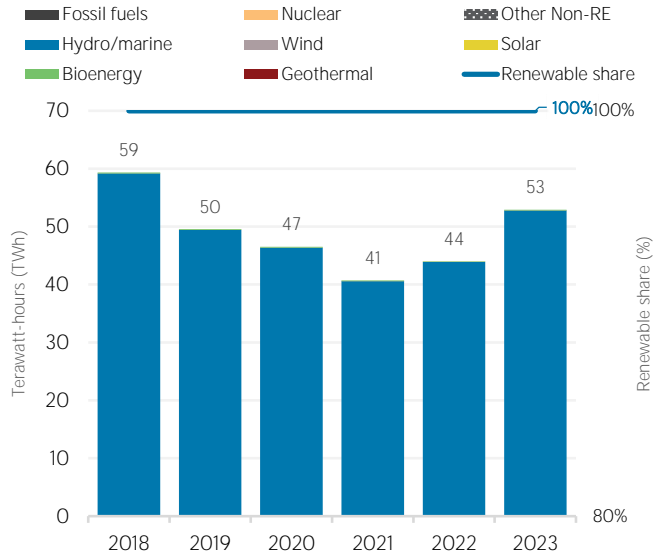
### Capacity utilisation in 2023 (%)



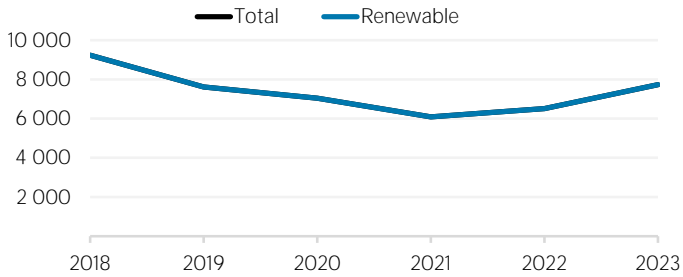
## ELECTRICITY GENERATION

Generation in 2023	GWh	%
Non-renewable	1	0
Renewable	52 921	100
Hydro and marine	52 812	100
Solar	2	0
Wind	0	0
Bioenergy	107	0
Geothermal	0	0
<b>Total</b>	<b>52 922</b>	<b>100</b>

### Electricity generation trend



### Per capita electricity generation (kWh)

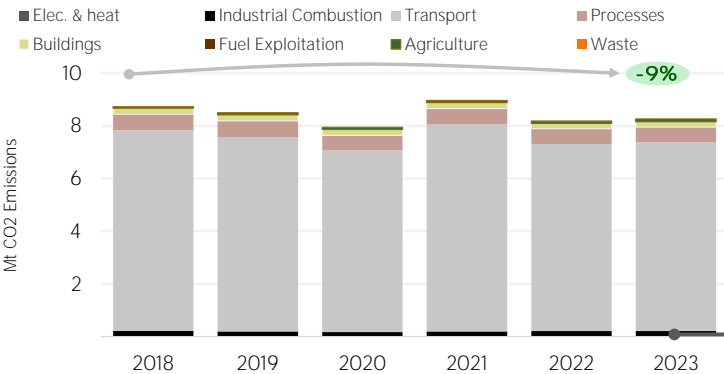


## LATEST POLICIES, PROGRAMMES AND LEGISLATION

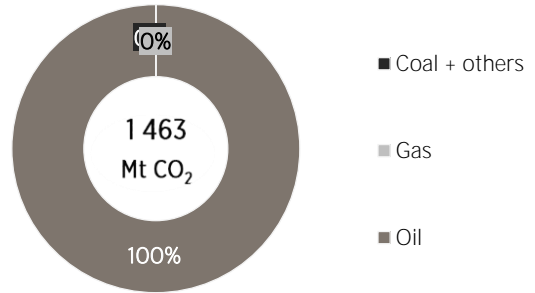
- 1 Revised/Updated NDC of Paraguay 2021
- 2 Chinese Taipei-Paraguay Economic Cooperation Agreement 2018
- 3 Egypt-Southern Common Market (MERCOSUR) FTA 2017
- 4 MERCOSUR-Colombia Free Trade Agreement 2017
- 5 Southern African Customs Union (SACU) - MERCOSUR Preferential Trade Agreement 2016

## ENERGY AND EMISSIONS

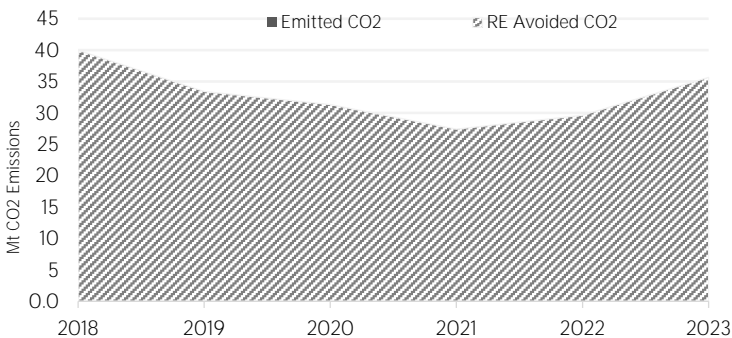
### CO<sub>2</sub> emissions by sector



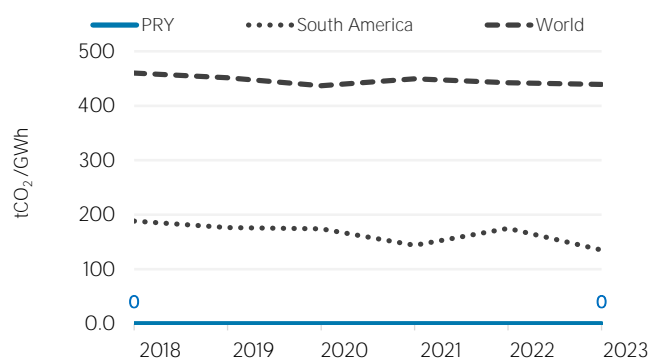
### Elec. & heat generation CO<sub>2</sub> emissions in



### Avoided emissions from renewable elec. & heat



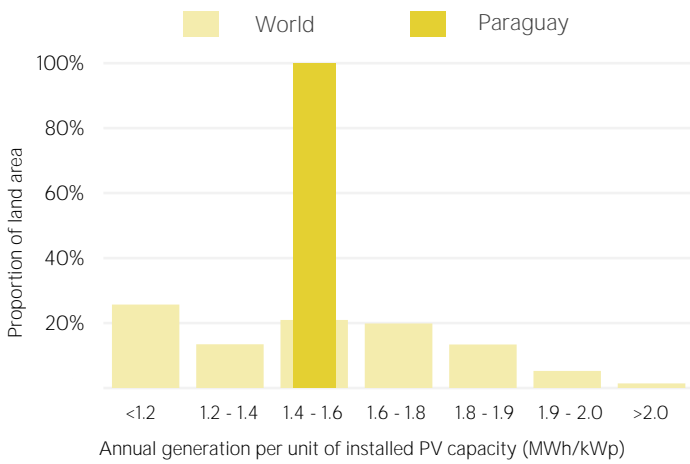
### CO<sub>2</sub> emission factor for elec. & heat generation



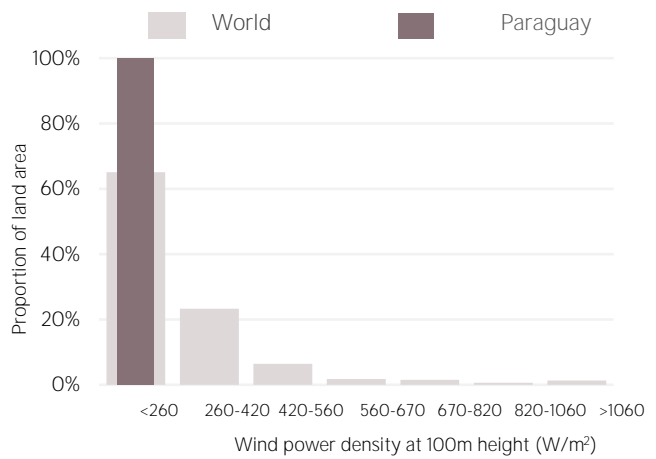
Avoided emissions based on fossil fuel mix used for power

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

Distribution of solar 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/m<sup>2</sup>) 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](mailto:statistics@irena.org).

**Last updated on:** 22 September, 2025



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