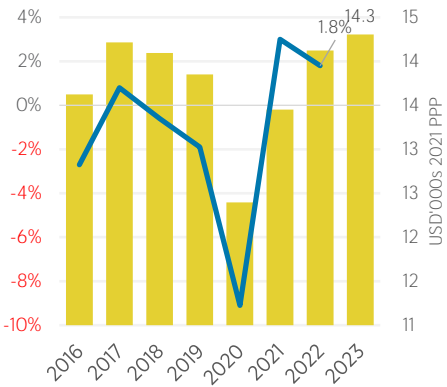
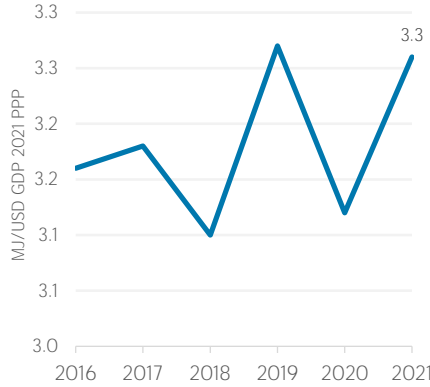


COUNTRY INDICATORS AND SDGS

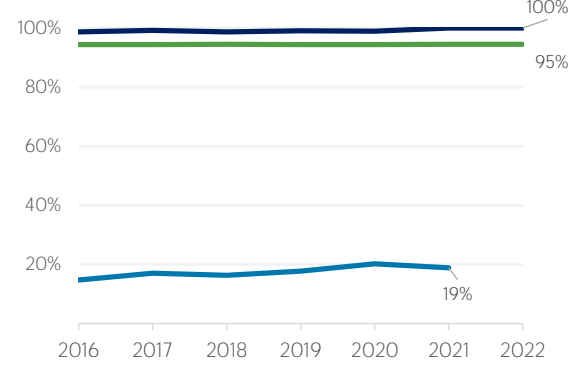
8.1.1 Real GDP growth rate



7.3.1 Energy intensity



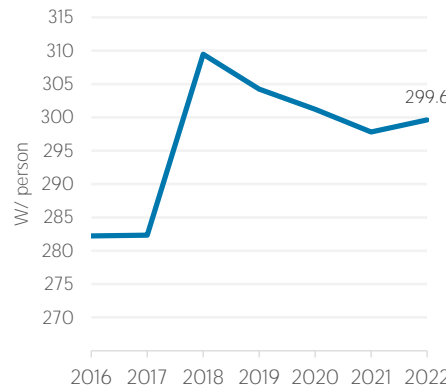
7.1.1 Access to electricity (% population)  
7.1.2 Access to clean cooking (% population)  
7.2.1 Renewable energy (% TREC)



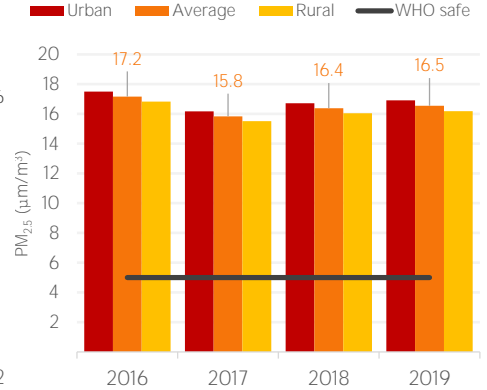
7.a.1 Public flows to renewables



7.b.1 Per capita renewable capacity



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



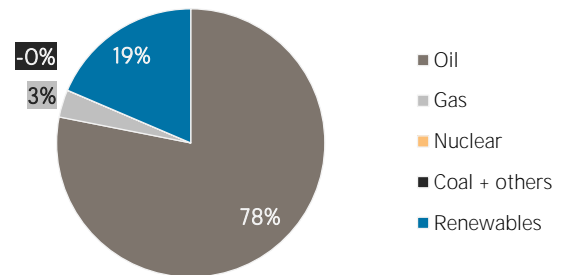
TOTAL ENERGY SUPPLY (TES)

Total Energy Supply (TES)	2016	2021
Non-renewable (TJ)	516 471	488 753
Renewable (TJ)	95 980	111 507
Total (TJ)	612 450	600 260
Renewable share (%)	16	19

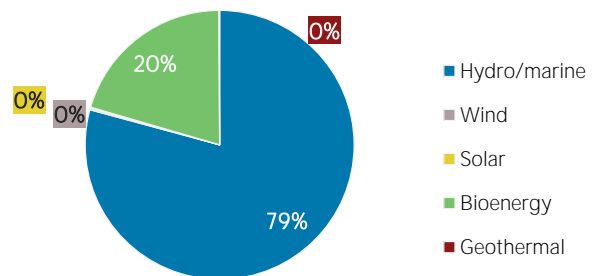
Growth in TES	2016-21	2020-21
Non-renewable (%)	-5.4	+16.6
Renewable (%)	+16.2	-0.0
Total (%)	-2.0	+13.1

Primary energy trade	2016	2021
Imports (TJ)	246 217	286 243
Exports (TJ)	928 780	817 245
Net trade (TJ)	682 563	531 002
Imports (% of supply)	40	48
Exports (% of production)	71	71
Energy self-sufficiency (%)	213	192

Total energy supply in 2021

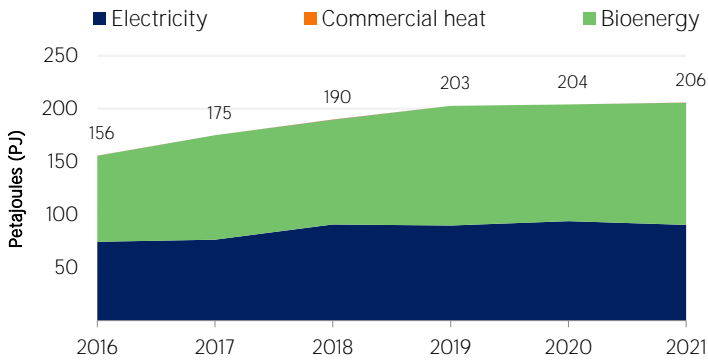


Renewable energy supply in 2021



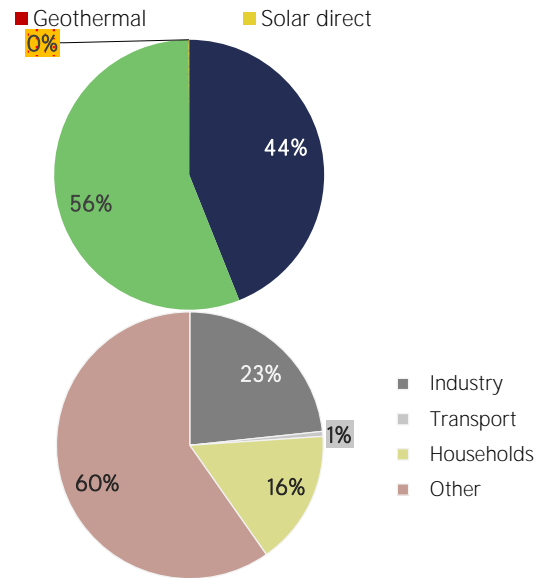
# RENEWABLE ENERGY CONSUMPTION (TFEC)

### Renewable TFEC trend



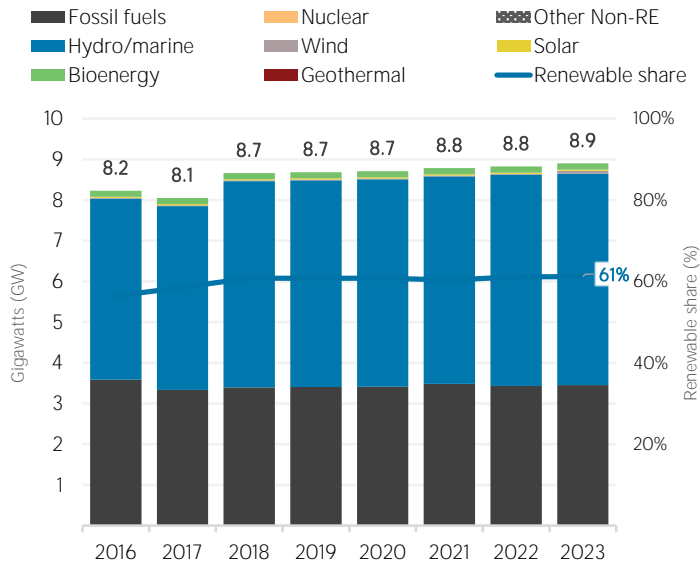
Consumption by sector	2016	2021
Industry (TJ)	39 478	48 020
Transport (TJ)	484	1 231
Households (TJ)	31 571	33 616
Other (TJ)	84 236	122 935

### Renewable energy consumption in 2021

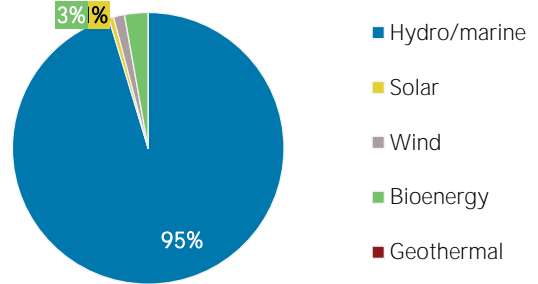


# ELECTRICITY CAPACITY

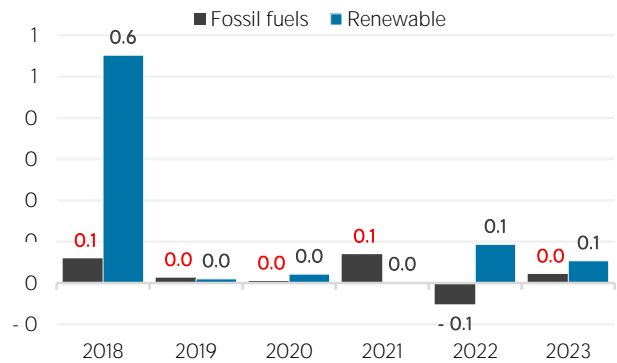
### Installed capacity trend



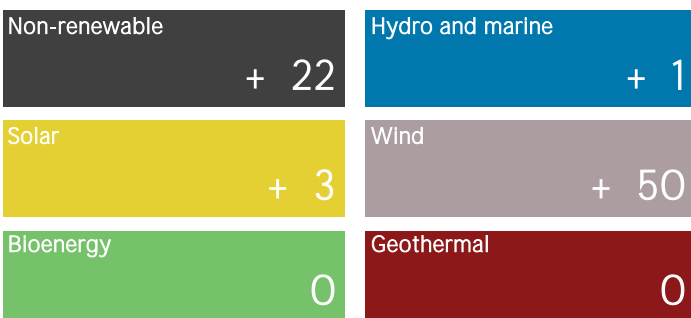
### Renewable capacity in 2023



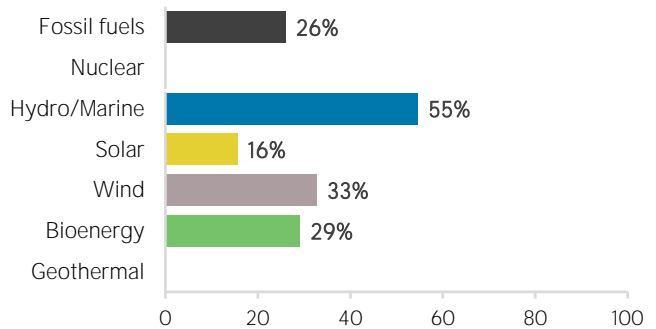
### Net capacity change (GW)



### Net capacity change in 2023 (MW)



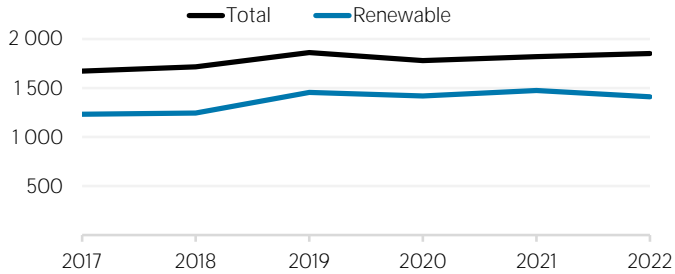
### Capacity utilisation in 2022 (%)



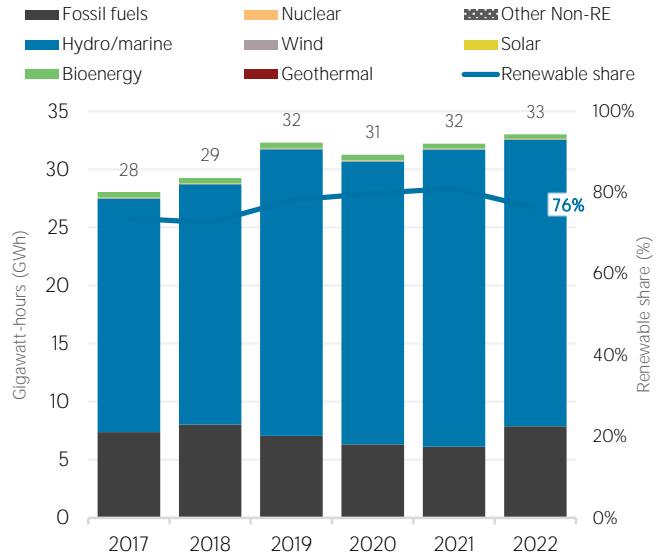
## ELECTRICITY GENERATION

Generation in 2022	GWh	%
<b>Non-renewable</b>	<b>7 884</b>	<b>24</b>
<b>Renewable</b>	<b>25 124</b>	<b>76</b>
Hydro and marine	24 635	75
Solar	39	0
Wind	61	0
Bioenergy	390	1
Geothermal	0	0
<b>Total</b>	<b>33 008</b>	<b>100</b>

Per capita electricity generation (kWh)



Electricity generation trend

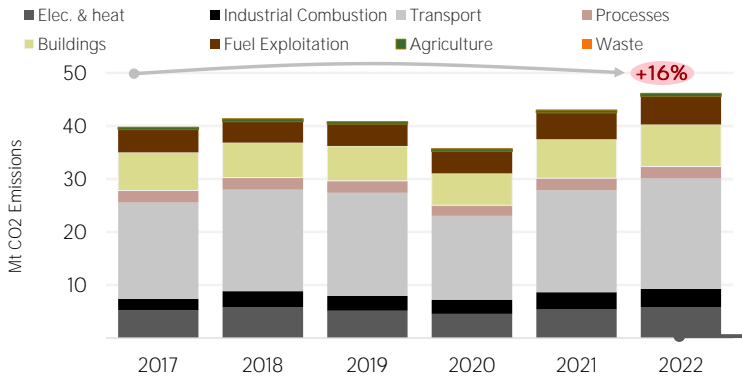


## LATEST POLICIES, PROGRAMMES AND LEGISLATION

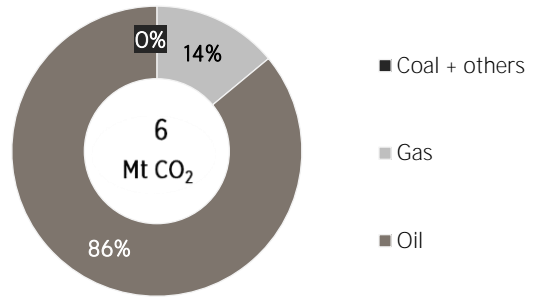
- |  |      |
|--|------|
| 1 Decree 151: Action Plan for the Ecuadorian mining sector   | 2021 |
| 2 Operating regulations of the multi-stakeholder group EITI-Ecuador                                  | 2020 |
| 3 Bylaws for Hydrocarbons Operations   | 2018 |
| 4 Reviewed technical regulation on energy efficiency of ductless air conditioners, RTE INEN 072 (1R) | 2018 |
| 5 Ecuador Energy Efficiency National Plan 2016-2035 (PLANEE)   | 2017 |

## ENERGY AND EMISSIONS

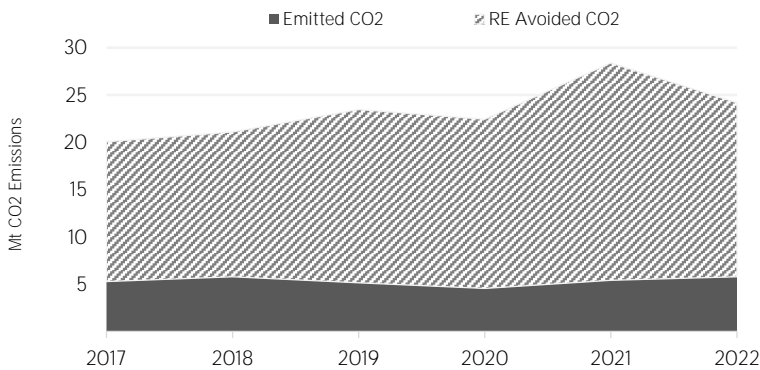
CO<sub>2</sub> emissions by sector



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

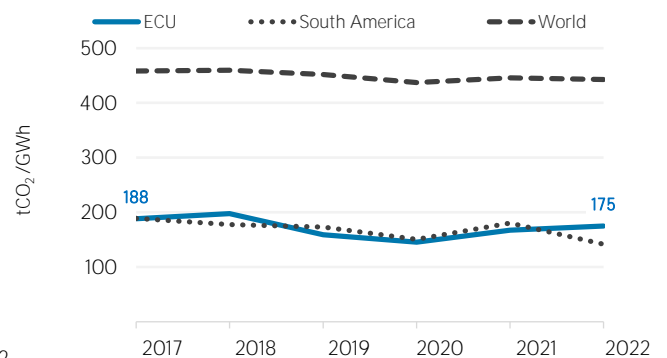


Avoided emissions from renewable elec. & heat



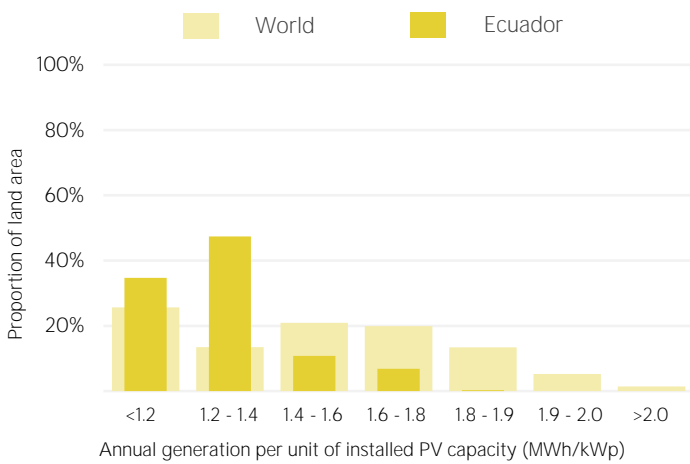
Avoided emissions based on fossil fuel mix used for power

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

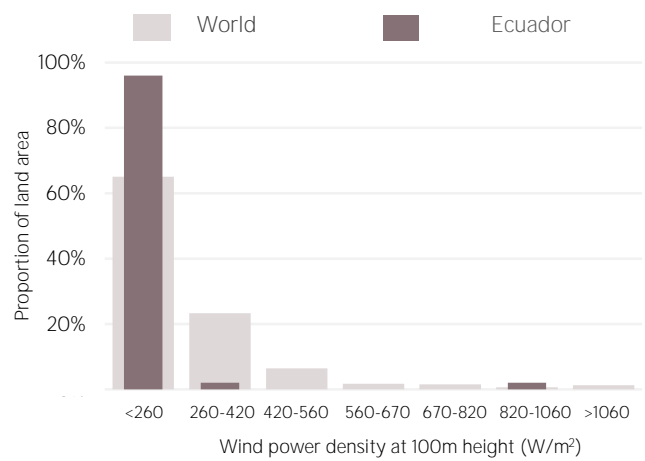


Calculated by dividing power sector emissions by elec. + heat gen.

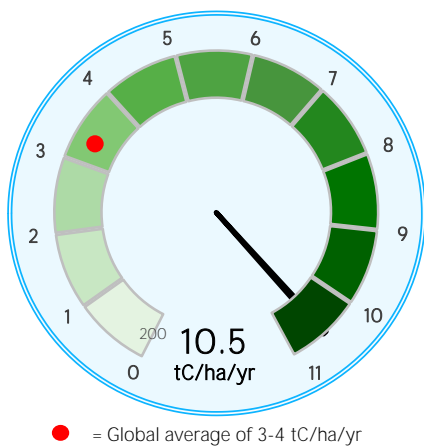
Distribution of solar potential



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 ( $W/m^2$ ) 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:** 31 July, 2024