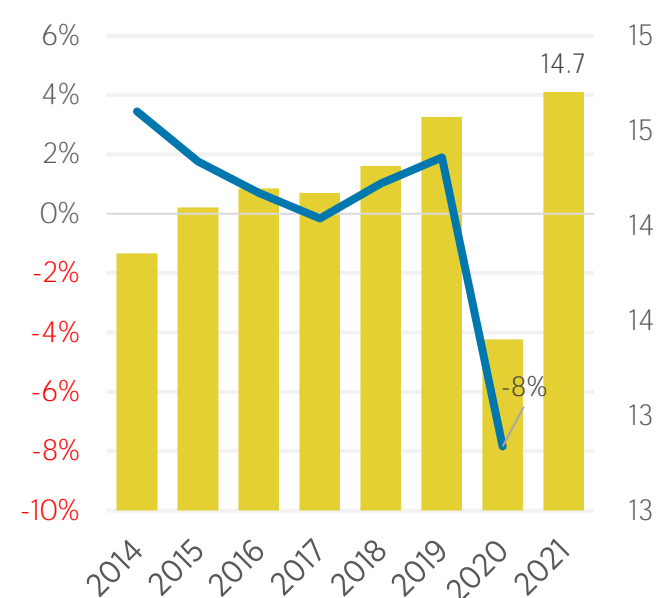
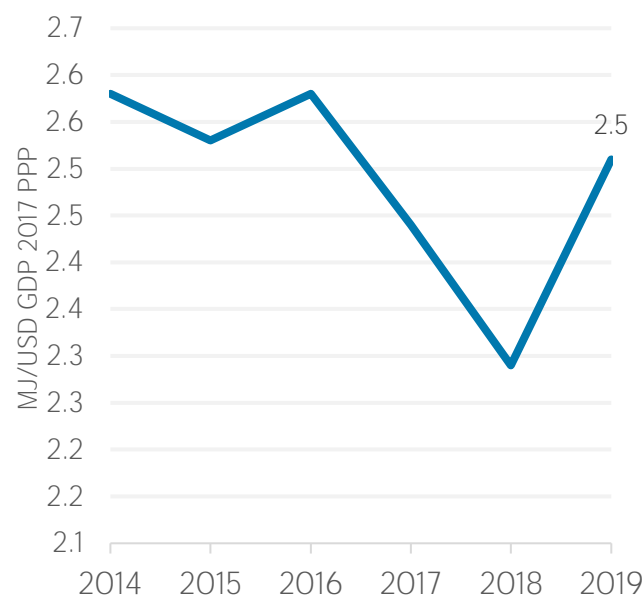


## COUNTRY INDICATORS AND SDGS

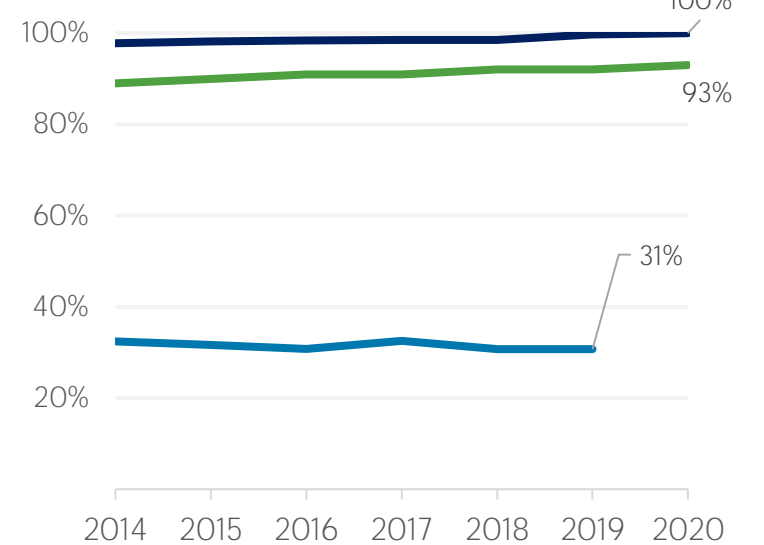
■ GDP per capita — 8.1.1 Real GDP growth rate



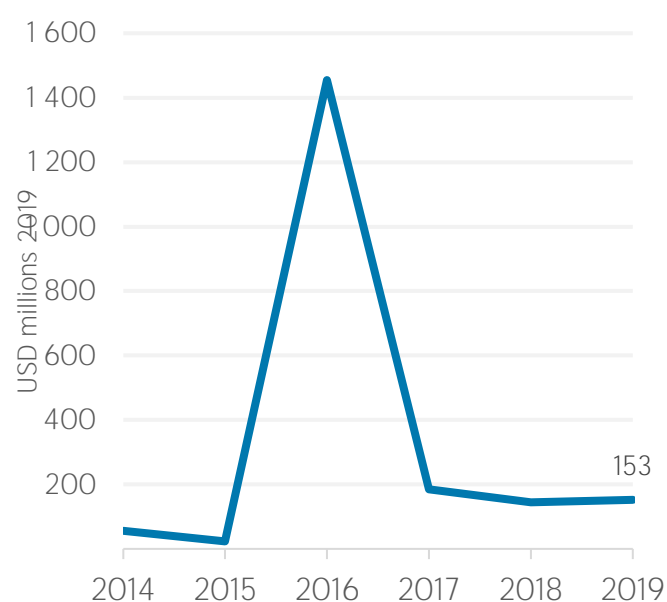
7.3.1 Energy intensity



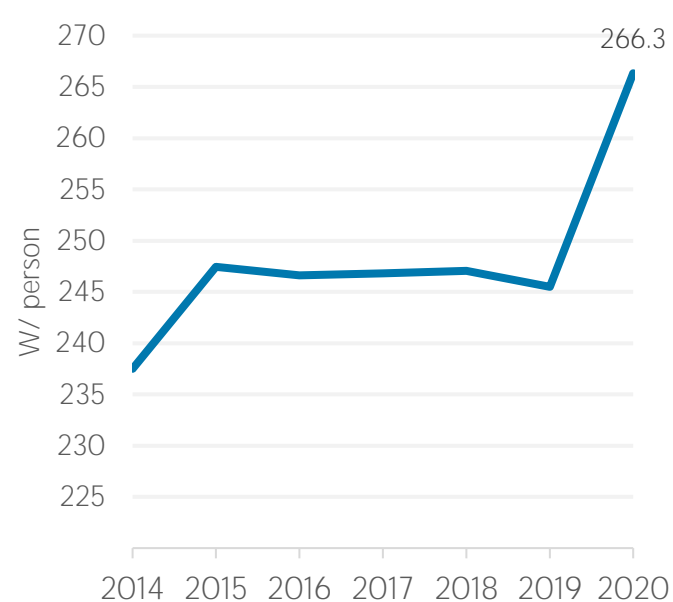
— 7.1.1 Access to electricity (% population)  
— 7.1.2 Access to clean cooking (% population)  
— 7.2.1 Renewable energy (% TREC)



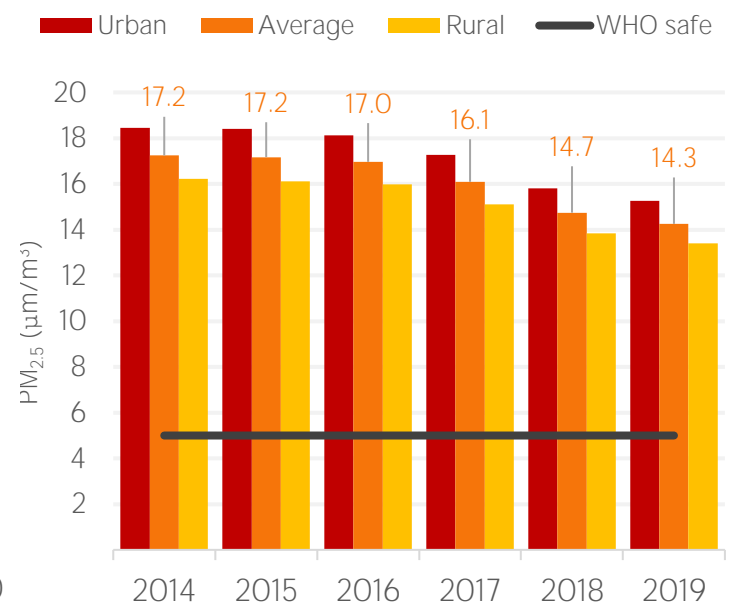
7.a.1 Public flows to renewables



7.b.1 Per capita renewable capacity



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



## TOTAL ENERGY SUPPLY (TES)

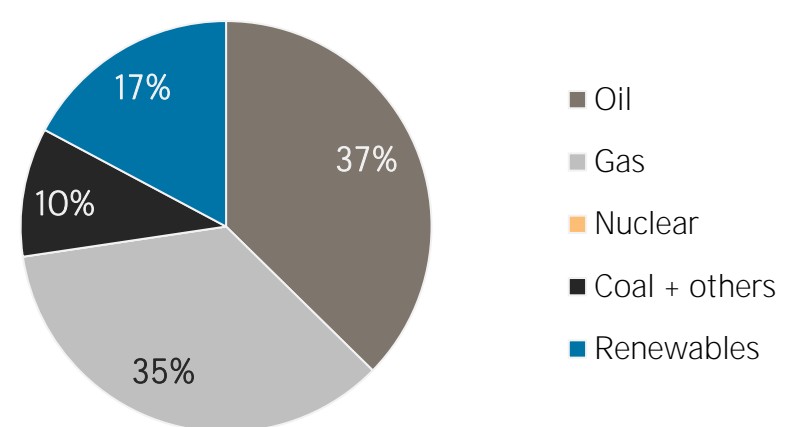
Total Energy Supply (TES)	2014	2019
Non-renewable (TJ)	1 776 882	1 677 340
Renewable (TJ)	352 959	348 625
Total (TJ)	2 129 841	2 025 965
Renewable share (%)	17	17

Growth in TES	2014-19	2018-19
Non-renewable (%)	-5.6	+12.5
Renewable (%)	-1.2	-6.6
Total (%)	-4.9	+8.7

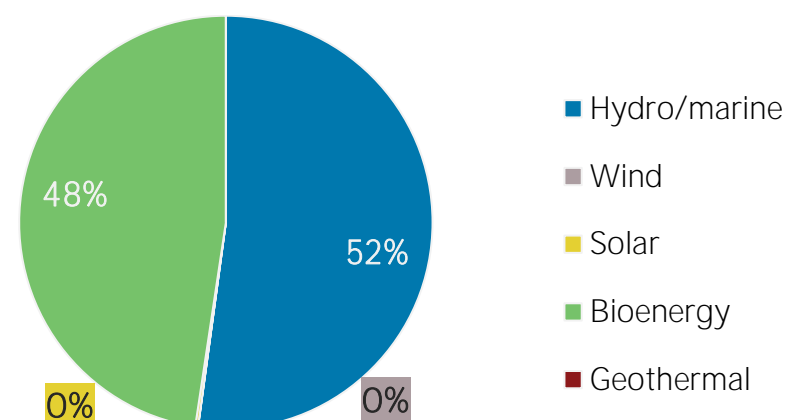
Primary energy trade	2014	2019
Imports (TJ)	359 127	242 645
Exports (TJ)	4 360 348	3 695 907
Net trade (TJ)	4 001 221	3 453 262

Imports (% of supply)	17	12
Exports (% of production)	74	67
Energy self-sufficiency (%)	279	271

Total energy supply in 2019

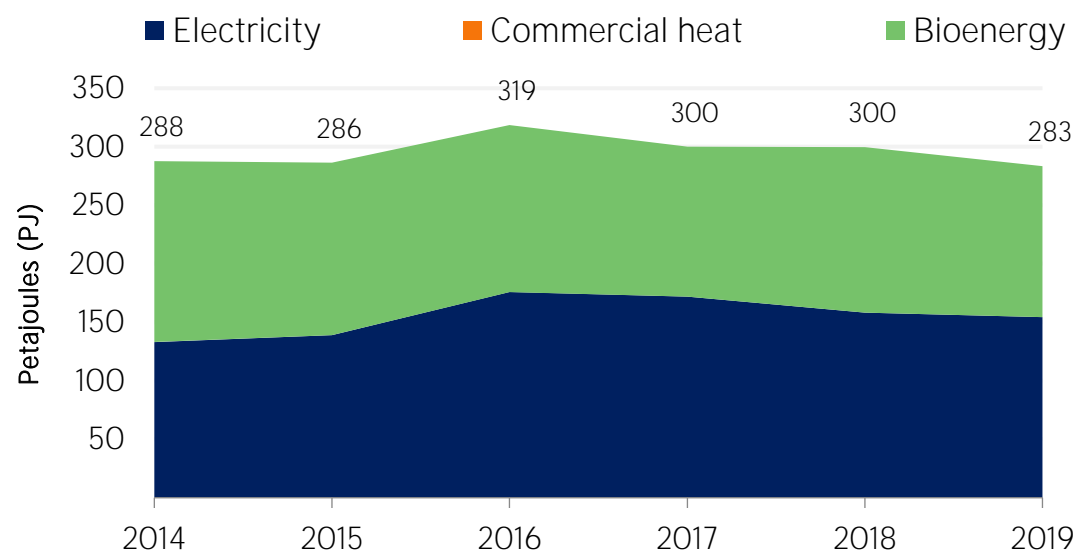


Renewable energy supply in 2019

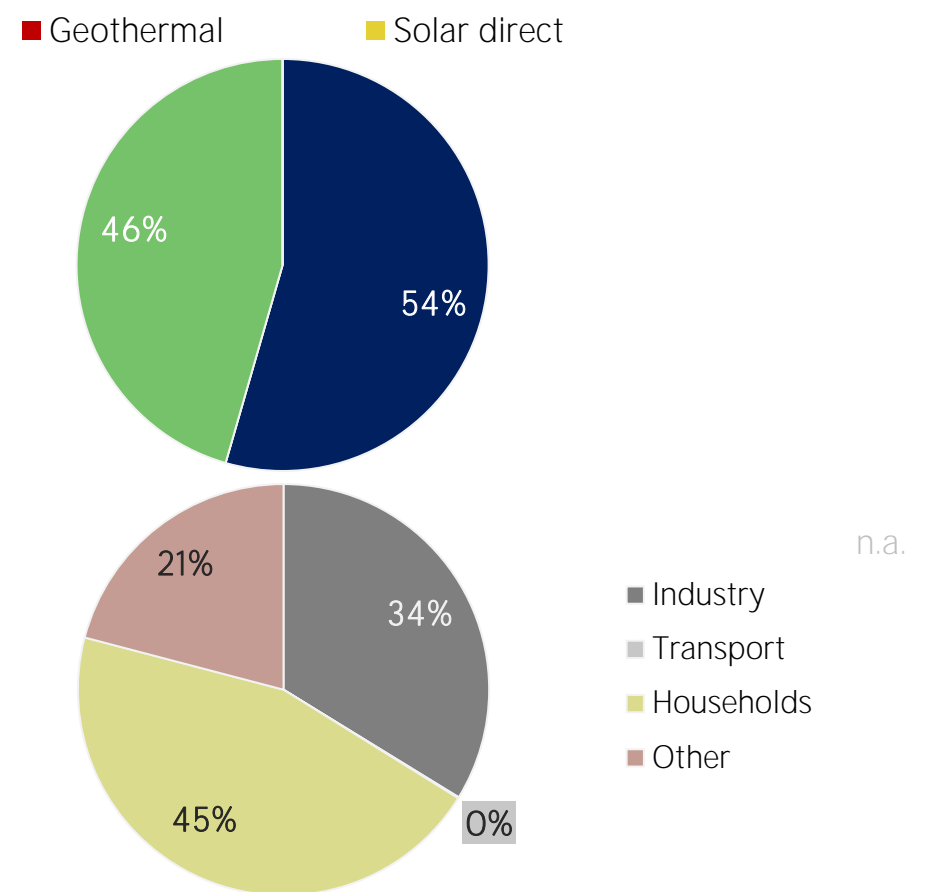


## RENEWABLE ENERGY CONSUMPTION (TFEC)

### Renewable TFE trend



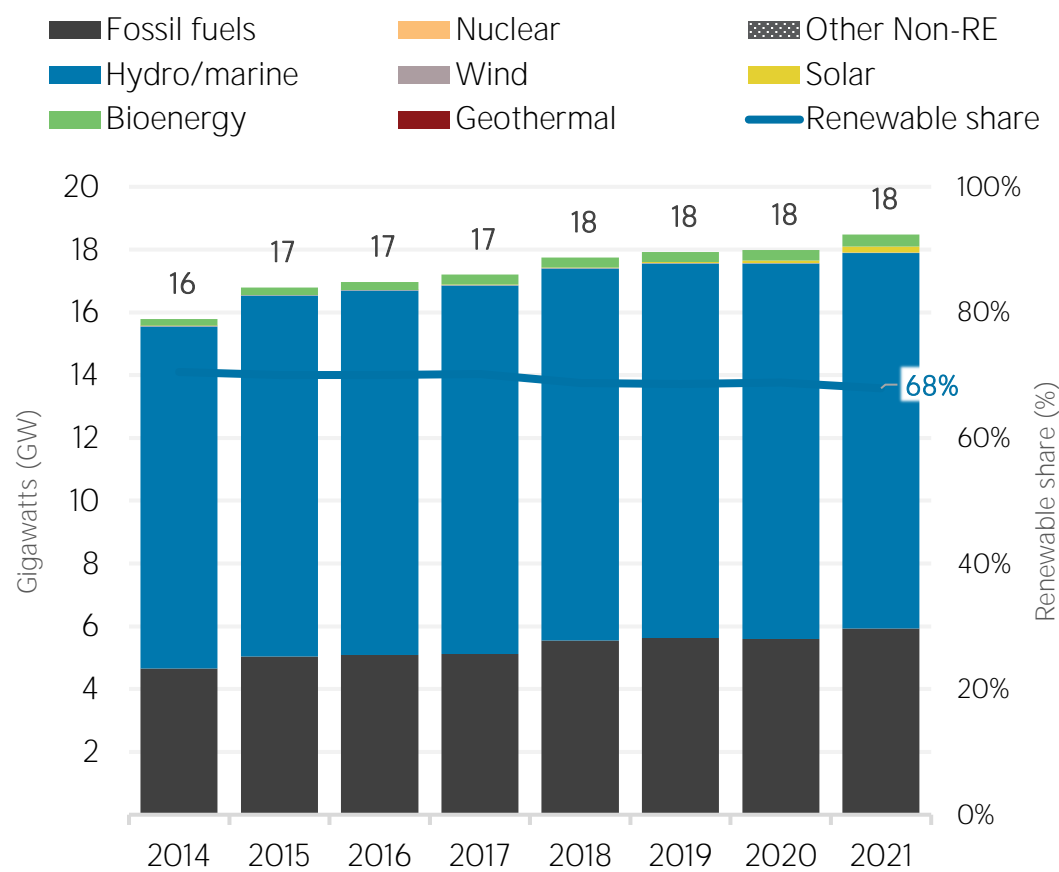
### Renewable energy consumption in 2019



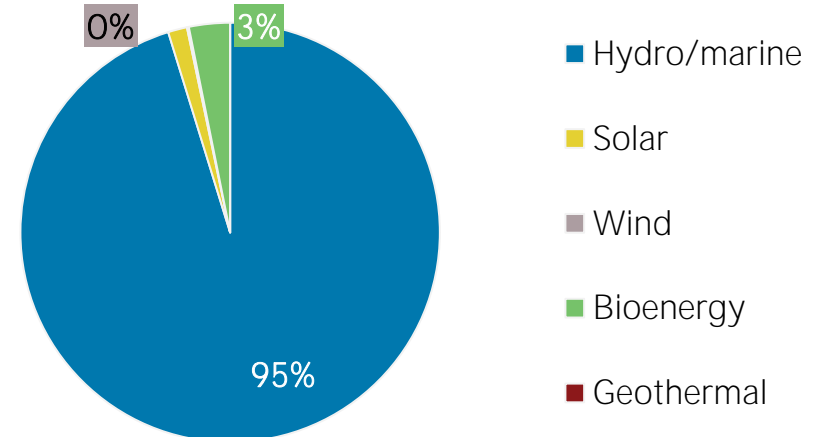
Consumption by sector	2014	2019
Industry (TJ)	88 605	95 629
Transport (TJ)	195	242
Households (TJ)	140 332	128 122
Other (TJ)	58 644	59 236

## ELECTRICITY CAPACITY

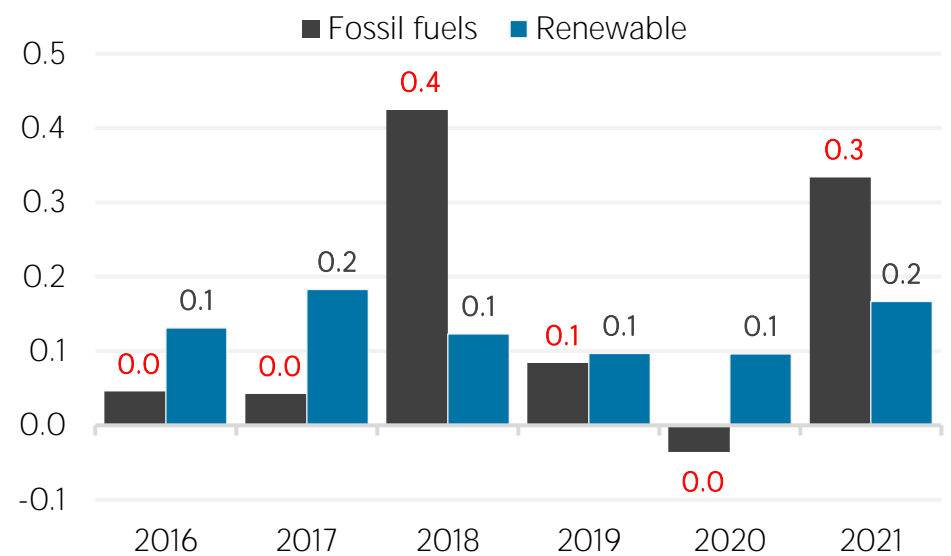
### Installed capacity trend



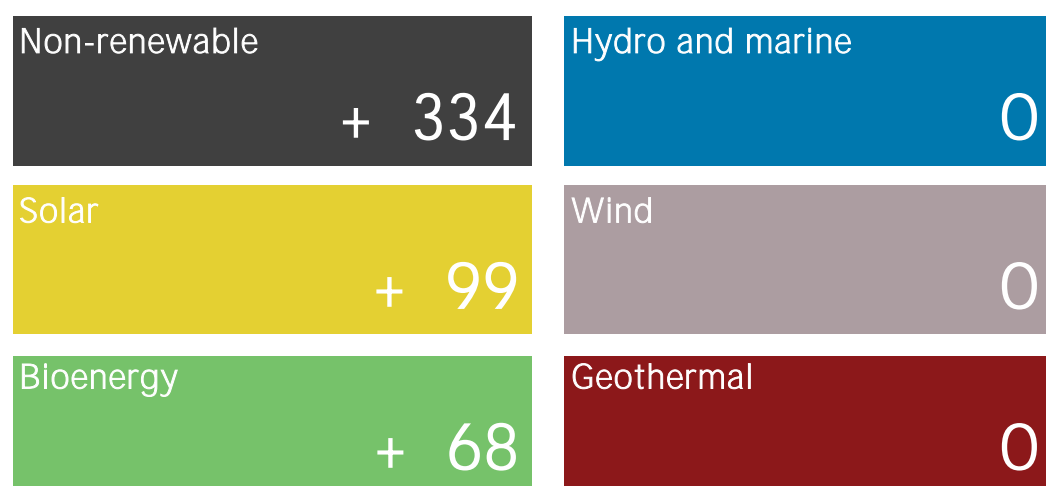
### Renewable capacity in 2021



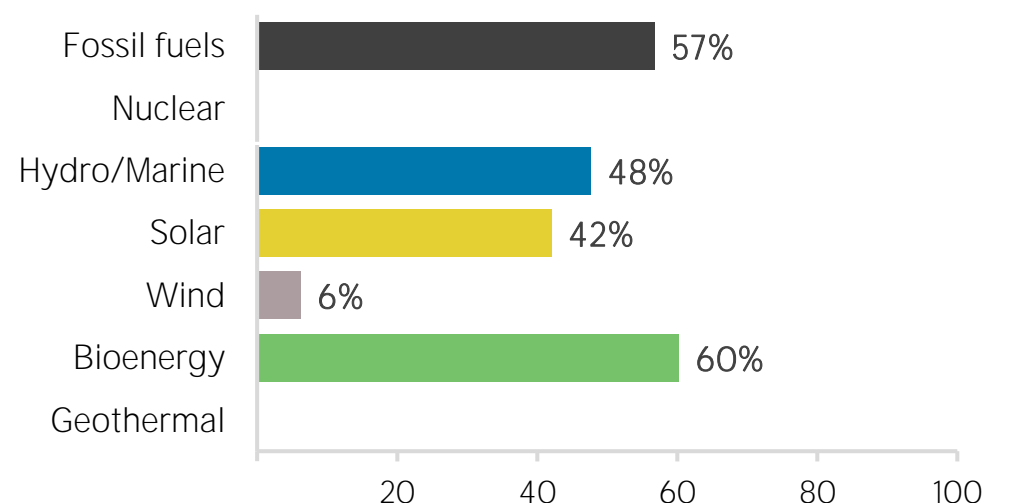
### Net capacity change (GW)



### Net capacity change in 2021 (MW)

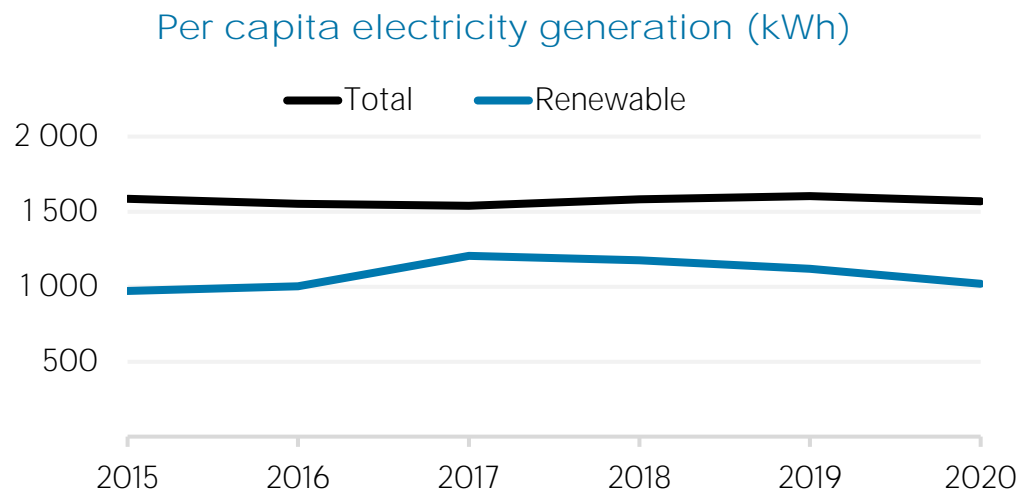


### Capacity utilisation in 2020 (%)

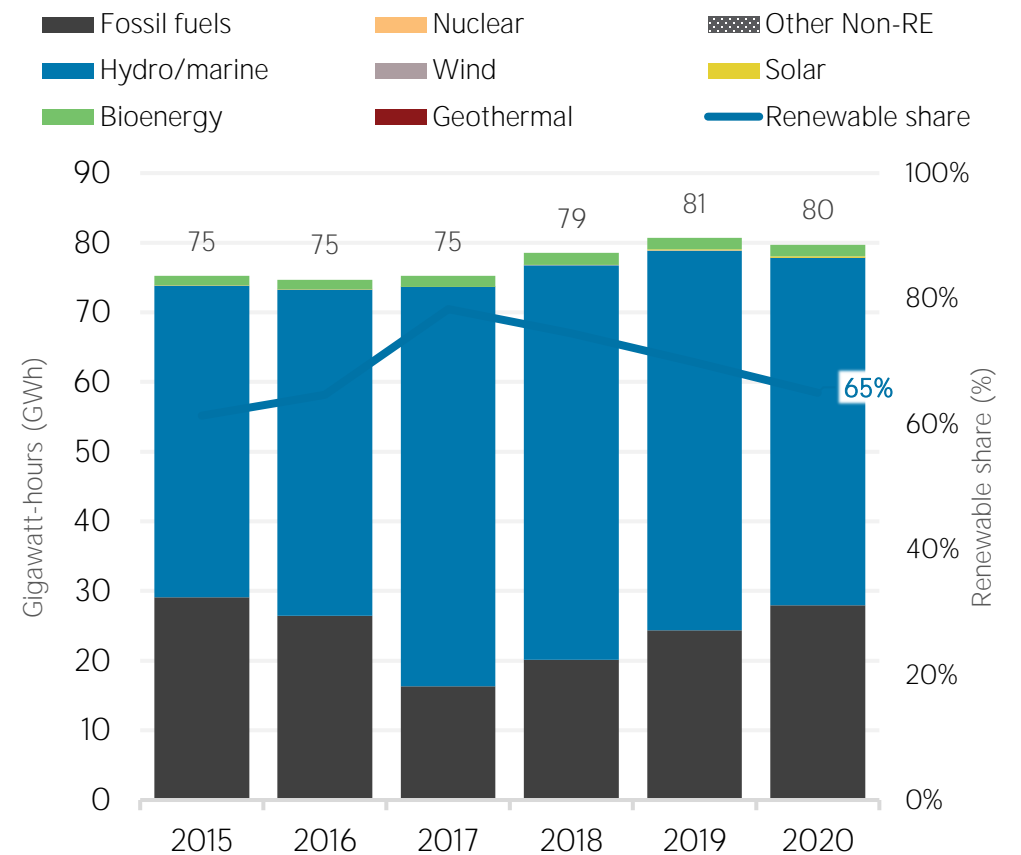


## ELECTRICITY GENERATION

Generation in 2020	GWh	%
<b>Non-renewable</b>	<b>27 939</b>	<b>35</b>
<b>Renewable</b>	<b>51 790</b>	<b>65</b>
Hydro and marine	49 862	63
Solar	206	0
Wind	10	0
Bioenergy	1 712	2
Geothermal	0	0
<b>Total</b>	<b>79 729</b>	<b>100</b>



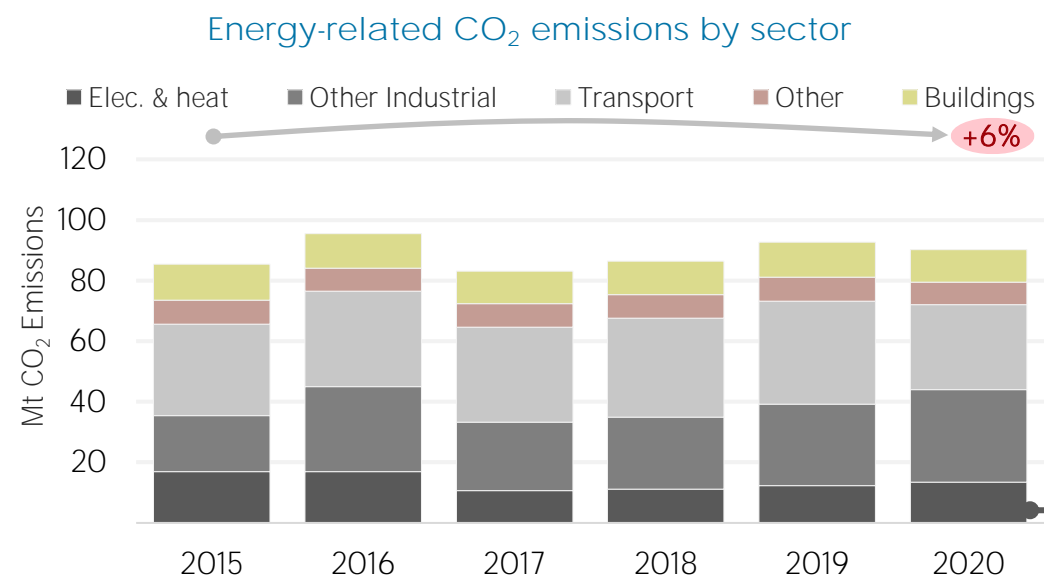
### Electricity generation trend



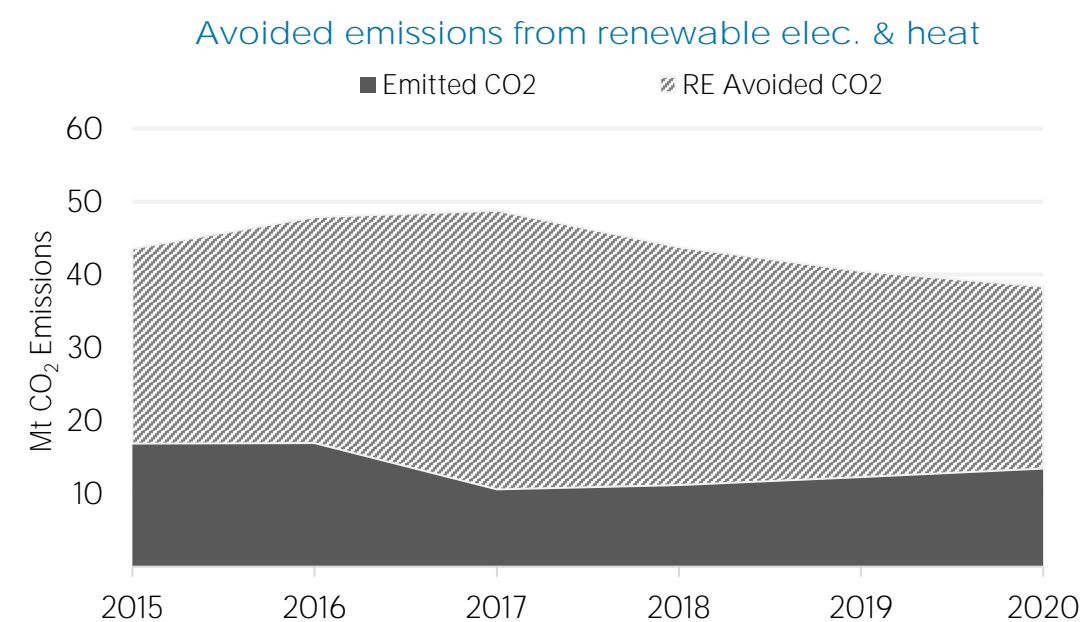
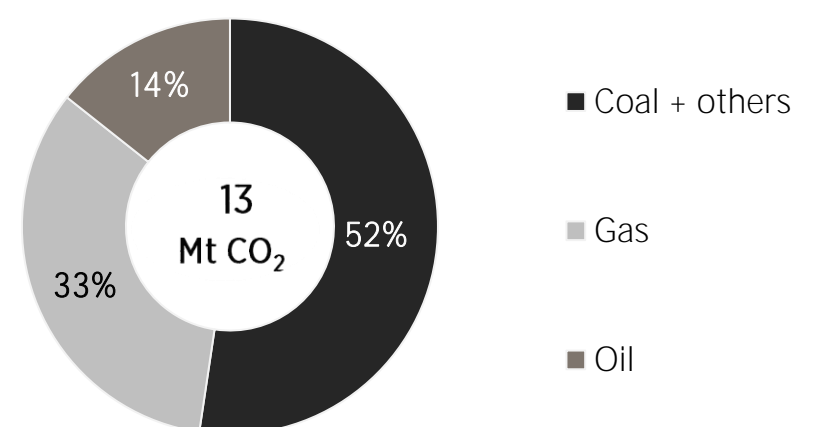
## LATEST POLICIES, PROGRAMMES AND LEGISLATION

- 1 Resolution 40066/2022. Technical Requirements for the Detection and Repair of Leaks, the Utilisation, Flare and Venting of Natural Gas During Exploration and Production of Hydrocarbons' Activities 2022
- 2 2050 Climate Change Management plan for the mining and energy sectors 2021
- 3 Decree 191 - identification of preferential parking lots for electric vehicles 2021
- 4 First geothermal energy generation project 2021
- 5 Hydrogen roadmap 2021

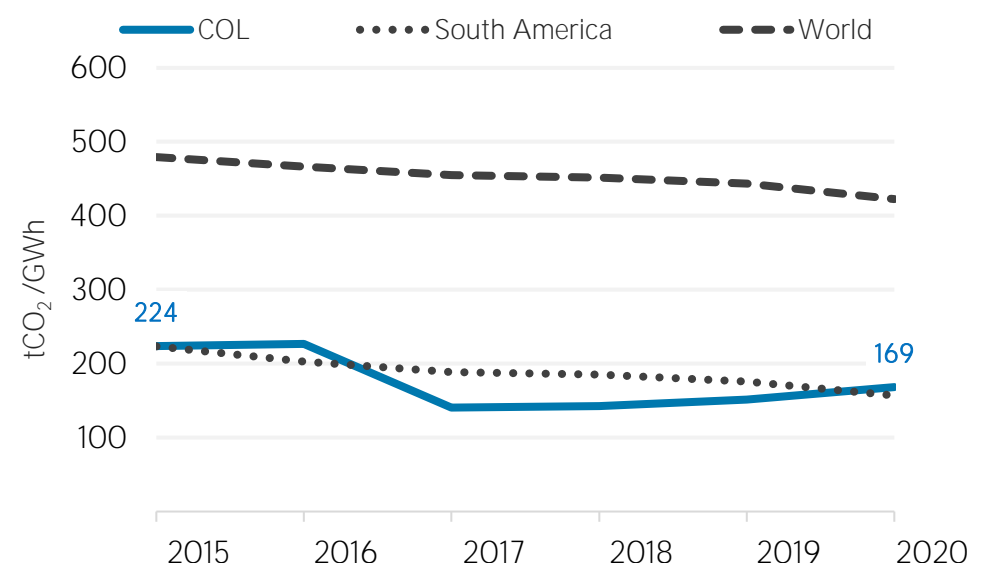
## ENERGY AND EMISSIONS



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



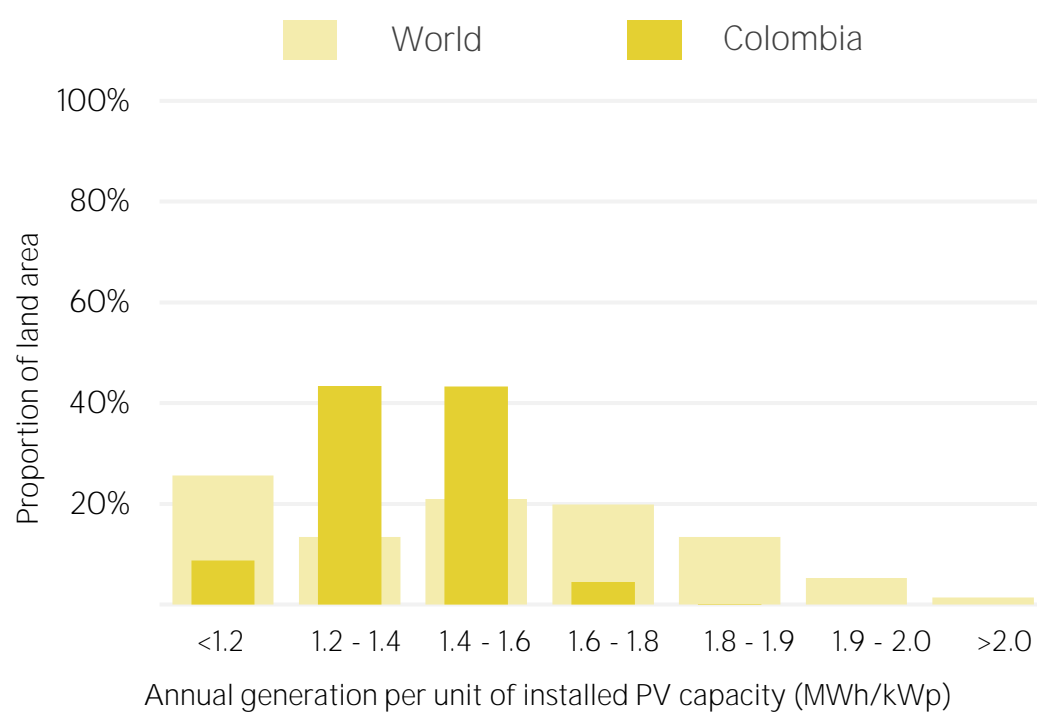
### CO<sub>2</sub> emission factor for elec. & heat generation



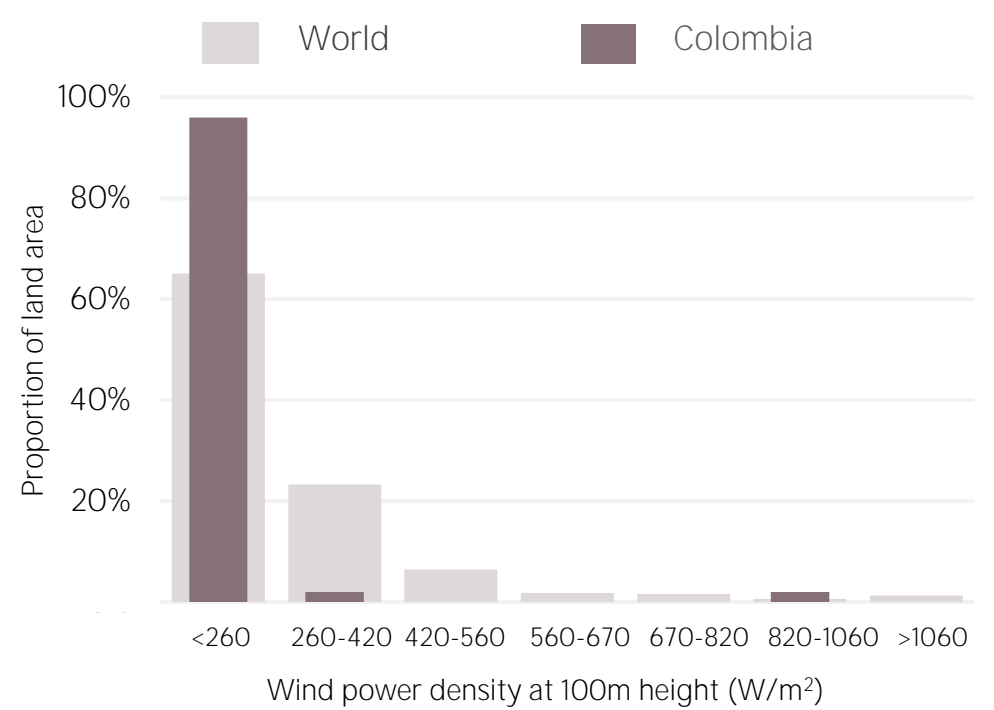
Avoided emissions based on fossil fuel mix used for power

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

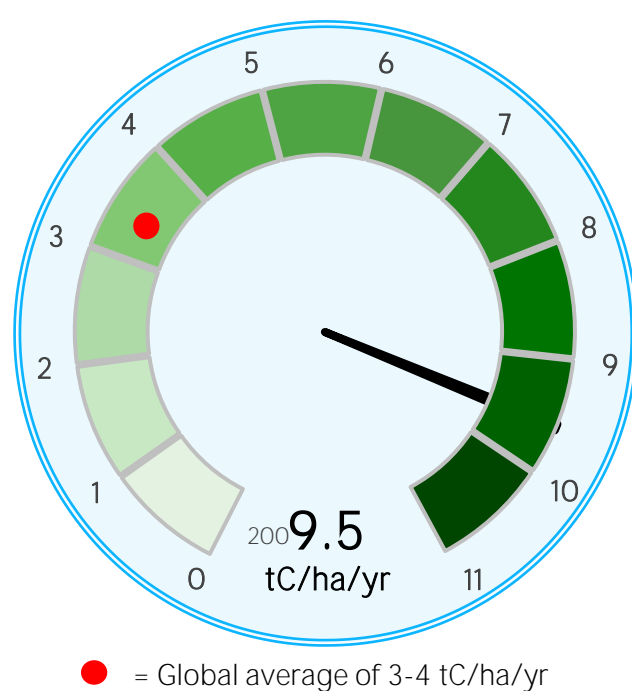
Distribution of solar potential



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: 24th August, 2022