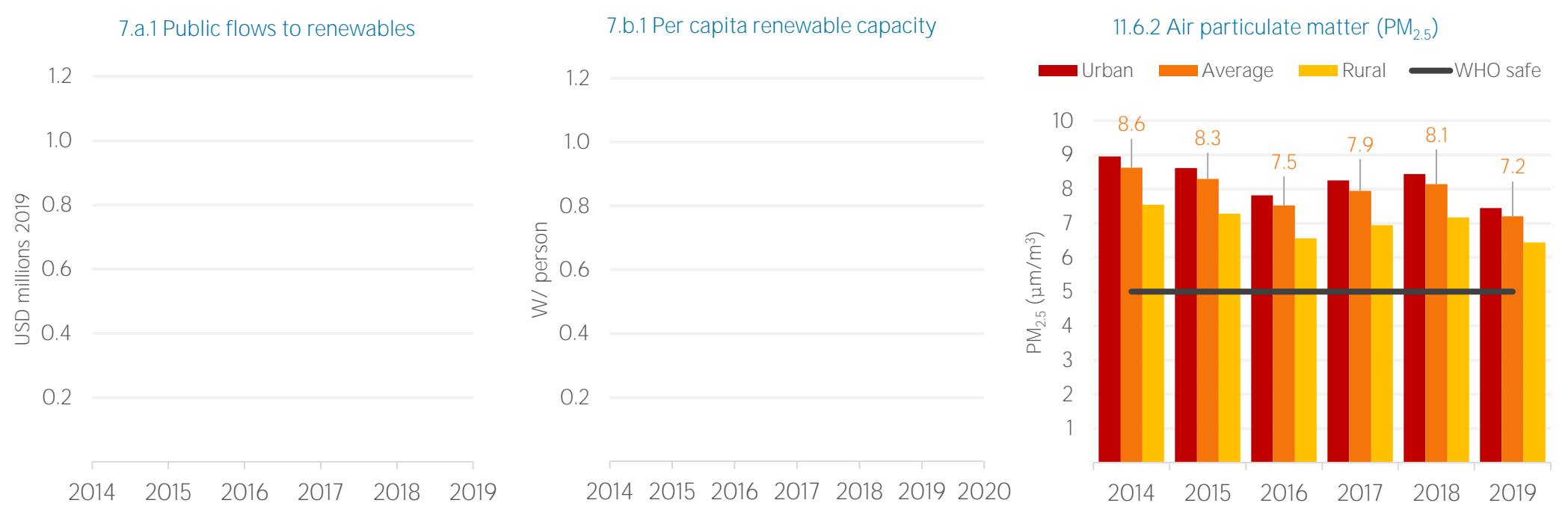
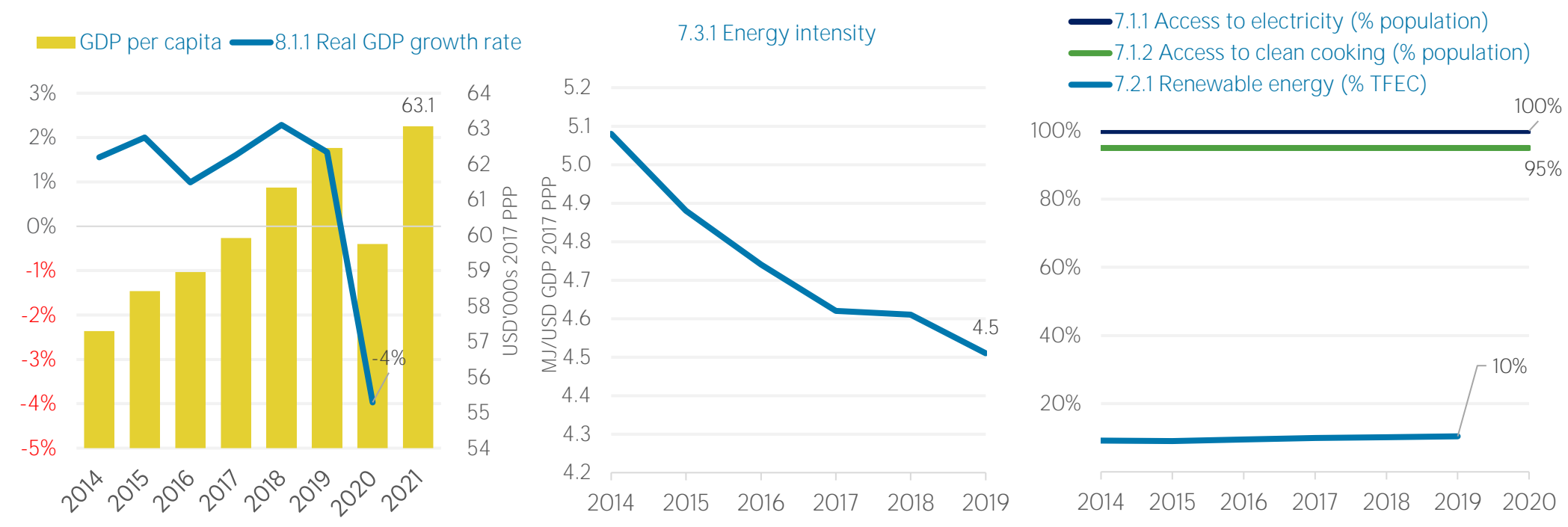


COUNTRY INDICATORS AND SDGS



TOTAL ENERGY SUPPLY (TES)

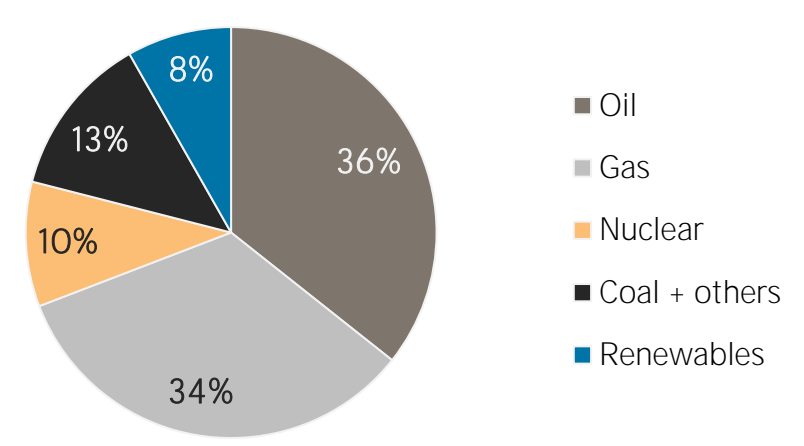
Total Energy Supply (TES)	2014	2019
Non-renewable (TJ)	86 046 290	85 123 737
Renewable (TJ)	6 504 088	7 638 721
Total (TJ)	92 550 378	92 762 458
Renewable share (%)	7	8

Growth in TES	2014-19	2018-19
Non-renewable (%)	-1.1	-0.3
Renewable (%)	+17.4	+3.0
Total (%)	+0.2	-0.1

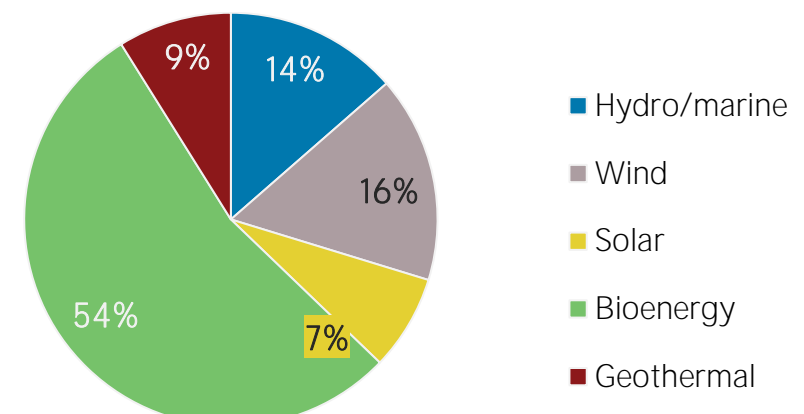
Primary energy trade	2014	2019
Imports (TJ)	22 927 985	22 555 835
Exports (TJ)	12 051 432	23 343 241
Net trade (TJ)	-10 876 553	787 406

Imports (% of supply)	25	24
Exports (% of production)	14	24
Energy self-sufficiency (%)	91	104

Total energy supply in 2019

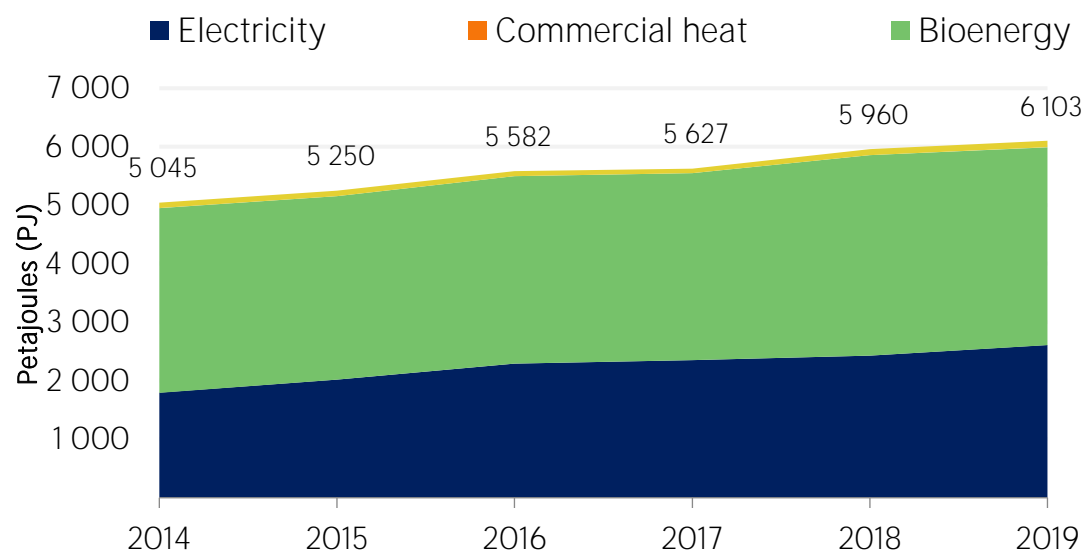


Renewable energy supply in 2019



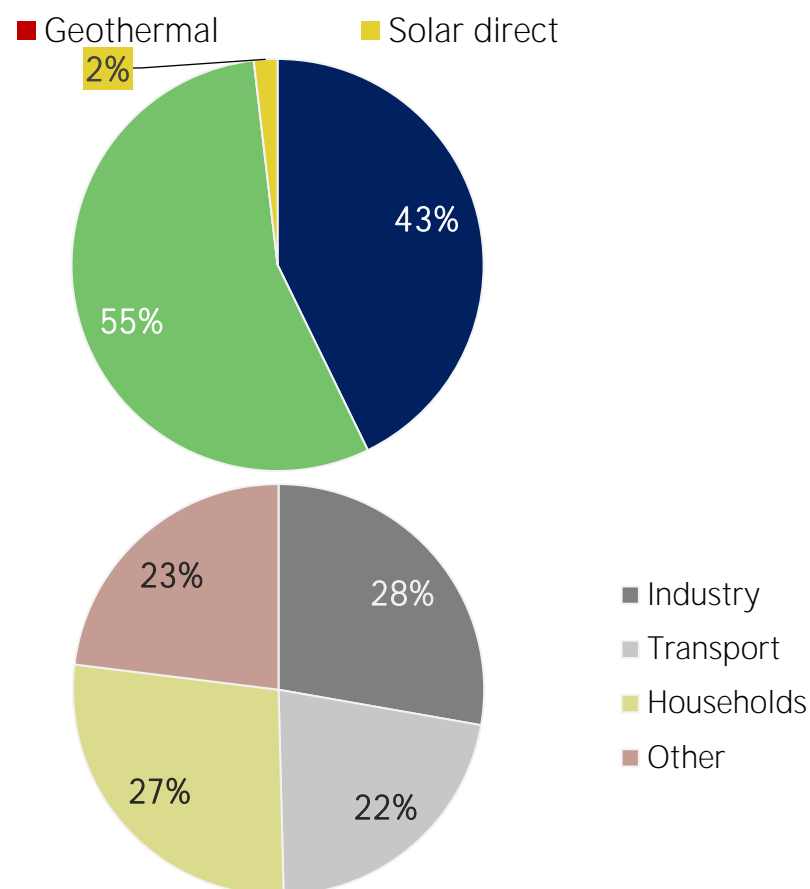
RENEWABLE ENERGY CONSUMPTION (TFEC)

Renewable TFE trend



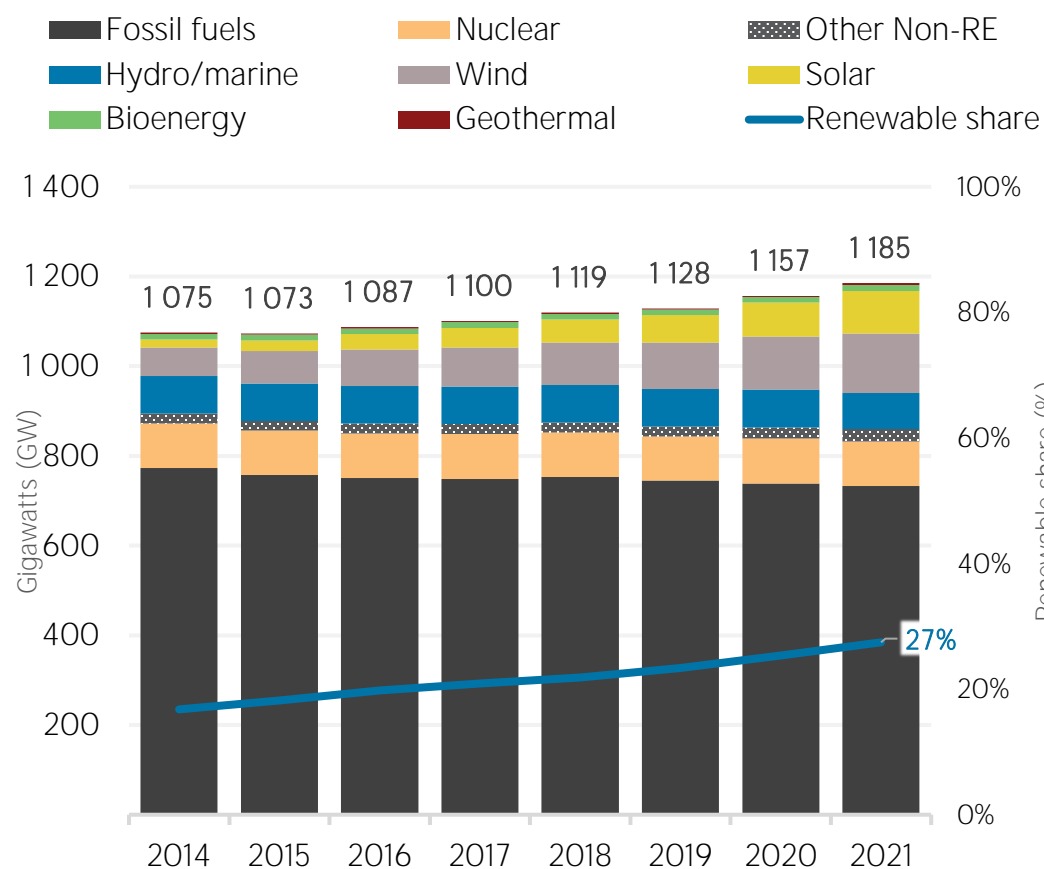
Consumption by sector	2014	2019
Industry (TJ)	1 717 988	1 694 108
Transport (TJ)	1 217 402	1 333 166
Households (TJ)	1 054 811	1 669 379
Other (TJ)	1 054 956	1 406 345

Renewable energy consumption in 2019

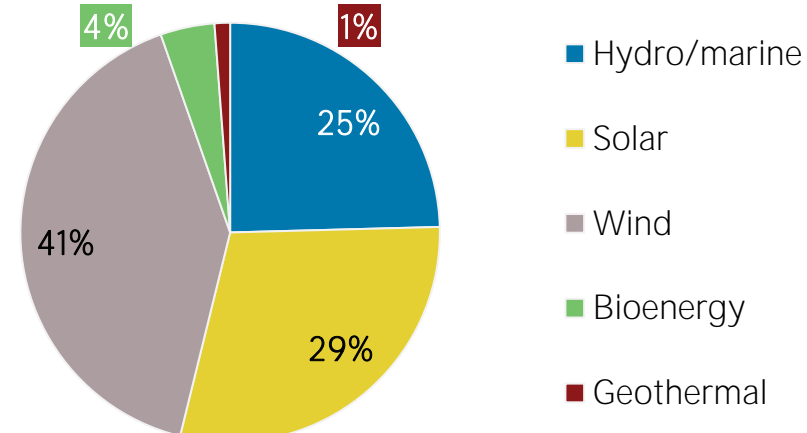


ELECTRICITY CAPACITY

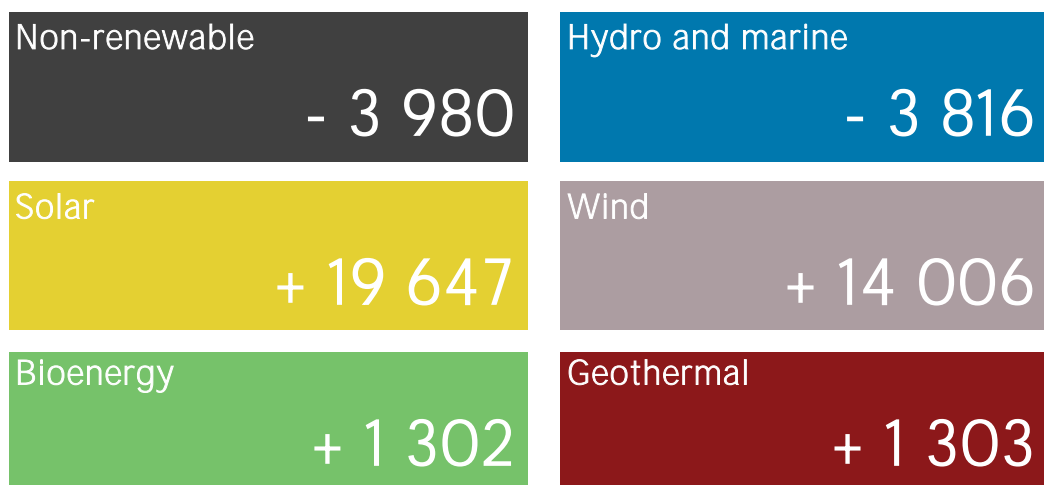
Installed capacity trend



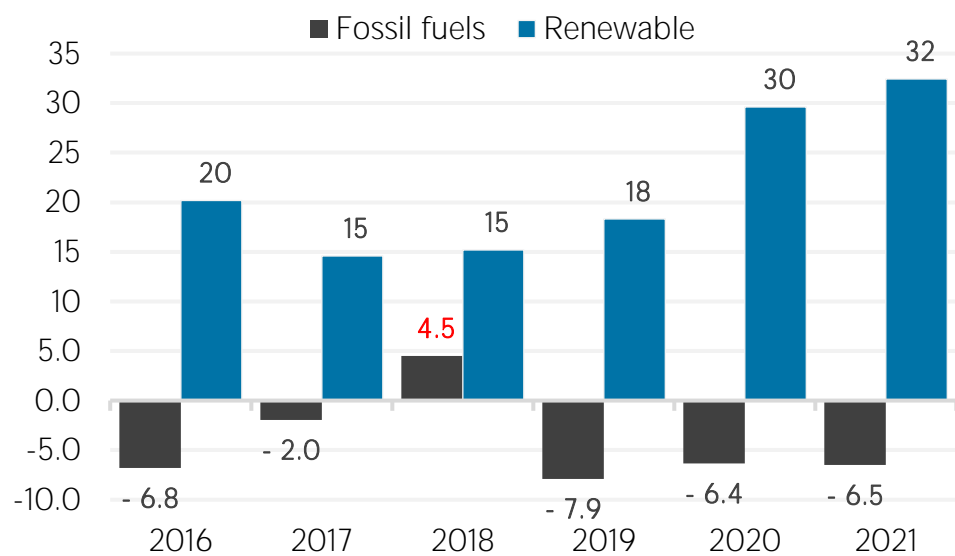
Renewable capacity in 2021



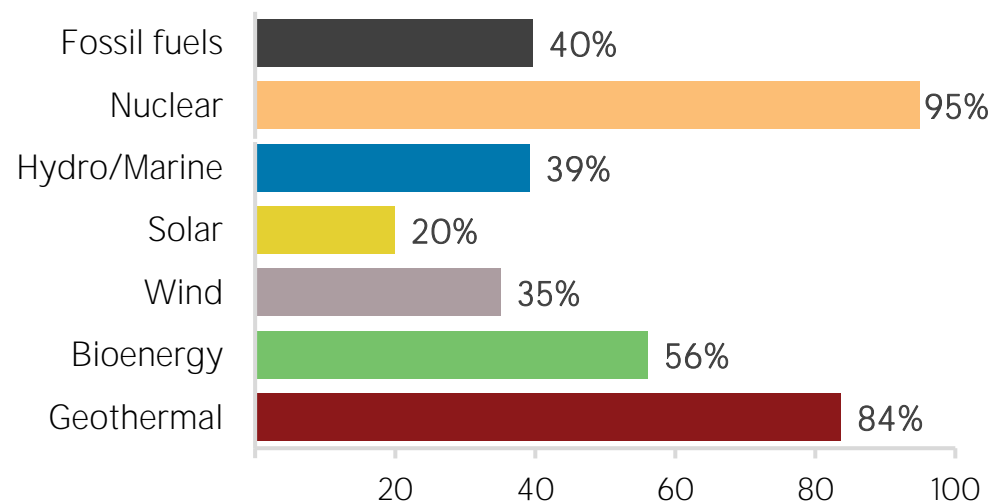
Net capacity change in 2021 (MW)



Net capacity change (GW)

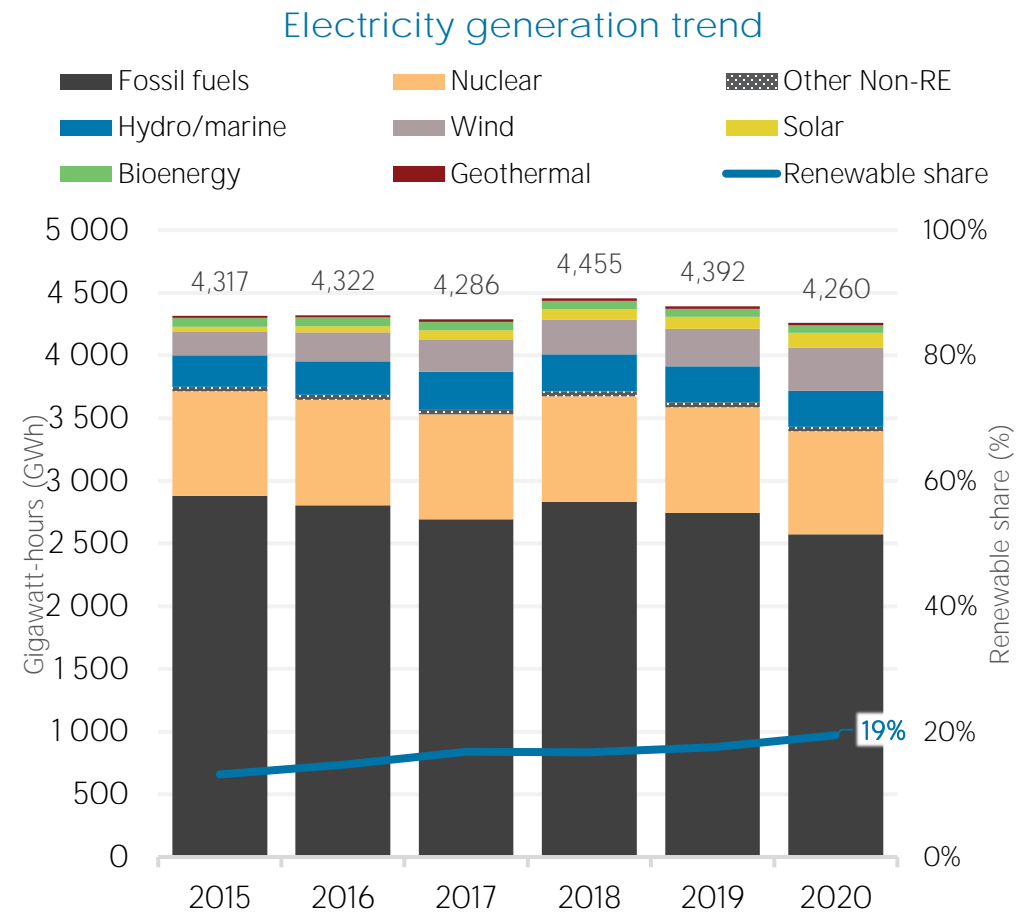
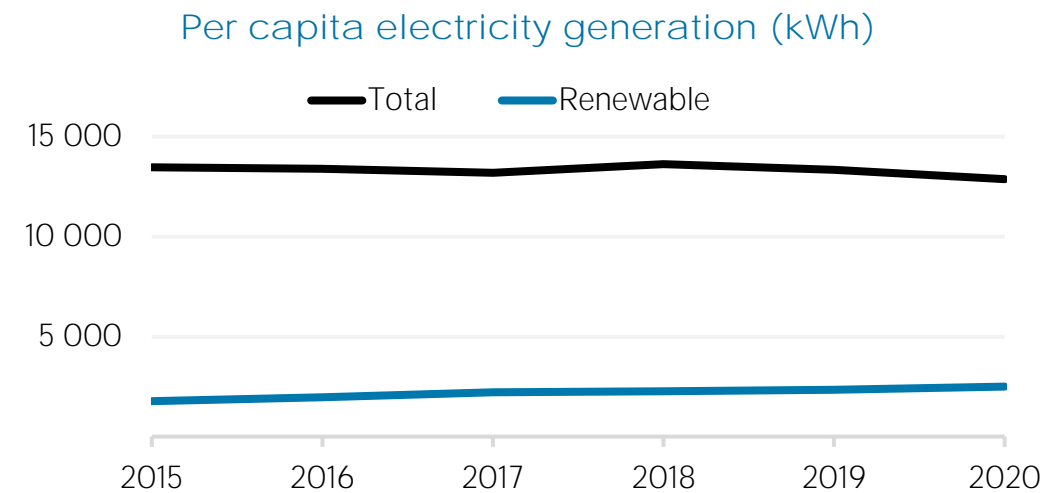


Capacity utilisation in 2020 (%)



ELECTRICITY GENERATION

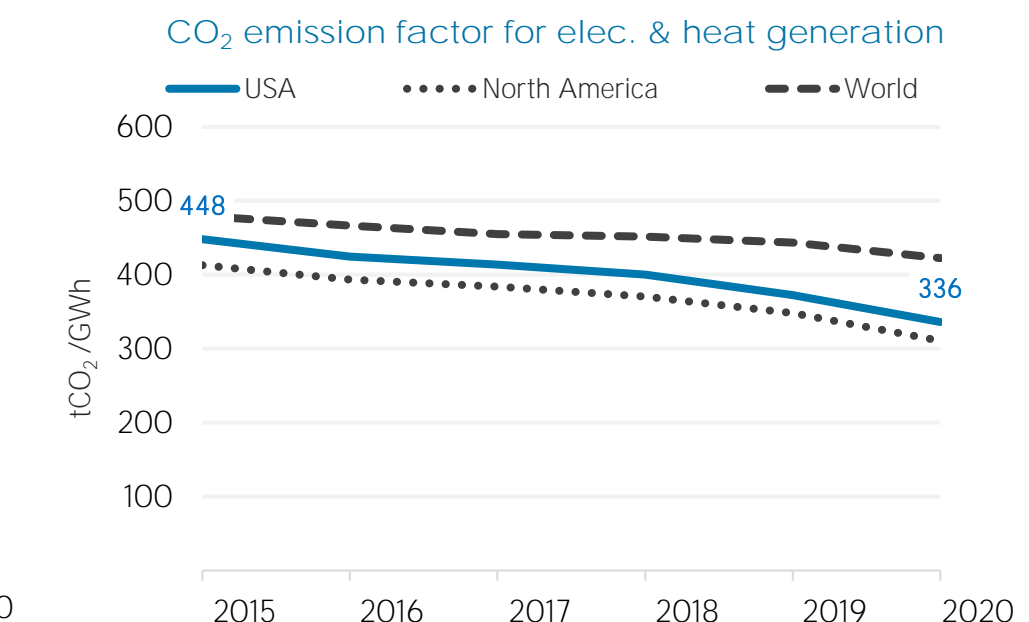
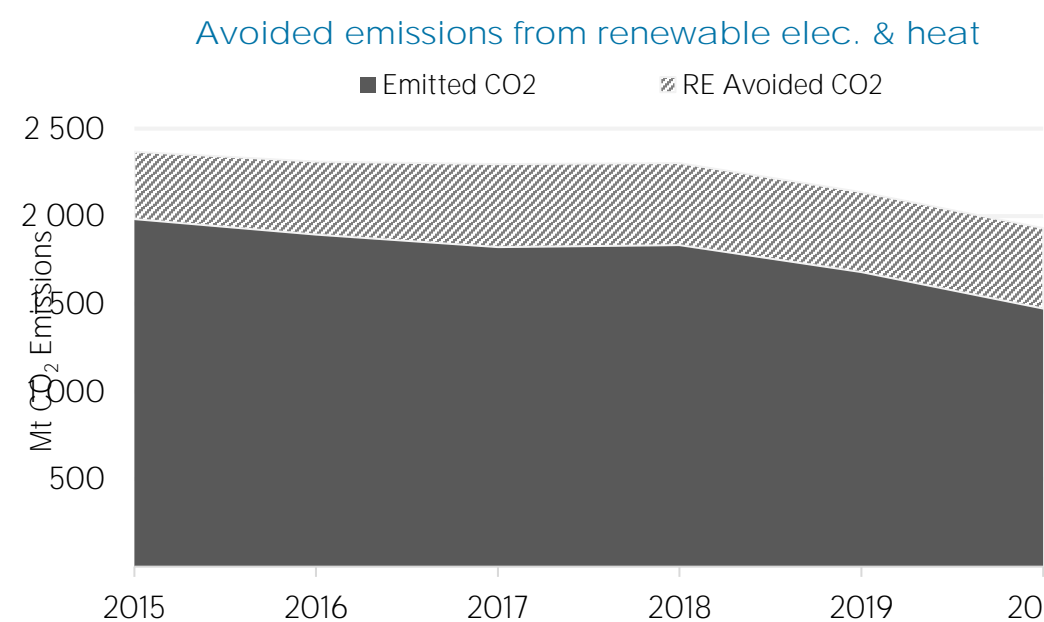
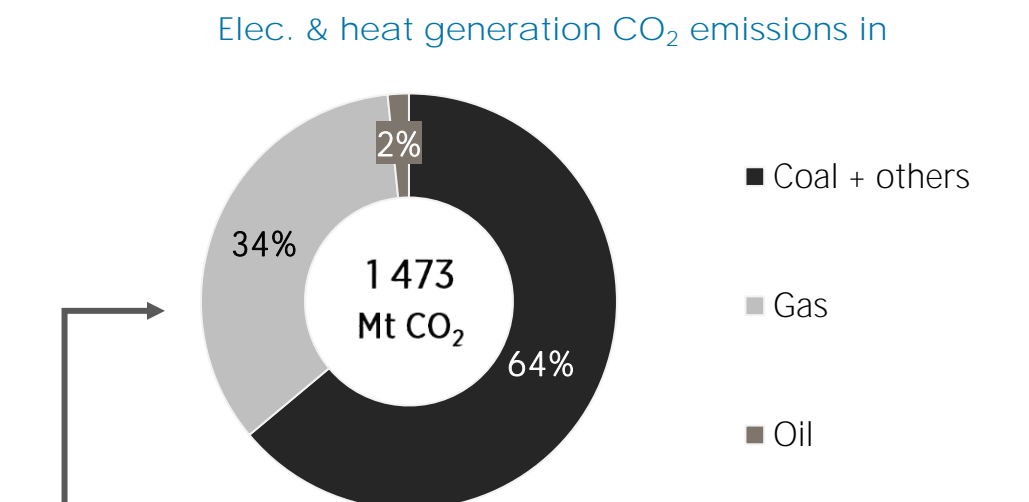
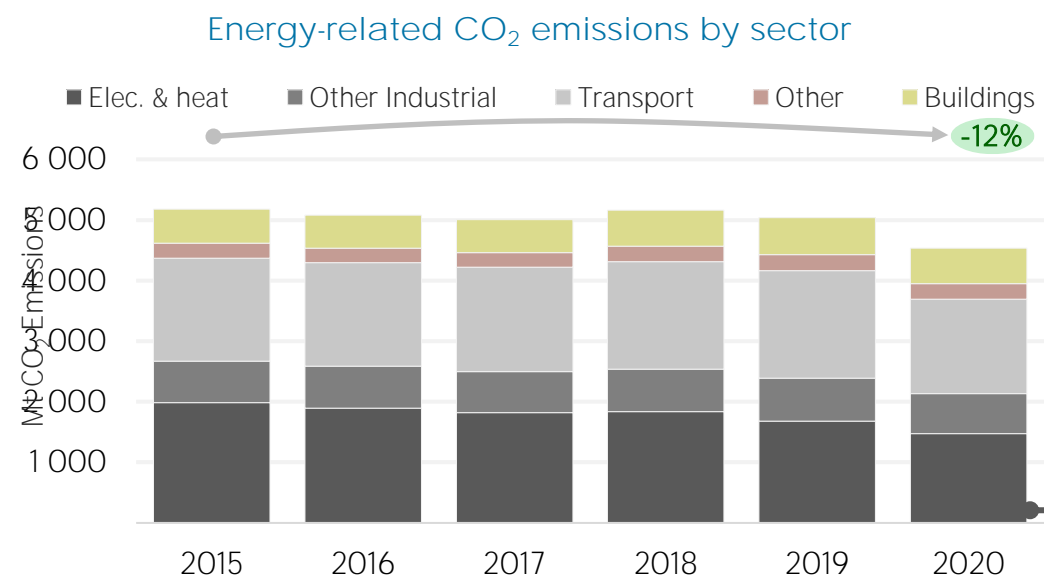
Generation in 2020	GWh	%
Non-renewable	3 432 657	81
Renewable	827 387	19
Hydro and marine	287 140	7
Solar	119 329	3
Wind	341 818	8
Bioenergy	60 269	1
Geothermal	18 831	0
Total	4 260 044	100



LATEST POLICIES, PROGRAMMES AND LEGISLATION

- 1 California Governor's Budget Summary: Lithium Valley Development 2022
- 2 Final List of Critical Minerals 2022 2022
- 3 Infrastructure and Jobs act: "Building a Better Grid" Initiative 2022
- 4 Infrastructure and Jobs act: Clean hydrogen initiatives 2022
- 5 Interagency Working Group on Mining Reform Fundamental Principles 2022

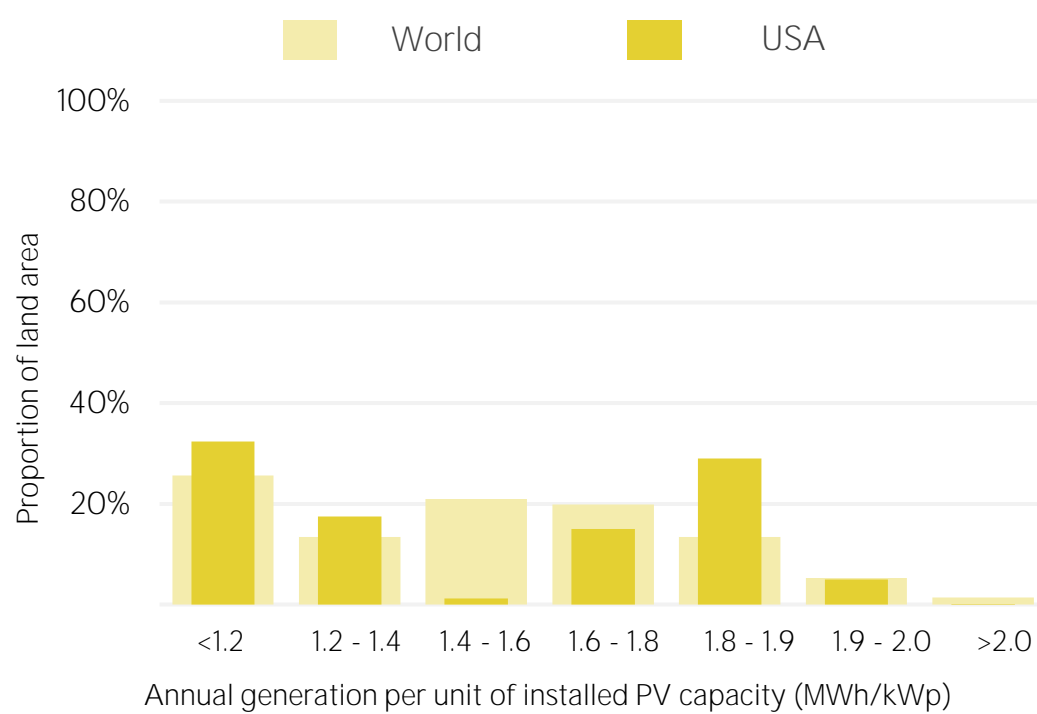
ENERGY AND EMISSIONS



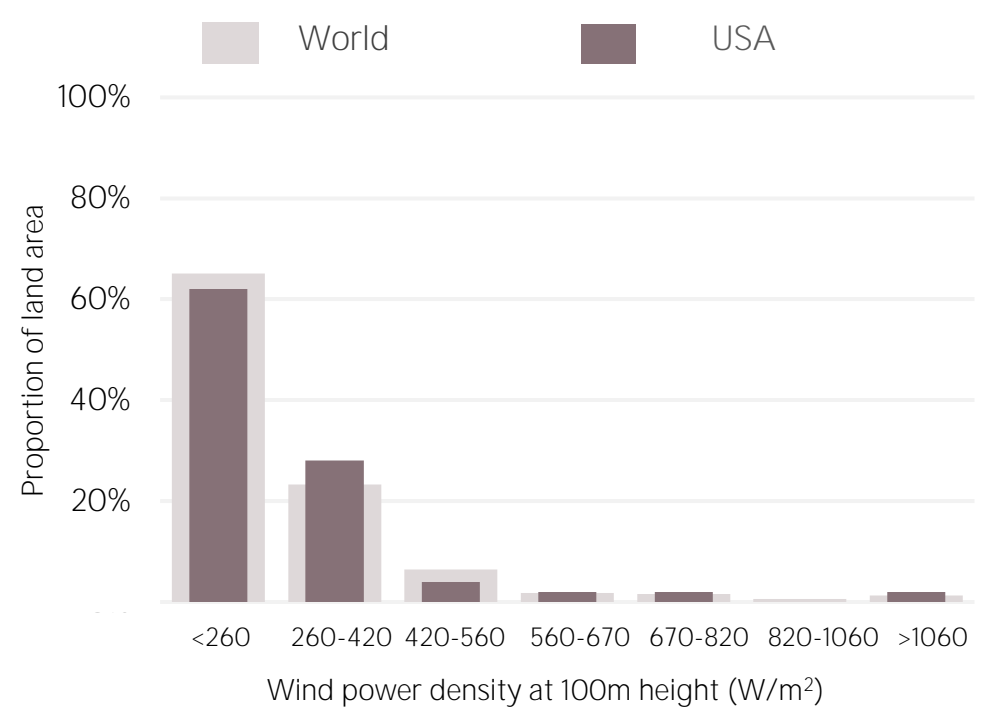
Avoided emissions based on fossil fuel mix used for power

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

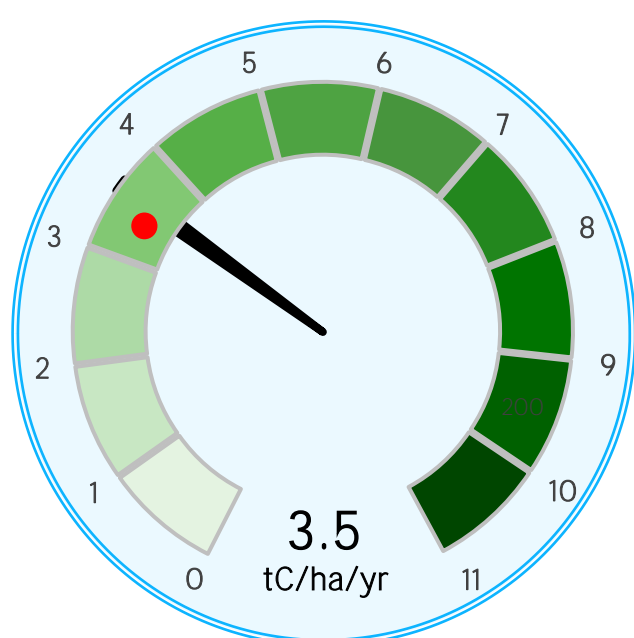
Distribution of solar potential



Distribution of wind potential



Biomass potential: net primary production



● = Global average of 3-4 tC/ha/yr

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.

Last updated on: 24th August, 2022