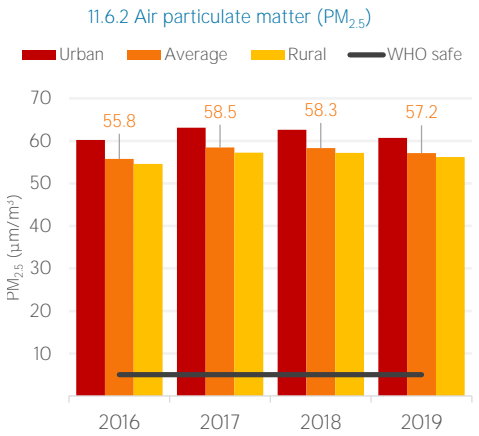
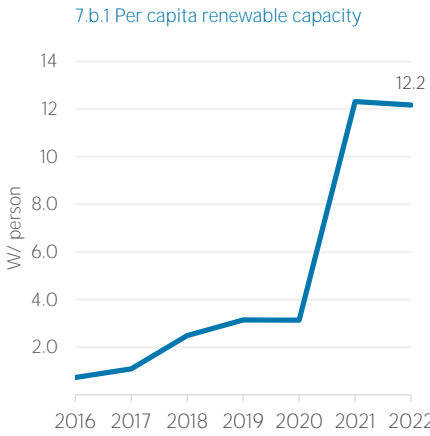
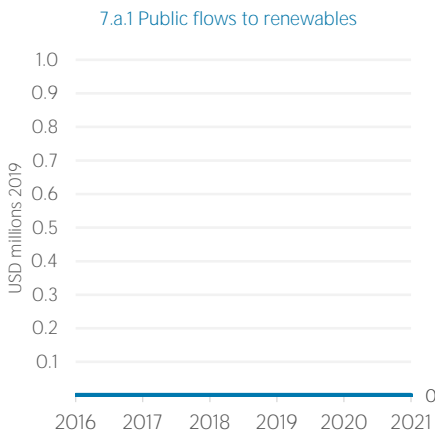
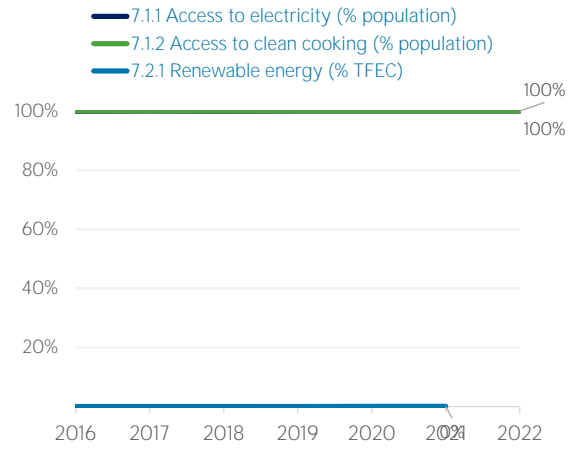
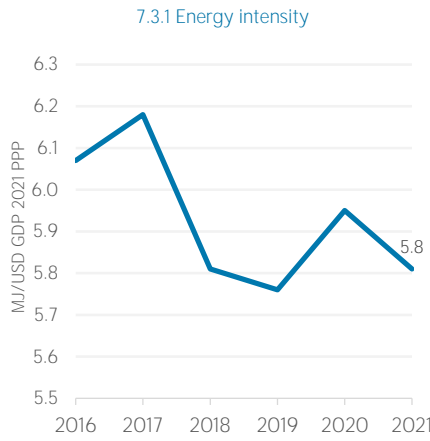
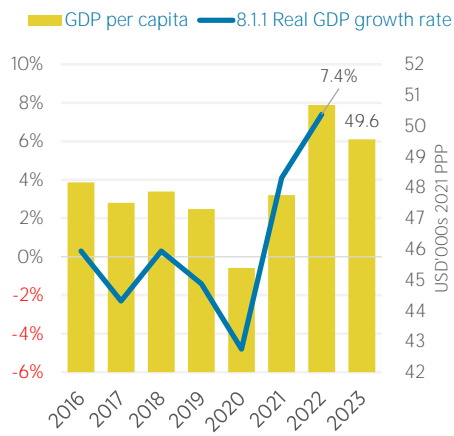


COUNTRY INDICATORS AND SDGS

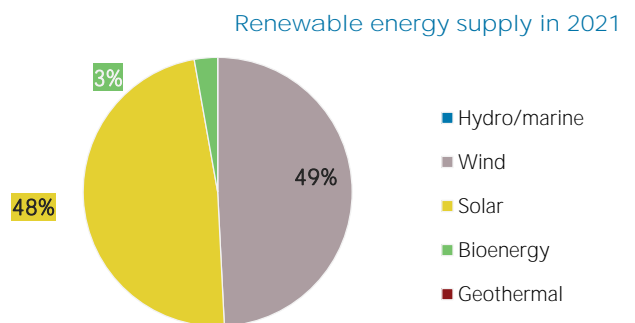
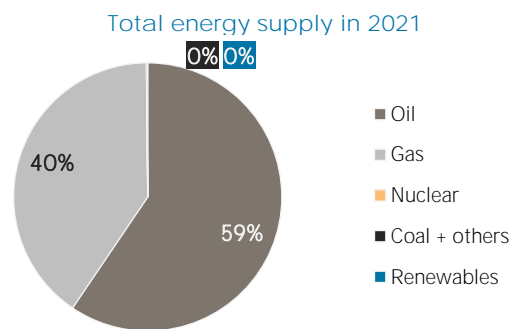


TOTAL ENERGY SUPPLY (TES)

Total Energy Supply (TES)	2016	2021
Non-renewable (TJ)	9 976 501	10 949 330
Renewable (TJ)	552	11 618
Total (TJ)	9 977 053	10 960 948
Renewable share (%)	0	0

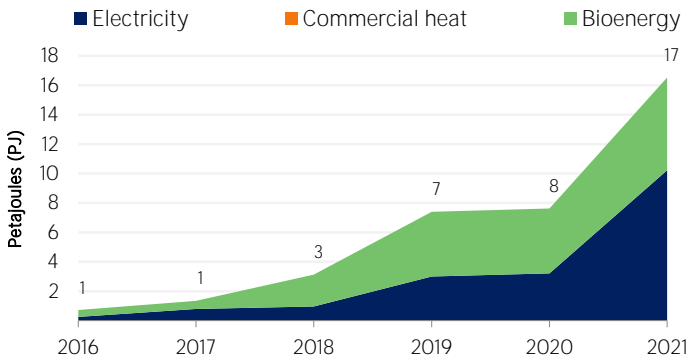
Growth in TES	2016-21	2020-21
Non-renewable (%)	+9.8	+16.0
Renewable (%)	+2005.9	+152.5
Total (%)	+9.9	+16.0

Primary energy trade	2016	2021
Imports (TJ)	1 193 974	814 444
Exports (TJ)	19 916 261	16 345 124
Net trade (TJ)	18 722 287	15 530 680
Imports (% of supply)	12	7
Exports (% of production)	69	61
Energy self-sufficiency (%)	287	243



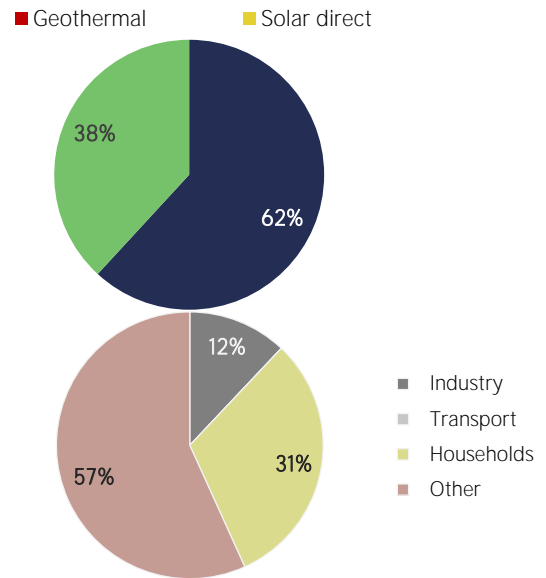
RENEWABLE ENERGY CONSUMPTION (TFEC)

Renewable TFEC trend



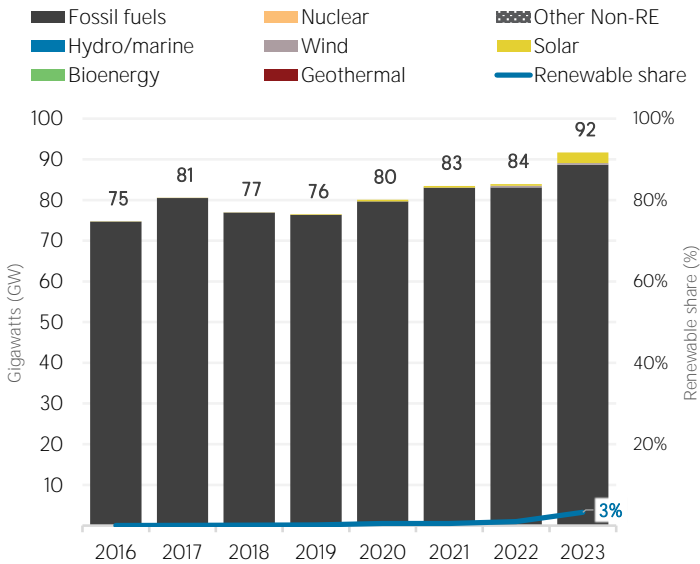
Consumption by sector	2016	2021
Industry (TJ)	37	1 990
Transport (TJ)	0	0
Households (TJ)	434	5 154
Other (TJ)	247	9 381

Renewable energy consumption in 2021

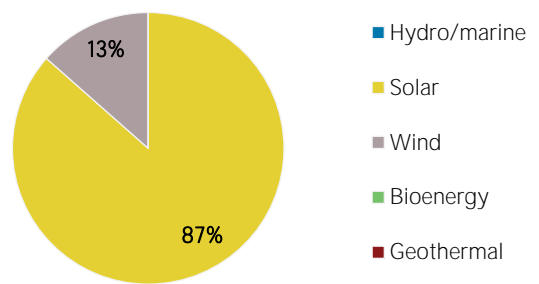


ELECTRICITY CAPACITY

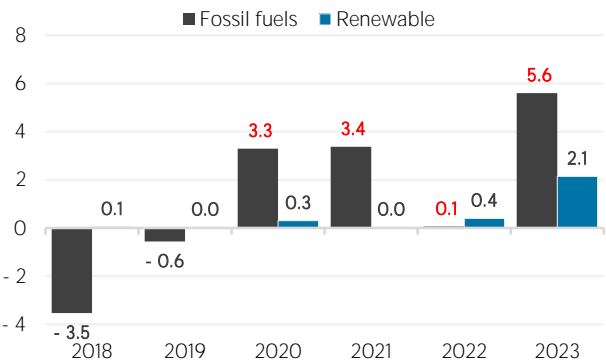
Installed capacity trend



Renewable capacity in 2023



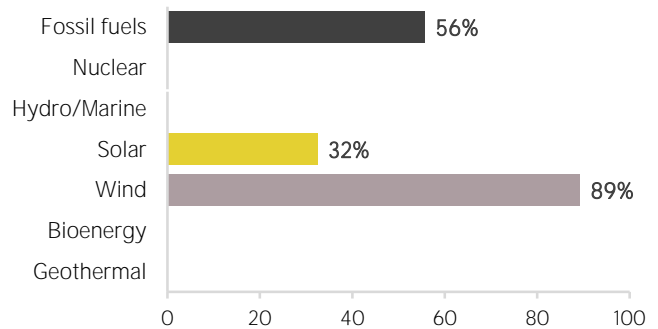
Net capacity change (GW)



Net capacity change in 2023 (MW)

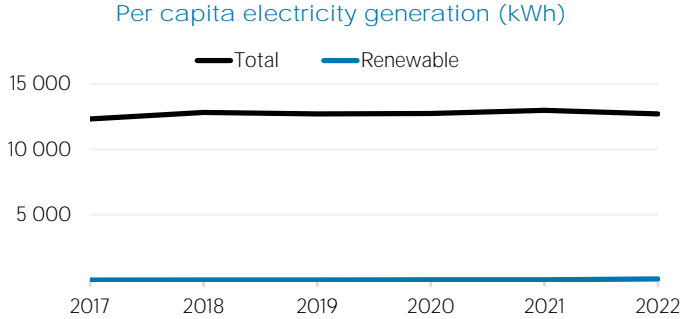
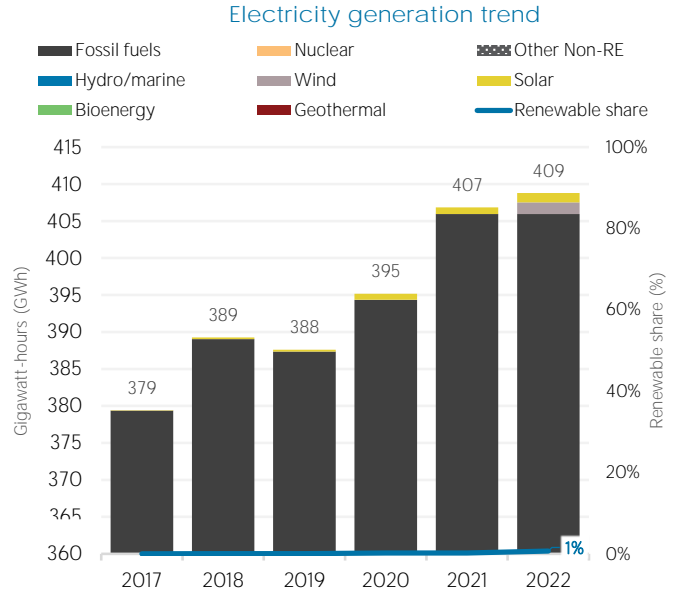
Non-renewable	+ 5 600	Hydro and marine	0
Solar	+ 2 146	Wind	0
Bioenergy	0	Geothermal	0

Capacity utilisation in 2022 (%)



ELECTRICITY GENERATION

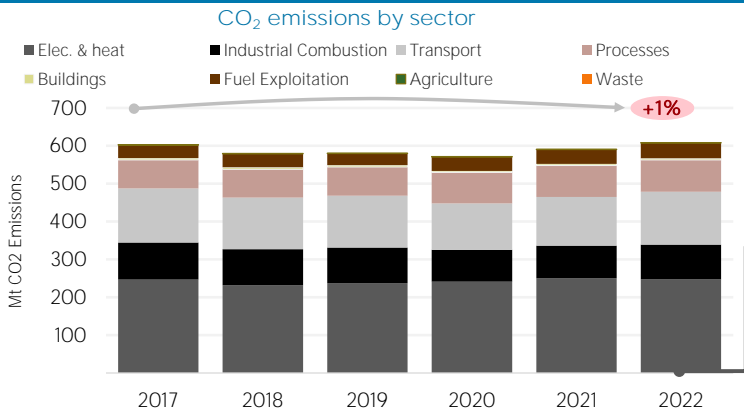
Generation in 2022	GWh	%
Non-renewable	405 949	99
Renewable	2 839	1
Hydro and marine	0	0
Solar	1 251	0
Wind	1 588	0
Bioenergy	0	0
Geothermal	0	0
Total	408 788	100



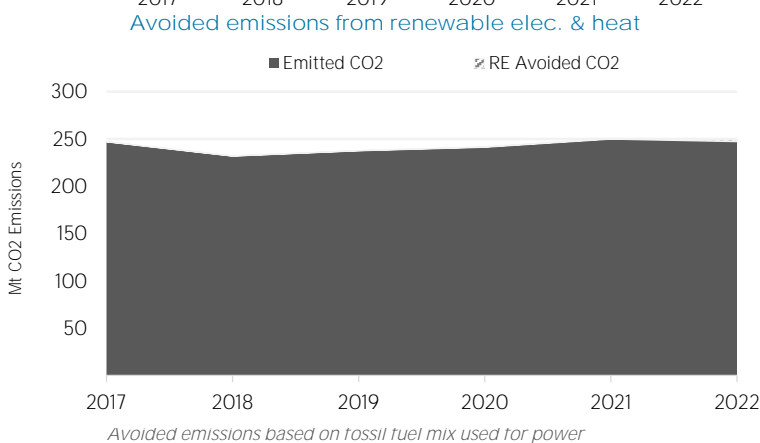
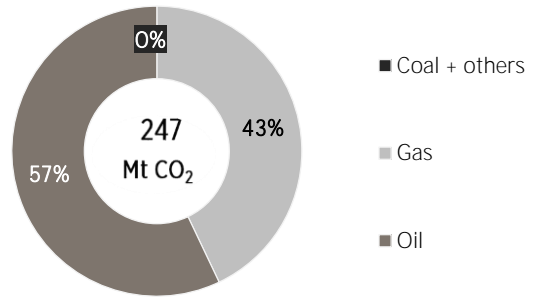
LATEST POLICIES, PROGRAMMES AND LEGISLATION

- 1 King Salman Energy Park (SPARK) 2021
- 2 Saudi Arabia - Sudair Solar Plant Project 2021
- 3 Saudi Green Initiative 2021
- 4 Saudi Green Initiative - renewable investments 2021
- 5 Saudi Arabia Minimum Energy Performance Standards for Electric Motors 2018

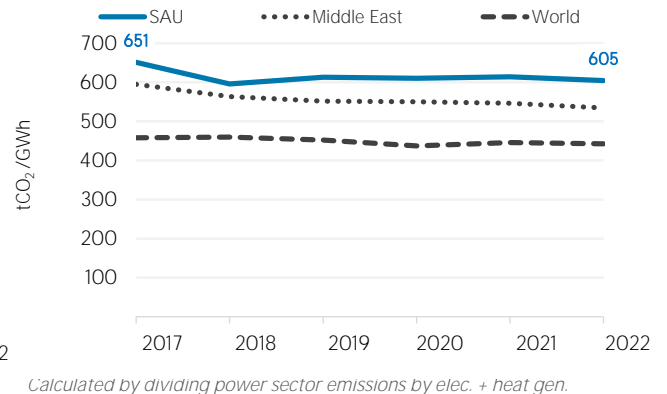
ENERGY AND EMISSIONS



Elec. & heat generation CO₂ emissions in



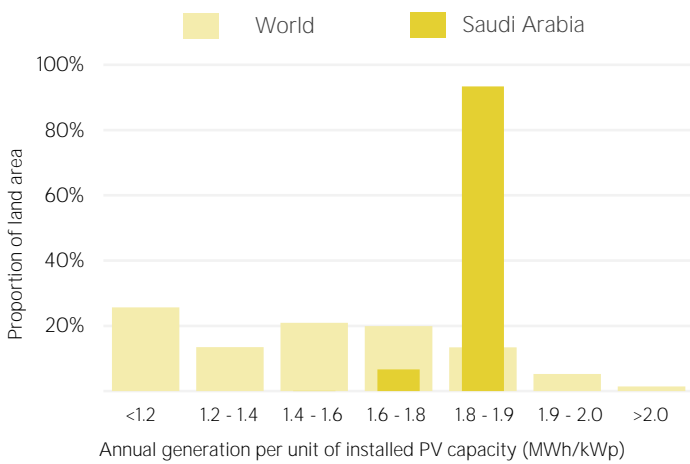
CO₂ emission factor for elec. & heat generation



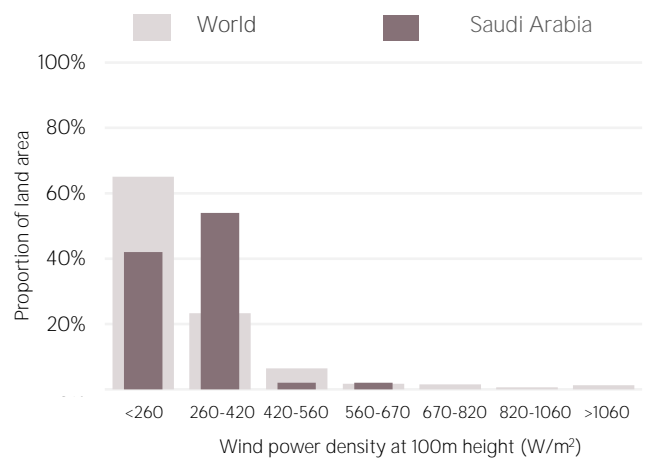
Avoided emissions based on fossil fuel mix used for power

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

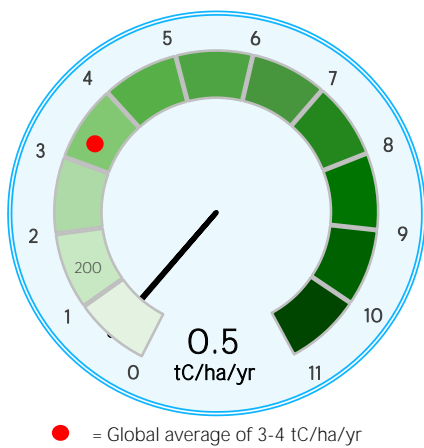
Distribution of solar potential



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^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.

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