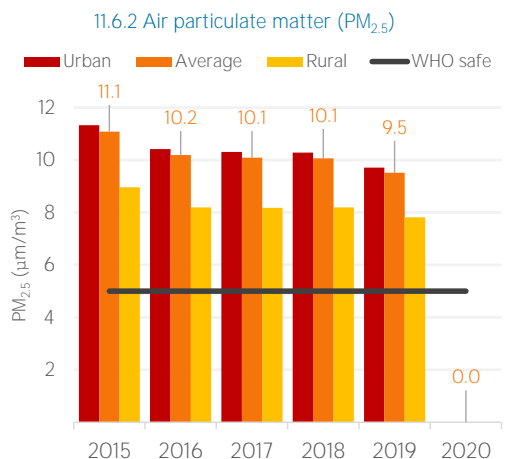
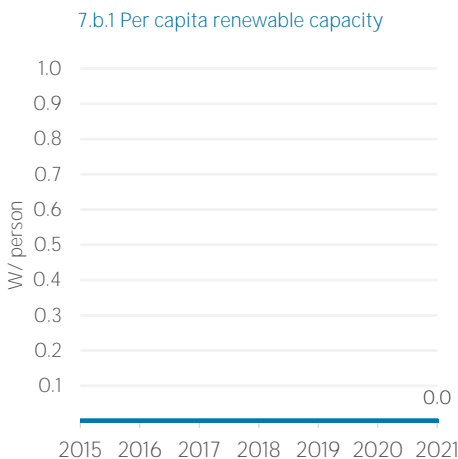
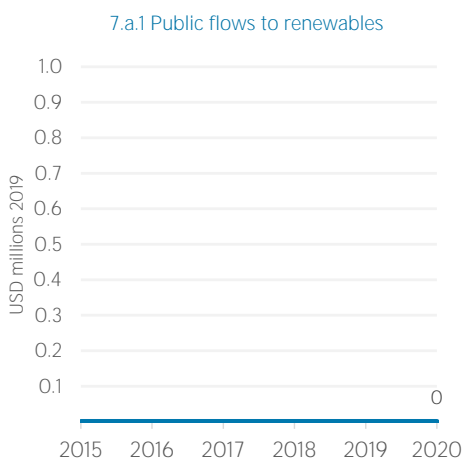
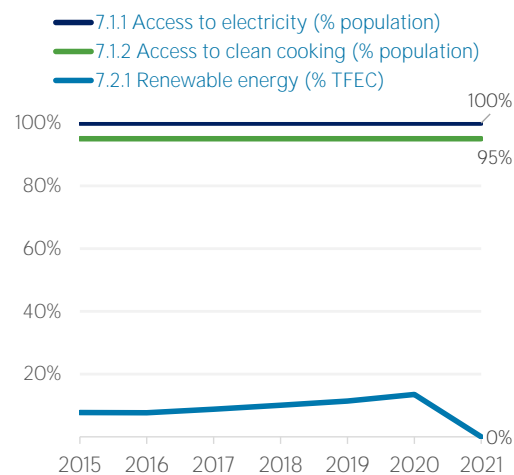
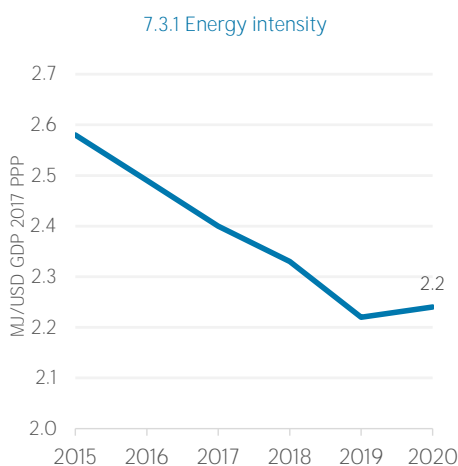
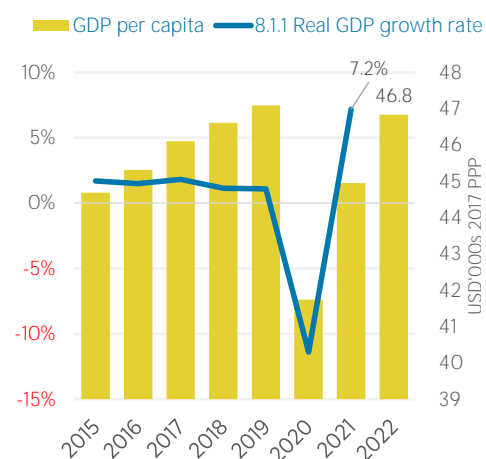


## COUNTRY INDICATORS AND SDGS



## TOTAL ENERGY SUPPLY (TES)

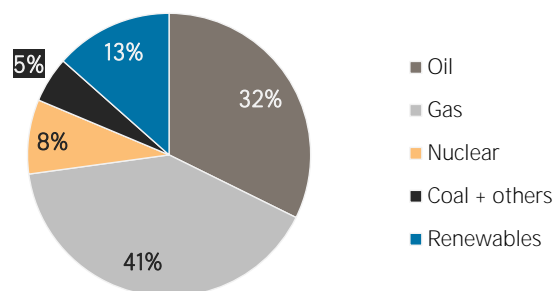
Total Energy Supply (TES)	2015	2020
Non-renewable (TJ)	6 962 991	5 532 812
Renewable (TJ)	628 343	860 529
Total (TJ)	7 591 334	6 393 342
Renewable share (%)	8	13

Growth in TES	2015-20	2019-20
Non-renewable (%)	-20.5	-11.3
Renewable (%)	+37.0	-9.1
Total (%)	-15.8	-11.0

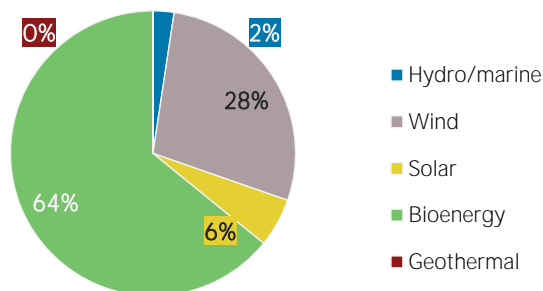
Primary energy trade	2015	2020
Imports (TJ)	6 032 724	4 755 984
Exports (TJ)	2 976 987	2 938 338
Net trade (TJ)	-3 055 737	-1 817 646

Imports (% of supply)	79	74
Exports (% of production)	60	61
Energy self-sufficiency (%)	65	76

Total energy supply in 2020

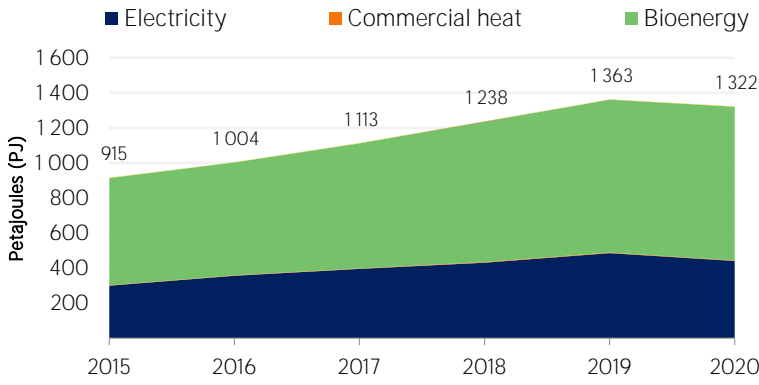


Renewable energy supply in 2020



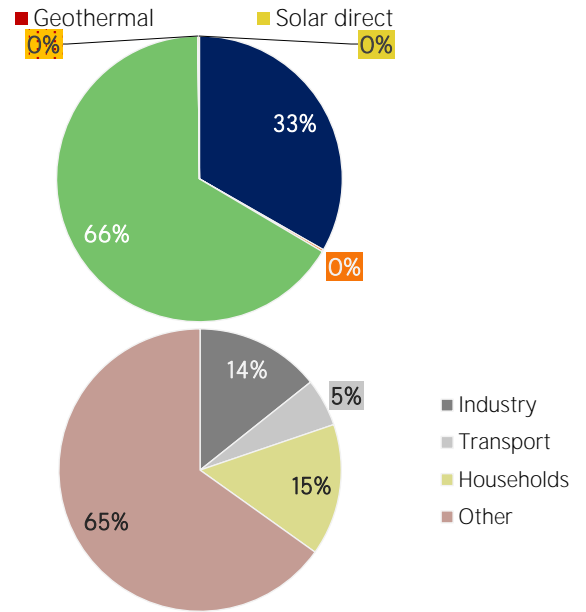
# RENEWABLE ENERGY CONSUMPTION (TFEC)

### Renewable TFEC trend



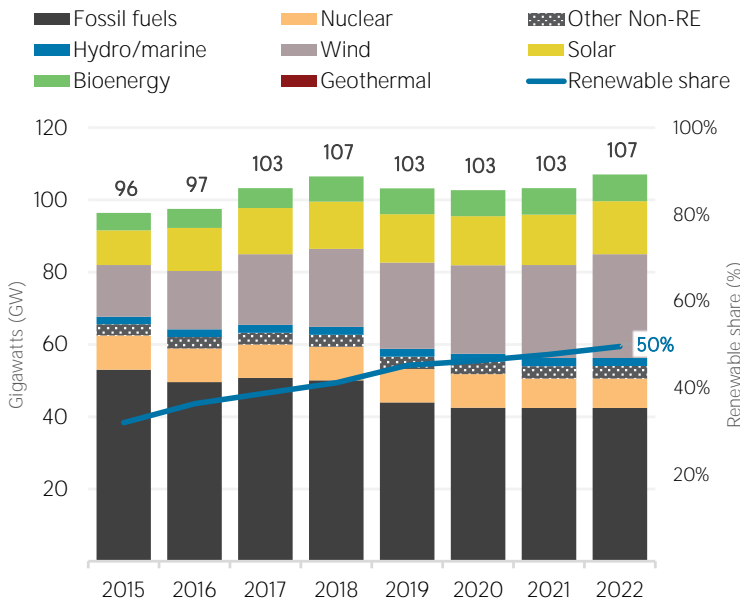
Consumption by sector	2015	2020
Industry (TJ)	130 594	189 047
Transport (TJ)	43 314	72 480
Households (TJ)	171 139	199 514
Other (TJ)	570 283	861 352

### Renewable energy consumption in 2020

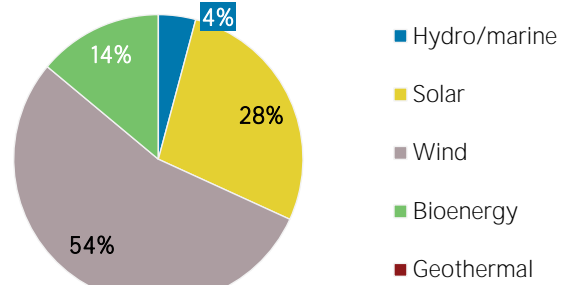


# ELECTRICITY CAPACITY

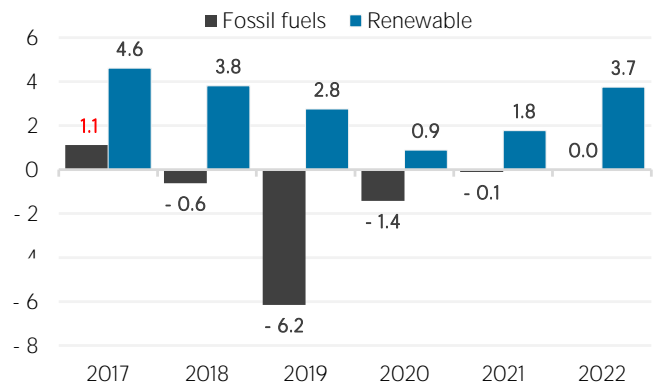
### Installed capacity trend



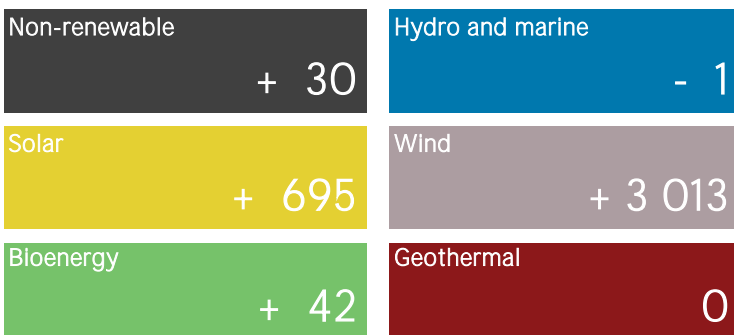
### Renewable capacity in 2022



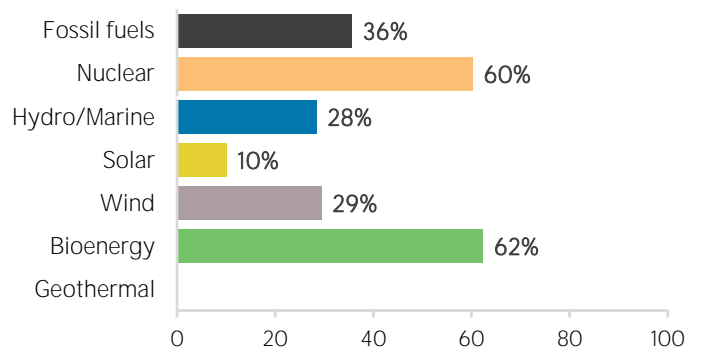
### Net capacity change (GW)



### Net capacity change in 2022 (MW)



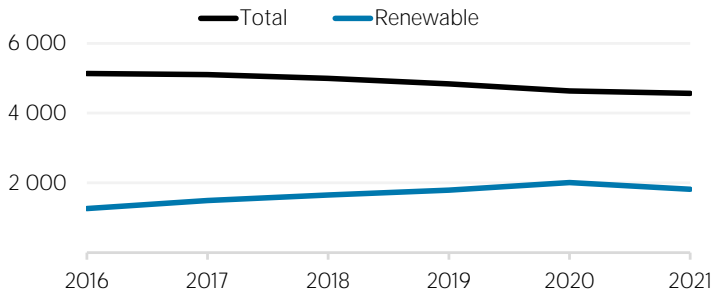
### Capacity utilisation in 2021 (%)



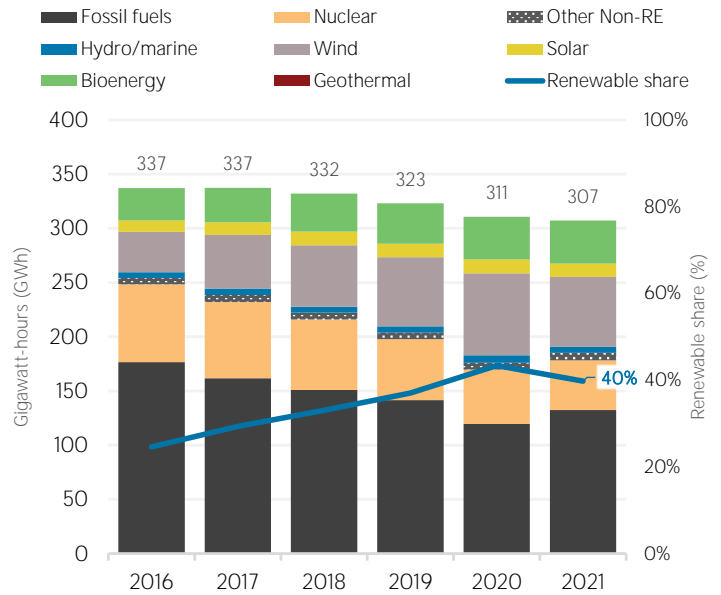
## ELECTRICITY GENERATION

Generation in 2021	GWh	%
<b>Non-renewable</b>	<b>185 138</b>	<b>60</b>
<b>Renewable</b>	<b>122 178</b>	<b>40</b>
Hydro and marine	5 501	2
Solar	12 138	4
Wind	64 662	21
Bioenergy	39 877	13
Geothermal	0	0
<b>Total</b>	<b>307 316</b>	<b>100</b>

Per capita electricity generation (kWh)



Electricity generation trend

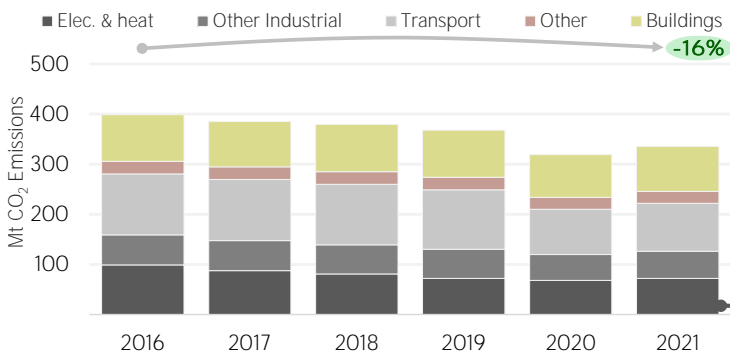


## LATEST POLICIES, PROGRAMMES AND LEGISLATION

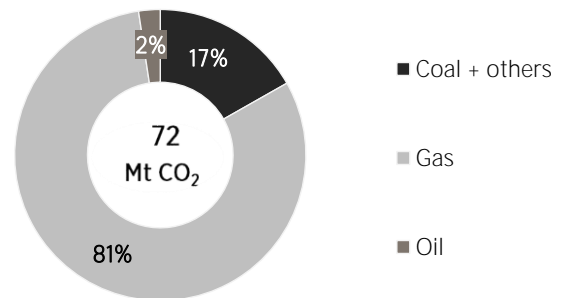
- 2023 Social Housing Decarbonisation Fund and Home Upgrade Grant allocations 2023
- Household Support Fund - 4th extension 2023
- [2nd Package] Spring Statement 2022: Measures supporting households 2022
- [3rd package] Cost of living package 2022
- Automotive Transformation Fund 2022

## ENERGY AND EMISSIONS

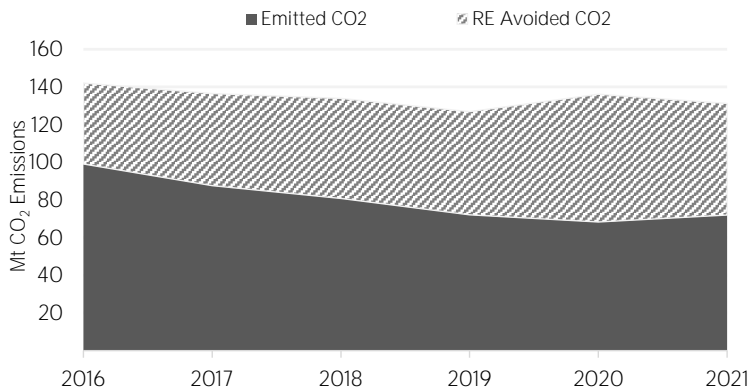
Energy-related CO<sub>2</sub> emissions by sector



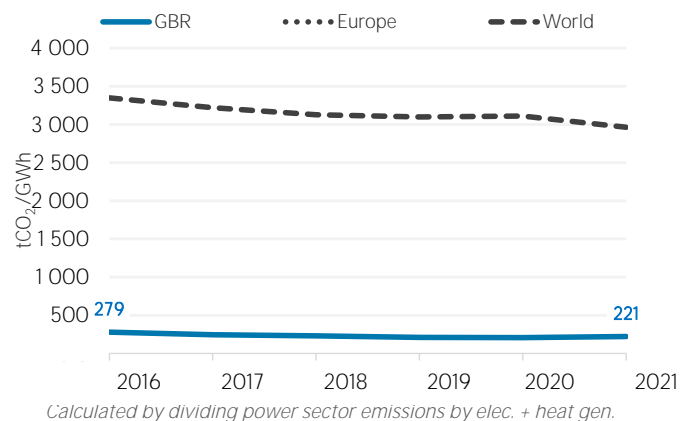
Elec. & heat generation CO<sub>2</sub> emissions in



Avoided emissions from renewable elec. & heat



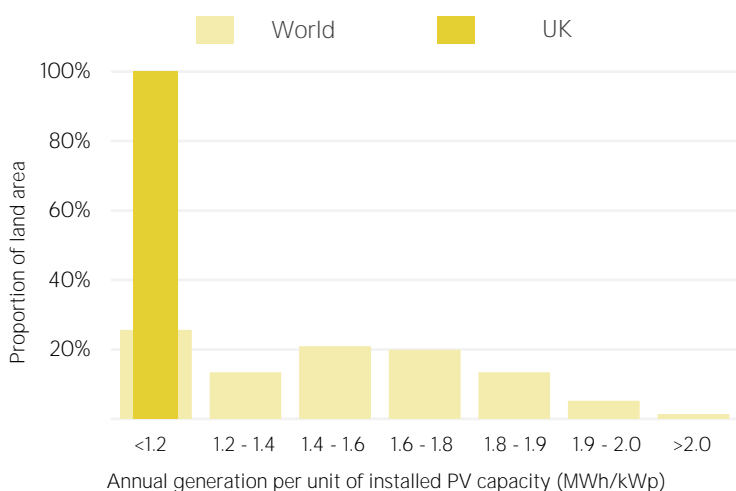
CO<sub>2</sub> emission factor for elec. & heat generation



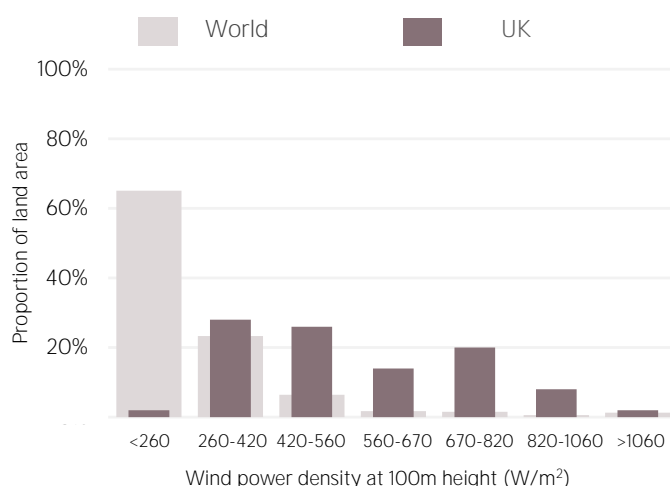
Avoided emissions based on fossil fuel mix used for power

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

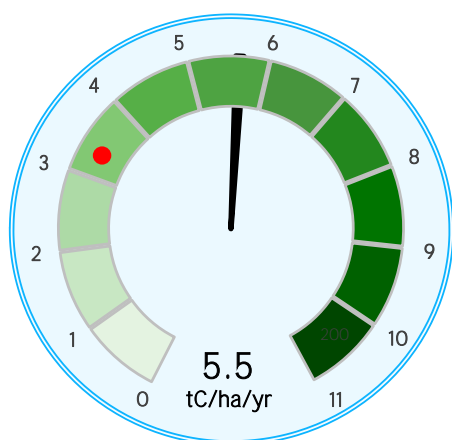
Distribution of solar potential



Distribution of wind potential



Biomass potential: net primary production



● = 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 ( $W/m^2$ ) 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).

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