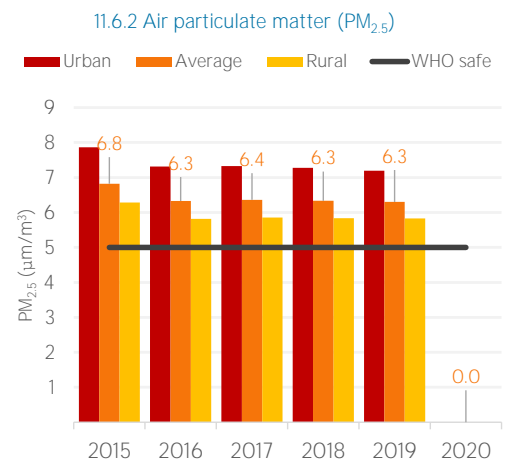
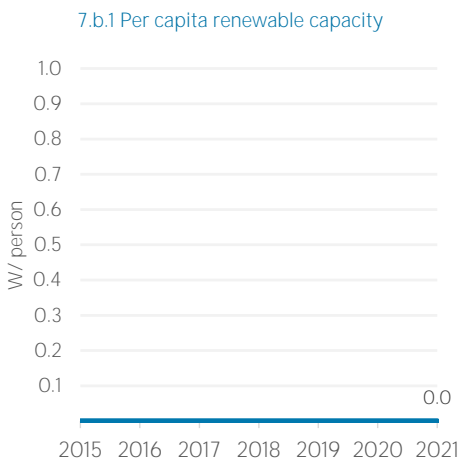
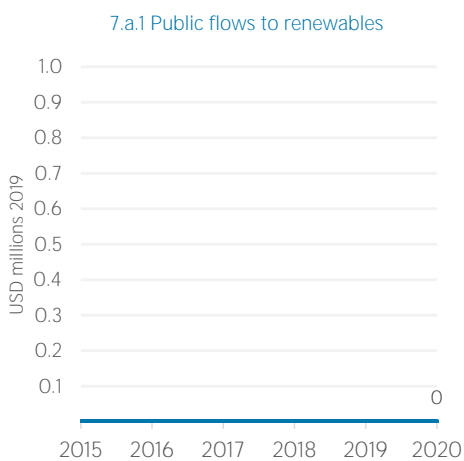
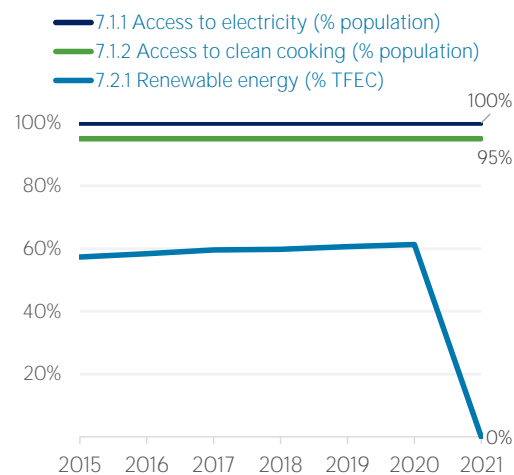
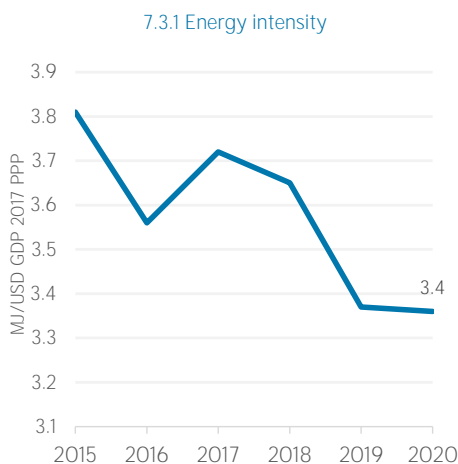
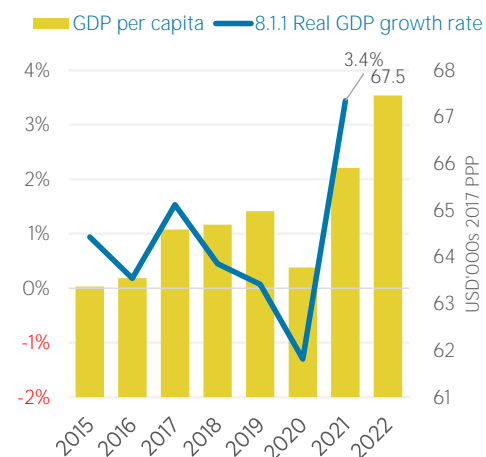


COUNTRY INDICATORS AND SDGS



TOTAL ENERGY SUPPLY (TES)

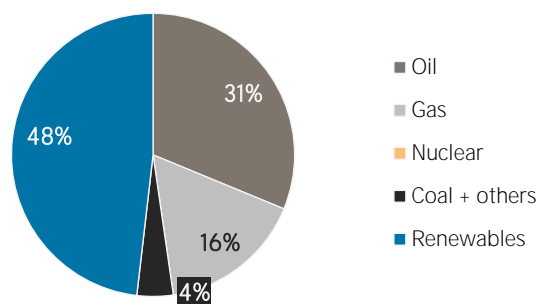
Total Energy Supply (TES)	2015	2020
Non-renewable (TJ)	709 684	598 144
Renewable (TJ)	520 046	555 695
Total (TJ)	1 229 730	1 153 838
Renewable share (%)	42	48

Growth in TES	2015-20	2019-20
Non-renewable (%)	-15.7	-2.6
Renewable (%)	+6.9	-9.9
Total (%)	-6.2	-6.3

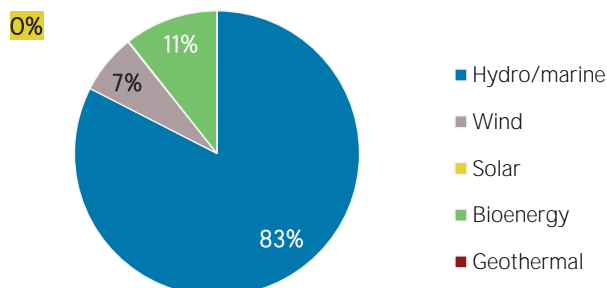
Primary energy trade	2015	2020
Imports (TJ)	338 993	454 557
Exports (TJ)	7 773 889	7 985 566
Net trade (TJ)	7 434 896	7 531 009

Imports (% of supply)	28	39
Exports (% of production)	89	91
Energy self-sufficiency (%)	708	758

Total energy supply in 2020

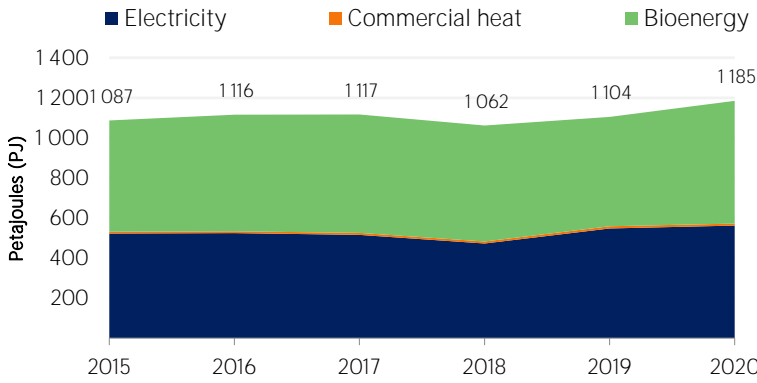


Renewable energy supply in 2020



RENEWABLE ENERGY CONSUMPTION (TFEC)

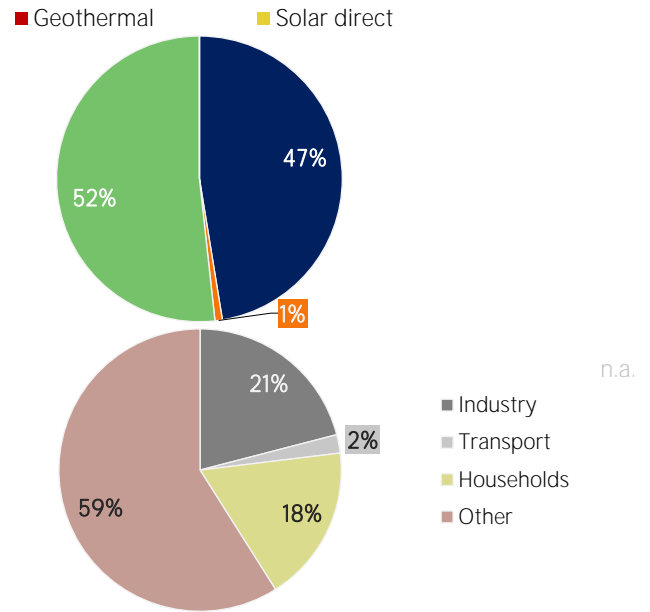
Renewable TFEC trend



Consumption by sector

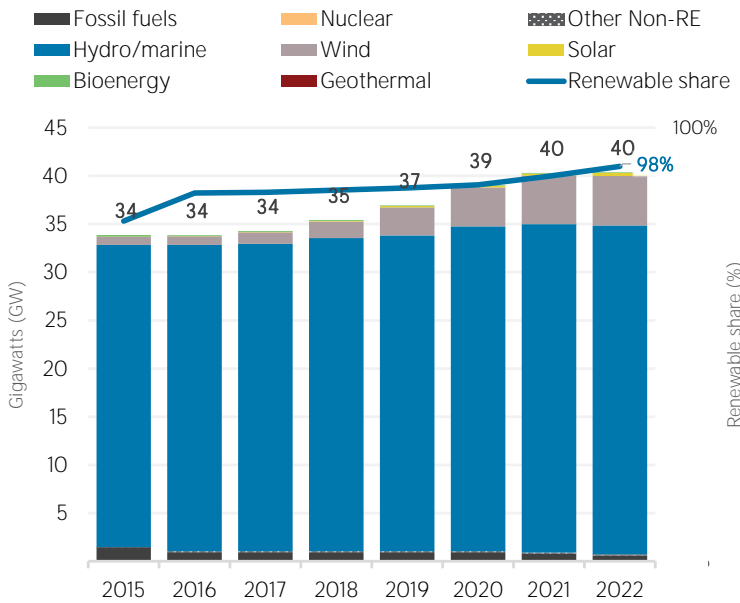
	2015	2020
Industry (TJ)	223 238	248 388
Transport (TJ)	10 047	25 022
Households (TJ)	203 747	212 685
Other (TJ)	650 251	698 783

Renewable energy consumption in 2020

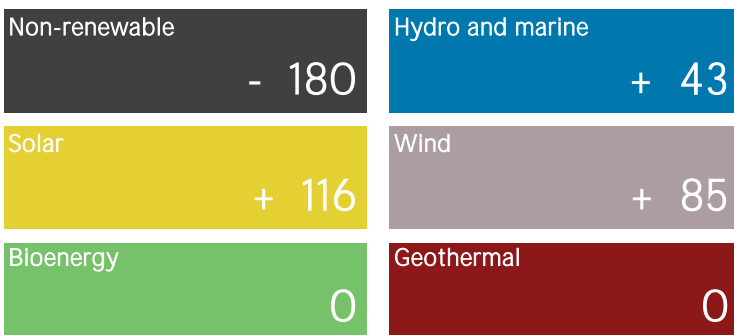


ELECTRICITY CAPACITY

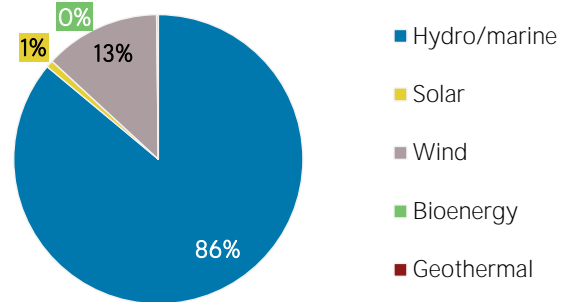
Installed capacity trend



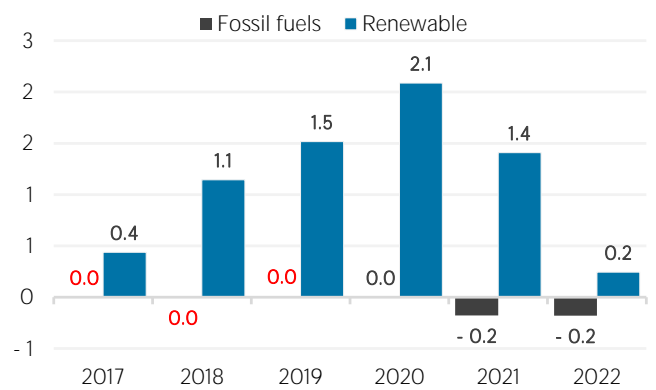
Net capacity change in 2022 (MW)



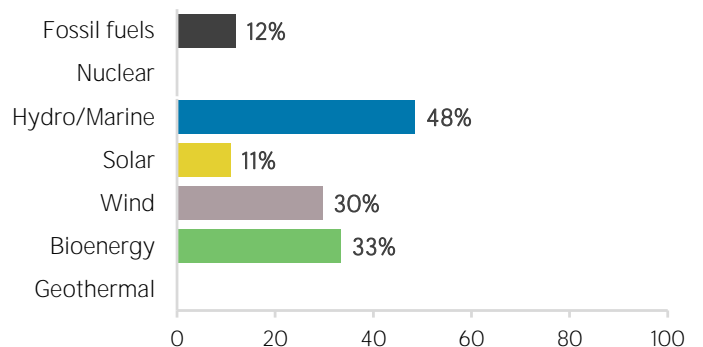
Renewable capacity in 2022



Net capacity change (GW)



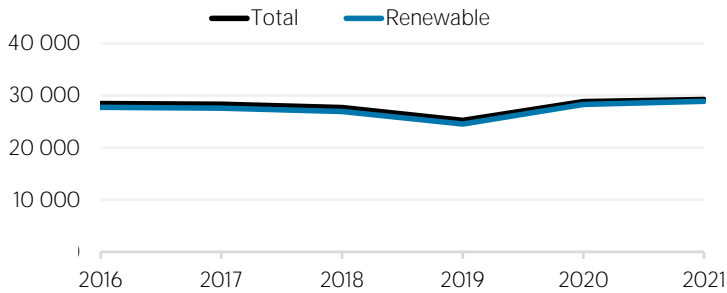
Capacity utilisation in 2021 (%)



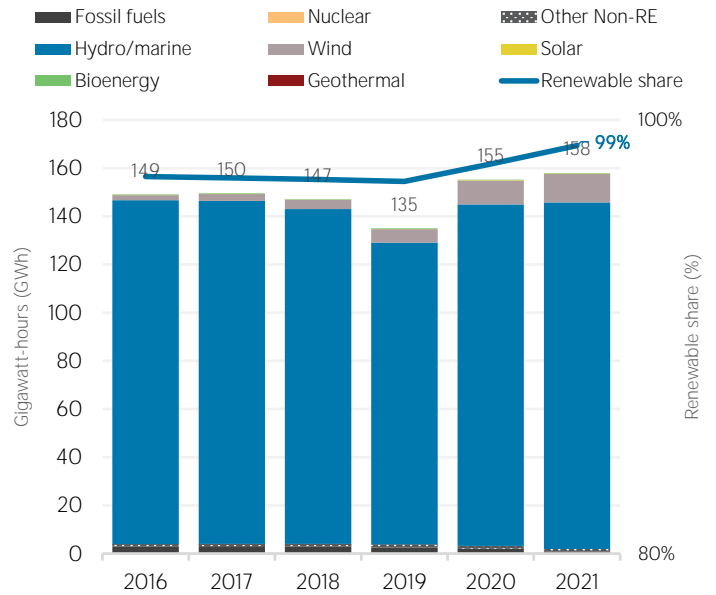
ELECTRICITY GENERATION

Generation in 2021	GWh	%
Non-renewable	1 865	1
Renewable	156 101	99
Hydro and marine	143 934	91
Solar	175	0
Wind	11 769	7
Bioenergy	224	0
Geothermal	0	0
Total	157 966	100

Per capita electricity generation (kWh)



Electricity generation trend

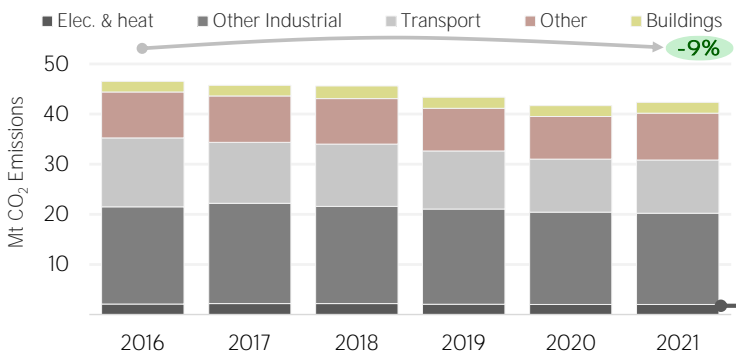


LATEST POLICIES, PROGRAMMES AND LEGISLATION

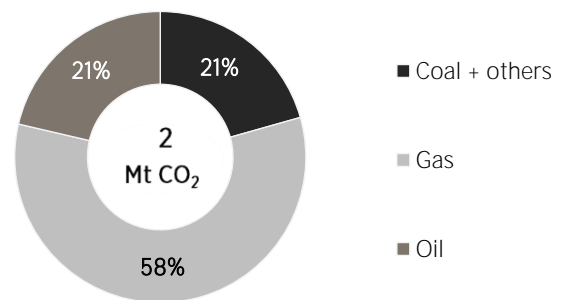
- 2023 fuel tax cuts 2023
- Competitions for offshore wind development 2023
- State budget 2023 - extension of households' electricity subsidy 2023
- 2022 - 2033 National Transport Plan - Railway 2022
- 2022 - 2033 National Transport Plan - Urban growth agreement 2022

ENERGY AND EMISSIONS

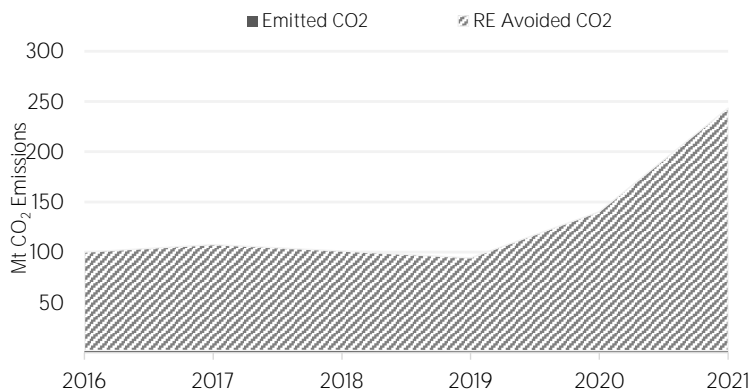
Energy-related CO₂ emissions by sector



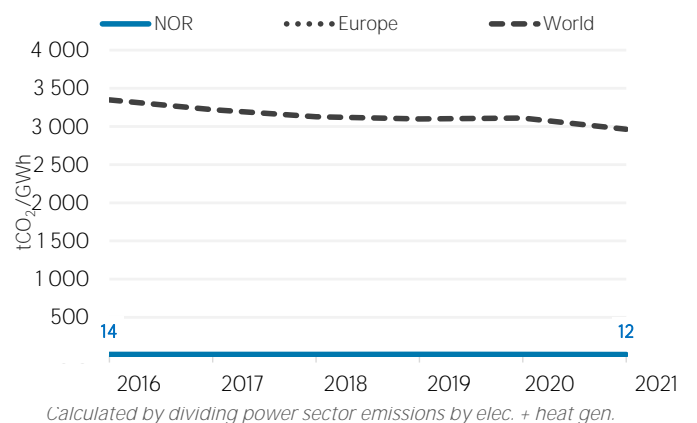
Elec. & heat generation CO₂ emissions in



Avoided emissions from renewable elec. & heat



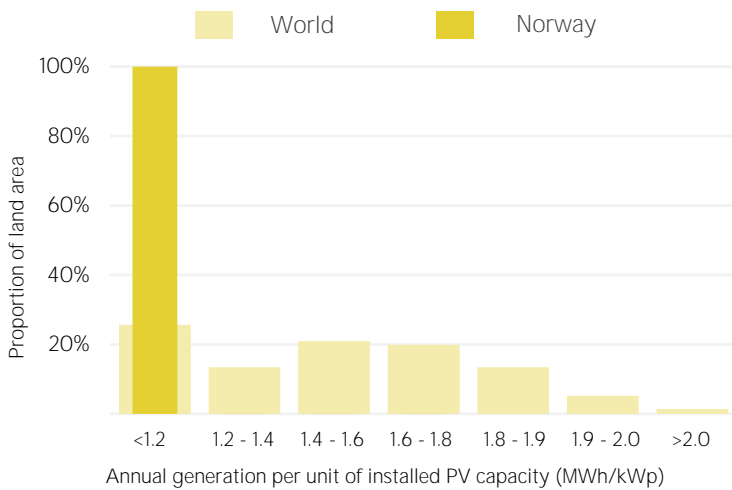
CO₂ emission factor for elec. & heat generation



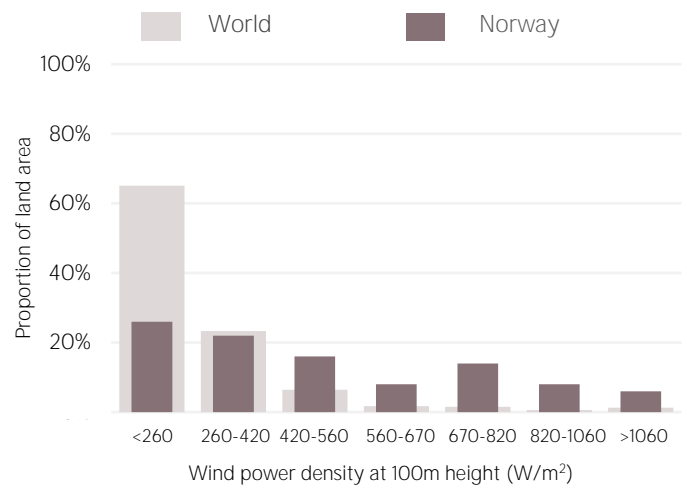
Avoided emissions based on fossil fuel mix used for power

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

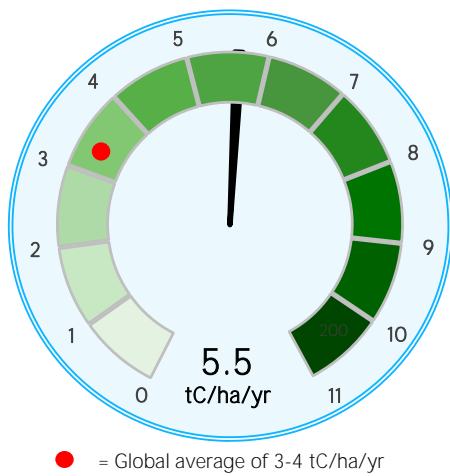
Distribution of solar potential



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.

Last updated on: 8th August, 2023