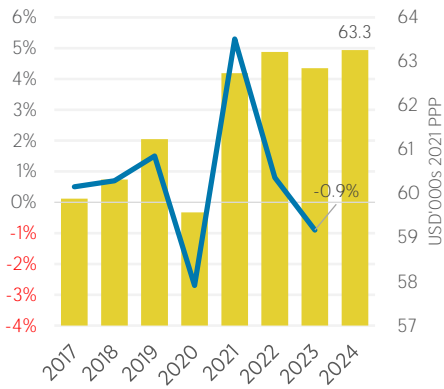
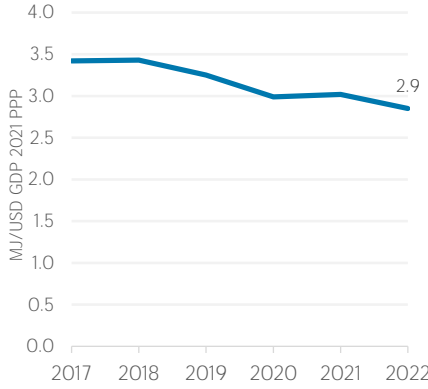


COUNTRY INDICATORS AND SDGS

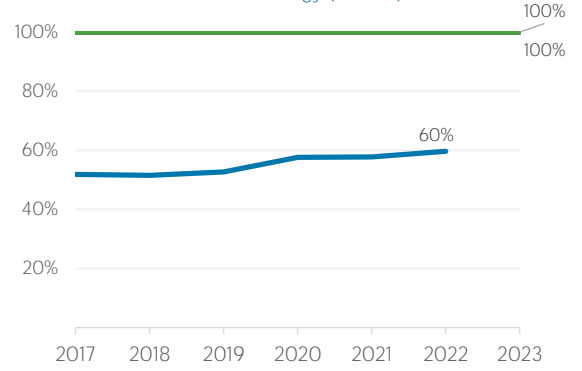
GDP per capita 8.1.1 Real GDP growth rate



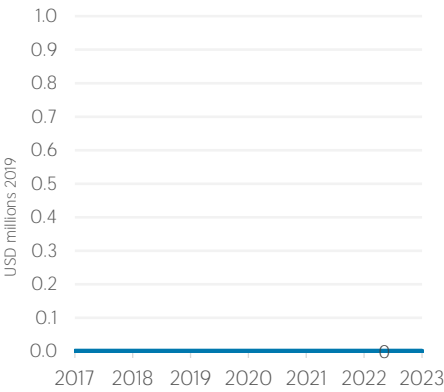
7.3.1 Energy intensity



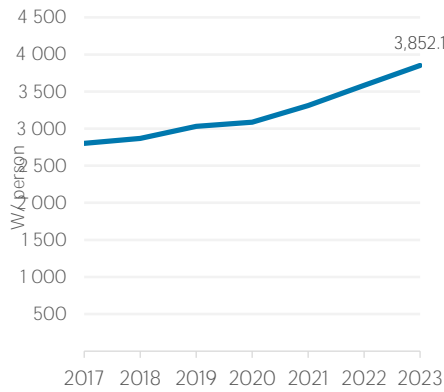
7.1.1 Access to electricity (% population)
7.1.2 Access to clean cooking (% population)
7.2.1 Renewable energy (% TFE)



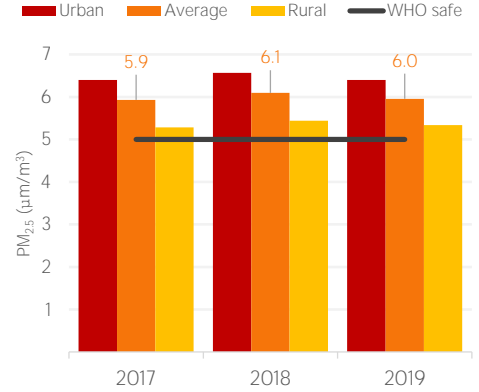
7.a.1 Public flows to renewables



7.b.1 Per capita renewable capacity



11.6.2 Air particulate matter (PM_{2.5})

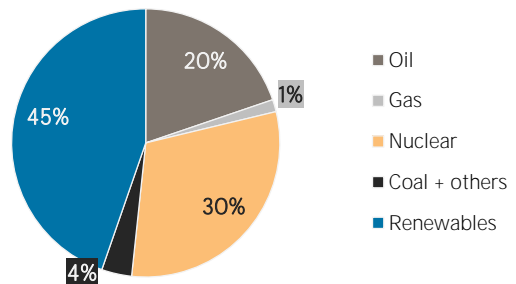


TOTAL ENERGY SUPPLY (TES)

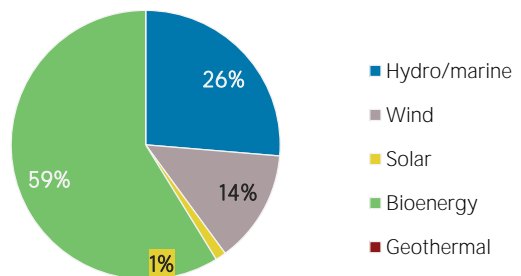
Total Energy Supply (TES)	2017	2022
Non-renewable (TJ)	1 257 271	1 019 428
Renewable (TJ)	755 077	823 657
Total (TJ)	2 012 348	1 843 085
Renewable share (%)	38	45

Growth in TES	2017-22	2021-22
Non-renewable (%)	-18.9	-6.1
Renewable (%)	+9.1	-5.1
Total (%)	-8.4	-5.6

Total energy supply in 2022



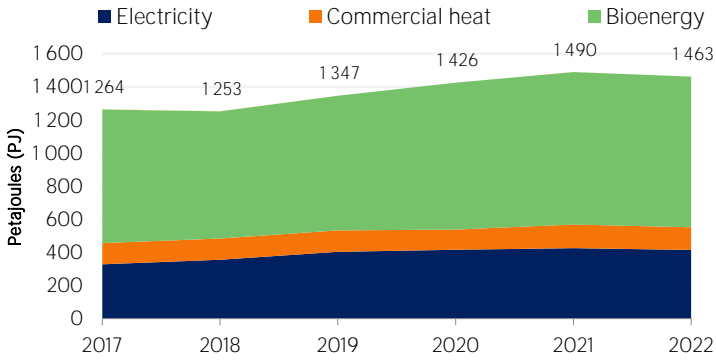
Renewable energy supply in 2022



Primary energy trade	2017	2022
Imports (TJ)	1 471 834	1 343 736
Exports (TJ)	886 444	809 264
Net trade (TJ)	- 585 390	- 534 472
Imports (% of supply)	73	73
Exports (% of production)	60	56
Energy self-sufficiency (%)	73	79

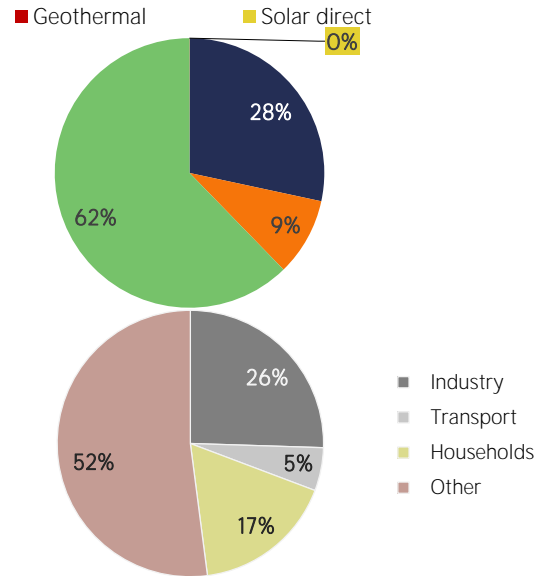
RENEWABLE ENERGY CONSUMPTION (TFEC)

Renewable TFEC trend



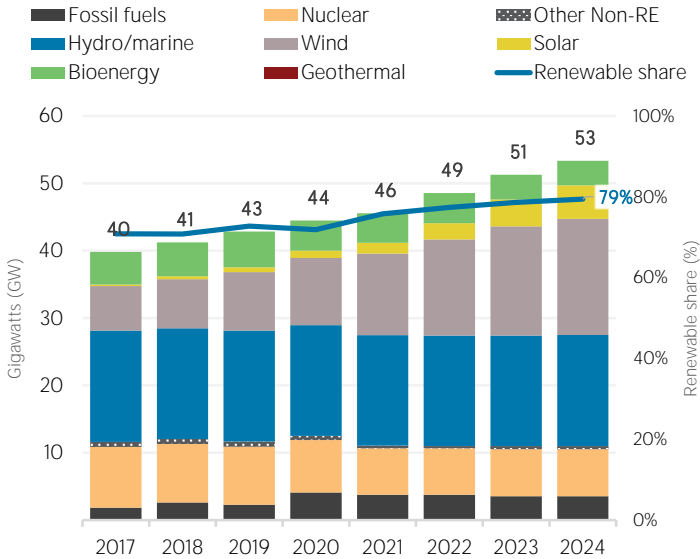
Consumption by sector	2017	2022
Industry (TJ)	323 872	372 992
Transport (TJ)	57 902	76 523
Households (TJ)	233 619	251 725
Other (TJ)	649 071	761 279

Renewable energy consumption in 2022

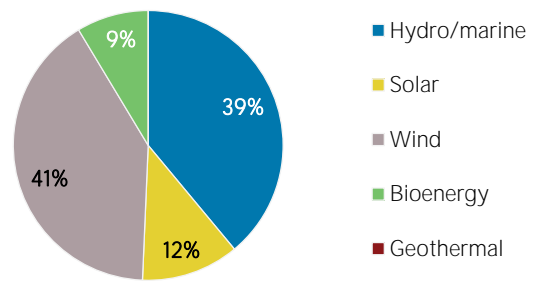


ELECTRICITY CAPACITY

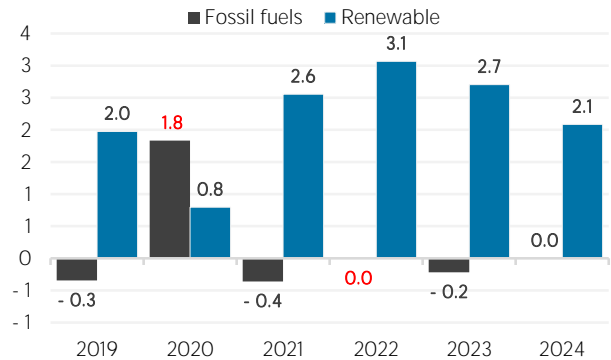
Installed capacity trend



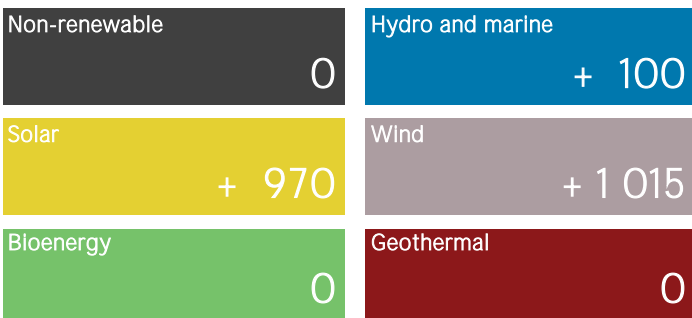
Renewable capacity in 2024



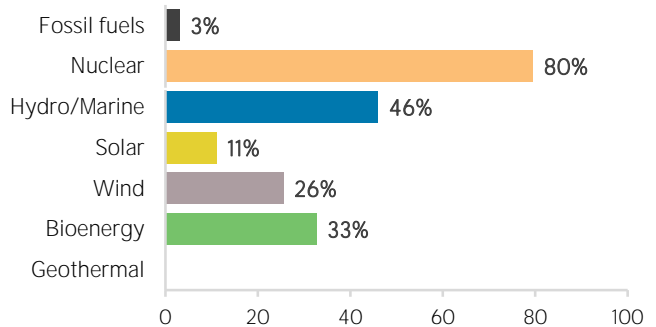
Net capacity change (GW)



Net capacity change in 2024 (MW)



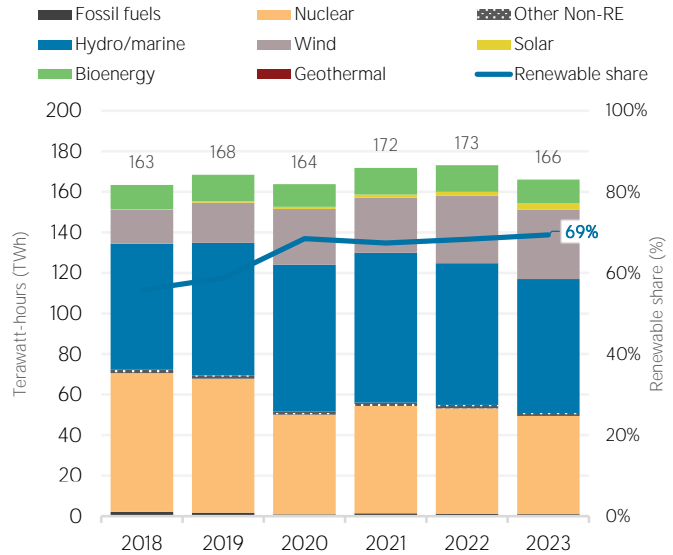
Capacity utilisation in 2023 (%)



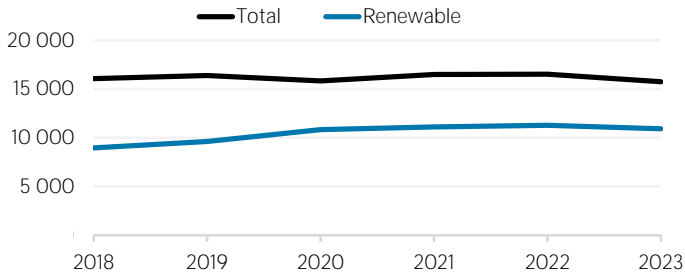
ELECTRICITY GENERATION

Generation in 2023	GWh	%
Non-renewable	50 847	31
Renewable	115 246	69
Hydro and marine	66 187	40
Solar	3 114	2
Wind	34 245	21
Bioenergy	11 700	7
Geothermal	0	0
Total	166 093	100

Electricity generation trend



Per capita electricity generation (kWh)

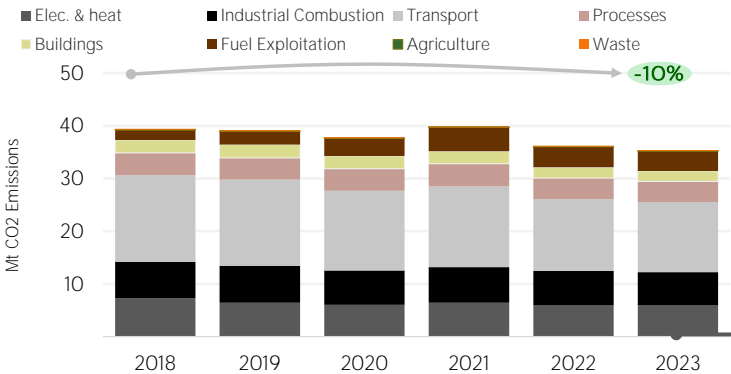


LATEST POLICIES, PROGRAMMES AND LEGISLATION

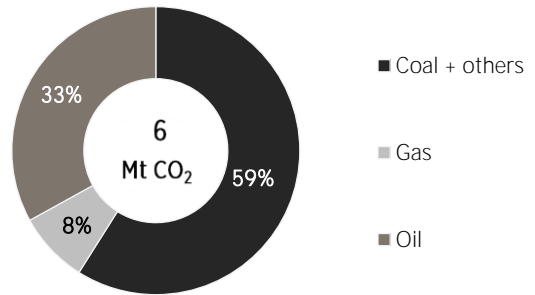
- Household energy efficiency measures 2025
- Memorandum on Natura 2000 permits in connection with mining operations 2024
- Multi-dwelling energy efficiency and housing investment aid 2024
- Regulation 2024/573 on fluorinated greenhouse gases 2024
- Electricity price support for electricity-intensive companies 2023

ENERGY AND EMISSIONS

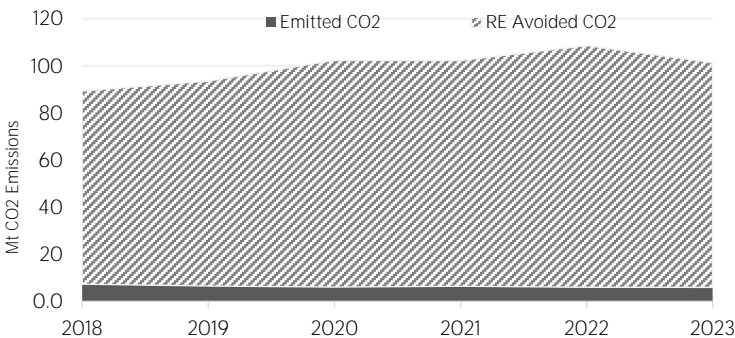
CO₂ emissions by sector



Elec. & heat generation CO₂ emissions in

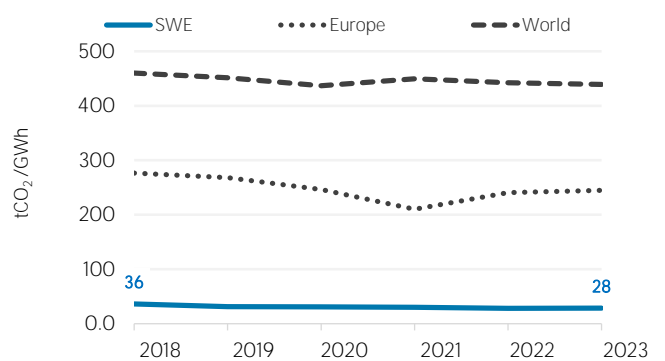


Avoided emissions from renewable elec. & heat



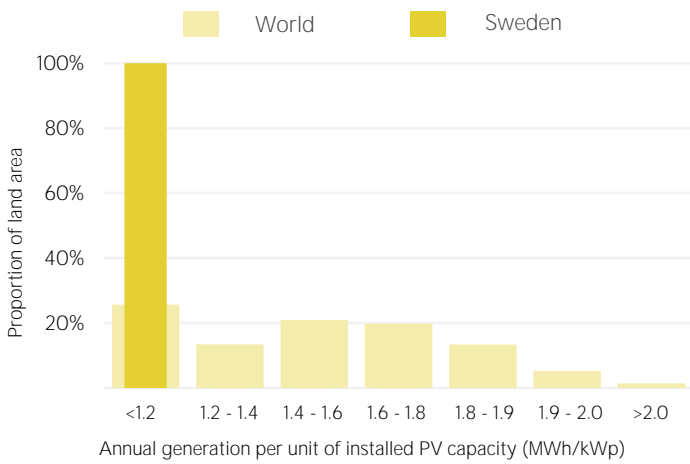
Avoided emissions based on fossil fuel mix used for power

CO₂ emission factor for elec. & heat generation

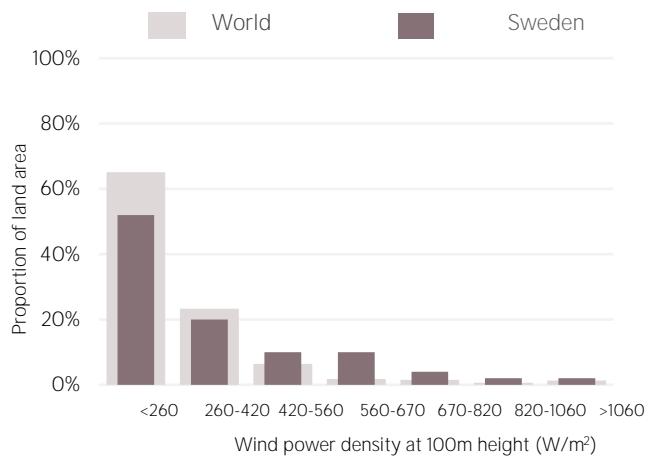


Calculated by dividing power sector emissions by elec. + heat gen.

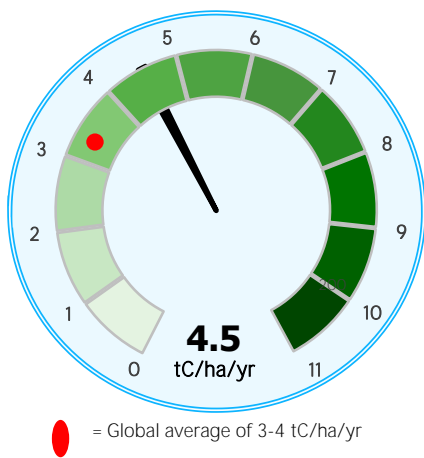
Distribution of solar potential



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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