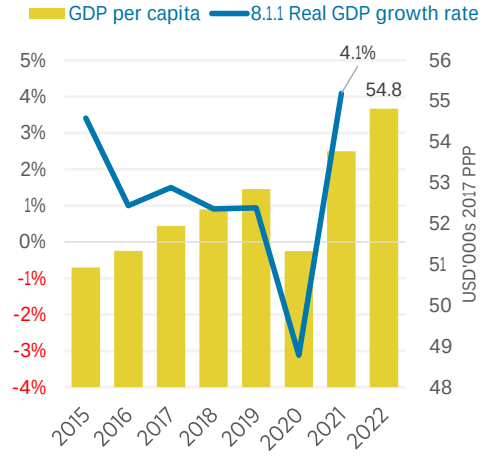
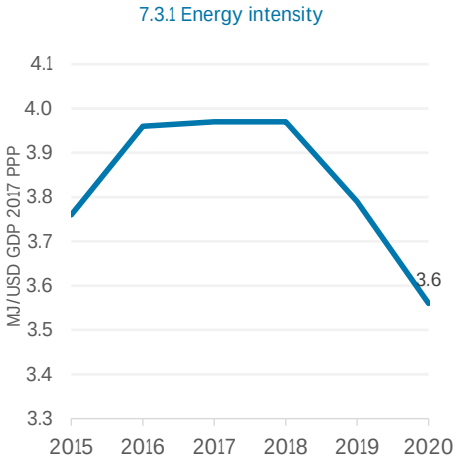
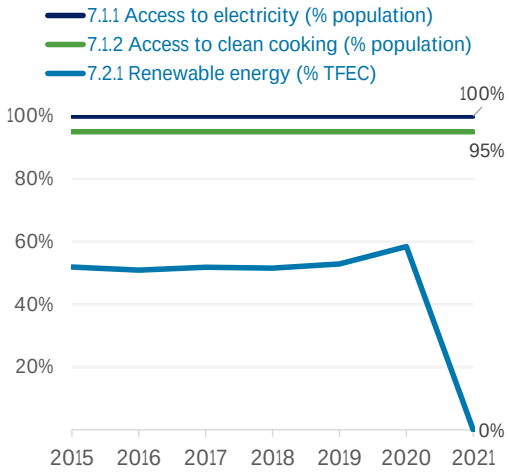
ENERGY PROFILE

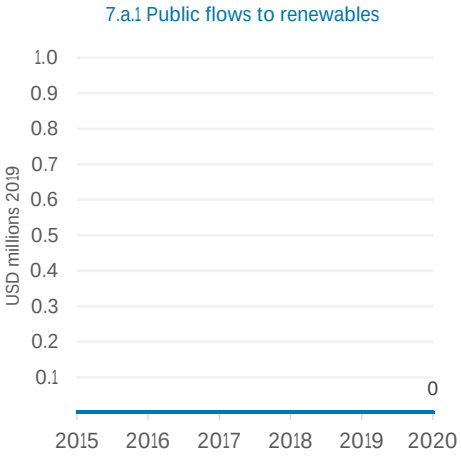
Sweden

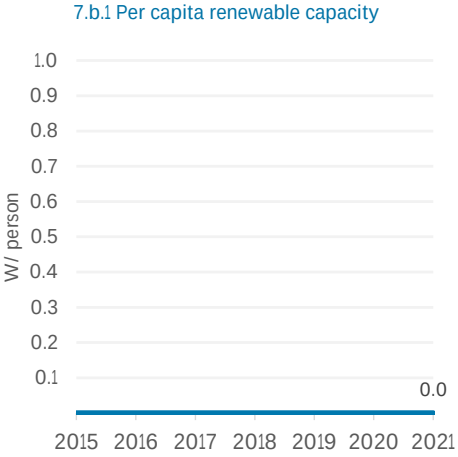
COUNTRY INDICATORS AND SDGS

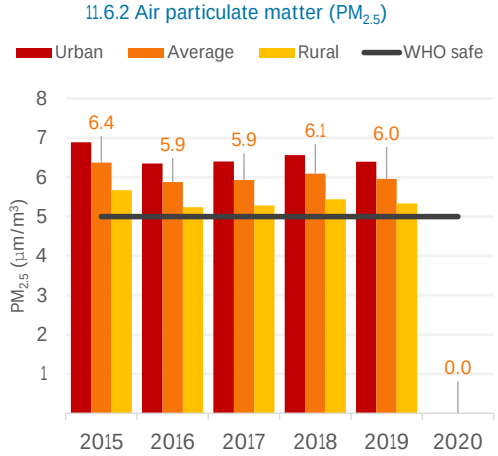












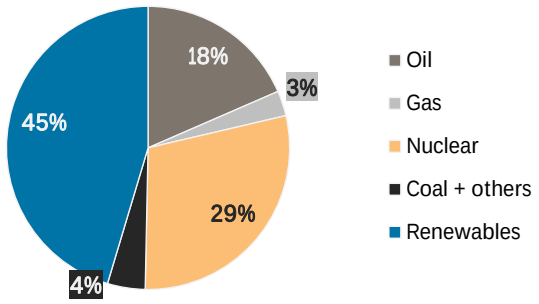
TOTAL ENERGY SUPPLY (TES)

Total Energy Supply (TES)	2015	2020
Non-renewable (TJ)	1 095 163	1 001 487
Renewable (TJ)	688 130	831 693
Total (TJ)	1 783 293	1 833 180
Renewable share (%)	39	45

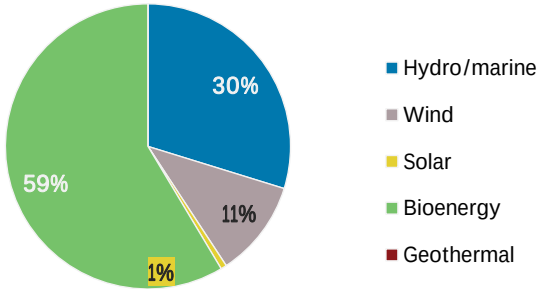
Growth in TES	2015-20	2019-20
Non-renewable (%)	-8.6	-19.5
Renewable (%)	+20.9	+2.4
Total (%)	+2.8	-10.8

Primary energy trade	2015	2020
Imports (TJ)	1 385 264	1 382 271
Exports (TJ)	770 784	714 175
Net trade (TJ)	- 614 480	- 668 096
Imports (% of supply)	78	75
Exports (% of production)	57	50
Energy self-sufficiency (%)	76	77

Total energy supply in 2020

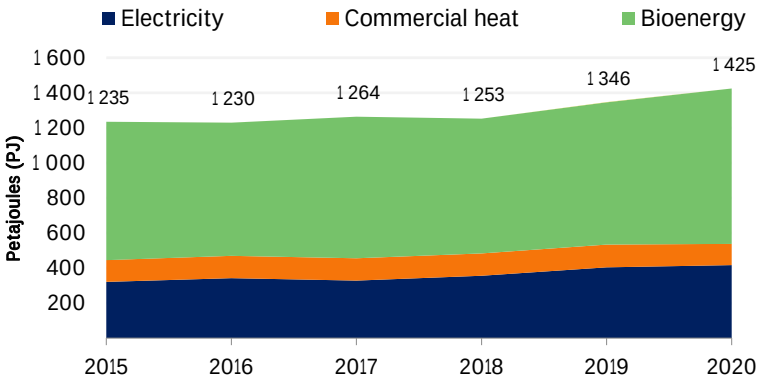


Renewable energy supply in 2020



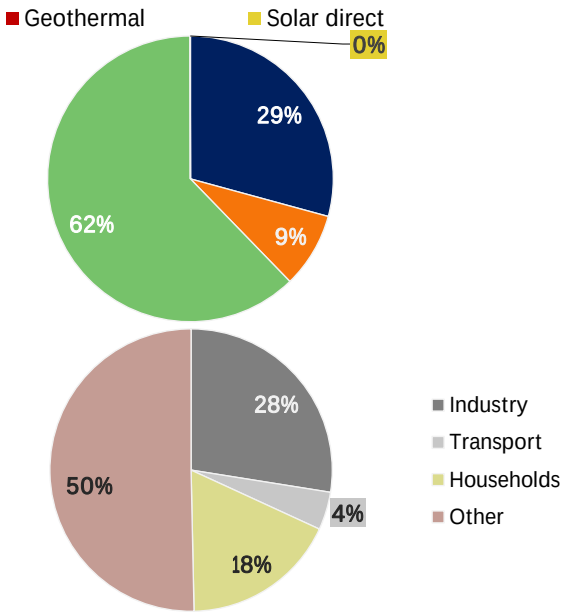
RENEWABLE ENERGY CONSUMPTION (TFEC)

Renewable TFEC trend



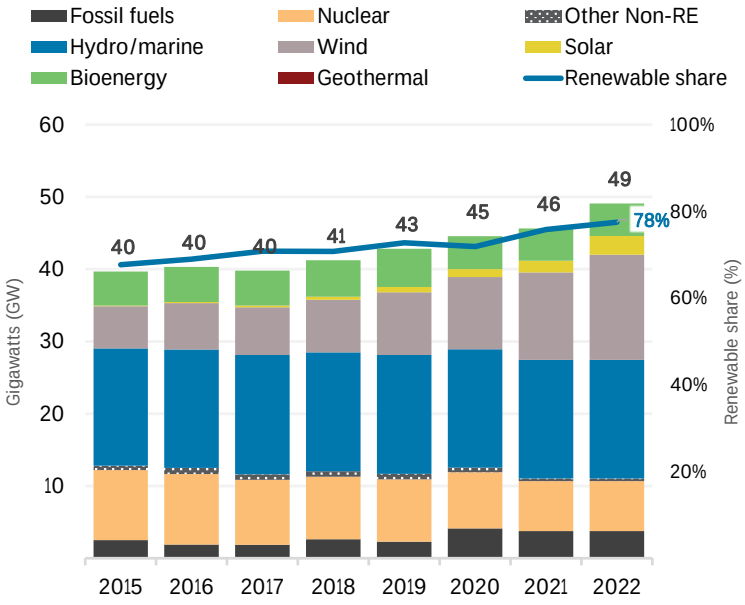
Consumption by sector	2015	2020
Industry (TJ)	324 152	392 179
Transport (TJ)	44 517	61 860
Households (TJ)	224 732	253 769
Other (TJ)	641 713	717 317

Renewable energy consumption in 2020

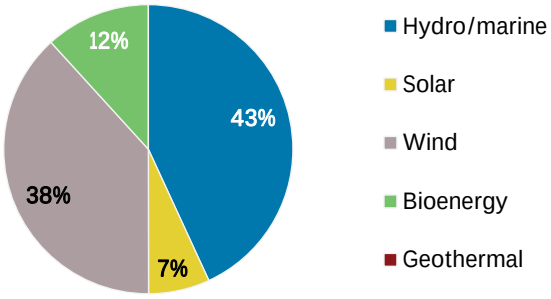


ELECTRICITY CAPACITY

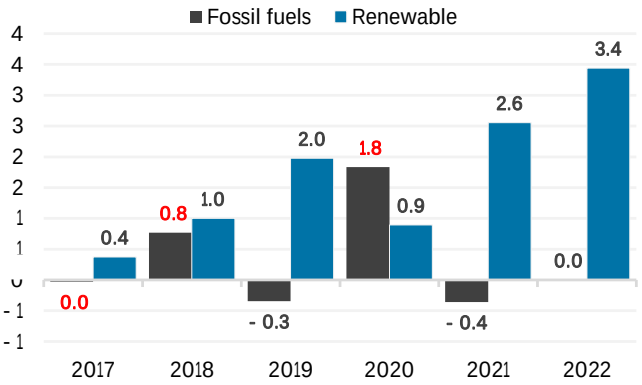
Installed capacity trend



Renewable capacity in 2022



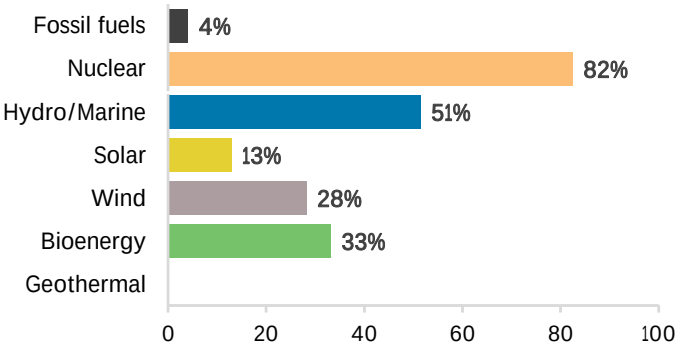
Net capacity change (GW)



Net capacity change in 2022 (MW)

Non-renewable: 0	Hydro and marine: 0
Solar: + 1 000	Wind: + 2 441
Bioenergy: 0	Geothermal: 0

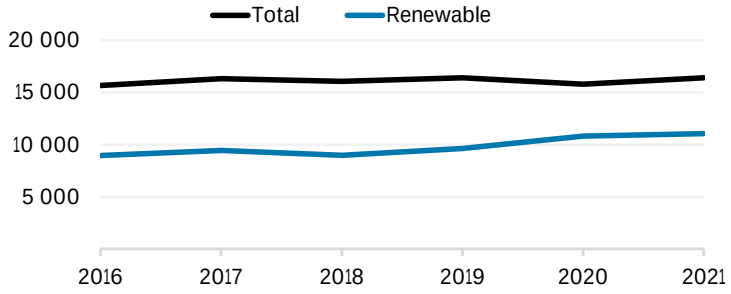
Capacity utilisation in 2021 (%)



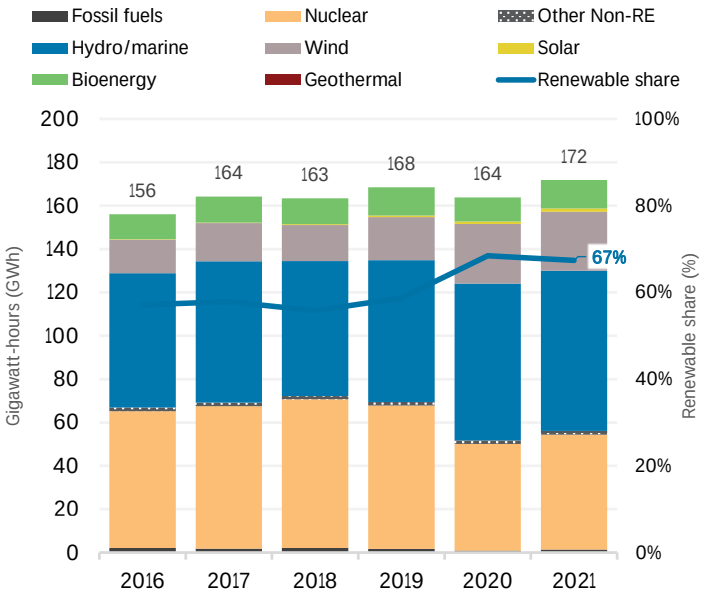
ELECTRICITY GENERATION

Generation in 2021	GWh	%
Non-renewable	**56 061**	**33**
Renewable	**115 737**	**67**
Hydro and marine	73 885	43
Solar	1 526	1
Wind	27 244	16
Bioenergy	13 082	8
Geothermal	0	0
Total	**171 798**	**100**

Per capita electricity generation (kWh)



Electricity generation trend

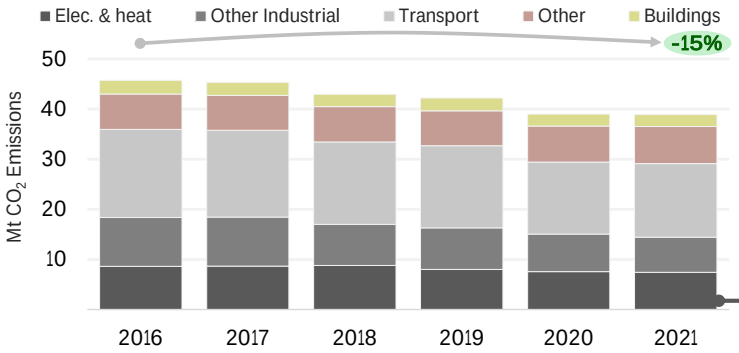


LATEST POLICIES, PROGRAMMES AND LEGISLATION

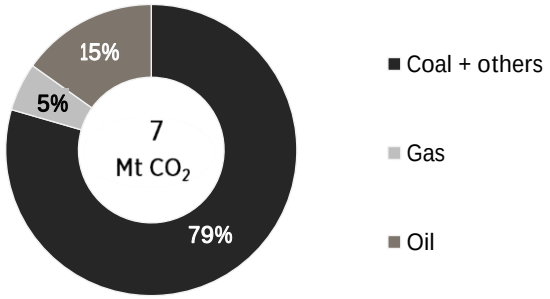
1	SEK 2.4 billion: Electricity price support for electricity-intensive companies	2023
2	SEK 380 million: Temporary tax reduction on agricultural diesel	2023
3	SEK 6.73 billion: Temporary reduction of tax on petrol and diesel	2023
4	Climate Premium for environmental vehicles	2022
5	Compensation against high electricity prices	2022

ENERGY AND EMISSIONS

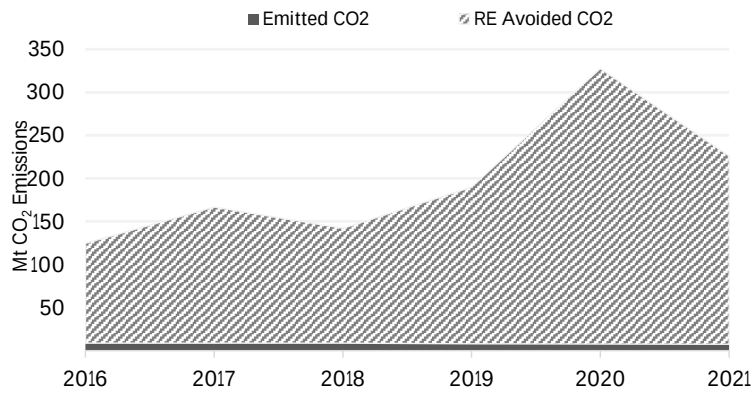
Energy-related CO_2 emissions by sector



Elec. & heat generation CO_2 emissions in

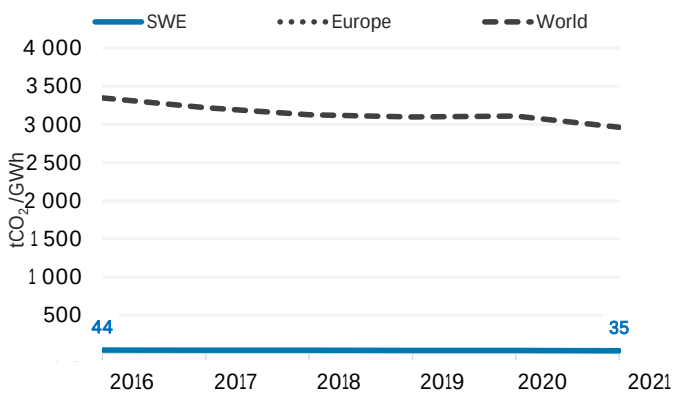


Avoided emissions from renewable elec. & heat



Avoided emissions based on fossil fuel mix used for power

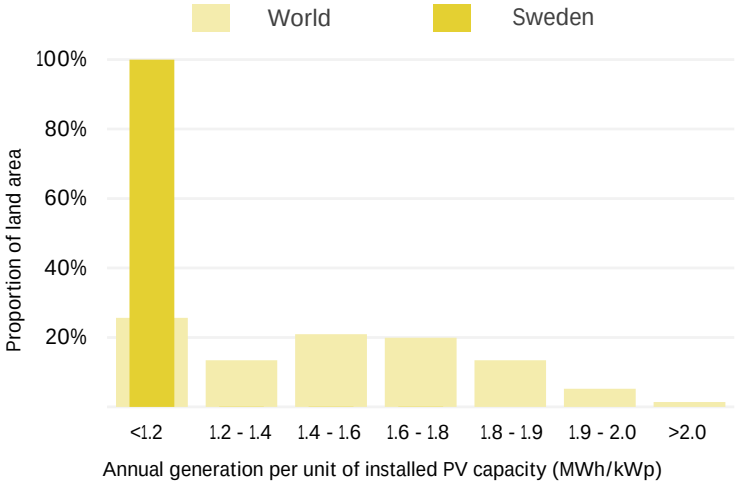
CO_2 emission factor for elec. & heat generation



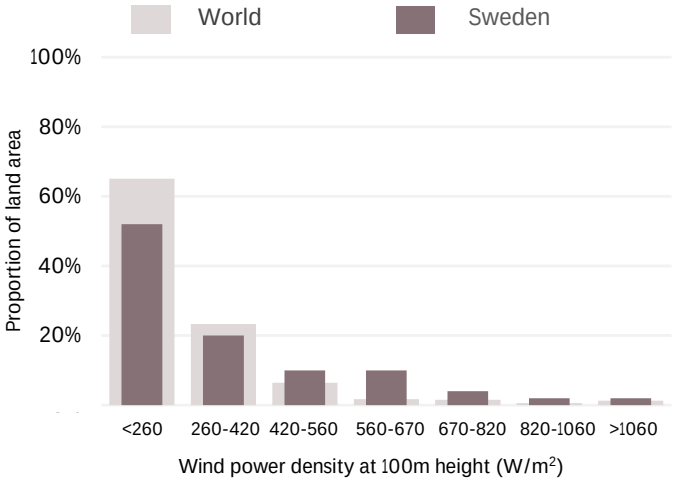
Calculated by dividing power sector emissions by elec. + heat gen.

RENEWABLE RESOURCE POTENTIAL

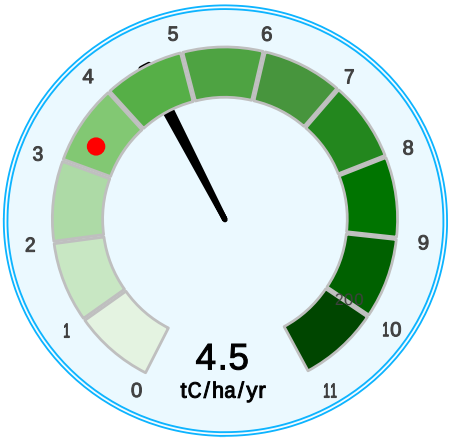
Distribution of solar potential



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.

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IRENA
International Renewable Energy Agency

IRENA Headquarters
Masdar City
P.O. Box 236, Abu Dhabi
United Arab Emirates
www.irena.org