COUNTRY INDICATORS AND SDGS

GDP per capita ▬ **8.1.1 Real GDP growth rate**

7.3.1 Energy intensity
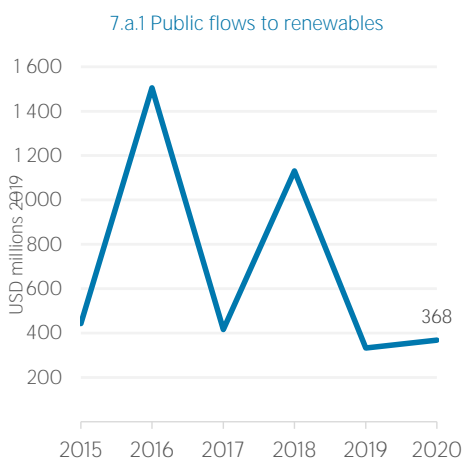

▬ 7.1.1 Access to electricity (% population)
▬ 7.1.2 Access to clean cooking (% population)
▬ 7.2.1 Renewable energy (% TFEC)

7.a.1 Public flows to renewables

7.b.1 Per capita renewable capacity

11.6.2 Air particulate matter (PM$_{2.5}$)

Urban | Average | Rural | ▬ WHO safe
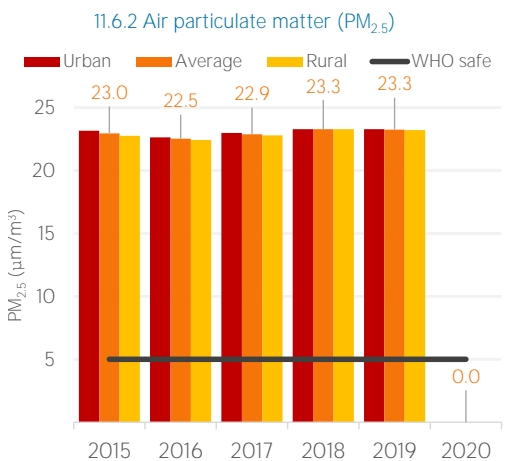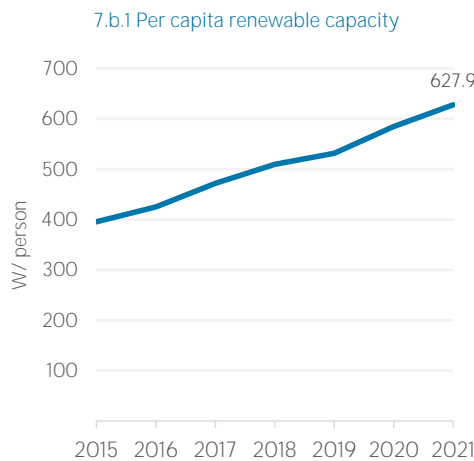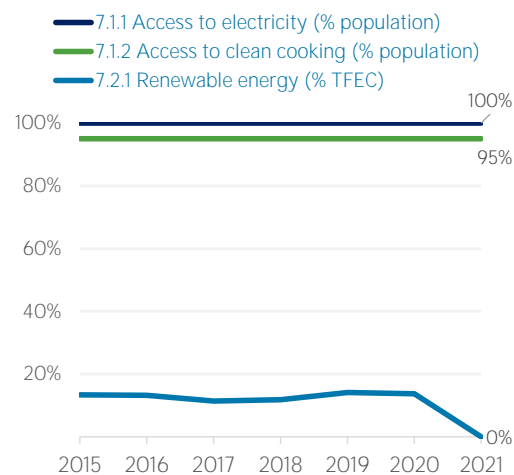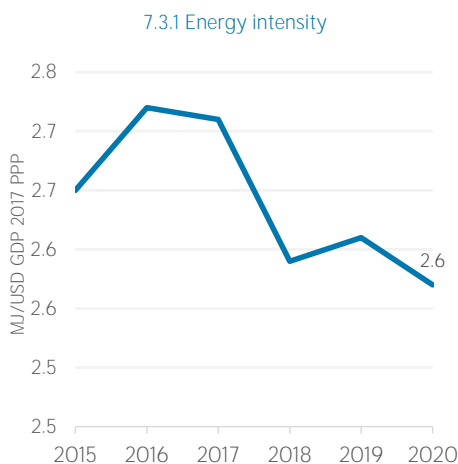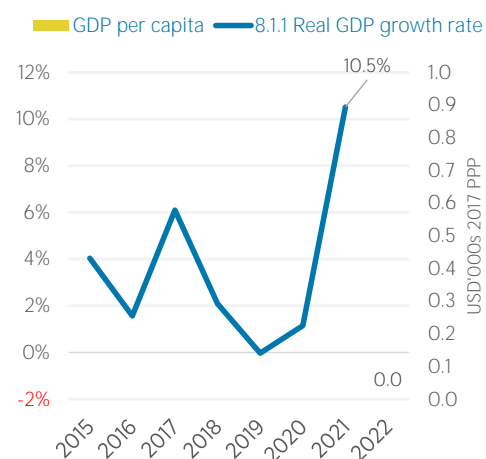
TOTAL ENERGY SUPPLY (TES)

Total Energy Supply (TES)	2015	2020
Non-renewable (TJ)	4 730 005	5 124 469
Renewable (TJ)	613 090	871 745
Total (TJ)	5 343 095	5 996 214
Renewable share (%)	11	15

Growth in TES	2015-20	2019-20
Non-renewable (%)	+8.3	-0.3
Renewable (%)	+42.2	-0.5
Total (%)	+12.2	-0.4

Primary energy trade	2015	2020
Imports (TJ)	4 710 090	4 757 253
Exports (TJ)	360 110	361 445
Net trade (TJ)	-4 349 980	-4 395 808
Imports (% of supply)	88	79
Exports (% of production)	28	21
Energy self-sufficiency (%)	24	28

Total energy supply in 2020

- Oil
- Gas
- Nuclear
- Coal + others
- Renewables

Renewable energy supply in 2020

- Hydro/marine
- Wind
- Solar
- Bioenergy
- Geothermal
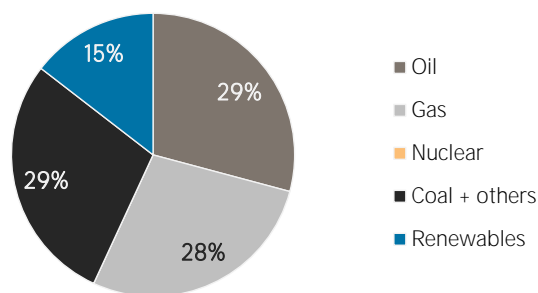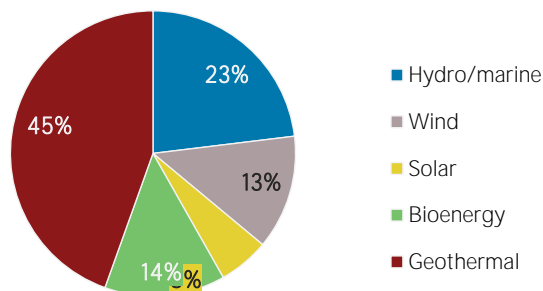
RENEWABLE ENERGY CONSUMPTION (TFEC)

Renewable TFEC trend

Legend: Electricity | Commercial heat | Bioenergy | Geothermal | Solar direct

Petajoules (PJ)

- 2015: 986
- 2016: 1 037
- 2017: 1 101
- 2018: 1 287
- 2019: 1 450
- 2020: 1 446

Renewable energy consumption in 2020

Pie chart (top):
- Electricity: 30%
- Bioenergy: 70%
- Commercial heat: 1%

Pie chart (bottom):
- Industry: 14%
- Transport: 0%
- Households: 17%
- Other: 68%

n.a.
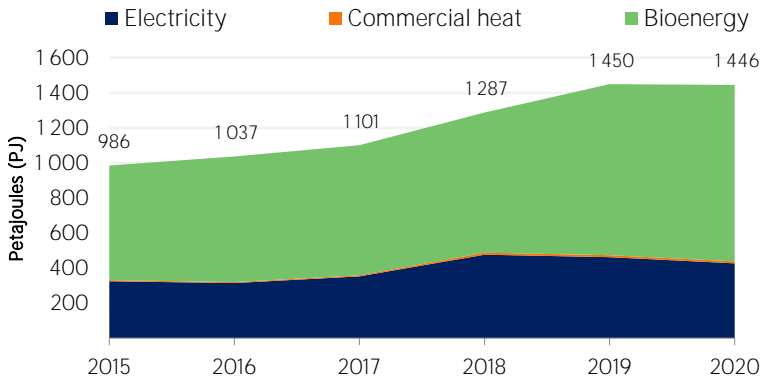
Consumption by sector	2015	2020
Industry (TJ)	166 243	207 854
Transport (TJ)	5 943	6 535
Households (TJ)	270 788	250 447
Other (TJ)	542 636	980 764
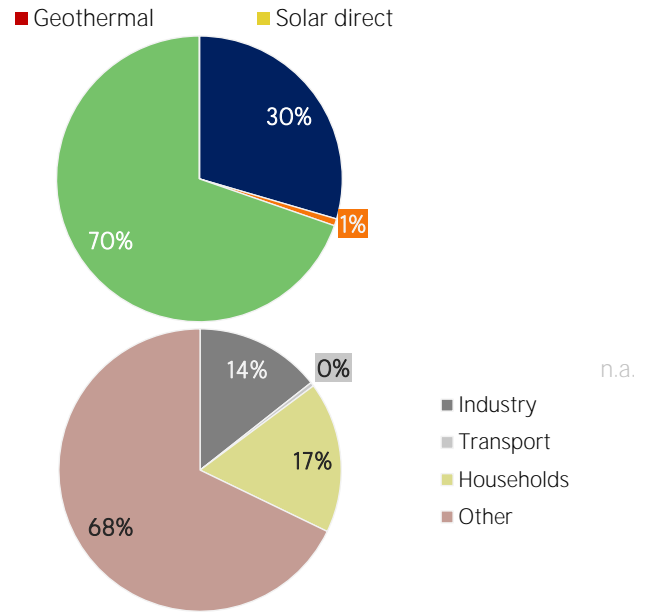
ELECTRICITY CAPACITY

Installed capacity trend

Legend: Fossil fuels | Nuclear | Other Non-RE | Hydro/marine | Wind | Solar | Bioenergy | Geothermal | Renewable share

Gigawatts (GW) / Renewable share (%)

- 2015: 73
- 2016: 78
- 2017: 85
- 2018: 89
- 2019: 91
- 2020: 96
- 2021: 100
- 2022: 104

Renewable share: 54%
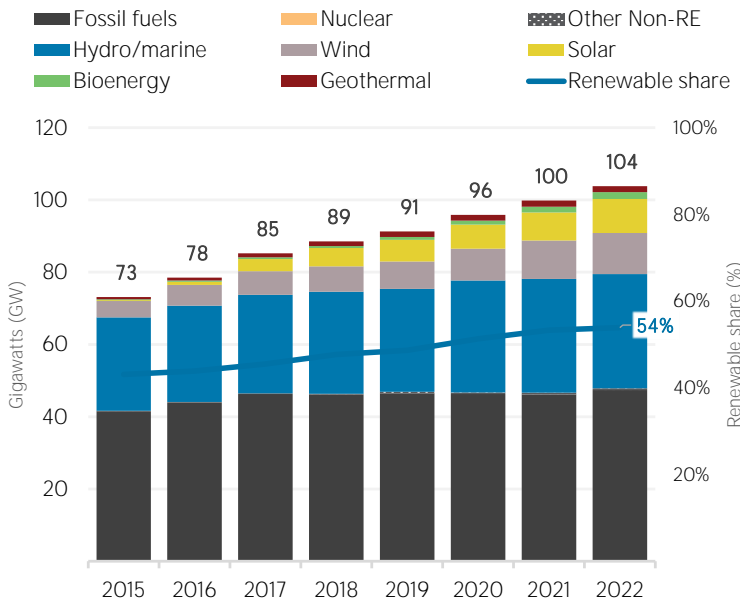
Renewable capacity in 2022

- Hydro/marine: 56%
- Solar: 17%
- Wind: 20%
- Bioenergy: 3%
- Geothermal: 3%
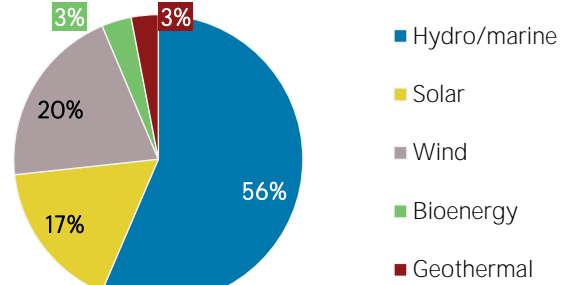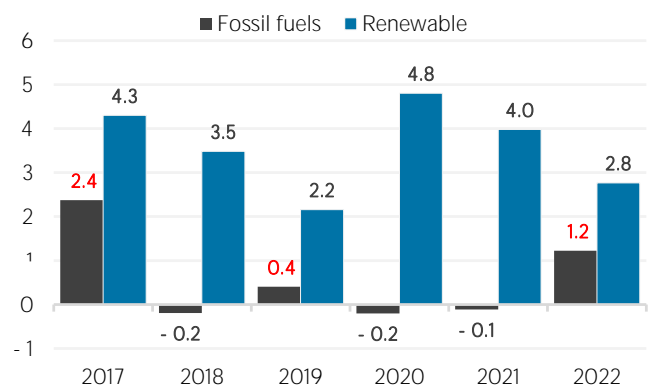
Net capacity change in 2022 (MW)

Non-renewable	+ 1 234
Hydro and marine	+ 79
Solar	+ 1 610
Wind	+ 789
Bioenergy	+ 275
Geothermal	+ 15

Net capacity change (GW)

Legend: Fossil fuels | Renewable

Year	Fossil fuels	Renewable
2017	2.4	4.3
2018	- 0.2	3.5
2019	0.4	2.2
2020	- 0.2	4.8
2021	- 0.1	4.0
2022	1.2	2.8
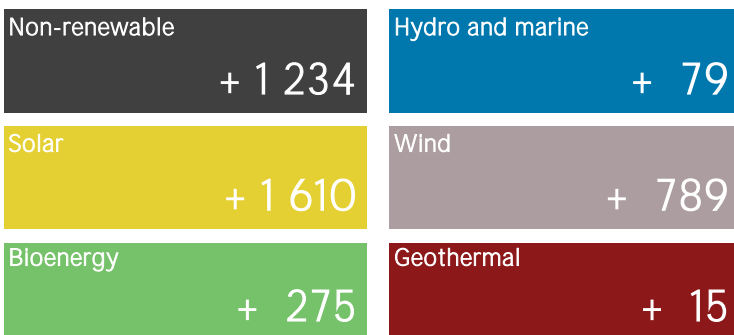
Capacity utilisation in 2021 (%)

- Fossil fuels: 53%
- Nuclear: (no value)
- Hydro/Marine: 20%
- Solar: 22%
- Wind: 37%
- Bioenergy: 55%
- Geothermal: 75%
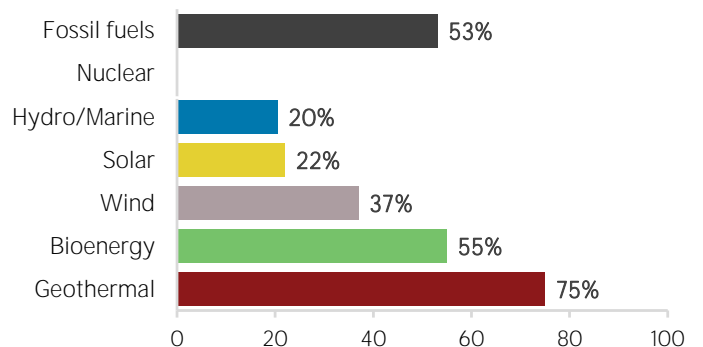
ELECTRICITY GENERATION

Generation in 2021

Generation in 2021	GWh	%
Non-renewable	216 171	65
Renewable	118 555	35
Hydro and marine	55 927	17
Solar	13 946	4
Wind	31 437	9
Bioenergy	6 453	2
Geothermal	10 793	3
Total	334 726	100

Per capita electricity generation (kWh)
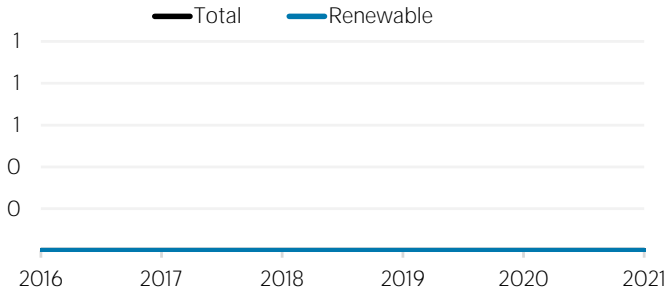
Electricity generation trend
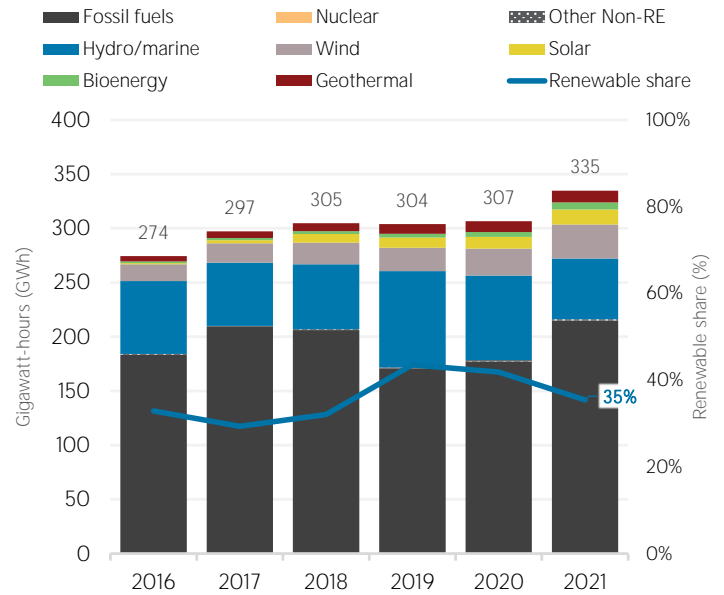

LATEST POLICIES, PROGRAMMES AND LEGISLATION

|		
1	2022 Electricity and natural gas consumer support	2022
2	Motor Vehicle Tax Law	2021
3	11th Development Plan	2020
4	Energy Efficiency Improvement Target for Public Buildings	2020
5	Extension of Renewable Energy Support Scheme (YEKDEM)	2020

ENERGY AND EMISSIONS

Energy-related CO_2 emissions by sector
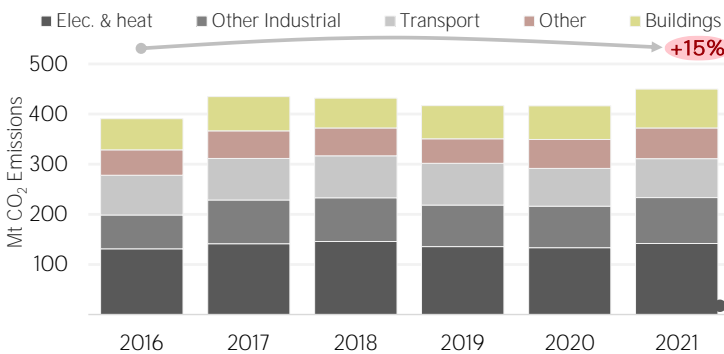
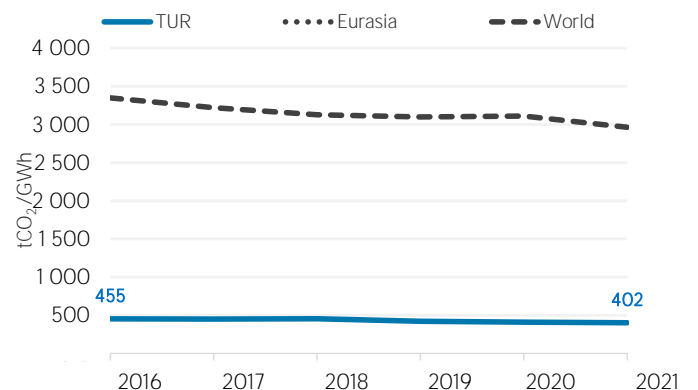

Elec. & heat generation CO_2 emissions in
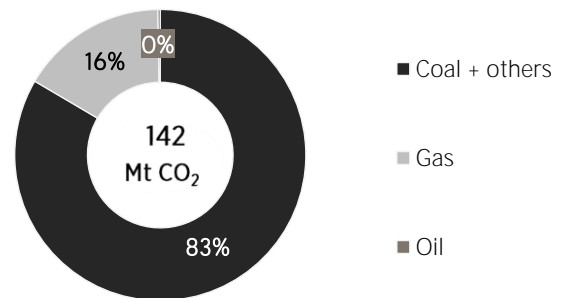
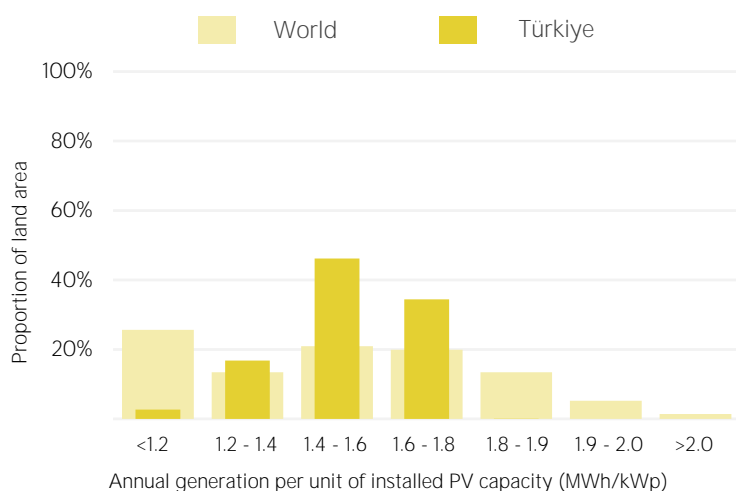## Avoided emissions from renewable elec. & heat
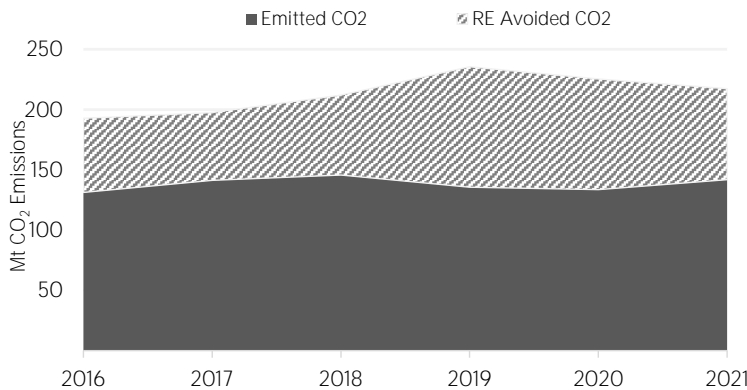
Avoided emissions based on fossil fuel mix used for power

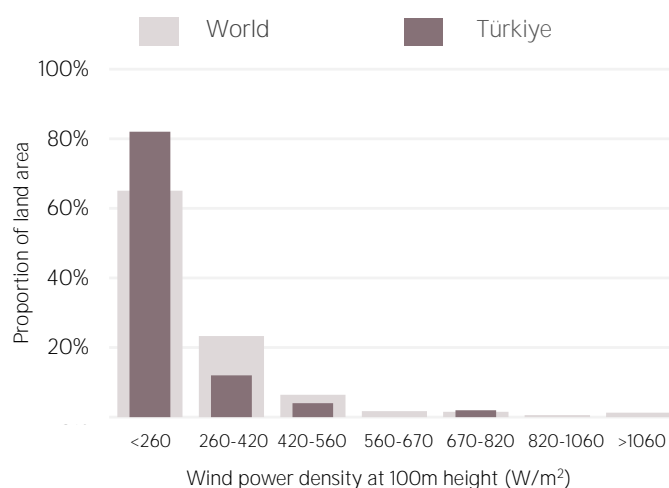## CO_2 emission factor for elec. & heat generation

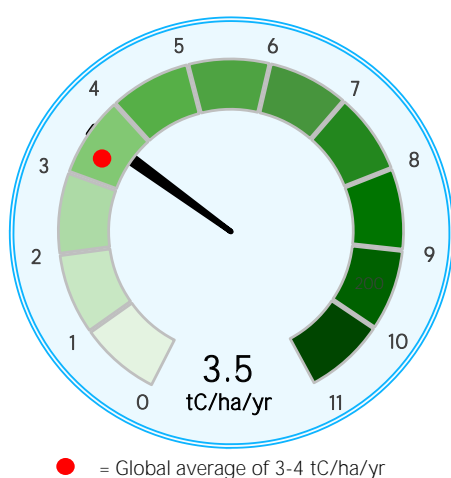*Calculated by dividing power sector emissions by elec. + heat gen.*

Distribution of solar potential

Legend: World, Türkiye

Proportion of land area (%) vs Annual generation per unit of installed PV capacity (MWh/kWp)

X-axis: <1.2, 1.2 - 1.4, 1.4 - 1.6, 1.6 - 1.8, 1.8 - 1.9, 1.9 - 2.0, >2.0

Distribution of wind potential

Legend: World, Türkiye

Proportion of land area (%) vs Wind power density at 100m height (W/m^2)

X-axis: <260, 260-420, 420-560, 560-670, 670-820, 820-1060, >1060

Biomass potential: net primary production

3.5
tC/ha/yr

● = 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

IRENA
International Renewable Energy Agency