

SUSTAINABLE DEVELOPMENT GOAL 7: ENERGY INDICATORS (2017)

Renewable energy (% of TFEC)	41.7	Access to electricity (% of population)	99.3
Energy efficiency (MJ per \$1 of GDP)	5.2	Access to clean cooking (% of population)	80
Public flows renewables (2017 USD M)	288.6	Per capita renewable capacity (W/person)	567.4

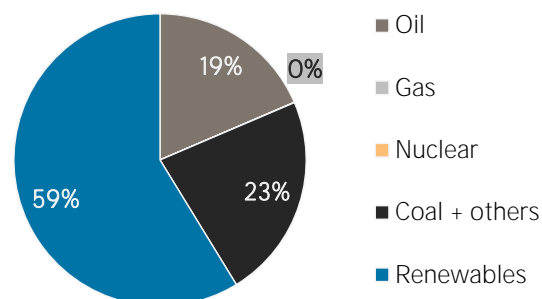
TOTAL PRIMARY ENERGY SUPPLY (TPES)

TPES	2012	2017
Non-renewable (TJ)	39 279	79 098
Renewable (TJ)	109 321	112 635
Total (TJ)	148 600	191 733
Renewable share (%)	74	59

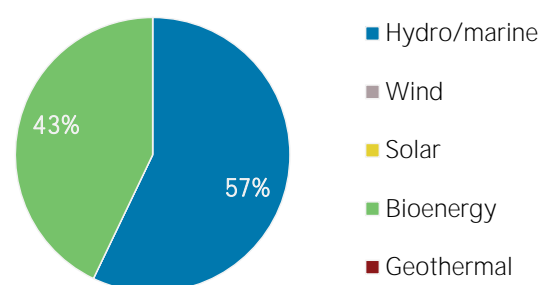
Growth in TPES	2012-17	2016-17
Non-renewable (%)	+101.4	+30.9
Renewable (%)	+3.0	+4.3
Total (%)	+29.0	+13.9

Primary energy trade	2012	2017
Imports (TJ)	32 673	35 895
Exports (TJ)	3 228	5 233
Net trade (TJ)	- 29 445	- 30 662
Imports (% of supply)	22	19
Exports (% of production)	3	3
Energy self-sufficiency (%)	81	84
Net trade (USD million)	n.a.	n.a.
Net trade (% of GDP)	n.a.	n.a.

Total primary energy supply in 2017



Renewable energy supply in 2017



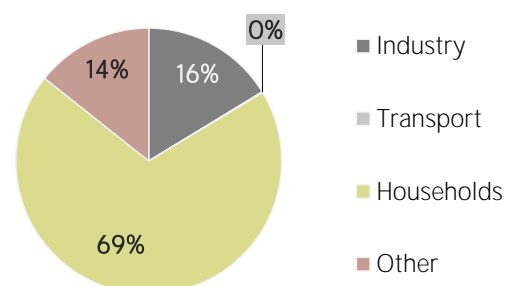
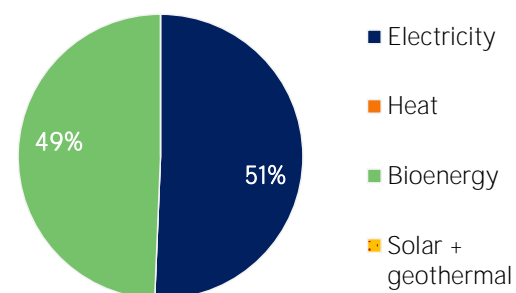
RENEWABLE ENERGY CONSUMPTION

Consumption by source	2012	2017
Electricity (TJ)	49 759	51 564
Heat (TJ)	0	0
Bioenergy (TJ)	50 228	50 228
Solar + geothermal (TJ)	0	0
Total (TJ)	99 987	101 792
Electricity share (%)	50	51

Consumption growth	2012-17	2016-17
Renewable electricity (%)	+3.6	+7.8
Other renewables (%)	0.0	+0.2
Total (%)	+1.8	+3.9

Consumption by sector	2012	2017
Industry (TJ)	23 023	16 577
Transport (TJ)	134	112
Households (TJ)	59 907	70 533
Other (TJ)	16 924	14 570
Renewable share of TFEC		41.7

Renewable energy consumption in 2017

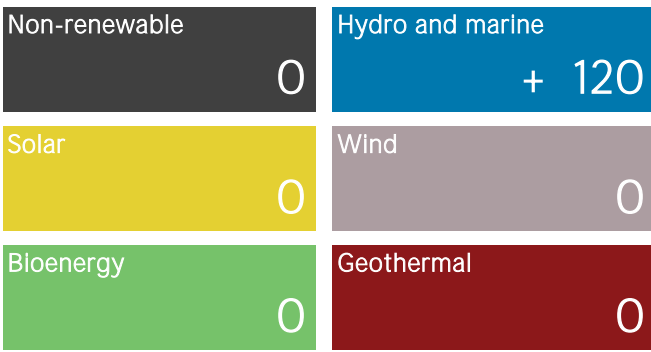


ELECTRICITY CAPACITY AND GENERATION

Capacity in 2019	MW	%
Non-renewable	718	12
Renewable	5 273	88
Hydro/marine	5 273	88
Solar	0	0
Wind	0	0
Bioenergy	0	0
Geothermal	0	0
Total	5 991	100

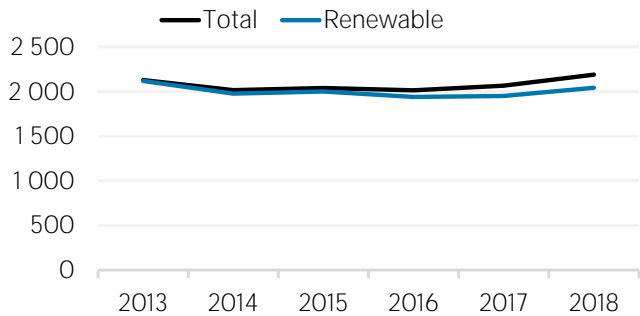
Capacity change (%)	2014-19	2018-19
Non-renewable	+ 72	0.0
Renewable	+ 5	+ 2.3
Hydro/marine	+ 5	+ 2.3
Solar	0	0.0
Wind	0	0.0
Bioenergy	0	0.0
Geothermal	0	0.0
Total	+ 10	+ 2.0

Net capacity change in 2019 (MW)

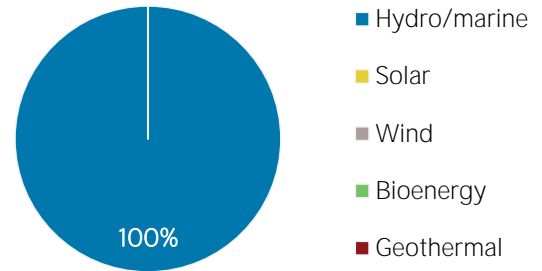


Generation in 2018	GWh	%
Non-renewable	1 348	7
Renewable	18 573	93
Hydro and marine	18 573	93
Solar	0	0
Wind	0	0
Bioenergy	0	0
Geothermal	0	0
Total	19 921	100

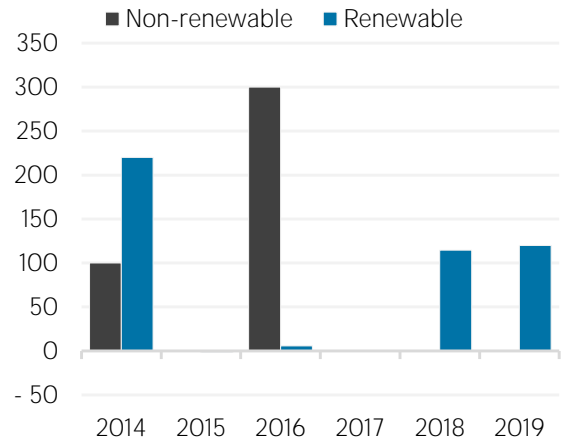
Per capita electricity generation (kWh)



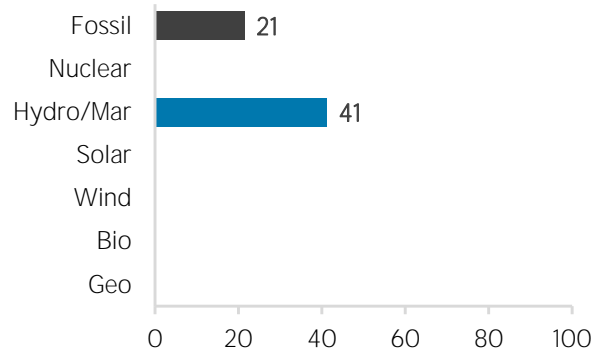
Renewable capacity in 2019



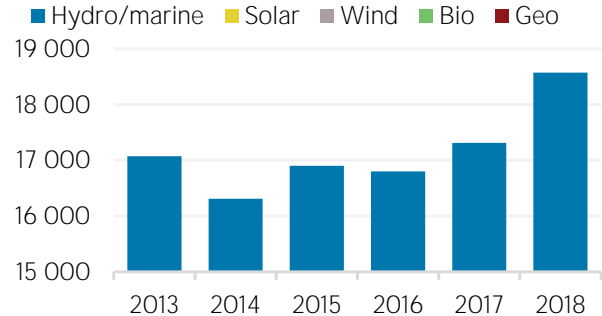
Net capacity change (MW)



Capacity utilisation in 2018 (%)



Renewable generation (GWh)



Most immediate clean energy targets & NDCs

Renewable energy:

- Renewable electricity:
- Renewable capacity:
- Renewable transport:
 - Liquid Biofuel blending mandate:
 - Other transport targets:
- Renewable heating/cooling:
- Renewable Hydropower
- Off-grid renewable technologies:

- Energy efficiency (Energy):
- Energy efficiency (Electricity):

year target unit

Latest policies, programmes and legislation

1	Energy Efficiency Standards on Power Sector and Appliances	2014
2	Sustainable Energy Action Plan in Somoniyon City	2014
3	On Energy Saving and Energy Efficiency	2013
4	Sustainable Energy for All Tajikistan 2013-2030	2013
5	Tajikistan Energy Saving and Energy Efficiency Law	2013

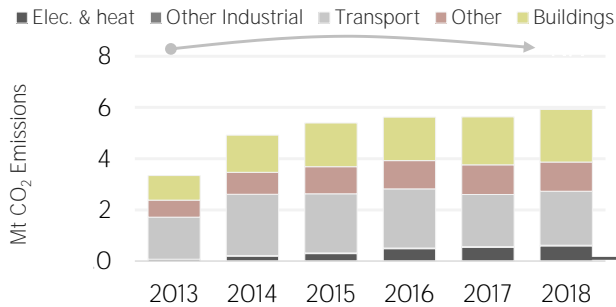
References to sustainable energy in Nationally Determined Contribution (NDC)

- Renewable energy
 - electricity
 - transport
 - heating/cooling
- Energy efficiency

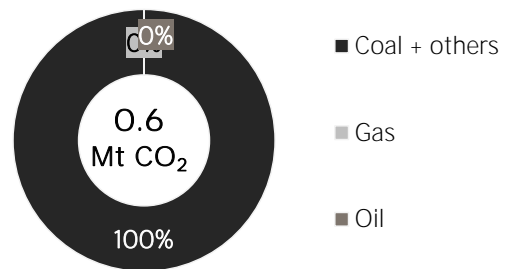
Conditional Unconditional unit

ENERGY AND EMISSIONS

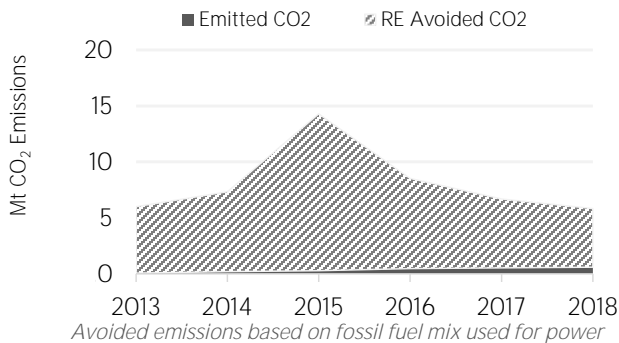
Energy-related CO₂ emissions by sector



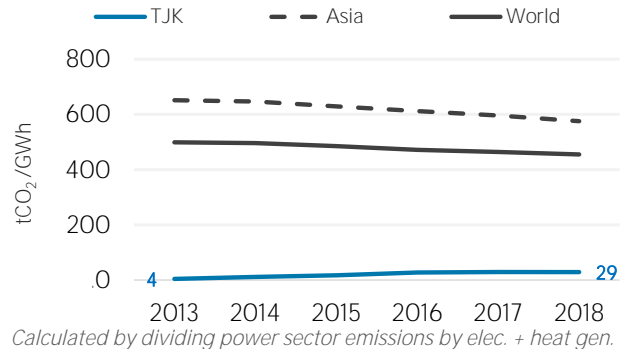
Elec. & heat generation CO₂ emissions in 2018



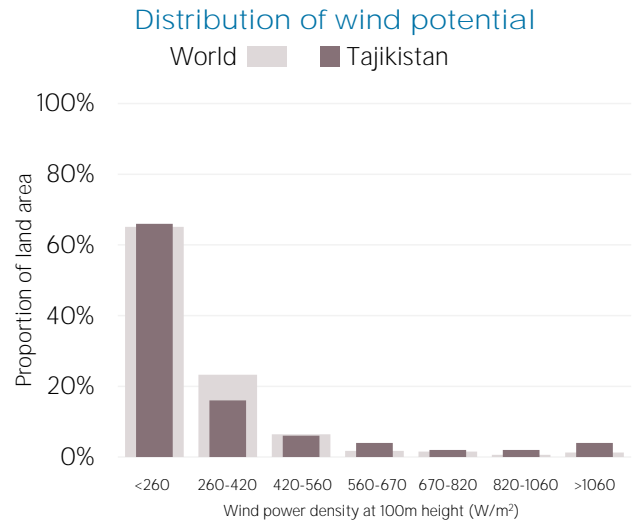
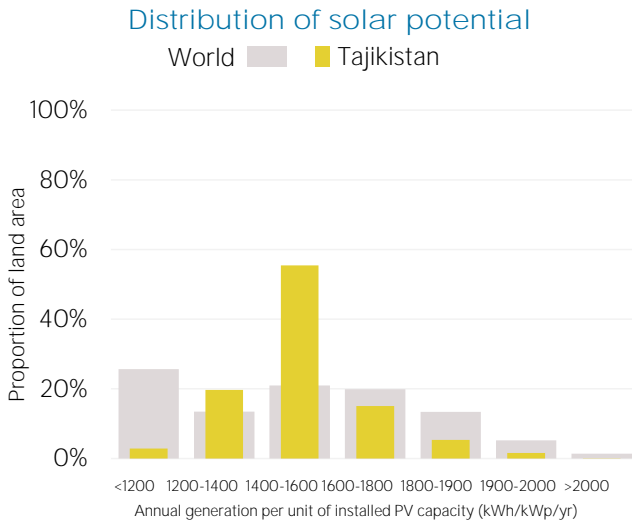
Avoided emissions from renewable elec. & heat



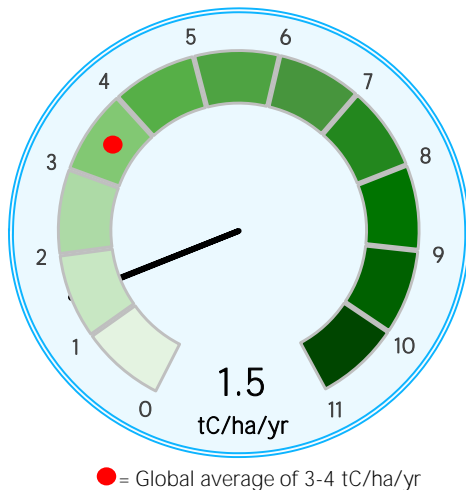
CO₂ emission factor for elec. & heat generation



RENEWABLE RESOURCE 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/m²) 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 per year.

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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