

Tunisia

Sustainable Development Goal 7.2: Energy Indicators (2016)

Renewable energy (% of TFEC)	12.5	Access to electricity (% of population)	100.0
Energy efficiency (MJ per \$1 of GDP)	3.8	Access to clean cooking (% of population)	>95

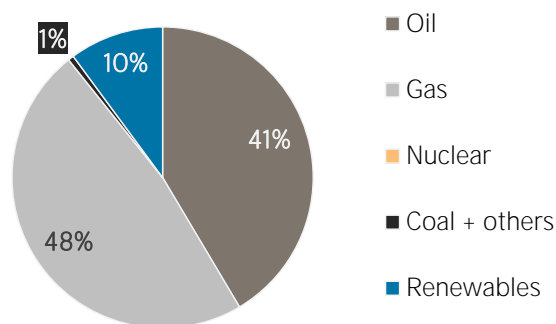
TOTAL PRIMARY ENERGY SUPPLY (TPES)

TPES	2011	2016
Non-renewable (TJ)	353 151	410 532
Renewable (TJ)	39 841	46 189
Total (TJ)	392 992	456 721
Renewable share (%)	10	10

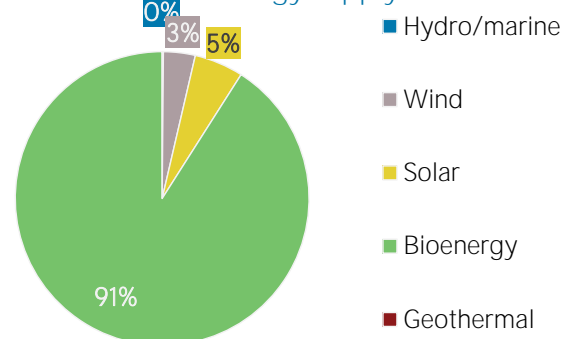
Growth in TPES	2011-16	2015-16
Non-renewable (%)	+16.2	+0.7
Renewable (%)	+15.9	+13.4
Total (%)	+16.2	+1.8

Primary energy trade	2011	2016
Imports (TJ)	240 842	321 999
Exports (TJ)	129 927	102 978
Net trade (TJ)	- 110 915	- 219 021
Imports (% of supply)	61	71
Exports (% of production)	44	41
Energy self-sufficiency (%)	75	54
Net trade (USD million)	- 950	- 1 378
Net trade (% of GDP)	-2.1	-3.3

Total primary energy supply in 2016



Renewable energy supply in 2016



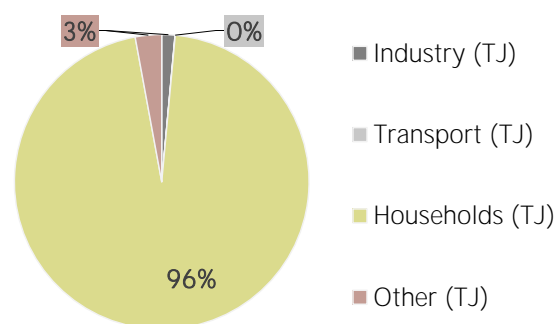
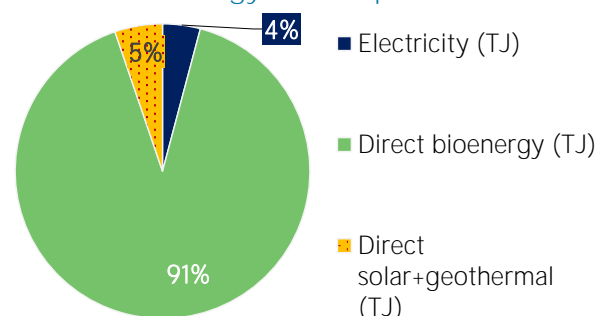
RENEWABLE ENERGY CONSUMPTION

Consumption by source	2011	2016
Electricity (TJ)	908	1 650
Direct bioenergy (TJ)	32 753	36 173
Direct solar+geothermal (TJ)	1 301	2 091
Total (TJ)	34 962	39 914
Electricity share (%)	3	4

Consumption growth	2011-16	2015-16
Renewable electricity (%)	+81.8	+2.6
Other renewables (%)	+12.4	+10.3
Total (%)	+14.2	+9.9

Consumption by sector	2011	2016
Industry (TJ)	328	575
Transport (TJ)	6	10
Households (TJ)	34 192	38 176
Other (TJ)	436	1 154
Renewable share of TFEC	13.3	12.5

Renewable energy consumption in 2016

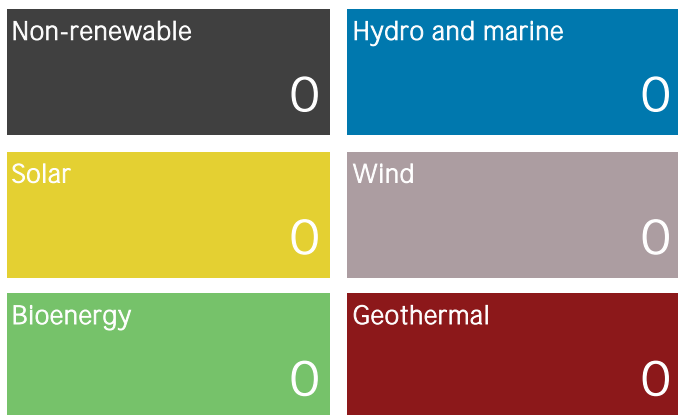


ELECTRICITY CAPACITY AND GENERATION

Capacity in 2018	MW	%
Non-renewable	5 174	94
Renewable	358	6
Hydro/marine	66	1
Solar	47	1
Wind	245	4
Bioenergy	0	0
Geothermal	0	0
Total	5 532	100

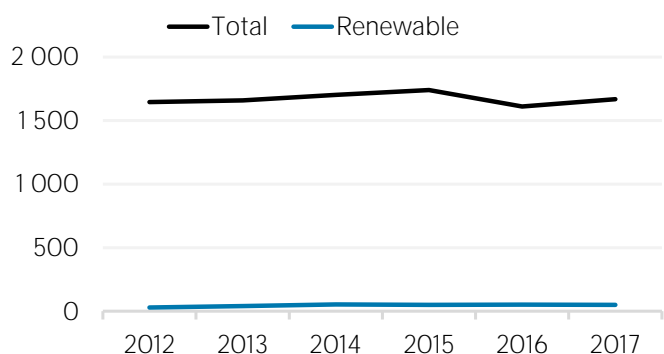
Capacity change (%)	2013-18	2017-18
Non-renewable	+ 21	0.0
Renewable	+ 30	0.0
Hydro/marine	0	0.0
Solar	+ 420	0.0
Wind	+ 23	0.0
Bioenergy	0	0.0
Geothermal	0	0.0
Total	+ 22	0.0

Net capacity change in 2018 (MW)

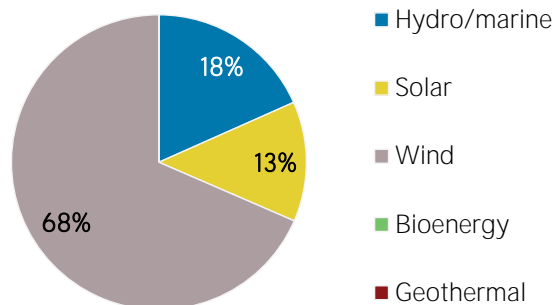


Generation in 2017	GWh	%
Non-renewable	18 508	97
Renewable	578	3
Hydro and marine	17	0
Solar	112	1
Wind	449	2
Bioenergy	0	0
Geothermal	0	0
Total	19 086	100

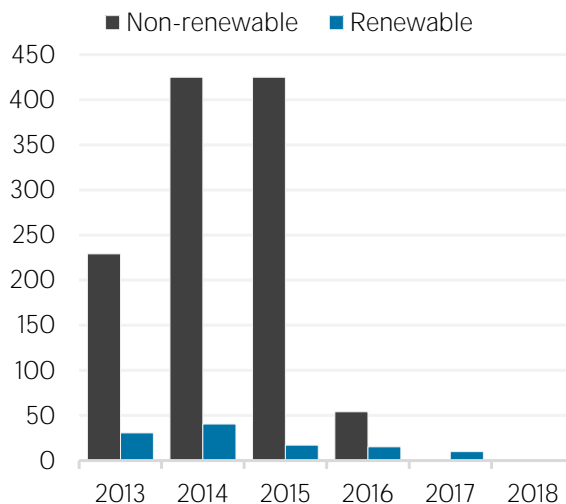
Per capita electricity generation (kWh)



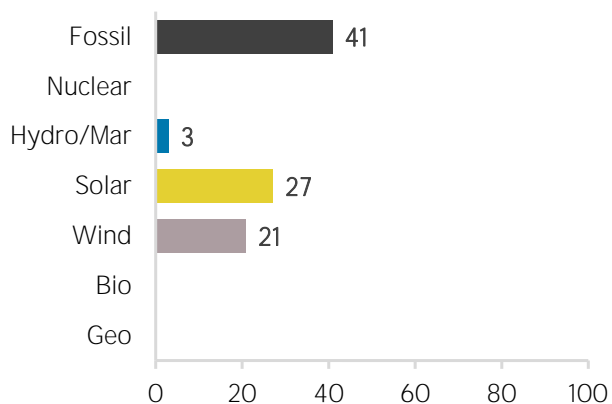
Renewable capacity in 2018



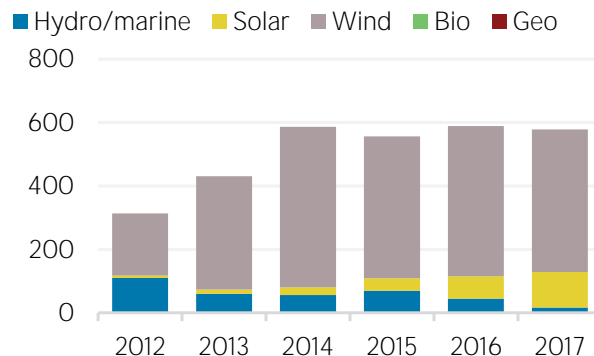
Net capacity change (MW)



Capacity utilisation in 2017 (%)



Renewable generation (GWh)



TARGETS, POLICIES AND MEASURES

Most immediate clean energy targets & NDCs

	year	target	unit
Renewable energy:	2050	100	%
Renewable electricity:	2020	14	%
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):			

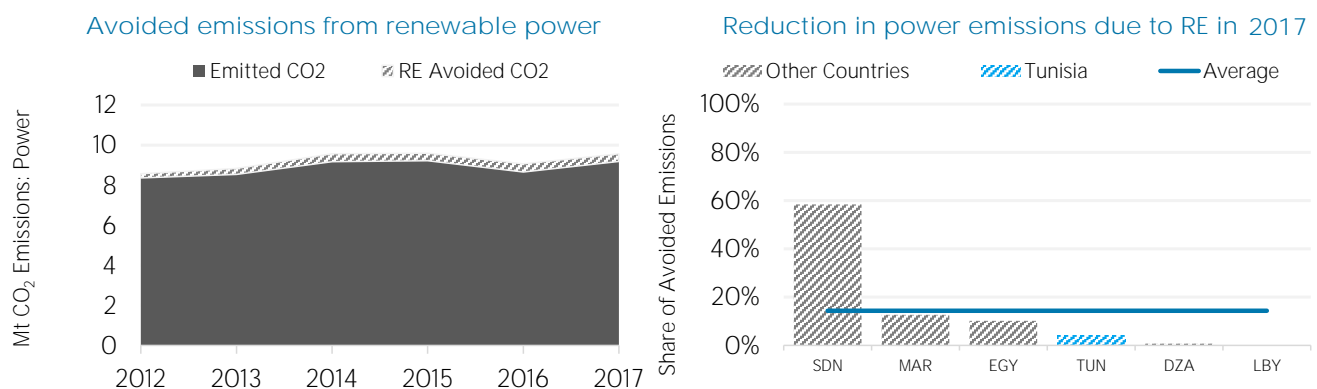
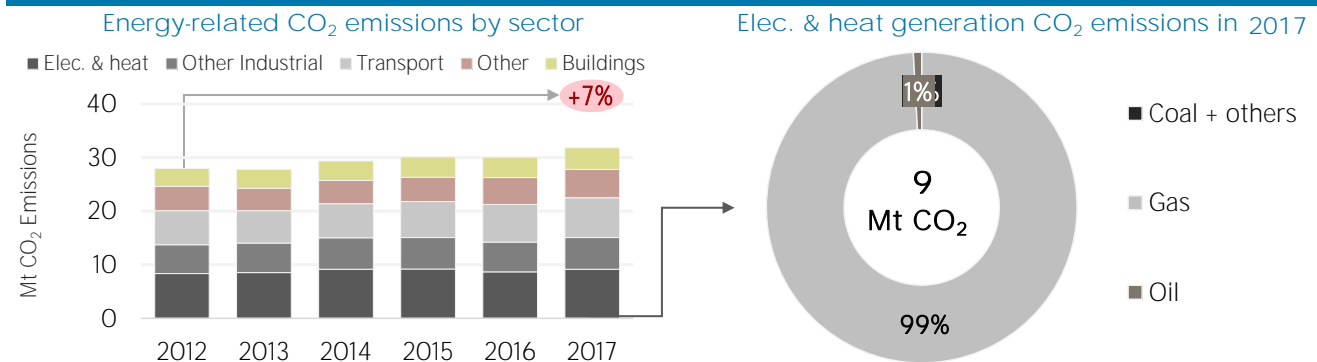
Latest policies, programmes and legislation

1	Renewable Energy Law for Electricity Production (No.74/2013)	2015
2	The Decree on connection and access of renewable electricity to the national grid	2011
3	Tax exemptions for the import of renewable energy and energy efficiency equipment materials (Decree 2010/1521)	2010
4	Decree 2009/362 on Renewable Energy and Energy Efficiency Premiums	2009
5	Decree on rules of selling renewable electricity to the Tunisian Company of Electricity and Gas (STEG)	2009

References to sustainable energy in Nationally Determined Contribution (NDC)

	Conditional	Unconditional	unit
- Renewable energy	3 434	382	MW (additional)
- electricity			
- transport			
- heating/cooling			
- Energy efficiency			

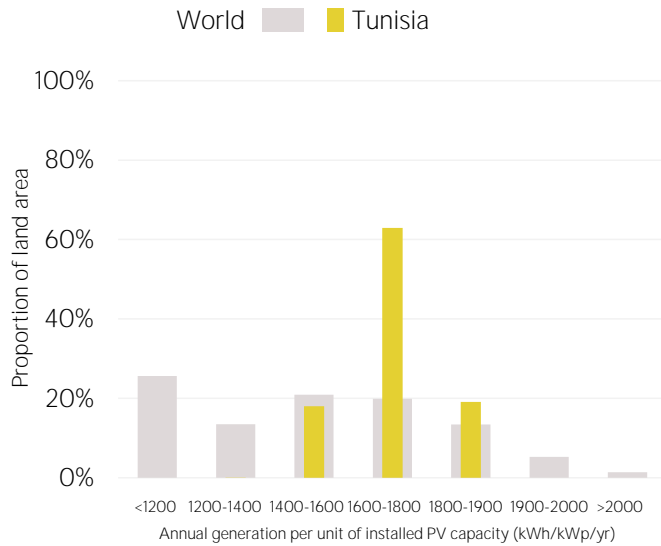
ENERGY AND EMISSIONS



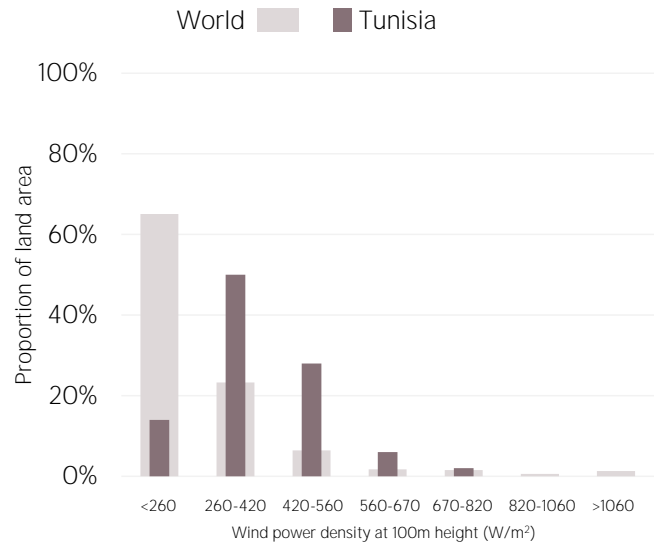
Avoided emissions based on fossil fuel mix used for power

Reduction is RE Avoided divided by sum of avoided and emitted

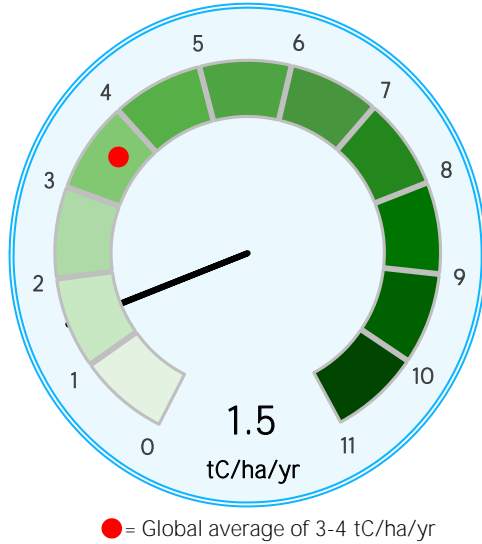
Distribution of solar potential



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 per year.

Sources: IRENA statistics, plus data from the following sources: UN SDG Indicators Database (original sources: WHO; World Bank; IEA; IRENA; and UNSD); 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: Energy self-sufficiency has been defined as total primary energy production divided by total primary energy supply. The value of energy trade has been defined as including all commodities in Chapter 27 of the Harmonised System (HS). Capacity utilisation has been calculated as annual generation divided by capacity x 8,760. Avoided emissions from renewable power have been 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.

This note has been produced to provide policy makers with a brief overview of developments in renewable energy in a country. 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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