

SUSTAINABLE DEVELOPMENT GOAL 7: ENERGY INDICATORS (2017)

Renewable energy (% of TFEC)	5.5	Access to electricity (% of population)	100.0
Energy efficiency (MJ per \$1 of GDP)	3.8	Access to clean cooking (% of population)	>95
Public flows renewables (2017 USD M)	1828.2	Per capita renewable capacity (W/person)	40.0

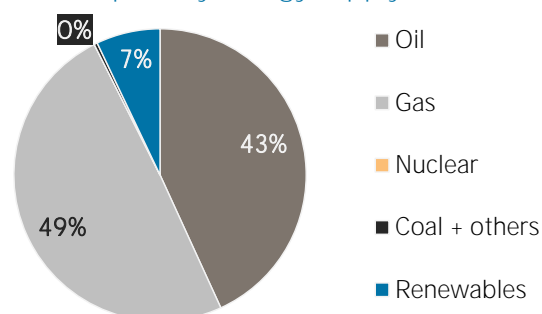
TOTAL PRIMARY ENERGY SUPPLY (TPES)

TPES	2012	2017
Non-renewable (TJ)	3 178 902	3 731 577
Renewable (TJ)	270 411	284 109
Total (TJ)	3 449 313	4 015 686
Renewable share (%)	8	7

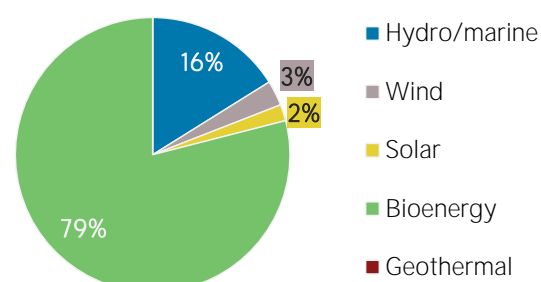
Growth in TPES	2012-17	2016-17
Non-renewable (%)	+17.4	+7.4
Renewable (%)	+5.1	+0.4
Total (%)	+16.4	+6.9

Primary energy trade	2012	2017
Imports (TJ)	559 648	1 180 196
Exports (TJ)	733 288	556 584
Net trade (TJ)	173 640	- 623 612
Imports (% of supply)	16	29
Exports (% of production)	20	16
Energy self-sufficiency (%)	106	85
Net trade (USD million)	- 4 189	- 6 580
Net trade (% of GDP)	-1.5	-2.8

Total primary energy supply in 2017



Renewable energy supply in 2017



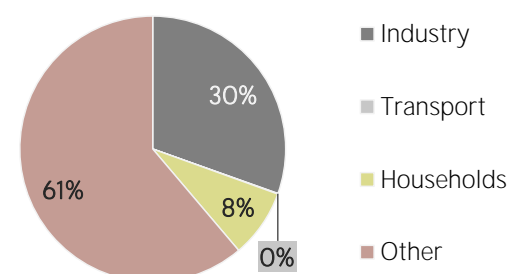
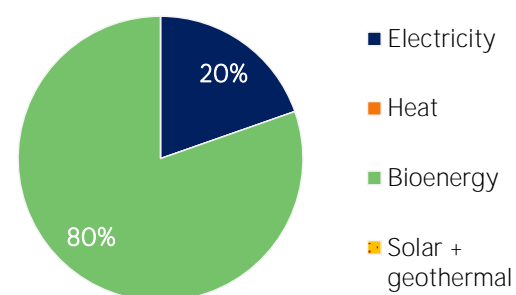
RENEWABLE ENERGY CONSUMPTION

Consumption by source	2012	2017
Electricity (TJ)	45 243	44 527
Heat (TJ)	0	0
Bioenergy (TJ)	183 632	182 264
Solar + geothermal (TJ)	0	0
Total (TJ)	228 875	226 791
Electricity share (%)	20	20

Consumption growth	2012-17	2016-17
Renewable electricity (%)	-1.6	-5.6
Other renewables (%)	-0.7	-2.2
Total (%)	-0.9	-2.9

Consumption by sector	2012	2017
Industry (TJ)	71 253	69 024
Transport (TJ)	163	157
Households (TJ)	19 276	18 834
Other (TJ)	138 183	138 776
Renewable share of TFEC		5.5

Renewable energy consumption in 2017

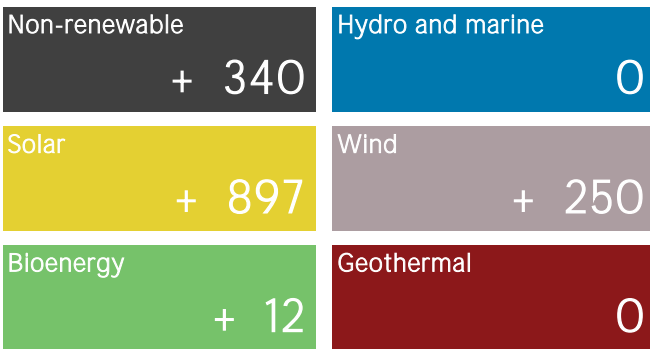


ELECTRICITY CAPACITY AND GENERATION

Capacity in 2019	MW	%
Non-renewable	58 614	91
Renewable	5 972	9
Hydro/marine	2 851	4
Solar	1 668	3
Wind	1 375	2
Bioenergy	79	0
Geothermal	0	0
Total	64 586	100

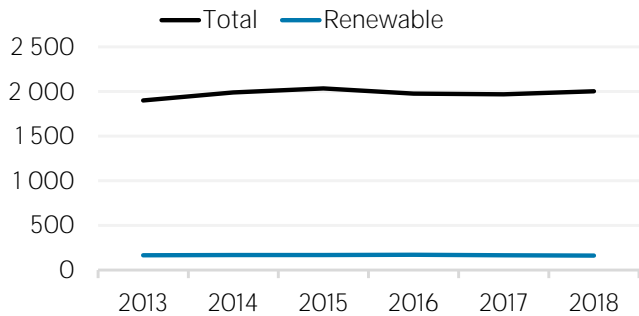
Capacity change (%)	2014-19	2018-19
Non-renewable	+ 81	+ 0.6
Renewable	+ 71	+ 24.1
Hydro/marine	0	0.0
Solar	+ 4 666	+ 116.3
Wind	+ 150	+ 22.2
Bioenergy	+ 17	+ 17.2
Geothermal	0	0.0
Total	+ 80	+ 2.4

Net capacity change in 2019 (MW)

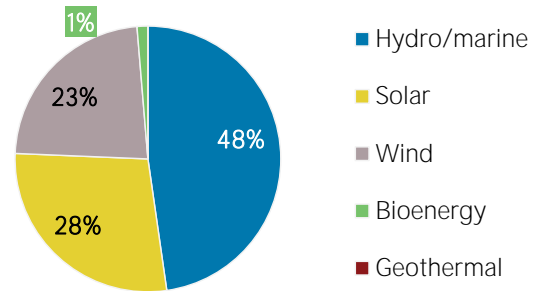


Generation in 2018	GWh	%
Non-renewable	181 138	92
Renewable	15 918	8
Hydro and marine	12 726	6
Solar	553	0
Wind	2 334	1
Bioenergy	305	0
Geothermal	0	0
Total	197 056	100

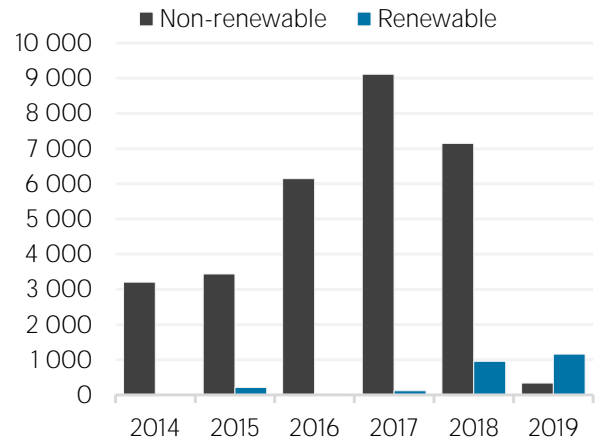
Per capita electricity generation (kWh)



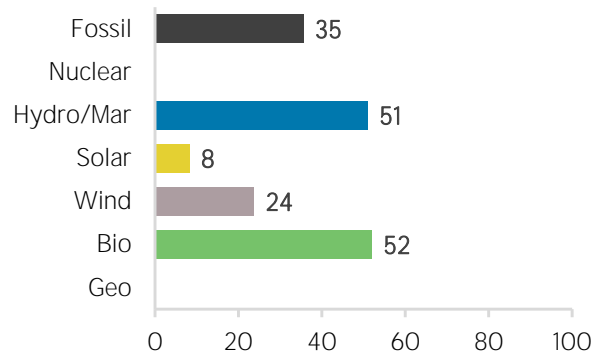
Renewable capacity in 2019



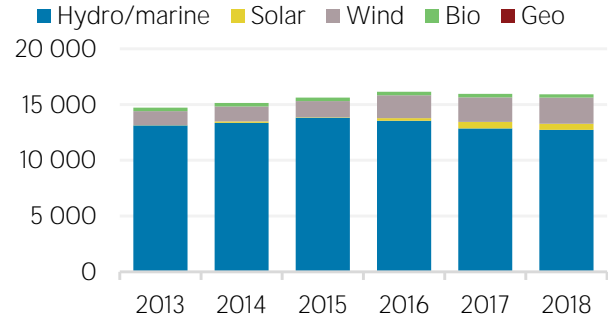
Net capacity change (MW)



Capacity utilisation in 2018 (%)



Renewable generation (GWh)



TARGETS, POLICIES AND MEASURES

Most immediate clean energy targets & NDCs

	year	target	unit
Renewable energy:			
Renewable electricity:	2013	50	%
Renewable capacity:			
Renewable transport:			
Liquid Biofuel blending mandate:			
Other transport targets:			
Renewable heating/cooling:			
Renewable Hydropower	2017	90	%
Off-grid renewable technologies:			
Energy efficiency (Energy):			
Energy efficiency (Electricity):			

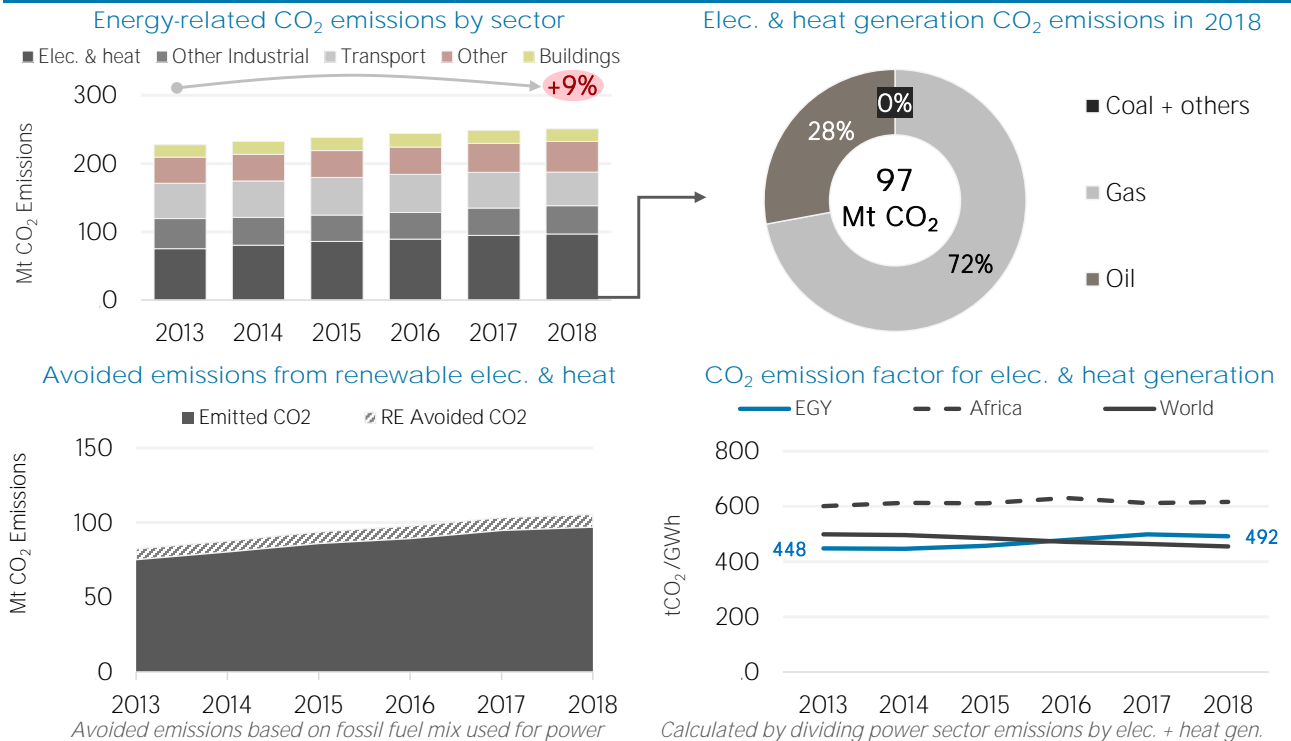
Latest policies, programmes and legislation

1	Non-ducted air conditioners and heat pumps- Testing and rating for performance (standard 4814 / 2018)	2019
2	Decree No. 239 for the year 2018 issuing the executive regulations of the law for Gas Market activities regulation Act No. (196) of the year 2017	2018
3	2013/3795 Energy efficiency label requirement for room air conditioner (window-split)	2017
4	Law No. 196 of 2017 for Gas Market Activities Regulation	2017
5	Air Conditioners Energy Efficiency Standard No. 3795-1 / 2016	2016

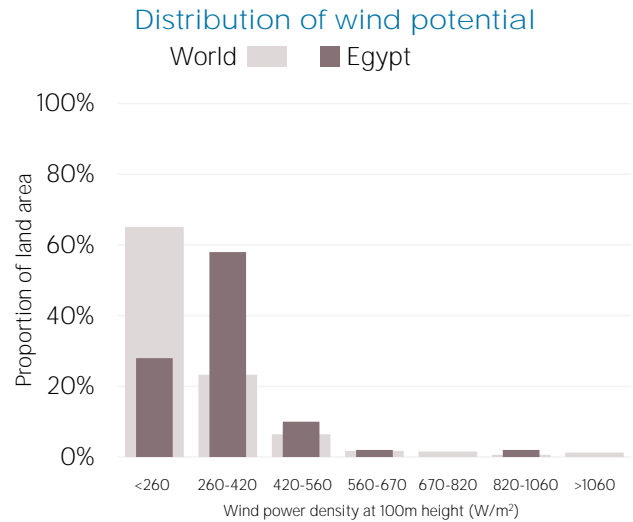
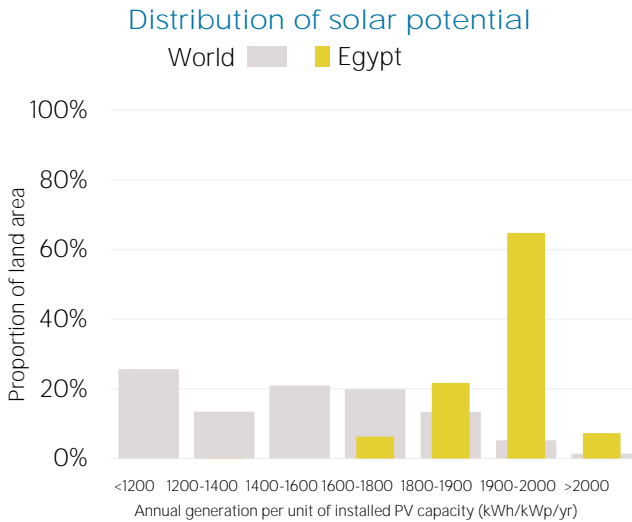
References to sustainable energy in Nationally Determined Contribution (NDC)

	Conditional	Unconditional	unit
- Renewable energy			
- electricity			
- transport			
- heating/cooling			
- Energy efficiency			

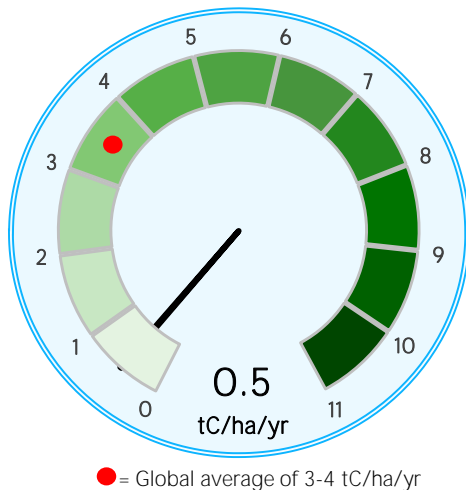
ENERGY AND EMISSIONS



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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