

SUSTAINABLE DEVELOPMENT GOAL 7: ENERGY INDICATORS (2017)

Renewable energy (% of TFEC)	30.4	Access to electricity (% of population)	100.0
Energy efficiency (MJ per \$1 of GDP)	5.0	Access to clean cooking (% of population)	>95
Public flows renewables (2017 USD M)	n.a.	Per capita renewable capacity (W/person)	n.a.

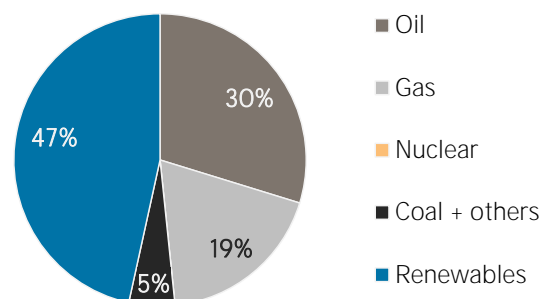
TOTAL PRIMARY ENERGY SUPPLY (TPES)

TPES	2012	2017
Non-renewable (TJ)	494 403	510 874
Renewable (TJ)	381 241	445 080
Total (TJ)	875 644	955 954
Renewable share (%)	44	47

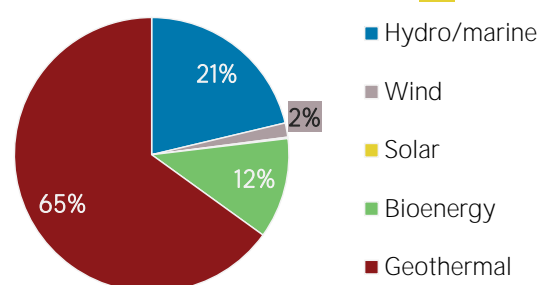
Growth in TPES	2012-17	2016-17
Non-renewable (%)	+3.3	-0.0
Renewable (%)	+16.7	-1.9
Total (%)	+9.2	-0.9

Primary energy trade	2012	2017
Imports (TJ)	306 282	347 256
Exports (TJ)	152 806	103 057
Net trade (TJ)	- 153 476	- 244 199
Imports (% of supply)	35	36
Exports (% of production)	20	14
Energy self-sufficiency (%)	85	79
Net trade (USD million)	- 4 987	- 3 167
Net trade (% of GDP)	-2.8	-1.5

Total primary energy supply in 2017



Renewable energy supply in 2017



RENEWABLE ENERGY CONSUMPTION

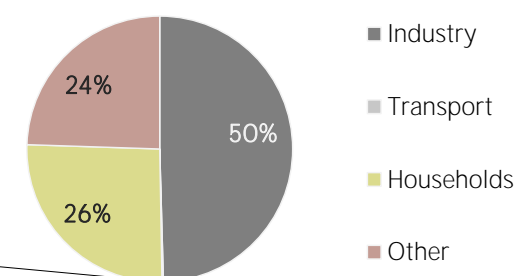
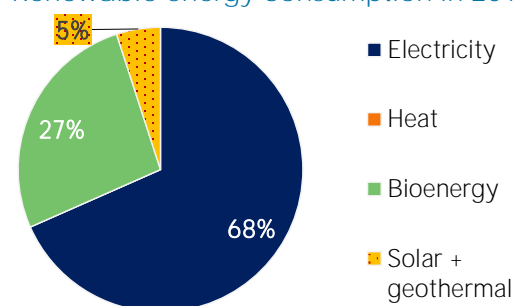
Consumption by source	2012	2017
Electricity (TJ)	100 786	116 971
Heat (TJ)	0	0
Bioenergy (TJ)	43 523	45 517
Solar + geothermal (TJ)	9 052	8 548
Total (TJ)	153 361	171 036
Electricity share (%)	66	68

Consumption growth	2012-17	2016-17
Renewable electricity (%)	+16.1	+1.3
Other renewables (%)	+2.8	-12.8
Total (%)	+11.5	-3.6

Consumption by sector	2012	2017
Industry (TJ)	78 868	84 765
Transport (TJ)	386	293
Households (TJ)	39 016	44 107
Other (TJ)	35 091	41 871

Renewable share of TFEC	30.4
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Renewable energy consumption in 2017

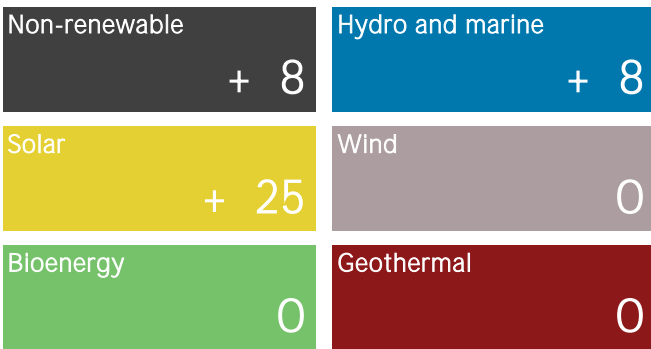


ELECTRICITY CAPACITY AND GENERATION

Capacity in 2019	MW	%
Non-renewable	2 117	23
Renewable	7 252	77
Hydro/marine	5 389	58
Solar	115	1
Wind	689	7
Bioenergy	119	1
Geothermal	941	10
Total	9 369	100

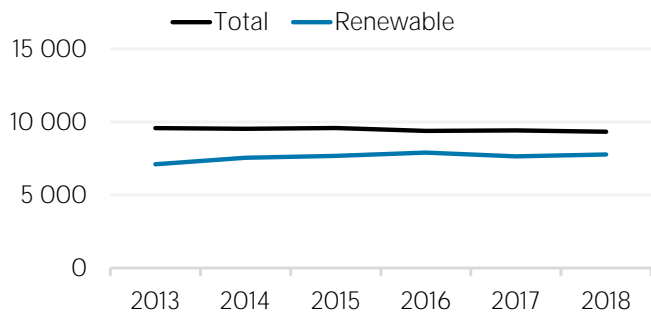
Capacity change (%)	2014-19	2018-19
Non-renewable	- 20	+ 0.4
Renewable	+ 2	+ 0.5
Hydro/marine	+ 0	+ 0.1
Solar	+ 431	+ 27.8
Wind	+ 1	0.0
Bioenergy	- 4	0.0
Geothermal	+ 2	0.0
Total	- 4	+ 0.4

Net capacity change in 2019 (MW)

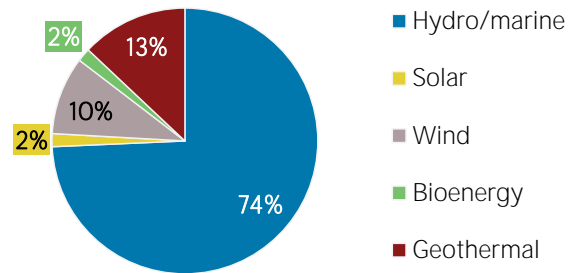


Generation in 2018	GWh	%
Non-renewable	7 378	17
Renewable	36 872	83
Hydro and marine	26 309	59
Solar	98	0
Wind	2 068	5
Bioenergy	582	1
Geothermal	7 815	18
Total	44 250	100

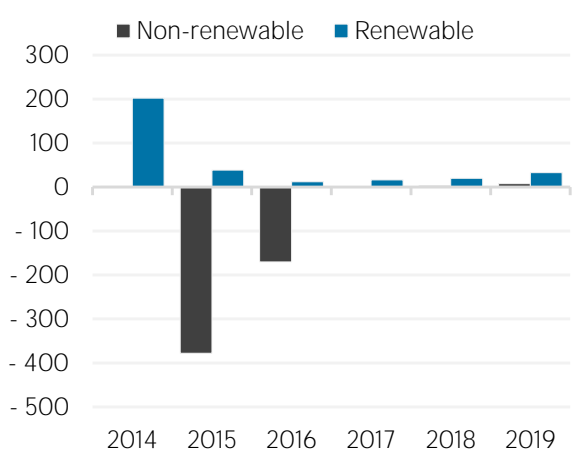
Per capita electricity generation (kWh)



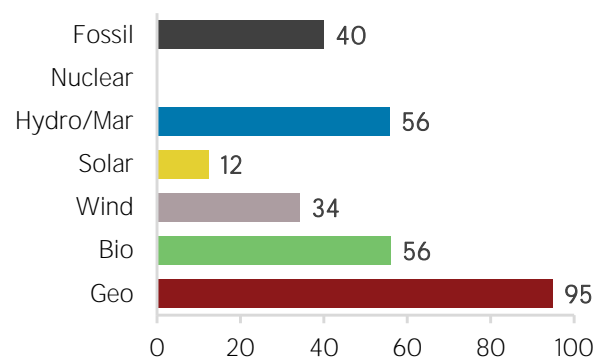
Renewable capacity in 2019



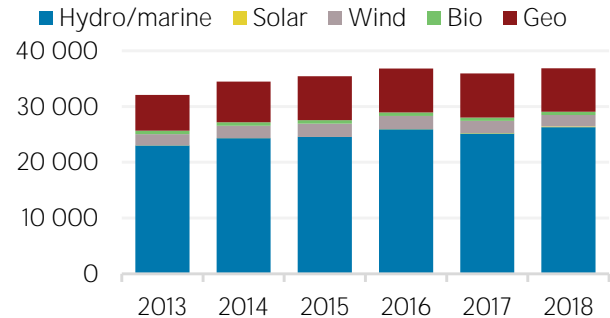
Net capacity change (MW)



Capacity utilisation in 2018 (%)



Renewable generation (GWh)



TARGETS, POLICIES AND MEASURES

Most immediate clean energy targets & NDCs

	year	target	unit
Renewable energy:			
Renewable electricity:	2025	90	%
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):			

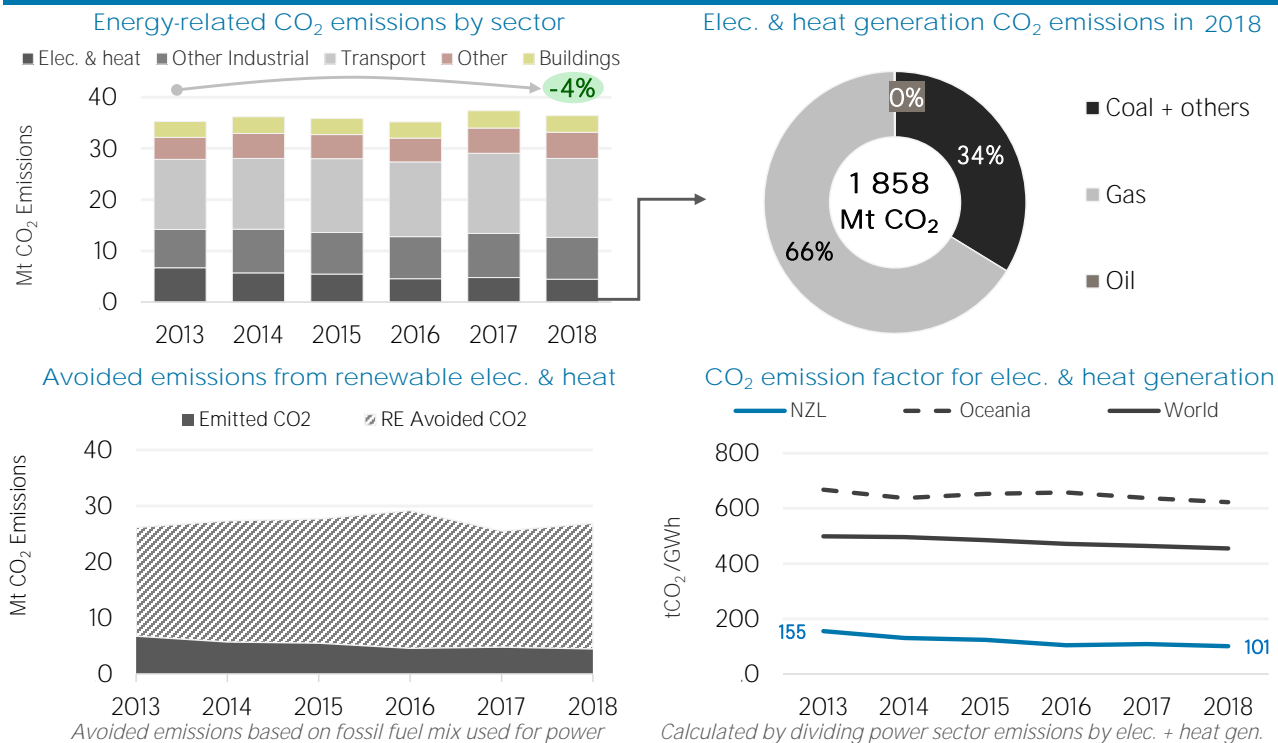
Latest policies, programmes and legislation

1 EVRoam	2018
2 Warmer Kiwi Homes	2018
3 ACC Levies for plug-in hybrid electric vehicles	2017
4 Emprove programme is operated by the Energy Efficiency and Conservation Authority (EECA)	2017
5 Enabling a nationwide network of public charging infrastructure	2017

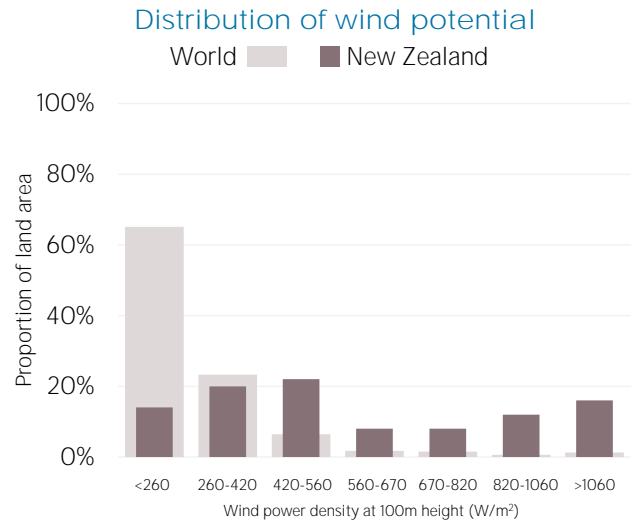
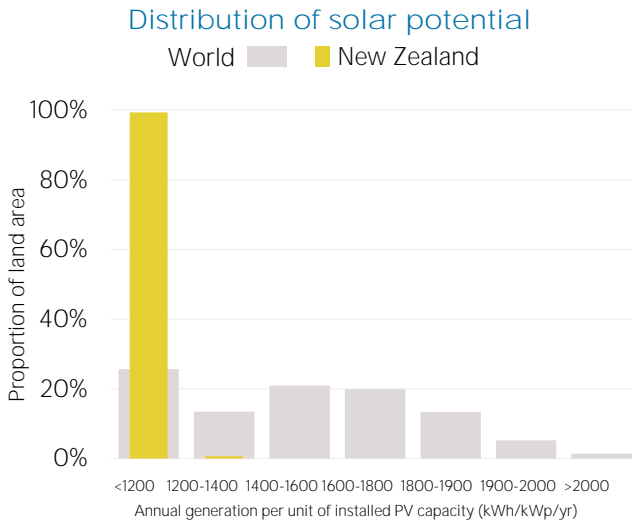
References to sustainable energy in Nationally Determined Contribution (NDC)

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

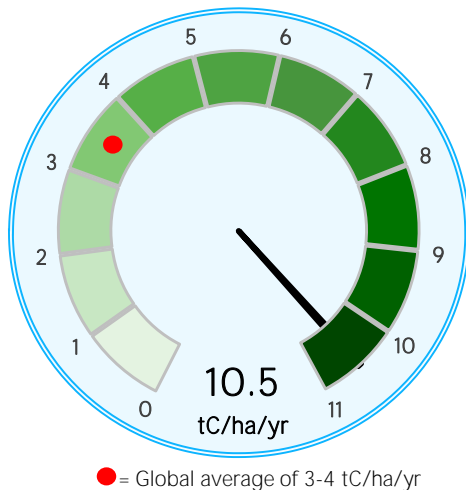
ENERGY AND EMISSIONS



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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