Serbia



100.0

66

- Renewable energy (% of TFEC) Energy efficiency (MJ per \$1 of GDP) Public flows renewables (2018 USD M)
- 21.1 Access to electricity (% of population)
- 5.3 Access to clean cooking (% of population)
- n.a. Per capita renewable capacity (W/person) n.a.

	TOTAL PR	IMARY ENERG	GY SUPPLY (TPES)
TPES	2013	2018	Total primary
Non-renewable (TJ)	539 823	550 671	
Renewable (TJ)	81 355	82 843	120/
Total (TJ)	621 177	633 514	
Renewable share (%)	13	13	
Growth in TPES	2013-18	2017-18	
Non-renewable (%)	+2.0	-2.9	F.00/
Renewable (%)	+1.8	-2.7	50%
Total (%)	+2.0	-2.9	
Primary energy trade	2013	2018	Renewable
Imports (TJ)	198 410	285 047	
Exports (TJ)	51 439	65 453	
Net trade (TJ)	- 146 971	- 219 594	
Imports (% of supply)	32	45	
Exports (% of production)	11	16	
Energy self-sufficiency (%)	77	66	55%
Net trade (USD million)	- 2 407	- 2 420	
Net trade (% of GDP)	-5.0	-4.8	



Total primary energy supply in 2018

Renewable energy supply in 2018



RENEWABLE ENERGY CONSUMPTION

Renewable energy consumption in 2018

Consumption by source	2013	2018
Electricity (TJ)	27 491	28 844
Heat (TJ)	115	141
Bioenergy (TJ)	43 386	44 128
Solar + geothermal (TJ)	0	0
Total (TJ)	70 993	73 113
Electricity share (%)	39	39
Consumption growth	2013-18	2017-18
Renewable electricity (%)	+4.9	-6.0
Other renewables (%)	+1.8	+0.3
Total (%)	+3.0	-2.3
Consumption by sector	2013	2018
Industry (TJ)	15 614	16 287
Transport (TJ)	489	386
Households (TJ)	47 991	49 004
Other (TJ)	6 899	7 436
Renewable share of TFEC	20.2	21.1



ELECTRICITY CAPACITY AND GENERATION

Capacity in 2020	MW	%
Non-renewable	4 685	62
Renewable	2 909	38
Hydro/marine	2 460	32
Solar	29	0
Wind	397	5
Bioenergy	24	0
Geothermal	0	0
Total	7 595	100
l e tal	, ,,,	100
C_{apacity} change $\binom{0}{2}$	2015 20	2010.20
Capacity change (%)	2015-20	2019-20
Capacity change (%) Non-renewable	2015-20 - 4	2019-20 - 6.4
Capacity change (%) Non-renewable Renewable	2015-20 - 4 + 19	2019-20 - 6.4 + 0.2
Capacity change (%) Non-renewable Renewable Hydro/marine	2015-20 - 4 + 19 + 2	2019-20 - 6.4 + 0.2 0.0
Capacity change (%) Non-renewable Renewable Hydro/marine Solar	2015-20 - 4 + 19 + 2 + 82	2019-20 - 6.4 + 0.2 0.0 + 22.9
Capacity change (%) Non-renewable Renewable Hydro/marine Solar Wind	2015-20 - 4 + 19 + 2 + 82 + 3 717	2019-20 - 6.4 + 0.2 0.0 + 22.9 - 0.3
Capacity change (%) Non-renewable Renewable Hydro/marine Solar Wind Bioenergy	2015-20 - 4 + 19 + 2 + 82 + 3 717 + 372	2019-20 - 6.4 + 0.2 0.0 + 22.9 - 0.3 0.0
Capacity change (%) Non-renewable Renewable Hydro/marine Solar Wind Bioenergy Geothermal	2015-20 - 4 + 19 + 2 + 82 + 3 717 + 372 0	2019-20 - 6.4 + 0.2 0.0 + 22.9 - 0.3 0.0 0.0

Net capacity change in 2020 (MW) Hydro and marine Non-renewable 318 \bigcirc Wind 5 Bioenergy Geothermal \mathbb{C} \mathbf{O} Generation in 2019 GWh % Non-renewable 27 093 72 Renewable 10 507 28 Hydro and marine 9 4 5 7 25 Solar 14 0 Wind 2 898 138 0 Bioenergy Geothermal 0 0 37 600 Total 100





Net capacity change (MW)



Capacity utilisation in 2019 (%)



Renewable generation (GWh)

■ Hydro/marine ■ Solar ■ Wind ■ Bio ■ Geo



TARGETS, POLICIES AND MEASURES

Most immediate clean energy targets & NDCs

Most infinediate clean energy targets & NDCs			
	year	target	
Renewable energy:	2020	27 %	
Renewable electricity:	2020	37 %	
Renewable capacity:			
Renewable transport:	2020	10 %	
Liquid Biofuel blending mandate:			
Other transport targets:			
Renewable heating/cooling:	2020	30 %	
Renewable Hydropower			
Off-grid renewable technologies:			
Energy efficiency (Energy):			

Energy efficiency (Electricity):

Latest policies, programmes and legislation

1 Decree on Amount of Special Fee for Incentives in 2013 (RS Official Gazette, No. 8/13)	2013
2 Decree on Criteria and Procedure for Qualification for Privileged Electricity Producer Status (RS Official Gazette, No. 8/13)	2013
3 Decree on Incentive Measures for Privileged Energy Producers (Eco-scheme)	2013
4 Decree on Method of Calculation and Allocation of Funding Raised from Incentive Fees for Privileged Electricity Producers (RS Official Gazette, No. 8/13)	2013
5 National Renewable Energy Action Plan (NREAP)	2013

References to sustainable energy in Nationally Determined Contribution (NDC)

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



Avoided emissions based on fossil fuel mix used for power

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

RENEWABLE RESOURCE POTENTIAL

Distribution of solar potential World Serbia



Biomass potential: net primary production





IRENA Headquarters Masdar City P.O. Box 236, Abu Dhabi United Arab Emirates www.irena.org Distribution of wind potential World Serbia



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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