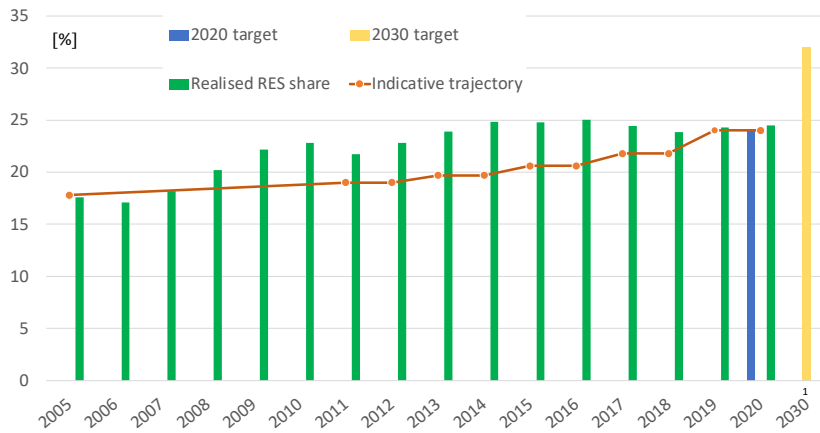


Romania

Renewable energy status

Share of energy from renewable sources in total gross final energy consumption



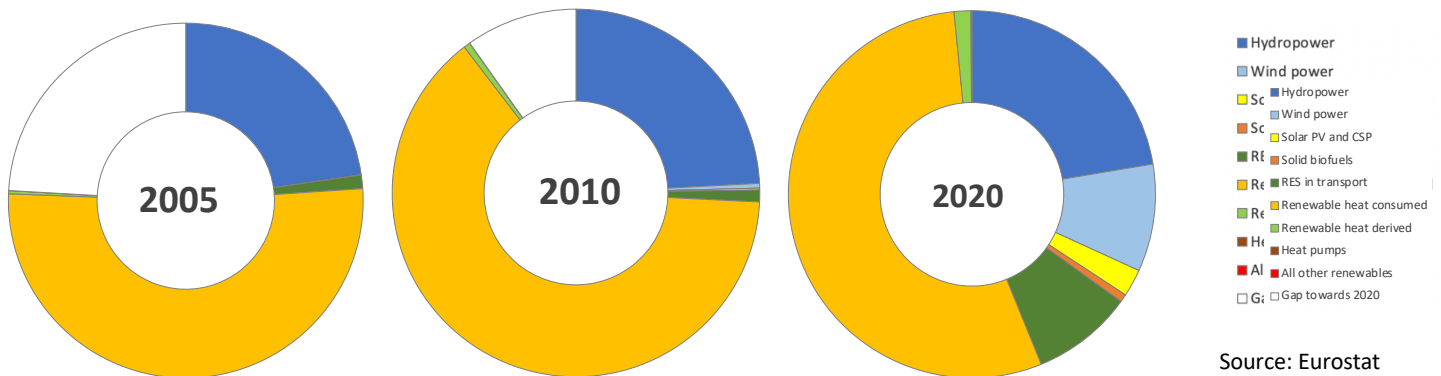
Source: Eurostat

Abbreviations used:

- RES: renewable energy sources
- RES-E: renewable electricity
- RES-H/C: renewable heating/cooling
- RES-T: renewable transport fuels

Data for 2020

Overall RES share:	24.48%	Avoided fossil fuels:	2.5 [Mtoe]
Overall RES 2020 target:	24.0%	Avoided fuel expenses:	399 [MEUR]
Overall RES 2030 target:	30.7%	RES Turnover:	1 630 [MEUR]
Share RES-E in electricity:	43.37%	RES Employment:	32 600 [jobs]
Share RES-T in transport:	8.54%	RES imports ² :	250 [MEUR]
Share RES-H/C in heating:	25.33%	RES exports ² :	7 [MEUR]



Source: Eurostat

	2005	2010	2020		
	Energy in ktoe	Energy in ktoe	Energy in ktoe	Employment in FTE	Turnover in MEUR
Hydropower	1 397.6	1 488.9	1 377.4	1 100	90
Wind power	0.0	25.6	582.6	2 500	210
Solar PV, and CSP	0.0	0.0	149.0	1 600	120
Solid biomass	0.0	9.4	42.4	6 100	290
Ren. energy in transport ³	76.2	64.6	549.2	20 100	830
Renew. heat consumed	3 183.5	3 931.0	3 363.2		
Renew. heat derived	18.1	35.7	91.5		
Heat pumps	0.0	0.0	0.0	900	60
All other renewables	0.0	0.1	4.6	300	30
Gap towards 2020	1 484.5	604.6			

Source: Eurostat, EurObserv'ER

FTE = Full time equivalent, PV=Photovoltaics, CSP=Concentrated Solar Power. Biofuels in transport only covers compliant fuels (employment and turnover additionally cover the non-compliant biofuels). Derived heat includes heat produced in main activity producer plants and heat sold produced in auto-producer plants. Its counterpart is the final heat consumption in the final consumption sectors (such as households).

¹ From Integrated National Energy Climate Plan

² Referring to the International Trade chapter from the publication: EurObserv'ER - *The State of Renewable Energy in Europe, 2021 edition*

³ Employment and turnover are only referring to biofuels in transport.



CURRENT RENEWABLE ENERGY POLICY

Romania is targeting to increase the share of renewable energy sources to at least 30.7% within gross final energy consumption by 2030 compared to a 24.48% share surveyed in 2020.

RES-E

On the electricity sector, Romania aims to cover a 50% share of its electricity consumption from renewable energy sources by 2030. This will be achieved mainly by hydro, wind and photovoltaic sources. Hydro power is expected to remain stable throughout the 2020-2030 period, while wind production will nearly double and solar generation is expected to increase nearly fourfold in absolute generation.

The promotion of RES-E production in Romania is achieved through the green certificates (GCs) scheme, combined with the annual mandatory quota for the acquisition of GCs. Up to now, no tendering procedures have been implemented. Moreover, Romania keeps on going to support the promotion of RES-E production by supporting prosumers, that is, the local electricity distributed generation of RES-E to meet the local consumption. Particular attention is paid to the transposition of the European provisions in the sense of promotion of the concepts of prosumer, aggregator and local energy community or flexibility facilities of RES-E production through aggregation and/or storage of electricity. The possibility to promote and stimulate the production of small RES-E capacities through premium feed-in-type schemes is under discussion. Regarding the prosumers approach, the Ministry of Environment currently runs two funding programs: - The Program for the installation of PV systems for electricity production, in order to cover the consumption needs and the delivery of the surplus in the national grid. Funding is granted up to 90% of the total eligible expenses, within the amount of 20 000 lei (approx. €4 000). The second programme is focused on PV systems for isolated households not connected to the electricity distribution grid.

RES H&C

For heating and cooling, the existing renewable share comes primarily from the use of biomass in boilers and a strong increase in the use of heat pumps (due to an estimated 25% cost reduction in deployment) and in the use of solar panels on roofs. For 2030, Romania targets to reach 33% renewable energy heating and cooling share. Romania relies heavily on biomass for its renewable contribution in this sector, with the use of biomass generally found in rural areas. The fact that the true potential of biomass is not clear at national level (due to lack of data and an unclear legal framework) makes it highly questionable whether the overall renewable energy contribution can be achieved and sustained. Moreover, the National Energy and Climate plan (NECP) does not provide information on the role of waste heat and on how the country intend to push forward RES share on district heating and cooling.

RES-T

Romania is targeting a 14.2% RES share in transport by 2030. As required in Articles 25-27 of Directive 2018/200111, the contribution of all eligible fuels does not exceed the 7% cap and Renewable electricity in transport is set to increase substantially compared to 2020, with around 700 000 private electric cars (including hybrid) and approximately 650 000 charging points (approximately 40 000 of which will provide fast and semi-fast charging) expected to be in circulation in 2030. The key policies and measures to achieve this are the rollout of electric vehicles and further uptake of advanced biofuels.

Table 1: Brief description of key policy instruments aimed at promoting RES in Romania

<i>Instrument</i>	<i>Description</i>
Renewable quota scheme	The promotion of RES-E production in Romania is achieved through the green certificates (GCs) scheme, combined with the annual mandatory quota for the acquisition of GCs. Starting with the end of 2016, the GC promotion scheme was closed for access to the scheme for new RES-E producers
Investment subsidy Developers	Developers of electricity generation and heating & cooling projects from renewable energy sources can apply for an investment subsidy from the National Rural Development Programme.
Vocational training programmes for installers	Applicable, among others, to technicians installing heating & cooling appliances.
Government recommendation to use renewable energy in new buildings	Applicable to new buildings with a floor surface of more than 1 000 m ² .
Biofuels quota scheme for transport fuels	Suppliers of transport fuels have to meet a certain minimum share of their annual turnover by biofuels that are certified to comply with regulated minimum sustainability criteria. Moreover, their transport fuel deliveries have to comply with certain minimum GHG emissions standards. The biofuels quota scheme does not encompass other renewable transport fuels.

For further information:

CEER, 2021. Status Review of Renewable Support Schemes in Europe for 2018 and 2019.

<https://www.ceer.eu/documents/104400/-/-/ffe624d4-8fbb-ff3b-7b4b-1f637f42070a>

Solar power Europe, EU Market outlook 2021-2025

[https://api.solarpowereurope.org/uploads/EU Market Outlook for Solar Power 2021 2025 Solar Power Europe d485a0bd2c.pdf](https://api.solarpowereurope.org/uploads/EU_Market_Outlook_for_Solar_Power_2021_2025_Solar_Power_Europe_d485a0bd2c.pdf)

IEA, Solar heat worldwide 2022

<https://www.iea-shc.org/solar-heat-worldwide>

Romanian National Energy and climate plan

https://energy.ec.europa.eu/system/files/2020-06/ro_final_necp_main_en_0.pdf

European Commission, 2020. Assessment of the final National Energy and Climate Plan of Romania

https://energy.ec.europa.eu/system/files/2021-01/staff_working_document_assessment_necp_romania_en_0.pdf

REN21, Global Status Report 2022.

https://www.ren21.net/wp-content/uploads/2019/05/GSR2022_Full_Report.pdf

RES Legal database

<http://www.res-legal.eu/search-by-country/romania/>

What is meant by ...?

Auctions for granting renewable energy support	An auction is a process of granting production or investment support to renewable energy projects based on the lowest bids by eligible project developers.
Feed-in tariff (FiT)	A support scheme which provides for a technology-specific remuneration per unit of renewable energy payable to eligible renewable energy producers. A proper, periodic review of FiT rates is often undertaken with the aim to prevent both too high FiTs so as to minimise regulatory rents, i.e. supra-normal returns and too low FiTs to preclude below-target market uptake because of FiT levels that are perceived by market participants to be less attractive. In addition, feed-in tariffs often include "tariff degression", a mechanism according to which the price (or tariff) ratchets down over time.
Feed-in premium (FiP)	A scheme which provides for a support level per unit of renewable energy to eligible renewable energy producers, typically for a period of 10-20 years, at a pre-set fixed or floating rate. The premium is typically adjusted periodically to exactly offset change in the average energy wholesale market price, based on a pre-specified benchmark market price. A floating FiP may move freely or may only be allowed to move within a pre-set interval.
Grants	Grants are non-repayable funds disbursed by one party (grant makers), often a government department, corporation, foundation or trust, to a recipient, often (but not always) a non-profit entity, educational institution, business or an individual. (Source: Wikipedia.org)
Green public procurement	In Green public procurement contracting authorities take environmental issues into account when tendering for goods or services. The goal is to reduce the impact of the procurement on human health and the environment. (Source: Wikipedia.org)
Renewable quota scheme (RQS)	A RQS mandates certain market actors (typically retail suppliers or large energy end-users) to respect a pre-set minimum share or amount of their total energy procurements from renewable sources of energy. Typically a tradable green certificate (TGC) scheme is operated to enable the obligated parties to prove their compliance with the prevailing renewable quota target by means of TGCs.
Sliding feed-in-tariff	A FiT scheme which pre-sets technology-specific declining feed-in tariffs for certain prospective vintages in line with the technology-specific learning curve, as projected by the National Regulatory Agency (NRA). Often a degression rate is used indicating the %/annum decrease in the rate level.
Soft loans	Loans at concessional (below market-based) terms, for example at sub-market-conform interest rates, made available in several Member States to stimulate certain renewable energy technologies.
Tax credits	These are amounts a tax paying entity is allowed to deduct when declaring payable taxes, for example company tax or income tax, to the tax authorities, for example the producer tax credits (PTCs) used in the United States to stimulate among others wind energy deployment.



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