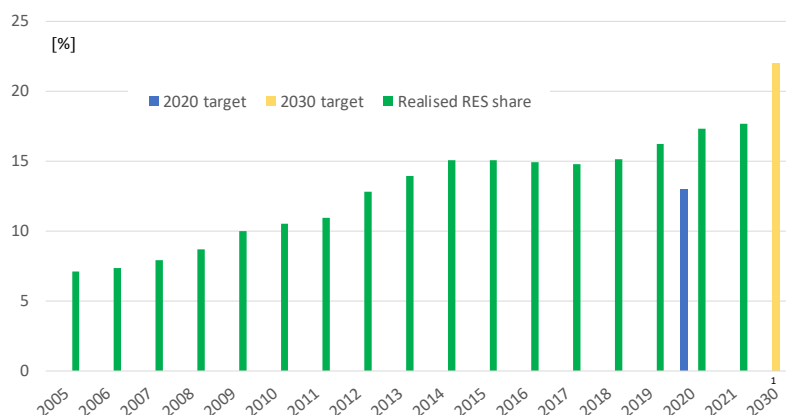


Czechia

Renewable energy status

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



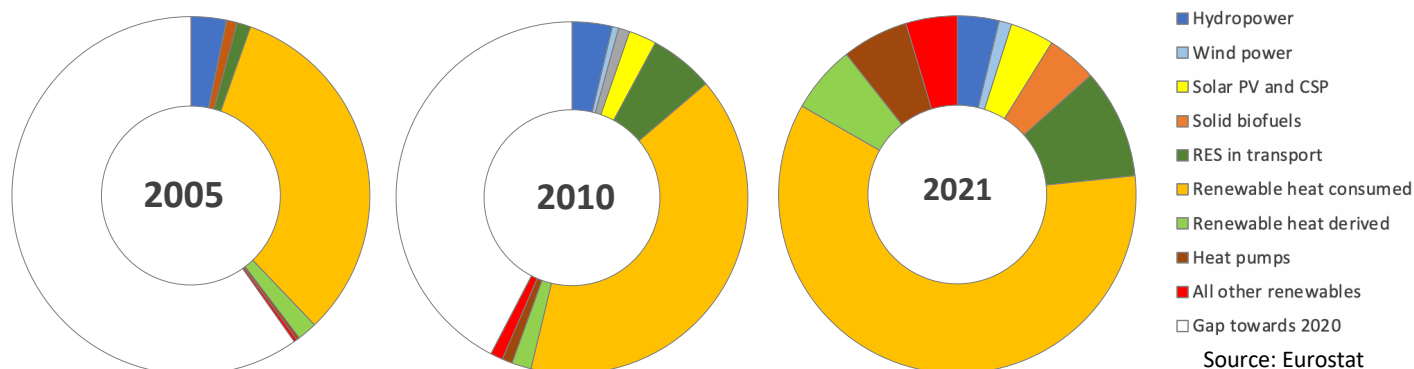
Source: Eurostat

Abbreviations used:

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

Data for 2021

Overall RES share: 17.7% Avoided fossil fuels: 3.9 [Mtoe]
 Overall RES 2020 target: 13% Avoided fuel expenses: 1 330 [MEUR]
 Overall RES 2030 target: 22% RES Turnover: 1 980 [MEUR]
 Share RES-E in electricity: 14.5% RES Employment: 30 100 [jobs]
 Share RES-T in transport: 7.5% RES imports²: 350 [MEUR]
 Share RES-H/C in heating: 24.2% RES exports²: 200 [MEUR]



Source: Eurostat

	2005		2010		2021		
	Energy in ktoe		Energy in ktoe		Energy in ktoe	Employment in FTE	Turnover in MEUR
Hydropower	161.0		186.4		190,3	1 400	100
Wind power	1.4		29.4		57,9	600	60
Solar PV, and CSP	0.0		52.9		199,1	2 200	180
Solid biomass	48.2		128.3		229,1	15 900	940
Ren. energy in transport ³	62.8		298.3		500,3	4 300	280
Renew. heat consumed	1636.9		2 016.8		3 022,9		
Renew. heat derived	90.2		90.1		308,5		
Heat pumps	13.3		47.8		303,3	1 900	160
All other renewables	14.7		57.6		233,9	3 800	260
Gap towards 2020	2 722.7		1 843.5				

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, 2022 edition*

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



CURRENT RENEWABLE ENERGY POLICY

Czechia is targeting to increase the share of renewable energy sources to at least 22% within gross final energy consumption by 2030 compared to a 13% share surveyed in 2020.

In 2020, the Czech authorities have announced a revision of the renewable energy law, but admit that the revised version will not be adopted for another year or two. The authorities describe several possible measures, including tariff support for small-scale renewable energy supply, auctions for renewables, new support schemes for sectoral targets, renewables in heating and cooling and bio-methane. No support is currently provided for new RES installations above 10 kW (non bioenergy).

RES-E

Czechia plans to increase the share of energy production based on renewable energy sources within electricity consumption to at least 16.9 % by 2030 (13.4% in 2020). This corresponds to a 3.3% increase over the coming decade, compared with a doubling of the renewable electricity share between 2010 and 2020, and thus represents a significant slowdown at a time when the key technologies, wind and solar energy, have reached cost parity. It is envisaged that the increase will come mainly from solar energy, followed by wind and biogas. In view of the role electricity could play in cost-effectively decarbonising the heating and cooling sector and the transport sector, and the Czech NECP's heavy reliance on large-scale biomass heating, the targeted increase in electricity from renewables is low. Electricity from renewable sources produced by installations commissioned before 2014 is promoted mainly through either a guaranteed feed-in tariff or alternatively a feed-in premium paid on top of the market price. However, a feed-in tariff can only be granted to operators of RES plants with an installed capacity up to 100 kW (30 kW in case of rooftop or façade PV installations or 10 MW in case of hydro power). The national energy and climate plan (NECP) does not include a forward-looking auction schedule. It announces tendering bonuses for up to 1 MW for photovoltaics and up to 6 MW for wind, but does not specify the level.

Regarding PV sector, there is a perceived general lack of support for large-scale solar, due to the fact that the past feed-in tariff regime granted very generous subsidies to large-scale PV projects. Since new utility-scale projects have not been built in the last 10 years, new projects might face public acceptance concerns. Electricity produced for own consumption is exempted from paying grid charges which include payment on RES. For own consumption they may receive support in the form of a green bonus (FiP), of which the level depends on the time of putting the plant into operation.

Moreover, the sudden increase of demand for solar in the Czech Republic has led to a shortage of skilled workers, especially at installation level. This could become a major bottleneck and limit in particular the deployment of smaller rooftop installations.

RES H&C

In heating and cooling, Czechia plans to increase the share of energy from renewable sources by 1.0 percentage points annually, without counting waste heat. This trajectory should lead the country to reach a 30.7% RES share compared to 20.7% spotted in 2020. The key policies and measures in the heating and cooling sector are green bonuses for biomass and geothermal energy. Detailed support measures are spelled out for bioenergy in heating only. District

heating is widespread in Czechia, but no comprehensive plan to decarbonise it has been developed.

RES-T

The NECP specifies that renewables must supply 14% of energy used in transport by 2030, starting from 8.8% in 2020. This increase should be achieved through renewable electricity sources, biofuels, bioemethane and, to a lesser extent, hydrogen. Fiscal measures would support the blending of biofuels with petrol or diesel. Czechia will continue to meet the fuel supplier obligation. First-generation biofuels will be capped at 7% in final energy consumption when the share of advanced biofuels is expected to increase significantly from the existing zero to 40% of the transport target by 2030. However, although an increase is projected in the number of e-vehicles from 1 200 today to 217 000 by 2030, no financial incentives are detailed that could help promote such a rise.

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

<i>Instrument</i>	<i>Description</i>
Feed-in tariffs or premiums	Guaranteed sale of electricity at a pre-set preferential price or a premium on top of the revenues from electricity sold, during the support contract period. For RES-E installations not larger than a technology-specific generating capacity. Only installations commissioned before January 2014 fall under this scheme. The exception is formed by eligible hydropower installations: also new ones can benefit for the FIT/FiP scheme. For eligible hydropower installations. Apart from small-scale projects, new projects do not get feed-in support.
Tax credits schemes	Renewable heating & cooling installations in buildings are eligible for an exemption from property tax for building owners. Biofuels are exempt from a consumption tax.
Biofuels quota scheme	Importers/suppliers of transport fuels are subject to a renewable quota scheme for biofuels and fiscal measures are also implemented to support the blending of biofuels with petrol or diesel. Compliance based on sample testing rather than certificates-based. No (direct) incentives for other alternative 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>

Czechia National Energy and climate plan

https://energy.ec.europa.eu/system/files/2021-01/staff_working_document_assessment_necp_czechia_en_0.pdf

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

https://energy.ec.europa.eu/system/files/2020-03/cs_final_necp_main_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>

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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