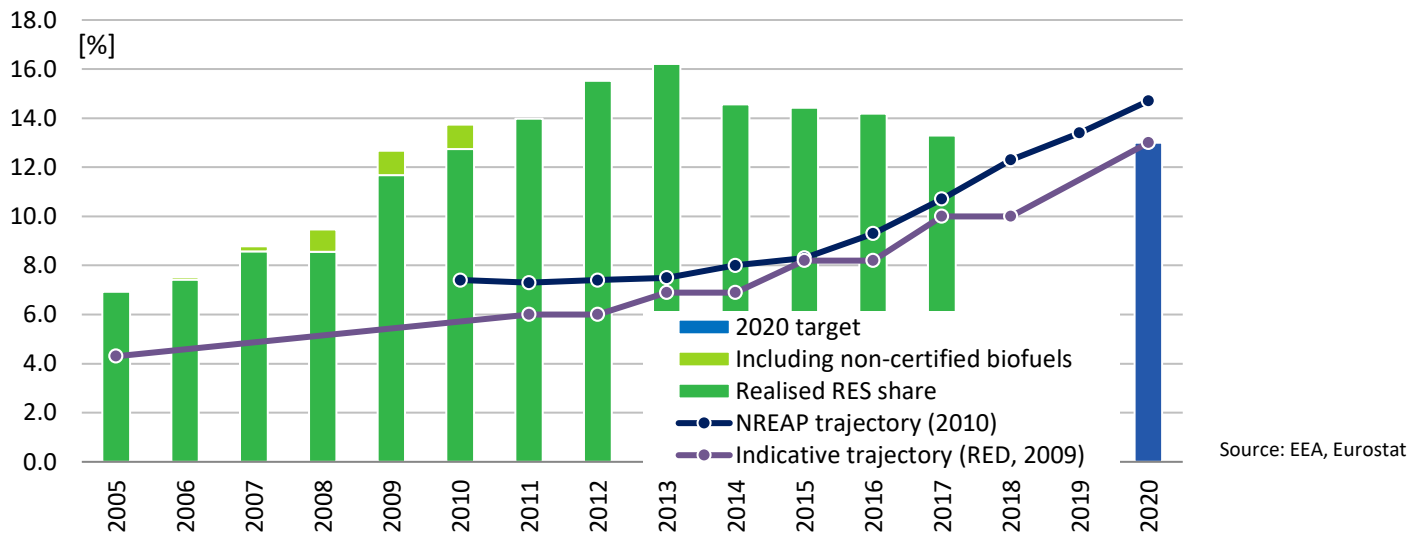


Summary

In Hungary, electricity from renewable energy sources is supported by a feed-in-tariff for installations with a capacity of 50 kW-500 kW or a feed-in ('green') premium for installations with a capacity of 0.5-1 MW. Plants with a capacity >1 MW and generally all wind power plants have to successfully participate in tenders in order to receive a feed-in premium. Currently the construction and grid connection of wind power plants is inhibited. Household-sized power plants up to 50 kVA can benefit from net metering. Renewable power project developers may apply for investment subsidies or soft loans through participation in tenders in the framework of EU co-financed subsidy and soft loan programmes. Some of these programmes – EEEOP and TOP for subsidies and EDIOP for soft loans – also cover renewable heating. The main support scheme for the use of renewable energy in the transportation sector is a biofuels quota system. Moreover, subsidy and reimbursement of excise duty options are available in certain biofuel cases.

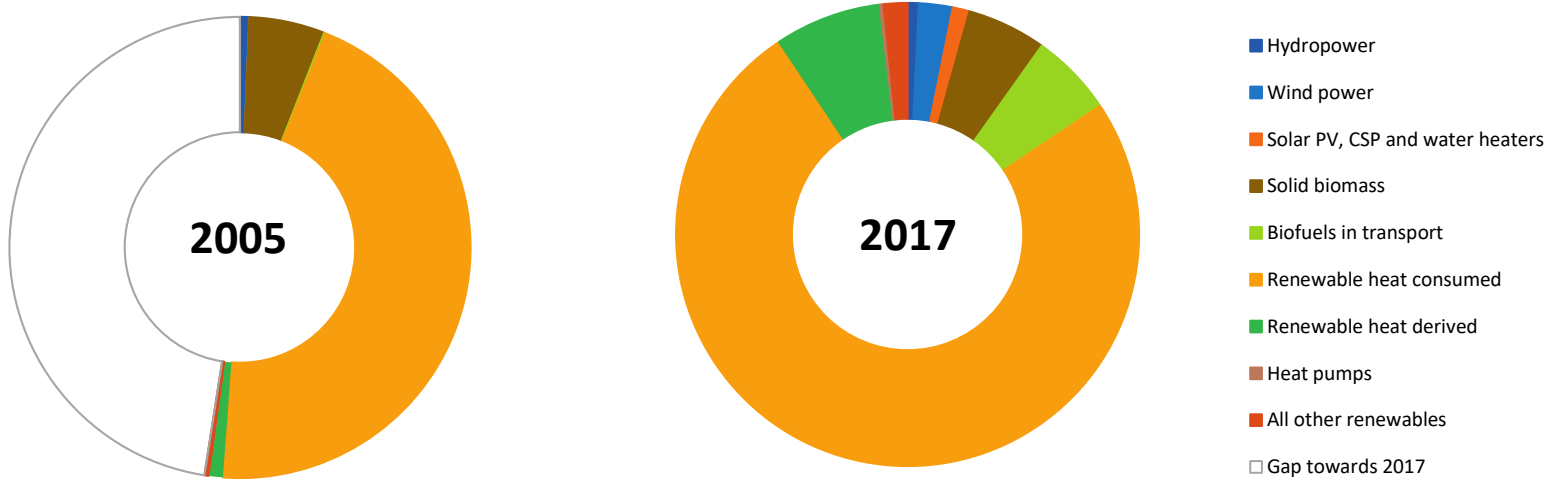


Abbreviations used:

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

Data for 2017

Overall RES share:	13.3%	Avoided fossil fuels:	3.3 [Mtoe]
Overall RES 2020 target:	13.0%	Avoided fuel expenses:	0.9 [billion euro]
Share RES-E in electricity:	7.5%	RES Turnover:	1480 [MEUR]
Share RES-T in transport:	6.8%	RES Employment:	36000 [jobs]
Share RES-H/C in heating:	19.6%		



Source: Eurostat, 2019.

	2005		2017		
	Energy		Energy	Employment	Turnover
Hydropower	15.9 ktce		19.9 ktce	100 Jobs	<10 MEUR
Wind power	1.1 ktce		60.4 ktce	800 Jobs	50 MEUR
Solar PV, CSP and water heaters	0.0 ktce		30.0 ktce	1500 Jobs	70 MEUR
Solid biomass	135.3 ktce		141.5 ktce	13300 Jobs	420 MEUR
Biofuels in transport	2.6 ktce		148.0 ktce	18200 Jobs	820 MEUR
Renewable heat consumed	1154.9 ktce		1919.6 ktce		
Renewable heat derived	25.7 ktce		190.7 ktce		
Heat pumps	0.0 ktce		6.5 ktce	400 Jobs	20 MEUR
All other renewables	7.2 ktce		42.6 ktce		
Gap towards 2017	1216.5 ktce				

Source: Eurostat, EurObserv'ER, 2019.

Hydropower jobs & turnover only covers 'small hydropower'. 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 autoproducer plants. Its counterpart is the final heat consumption in the final consumption sectors (such as households).



CURRENT RENEWABLE ENERGY POLICY

Electricity from renewable energy sources is supported by the METÁR scheme which entered into force as from 1 January 2017. It encompasses three installation-size related components:

- feed-in tariffs for installations with a capacity of 50 kW-500 kW or in case of a demonstration project; both already operating with FiT support before 1 January 2017. The eligibility period and the maximum amount of eligible electricity are determined for each eligible electricity producer by the Hungarian Energy and Public Utility Regulatory Authority (HEA). For installations having applied for the feed-in tariff after 31 December 2016, the new Decree No. 299/2017. (X. 17.) applies. This decree sets out different regulations for renewable energy installations between 50 kW – 0.5 MW and for plants between 0.5-1 MW. Installations up to 0.5 MW are either eligible for the feed-in tariff or the green premium (market premium). All renewable power technologies that are not commercially feasible, except wind power, are eligible feed-in premiums without tendering for installations with a capacity of 0.5-1 MW and biomass/biogas installations in general. The rate depends on factors such as technology, capacity, grid area, time block (3 blocks per day). Support contract period is partly technology-specific and determined on an individual basis for remaining cases.
- Plants with a capacity >1 MW and generally all wind power plants are obliged to participate in a tendering procedure in order to receive the green premium. However, the construction and grid connection of wind power plants is currently inhibited by a Government Decree until at least 2019.
- net-metering for household-size power plants up to 50 kW.
- loan/subsidy programmes. These are granted on the basis of tenders, mainly within the framework of the Economic and Investment Operational Programme (EDIOP) for soft loans and the 'Széchenyi Plan 2020', the Environment and Energy Efficiency Operational Programme (EEEOP), Territorial and Settlement Operational Programme (TOP), Competitive Central Hungary Operational Programme (CCHOP) and Rural Development Operational Programme (RDOP) for investment subsidies. These programmes are largely co-financed by the EU through the European Structural and Investment Funds (ESI) with a total allocation for Hungary (also including many other activities) over the period 2014-2020 of € 25 billion with counter financing by the State of Hungary to the tune of € 4.63 billion. In certain cases, feed-in tariffs can be combined with the soft loans or investment grants. Hitherto the tenders proceed in a lackluster frequency; especially wind power projects face permitting problems.

The use of heating energy from renewable sources is also stimulated by the EEEOP and TOP subsidy schemes as well as by soft loans from the Economic Development Innovation Operative Programme (EDIOP), largely co-financed by the EU through ESI with counter-financing by the State of Hungary. Subsidies/ soft loans are granted on the basis of tenders. Technologies covered are determined by the tender specifications.

The use of renewable energy in the transportation sector is fostered by way of a biofuels quota scheme. Each year gasoline and diesel retailers have to meet pre-set annual quota for biofuels and hydrogen in their total sales on an energy content (MJ) basis. Producers of biofuels can also apply for certain investment subsidy schemes, including the TOP and CCHOP schemes, through participation in tenders. In certain cases reimbursement can be obtained of excise duty on transportation fuels. Electric vehicles are exempted from registration tax and annual circulation tax. Company-owned electric vehicles are exempted from company car tax and eligible to free parking benefits.

OVERVIEW OF MAIN SUPPORTING POLICIES

Tables 1 and 2 provide an overview of support instruments used to promote the deployment of renewable energy in Hungary.

Table 1: Overview of support schemes to promote renewable energy in Hungary

	NON-FISCAL SUPPORT SCHEMES						FISCAL AND OTHER STATE FUNDED INCENTIVES			
	Feed-in tariffs 1)	Feed-in premium 1)	Tenders 2)	Quota obligation with Tradable Green certificates	Quota obligation without Tradable Green certificates	Net-metering/ net-billing 2)	Investment subsidies	Selective reimbursement of excise duty on transport fuel	Tax credits mechanism II	Soft loans
RES-E										
- Offshore wind										
- Onshore wind		(x)	(x)			x	(x)			(x)
- Solar	x	x	x			x	x			x
- Hydro	x	x	x			x	x			x
- Geothermal	x	x	x			x	x			x
- Solid biomass	x	x	x			x	x			x
- Biogas	x	x	x			x	x			x
RES-H/C										
- Solar thermal							x			x
- Geothermal							x			x
- Biomass							x			x
- Biogas							x			x
- Small scale installations, e.g. solar thermal collectors, heat pumps, biomass boilers and pellet stoves							x			x
- Others, i.e. aerothermal, hydrothermal							x			x
RES-T										
- Bio gasoline					x		x	x		
- Biodiesel					x		x	x		

- 1) Except for wind power, installations commissioned before 2017 with a capacity of 50 kW-500 kW or in case of a demonstration project are eligible. As from 2017, new installations < 500 kW are either eligible for a feed-in tariff or a feed-in premium without tendering; new installations of 0.5-1 MW capacity (no capacity limit for biomass/biogas installations) are eligible for a feed-in premium without tendering.
- 2) Project developers of installations above 1 MW capacity and wind power installations in general are solely eligible for a feed-in premium through successful participation in tenders. Currently, development of wind farms are inhibited by permitting problems
- 3) Installations ≤ 50 kW benefitting households.

Sources: RES-Legal Europe, EurObserv'ER

Table 2: Brief description of key policy instruments aimed at promoting RES in Hungary

<i>Instrument</i>	<i>Description</i>
Feed-in tariff	For installations between 50 kW-500 kW which are not subject to tendering procedures. The transmission system operator (TSO) MAVIR Ltd. is legally obliged to purchase electricity from renewable sources, to sell it at the electricity stock market and pay a guaranteed price to plant operators.
Green premium without tendering	Is granted for renewable electricity producing plants between 0.5 MW-1 MW. Those plants are not subject to tendering procedures. The tariff is set out by a Government Decree which is determined through a market reference price and an 'administrative premium'.
Green premium with tendering	Plants with a capacity higher than 1 MW and wind power plants applying for a green premium are subject to obligatory tendering procedures.
Net metering	Household-sized power plants with a capacity of maximum 50 kVA may benefit from net metering. The electricity surplus injected to the grid is remunerated by the electricity supplier with the electricity retail price.
Subsidy programmes promoting renewable heat	Currently provided by subsidy programmes under the Environmental and Energy Efficiency Operative Programme (EEEOP) and other operative programmes financed through European Union funds in conjunction with funds provided by the Hungarian government.
Soft loans	Are granted within the Economic Development Innovation Operative Programme (EDIOP) to support the use of renewable energy sources for generating power and heat.
Biofuels quota scheme	Obliges fuel retailers to ensure that biofuels and hydrogen make up a certain percentage of their annual fuel sales.
Tax regulation mechanism	A tax reimbursement applies to certain biofuels in case of engine development projects and vehicles used in the mining industry and in water management.
Investment subsidies	Provided by certain programmes to promote renewable energy sources in the transport sector

For further information:

EEA 2017: Progress of renewable energy sources, European Environmental Agency (EEA), <https://www.eea.europa.eu/data-and-maps> (European Union), last accessed June 2017.

EurObservER Annual Overview 2016, <https://www.eurobserv-er.org/category/all-annual-overview-barometers>

Eurostat, 2017. Energy from renewable sources. http://ec.europa.eu/eurostat/statistics-explained/index.php/Energy_from_renewable_sources

Global Status Report by REN21

http://www.ren21.net/wp-content/uploads/2016/10/REN21_GSR2016_FullReport_en_11.pdf

Member State Progress Report, available at the Renewable Energy pages of the European Commission, <http://ec.europa.eu/energy/en/topics/renewable-energy>

RES Legal database, <http://www.res-legal.eu/search-by-country/hungaria/>

https://ec.europa.eu/commission/sites/beta-political/files/energy-union-factsheet-hungary_en.pdf
(European Commission/ DG ENER, Energy Union Factsheet Hungary, November 2017)

European Alternative Fuels Observatory, <http://www.eafo.eu/content/hungary> ;
<http://www.eafo.eu/eu>

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.



This project is funded
by the European Union under
contract n° ENER/C2/2016-487/SI2.742173

Disclaimer

This document was prepared by the EurObserv'ER consortium, which groups together Observ'ER (FR), the Energy research Centre of the Netherlands (ECN, NL), the Renewables Academy (RENAC, DE), Frankfurt School of Finance and Management (DE), Fraunhofer-ISI (DE) and Statistics Netherlands (CBS, NL). The information and views set out in this publication are those of the author(s) and do not necessarily reflect the official opinion of the Commission. The Commission does not guarantee the accuracy of the data included in this study. Neither the Commission nor any person acting on the Commission's behalf may be held responsible for the use which may be made of the information contained therein.