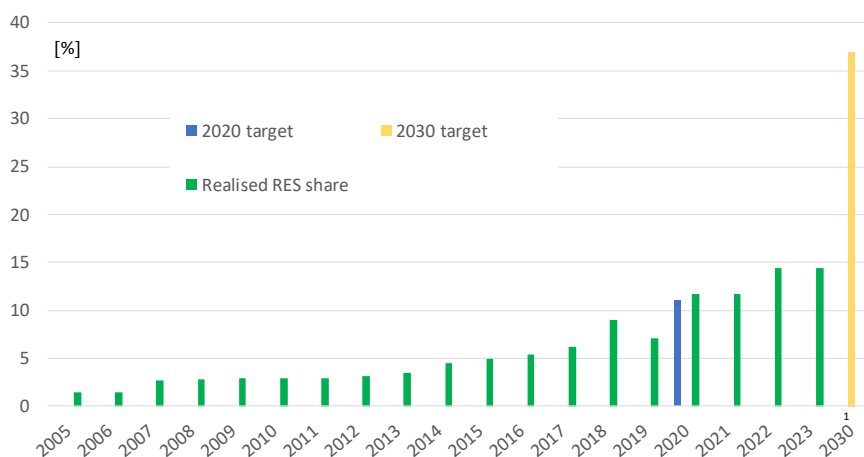


Luxembourg

Renewable energy status

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



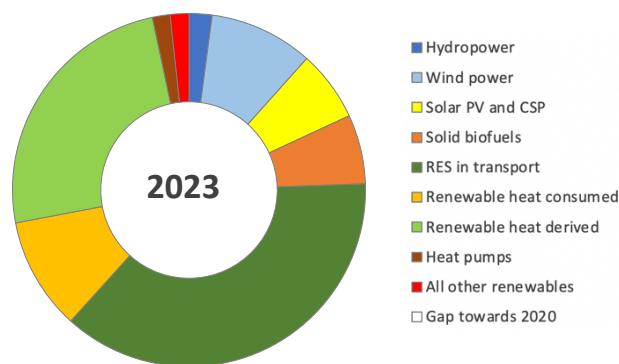
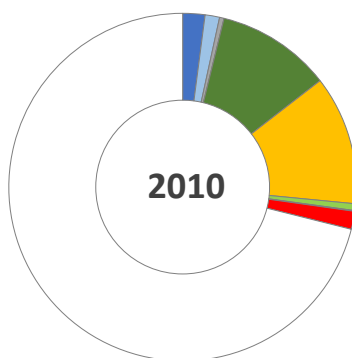
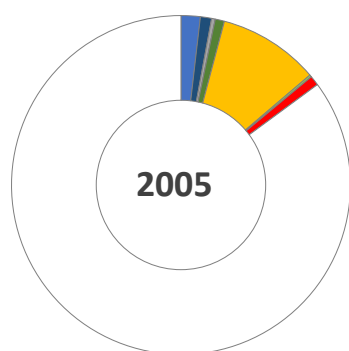
Source: Eurostat

Abbreviations used:

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

Data for 2023

Overall RES share:	14.4%	Avoided fossil fuels:	0.3 [Mtoe]
Overall RES 2020 target:	11.0%	Avoided fuel expenses:	238 [MEUR]
Overall RES 2030 target:	37.0%	RES Turnover:	250 [MEUR]
Share RES-E in electricity:	18.0%	RES Employment:	1700 [jobs]
Share RES-T in transport:	9.2%	RES imports ² :	60 [MEUR]
Share RES-H/C in heating:	15.5%	RES exports ² :	49 [MEUR]



Source: Eurostat

	2005	2010	2023		
	Energy in ktoe	Energy in ktoe	Energy in ktoe	Employment in FTE	Turnover in MEUR
Hydropower	7.9	8.9	8.2	200	30
Wind power	4.6	5.8	37.2	300	50
Solar PV, and CSP	1.5	1.8	25.3	500	80
Solid biomass	0.0	0.0	24.8	100	30
Ren. energy in transport ³	3.8	46.0	145.6	<100	<10
Renew. heat consumed	41.5	51.8	40.3		
Renew. heat derived	0.9	2.7	96.4		
Heat pumps	0.0	0.3	6.3	<100	10
All other renewables	4.0	7.2	6.7	400	40

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, 2024 edition*

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



CURRENT RENEWABLE ENERGY POLICY

RES-E

In Luxembourg the main schemes for promoting electricity from renewable energy sources (except geothermal) are a feed-in tariff scheme and a floating feed-in premium scheme. Both schemes apply technology and capacity specific rates. In general, beneficiaries can benefit from either one of these schemes for a 15-year period from the first day onward the installation concerned feeds electricity into the public grid. Additionally, solar PV systems having a capacity in excess of 500 kW have to submit a successful tender bid in order to become eligible to a market premium contract for 15 years.

There is also a tax exemption on the sale of electricity from small PV installations, with the maximum size increased to 10 kWp in 2021 (from a maximum of 4 kWp previously). Furthermore, installations generating renewable electricity are supported through four investment subsidy schemes. Finally, there is an implicit requirement for the use of renewable energy in the regulation on energy efficiency of residential buildings.

RES H&C

Renewable heating and cooling are also supported by four the investment subsidies, including support for heat pumps and CHPs. There is also an implicit requirement for the use of renewable energy for heating and cooling based on the regulation on energy efficiency of residential buildings.

RES-T

Renewable energy use in transport is supported through a biofuels quota scheme. Oil and gas companies importing or producing automotive petrol, gas or diesel for consumption by vehicle operators are obliged to fulfil a quota of biofuels per year. The blending rate was set at 7.7% in 2020.

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

<i>Instrument</i>	<i>Description</i>
Feed-in tariffs or premiums	A guaranteed sale of electricity at a pre-set technology-specific preferential price or a technology-specific floating premium on top of the market electricity price, during the support contract period of generally 15 years. New PV installations ≥ 500 kW have to submit successful tender bids to become eligible for floating feed-in premiums.
Tax exemption for small photovoltaic installations	The income raised from the sale of the energy produced by small photovoltaic installations (under 10 kWp) is not taxed. Website: https://mea.gouvernement.lu/fr/actualites/gouvernement%2Bfr%2Bactualites%2Btoutes_actuaites%2Bcommuniquies%2B2021%2B10-octobre%2B04-energie-solaire.html
VAT exemption	Renewable energy producers (including small-scale solar PV) are exempt from paying VAT on installations. It is still required to pay VAT on energy sold, but the rate on the sale of electricity is only 8%.
Grid fee exemption	Self-consumed electricity is exempt from grid fees, taxes, and levies. This also applies to the storage of self-consumed electricity and electricity produced by local energy communities for shared consumption by other community members.
Investment subsidies	Projects investing in installations for the generation of electricity from renewables (with the exception of geothermal installations) are eligible for an investment subsidy. This focusses on solar projects and industrial and commercial companies investing in renewable electricity generation. Renewable heating and cooling projects are also eligible for one or more of four different investment subsidies. Website: https://guichet.public.lu/en/citoyens/logement/renovation-transformation/performances-energie/aide-installations-techniques-regime-2017.html
Biofuels quota	Importers/suppliers of transport fuels are subject to a renewable quota scheme for biofuels. Compliance based on sample testing rather than certificates based.

For further information:

CEER, 2023. Status Review of Renewable Support Schemes in Europe for 2020 and 2021.

https://www.ceer.eu/wp-content/uploads/2024/04/RES_Status_Review_in_Europe_for_2020-2021.pdf

International Energy Agency (IEA) database on policies and measures.

<https://www.iea.org/policies?topic=Renewable%20Energy&q=luxembourg&country%5B0%5D=Luxembourg>

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

Government of Luxembourg, Financial aid – Housing & Construction.

<https://guichet.public.lu/en/citoyens/aides/logement-construction.html>

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.



Disclaimer

This document was prepared by the EurObserv'ER consortium, which groups together Observ'ER (FR), TNO (NL), RENAC (DE), VITO (BE) and Fraunhofer ISI (DE). This document has been prepared for the European Commission however it reflects the views only of the authors, and the Commission