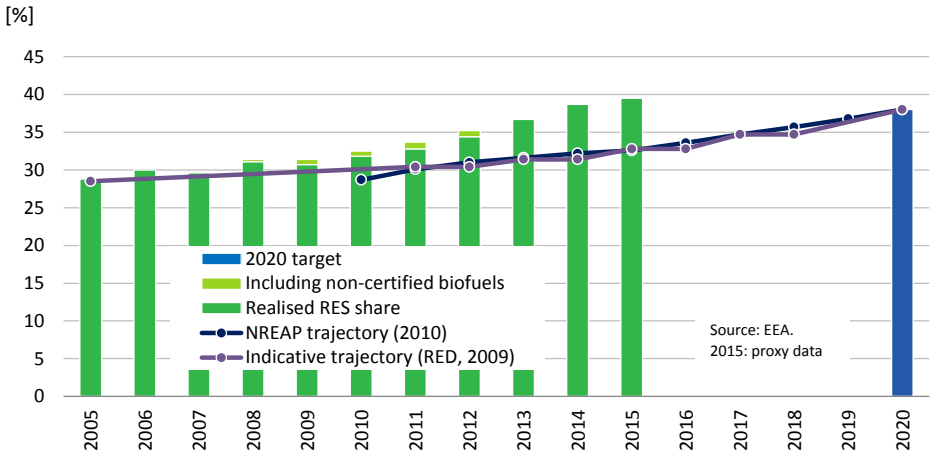
Finland

Renewable Energy Policy Factsheet

September 2017

Summary

By 2014 Finland already surpassed its 2020 target for renewable energy use under the 2009 EU Renewable Energy Directive. The current feed-in premium system will be discontinued and is expected to be replaced with a competitive technology-neutral tendering scheme, in line with the requirements set in the 2014 State Aid guidelines.

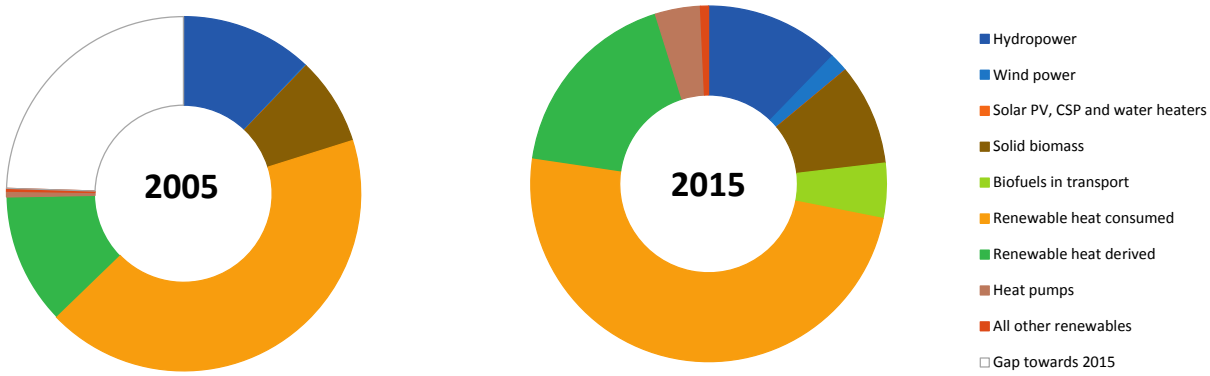


Abbreviations used:

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

Data for 2015

Overall RES share:	39.3%	Avoided fossil fuels:	14.7 [Mtoe]
Overall RES 2020 target:	38.0%	Avoided fuel expenses:	4.8 [billion euro]
Share RES-E in electricity:	32.5%	RES Turnover:	3530 [MEUR]
Share RES-T in transport:	22.0%	RES Employment:	31350 [jobs]
Share RES-H/C in heating:	52.8%		



Source: Eurostat, 2017.

	2005	2015		
	Energy	Energy	Employment	Turnover
Hydropower	1196.1 ktoe	1216.5 ktoe	400 Jobs	75 MEUR
Wind power	13.2 ktoe	170.7 ktoe	3300 Jobs	570 MEUR
Solar PV, CSP and water heaters	0.2 ktoe	0.8 ktoe	100 Jobs	2 MEUR
Solid biomass	792.2 ktoe	910.4 ktoe	23700 Jobs	2300 MEUR
Biofuels in transport	0.0 ktoe	496.0 ktoe	1800 Jobs	200 MEUR
Renewable heat consumed	4234.7 ktoe	4890.4 ktoe		
Renewable heat derived	1187.2 ktoe	1770.8 ktoe		
Heat pumps	51.4 ktoe	408.3 ktoe	1600 Jobs	350 MEUR
All other renewables	25.7 ktoe	72.5 ktoe	450 Jobs	33 MEUR
Gap towards 2015	2435.7 ktoe			

Source: Eurostat, EurObserv'ER, 2017.

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

In November 2016 the Finnish government published the new Energy and Climate Strategy, outlining actions geared at enabling Finland in attaining the targets specified in the Government Programme and adopted in the EU for 2030, and to contribute to the EU achieving an 80−95% reduction in greenhouse gas emissions by 2050.

According to Finlands national energy and climate strategy to 2030 published on 24 November 2016, investment subsidies for renewable energy are mainly targeted towards commercialising new technology and the effort sharing sector, i.e. sectors that are not covered under the European Union's emissions trading scheme (EU ETS), especially towards institutions producing advanced transport biofuels. In addition, the use of agricultural, societal and industrial waste and side streams in the production of heat and electricity and as transport fuel is promoted.

The current feed-in tariff system of wind power will be discontinued. The goal is for projects to be implemented on market terms in the future. For the transition period and to maintain Finnish project expertise, the Finnish government considers it necessary to implement technology-neutral competitive tendering, which means that the electricity production subsidy will only be paid for the most cost-effective and competitive production investments of renewable electricity. In 2018–2020, a total of 2 TWh (annual electricity production) will be subject to an open tendering process. The Ministry of Economic Affairs and Employment will commission an independent and comprehensive study on the adverse health and environmental impacts of wind power before the preparation of the act concerning the production aid.

Legislation concerning the current support schemes in Finland has been under major revision for several years now. For the transition period, the electricity production subsidy will only be paid to the most cost-effective and competitive investments in renewable electricity production.

OVERVIEW OF MAIN SUPPORTING POLICIES

Finland supports electricity from selected renewable energy sources (wind, biomass and biogas) through a feed-in premium. Additionally, state grants in the form of energy and investment subsidies are provided for a broader range of renewable energy sources for electricity generation. For heat production in CHP plants a so-called "heat bonus" is provided. Renewable energy fuels for transport purposes are promoted via a quota obligation scheme. Efforts have also been made to promote biofuel production through considerable increases in appropriations for investment aid for new biofuel technologies and for research and development activities.

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

	REGULATORY POLICIES					FISCAL INCENTIVE AND PUBLIC FINANCES		
	Feed-in premium	Heat bonus for CHP	Quota obligation without certificates system	Tendering	Net-metering/ net-billing	Subsidy (Energy Aid) and/or Investment Aid	Tax regulation mechanism	Loans
RES-E								
- Offshore wind						o		
- Onshore wind	o					o		
- Solar						o		
- Hydro						o		
- Geothermal						o		
- Solid biomass	o					o		
- Biogas	o					o		
RES-H/C								
- Solar thermal						o		
- Geothermal						o		
- Biomass		o				o		o
- Biogas		o				o		o
- Large ambient heat application						o		
- Small scale installations, e.g. solar thermal collects, heat pumps, biomass boilers and pellet stoves						o		
- Others, i.e. aerothermal, hydrothermal						o		
RES-T								
- Bio gasoline			o				o	
- Biodiesel			o				o	
- Biogas								

Sources: EurObserv'ER, GSR/REN21, RES-Legal Europe (2017)

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

Instrument	*Description*
Feed-in tariff/premium	Producers of electricity from renewable energy sources (wind, wood chip, biogas) receive a feed-in premium on top the wholesale electricity price.
Energy/investment subsidies (state grants)	The Finnish government provides subsides for investment and research projects aimed at renewable energy generation. State grants are also provide for construction, expansion and renovation of heating facilities for agricultural production, where grant allocation is contingent on use of renewable energy sources.
Biofuel obligation	The main support scheme for promoting biofuels is a quota system, which obliges vendors to ensure that biofuels make up a certain percentage of their total annual sale of fuels.
Tax exemption (energy content and CO_2)	All transport fuels are taxed on their energy content and CO_2 emissions. Under the current tax regime, biofuels receive a tax rebate based on their lower energy content. The consideration of CO_2 emissions also provides a benefit for biofuels. The basis for CO_2 tax on biofuels is the carbon-dioxide emissions during their lifetime in comparison with their fossil equivalents. Unsustainable biofuels are subject to the same CO_2 tax as fossil fuels, sustainable biofuels are subject to 50 % of the CO_2 tax on the equivalent fossil fuel, and double-counted fuels under the RES Directive are not subject to any CO_2 tax.
Feed-in tariff/premium	Producers of electricity from renewable energy sources (wind, wood chip, biogas) receive a feed-in premium on top the wholesale electricity price.
Energy/investment subsidies (state grants)	The Finnish government provides subsides for investment and research projects aimed at renewable energy generation. State grants are also provide for construction, expansion and renovation of heating facilities for agricultural production, where grant allocation is contingent on use of renewable energy sources.

For further information:

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

EurObserv'ER 16th annual overview barometer, https://www.eurobserv-er.org/category/all-annual-overview-barometers

EEA charts on progress of renewable energy sources for EU and per Member State, https://www.eea.europa.eu/data-and-maps/indicators/renewable-gross-final-energy-consumption-4/assessment-1

International Energy Agency (IEA) database on policies and measures , https://www.iea.org/policiesandmeasures/renewableenergy/?country=Finland

RES Legal database: http://www.res-legal.eu/search-by-country/finland

Global Status Report by REN21, http://www.ren21.net/gsr-2017

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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Disclaimer

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