



RENEWABLE ENERGY POLICY REVIEW

FINLAND

Bioenergy plays an important role in the decentralised and diversified Finnish energy system. Finland is one of the world leaders in utilising bioenergy. Almost 20 % of total primary energy consumption in Finland is met by bioenergy. The National Action Plan for Renewable Energy Sources (RES) aims at a further increase the use of biomass: by 2010, the use of bioenergy energy sources should be 30 per cent higher than in 2001. The RES National commitments for the year 2015 and 2025 aim to increase bioenergy use in electricity and heat production. Currently in Finland CHP with biomass and biofuels are wider used, a main policy objective is to expand their RES-CHP-District heating schemes, but also biofuels in the transport sector. Finland policy framework for bioenergy has been very effective; however other RES with still potential in Finland are less developed. Additional support in the form of feed-in tariffs based on purchase obligations or green certificates is being considered for onshore wind power.

A very important role in the Finish biomass sector plays peat. 30% of the total land area of Finland of 30.5 million hectares is classified as peatland. Peat is very often used in CHP plants, however it is not a RES and it should not count for fulfillment of the RES targets of Finland.

In May 2006, the Helsinki City Council voted to switch half of the city's public bus fleet to run on biodiesel made from biomass, animal fat and waste cooking oil. The three-year programme was slated to affect 700 vehicles and cut overall bus particle emissions by half.

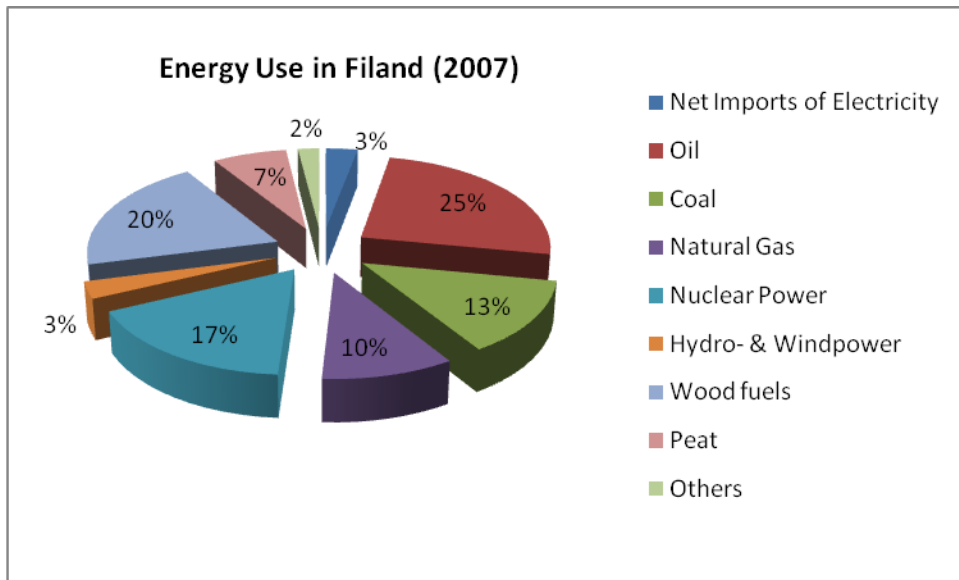
In May 2002 Finland's parliament approved the building a fifth nuclear power plant, to be in operation about 2009. The construction of the power plant is delayed.

KEY FIGURES¹

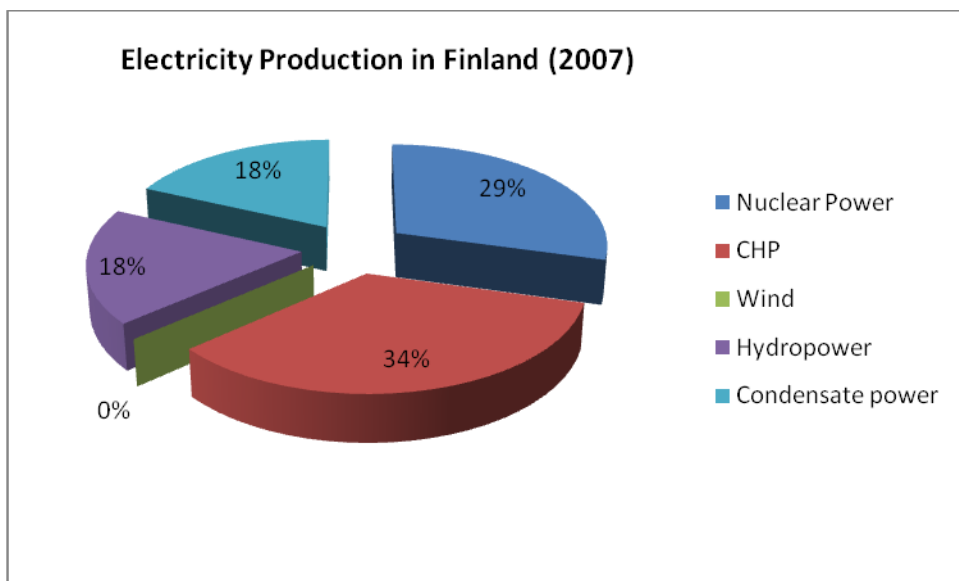
- The **share of RES in total primary energy consumption** was of 25% in 2007, 27% in 2008 (provisional data)
- The **share of RES in the gross final energy consumption** was 30 % in 2007 and 31% in 2008 (provisional data).

¹ Statistics Finland

- The **share of RES in the gross electricity production** was 30% in 2007, 36% in 2008 (provisional data).
- The **share of all biofuels** in the transport sector in 2007 was 0.04% and 2% in 2008 (provisional data).
- Finland energy dependence on imports amounted to 51 % in 2007, 49% in 2008 (provisional data).



Source: adaptation from Motiva



Source: Statistics Finland, Energy Statistics

RES POLICY

Through subsidies and energy tax exemptions, Finland encourages investment in RES-electricity and RE-Heating&Cooling.

RES TARGETS

Mandatory targets set by the Directive on the Promotion of the use of energy from renewable sources

- 38% share of RES on the final consumption of energy in 2020.
- At least 10% share of renewable energy in final consumption of energy in transport by 2020.

Indicative Target set by the RES- electricity European Directive from 2001²

- 31.5 % Share of RES on gross electricity consumption by 2010

Indicative Target set by the European Biofuels Directive from 2003³

- Biofuels consumption of 5.75% of petrol and diesel use for transport in 2010.

National commitments

- Increasing the use of renewable energy by at least 25% by 2015 and 40% by 2025 is a key objective of Finland's energy policy.
- The National Action Plan for Renewable Energy Sources was launched in 1999 and updated in 2002. By 2010, the use of bioenergy energy sources should be 30 per cent higher than in 2001. The RES National commitments for the year 2015 and 2025 aim to increase of bioenergy in electricity and heat production.
- There is no national target/commitment for heating and cooling.

² Directive 2007/71/EC on the promotion of electricity produced from renewable energy sources in the internal electricity market. Currently in force, sets targets up to 2010.

³ Directive 2003/30/EC on the promotion of the use of biofuels or other renewable fuels for transport currently in force, sets targets up to 2010, with indicative targets by 2005.

Progress towards the targets

Finland is nearing its RES-electricity target for 2010.

In the “Long-term Climate and Energy Strategy” approved by the Finnish Government in November 2008, it is stated that a series of measures will be put in place in order to allow Finland to meet the requirements as set by the RES Directive of 2008. These will be mainly based on an increase of the use of wood-based energy, waste fuels, heat pumps, biogas and wind power, bringing to a growth of forest chips use (to two or three times over current levels) and by 2020, to some 6TWh of wind energy deployment, which would entail the construction of a minimum of 700 new 3 MW wind power plants in the country. Also, climate and energy financing were planned to increase from EUR 350 million in 2007 to EUR 440 million in 2008 and to EUR 550 million in 2009.

Support for Electricity

Finland’s energy market is fully liberalised, right down to the level of the individual private consumer. Market support for renewable electricity consists of different instruments.

Investment Subsidies

First, the construction costs of renewable energy plant are co-financed by the government with grants of up to 40% in the case of wind. This applies to companies. In the recent year’s wood plants for energy and fuel production have been the ones mostly benefiting from this scheme (60% of the total grants in 2006). Biogas plants received 7% of the total budget that year (2.5 M€)⁴.

Tax refunds for suppliers of renewable electricity- the “electricity tax benefit”

The government imposes a tax per kWh on all Finnish electricity suppliers, which they pass on to their end consumers. The government refunds this tax to suppliers of renewable electricity, however, at 0.69 c€/kWh for wind and 0.42 €/kWh for other eligible technologies. All technologies used for the generation of electricity from renewable energy sources are promoted with the following exceptions: solar power plants, large hydro power plants, geothermal power plants and plants generating electricity from peat.

Guaranteed access to the grid

For all electricity users and electricity-producing plants, including RES-electricity generators (Electricity Market Act – 386/1995.)

⁴ Figures from the Finnish report connected to the biofuels directive

Feed in Tariff or Green Certificates

Additional support in the form of feed-in tariffs based on purchase obligations or green certificates is being considered for onshore wind power.

Feed-in compensation for turf

The generation of electricity from peat⁵ is promoted through a price regulation in terms of a guaranteed feed-in compensation, whose amount is determined by law and which is to be paid per MWh of electricity. The amount of the feed-in compensation is calculated according to the production costs and the general market price for electricity. The grid operator adapts the amount of payment every month. The adapted price takes into account the production costs of energy from peat, the market price of electricity and the production costs of electricity from hard coal in order to guarantee the compatibility of electricity from peat and hard coal. The feed-in compensation is calculated for a period of one month according to a special formula. The amount of electricity promoted per year is limited.

Support for Heating and Cooling

Investment Subsidies

The construction costs of renewable energy plant are co-financed by the government with grants of up to 30%. This applies to companies. Direct investment supports individual biomass heating installations.

Fiscal Incentives

Taxes imposed on heat, are calculated on the basis of the net carbon emissions of the input fuels and are zero for renewable energy sources.

Support for Biofuels

Quota Obligations

On the basis of an expert group's proposals, on 19 October 2006 the Government submitted a legislative proposal to the Finnish Parliament concerning the promotion of biofuels in transport. The proposal aims to create demand for biofuels by placing an obligation in respect of the marketing of biofuels on the distributors of transport fuels. The proposed law has been submitted to the Finnish Parliament, and is due to enter into force on 1st January 2008.

⁵ For plants that are located in Finland and use Finnish peat

The proposal sets out a minimum percentage of biofuels to be supplied for consumption annually by the distributors of transport fuels. This minimum percentage would increase annually from, in 2008, at least 2% of the total energy content of the petrol, diesel oil and biofuels supplied by a distributor of transport fuels. In 2009, the share would be at least 4%, and in 2010 and afterwards annually at least 5.75%. A separate Government decree would, however, provide for the entry into force of the 2010 obligation. The obligation would be enforced if the quality standards of fuels, in 2010, allow the mixing of the required percentages of biofuels with petrol and diesel oil.

The obligation would only apply to the total amount of biofuels, allowing the distributors to fulfill the obligation by using biofuels to replace petrol or diesel oil in a ratio they choose within the limits of the quality standards. Neither would the law regulate the origin of the biofuel. The distributors could subcontract their obligation wholly or partially to another company.

Irrespective of contracts, each distributor would be accountable to the Government for fulfilling his obligation either personally or through a contractor. If the distributor failed to fulfill his obligation, the customs authorities would impose a penalty fee.

Resource	Quota in % (per year)
Biofuels	2% in 2008 4% in 2009 5.75% in 2010

Sources:

European Commission Factsheets by Country

http://ec.europa.eu/energy/energy_policy/facts_en.htm

Member States Reports in the framework of the Directive 2001/77/EC on renewable electricity

http://ec.europa.eu/energy/res/legislation/electricity_member_states_en.htm

Member States Reports in the framework of the Directive 2003/30/EC on biofuels

http://ec.europa.eu/energy/res/legislation/biofuels_members_states_en.htm

Motiva

<http://www.motiva.fi/en/>

VTT

<http://www.vtt.fi/>

EurObserv'er Barometer

<http://www.energies-renouvelables.org/observ-er/sig/eufores/sig.asp>

Legal Sources on Renewable Energy

<http://res-legal.eu/>

Finnish Ministry of Employment and Economy

<http://www.tem.fi/?l=en>



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