COUNTRY REPORT FINLAND

Tere Vadén, Antti Majava, Janne M. Korhonen
and Jussi T. Eronen

Energy Without Russia

The Consequences of the Ukraine war and the
EU Sanctions on the Energy Sector in Europe

EUROPA

FRIEDRICH EBERT STIFTUNG

EUROPA

Europe needs social democracy!

Why do we really want Europe? Can we demonstrate to European citizens the opportunities offered by social politics and a strong social democracy in Europe? This is the aim of the new Friedrich-Ebert-Stiftung project »Politics for Europe«. It shows that European integration can be done in a democratic, economic and socially balanced way and with a reliable foreign policy.

The following issues will be particularly important:
- Democratic Europe
- Economic and social policy in Europe
- Foreign and security policy in Europe

The FES will devote itself to these issues in publications and events: we start from citizens' concerns, identify new positions with decision-makers and lay out alternative policy approaches. We want a debate with you about »Politics for Europe«!

Further information on the project can be found here:
https://www.fes.de/politik-fuer-europa/

Friedrich-Ebert-Stiftung

The Friedrich-Ebert-Stiftung (FES) is the oldest political foundation in Germany with a rich tradition dating back to its foundation in 1925. Today, it remains loyal to the legacy of its namesake and campaigns for the core ideas and values of social democracy: freedom, justice and solidarity. It has a close connection to social democracy and free trade unions.

FES promotes the advancement of social democracy, in particular by:
- Political educational work to strengthen civil society
- Think Tanks
- International cooperation with our international network of offices in more than 100 countries
- Support for talented young people
- Maintaining the collective memory of social democracy with archives, libraries and more.

About the authors

Tere Vadén is a researcher at BIOS Research Unit, Helsinki, Finland, and Associate professor at Tampere University and University of Lapland.

Antti Majava is a researcher at BIOS Research Unit, Helsinki, Finland, and works as a consultant in the fields of energy and regional development.

Janne M. Korhonen is Project Manager responsible for the research theme on just ecological transition at the Kalevi Sorsa Foundation, Helsinki, Finland.

Jussi T. Eronen is a founding member of BIOS Research Unit, and professor at the Past Present Sustainability Research Unit, Ecosystems and Environment Research Programme & Helsinki Institute of Sustainability Science, Faculty of Biological and Environmental Sciences, University of Helsinki, Helsinki, Finland.

Tere Vadén, Antti Majava, Janne M. Korhonen and Jussi T. Eronen

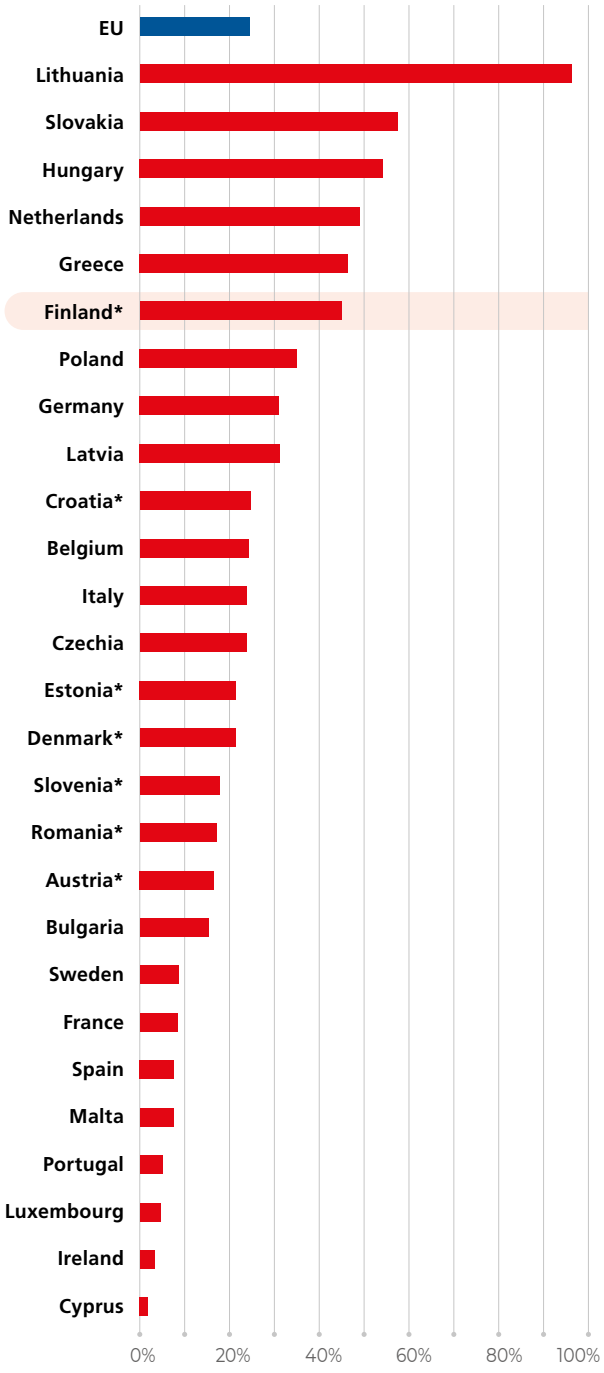
Energy Without Russia: The Case of Finland

The Consequences of the Ukraine War and the EU Sanctions on the Energy Sector in Europe

INTRODUCTION

In 2022 Finland was seen to be highly dependent on Russian imports. The main points of dependence were considered to be oil and gas in the energy sector in particular, as well as timber for the pulp industry. Russian inputs to the energy system were substantial: over 40 per cent of gross available energy was imported from Russia (cf. Figure 1). Surprisingly, decoupling this strong dependence has been relatively painless. Finland was quick to diversify the sourcing of oil, helped by the technical readiness by the main refinery. The use of natural gas was fairly low compared to Central Europe, and direct gas import via pipeline has ceased, replaced by LNG imports from global markets. The decoupling has been made easier by two factors: a determined national will to decouple and the fact that consumers faced the effects mainly indirectly due to price increases in the global and European markets.

Figure 1
Imports from Russia in gross available energy, EU, 2020



Source: Eurostat, Including estimates for non-reported data for countries with*

1

STATUS QUO ANTE (AS OF FEBRUARY 2022)

In 2019, the year before abnormal changes due to the pandemic restrictions, Finnish primary energy consumption was approximately 306 TWh, with oil the single biggest source of energy at 109 TWh.[1] All in all, fossil sources contributed somewhat over half of the total consumption, approximately 169 TWh. Renewable sources contributed 37 per cent of total consumption, with wood fuels alone responsible for 28 per cent (see Table 1).

In the European context, it is noteworthy that the role of natural gas was relatively small, at 19 TWh (or 6 per cent), even though there is a direct gas pipeline from Russia to Finland and another one, BalticConnector, between Estonia and Finland. The situation is largely explained by the fact that natural gas was mainly used in limited amounts in industrial processes (combined heat and power production,

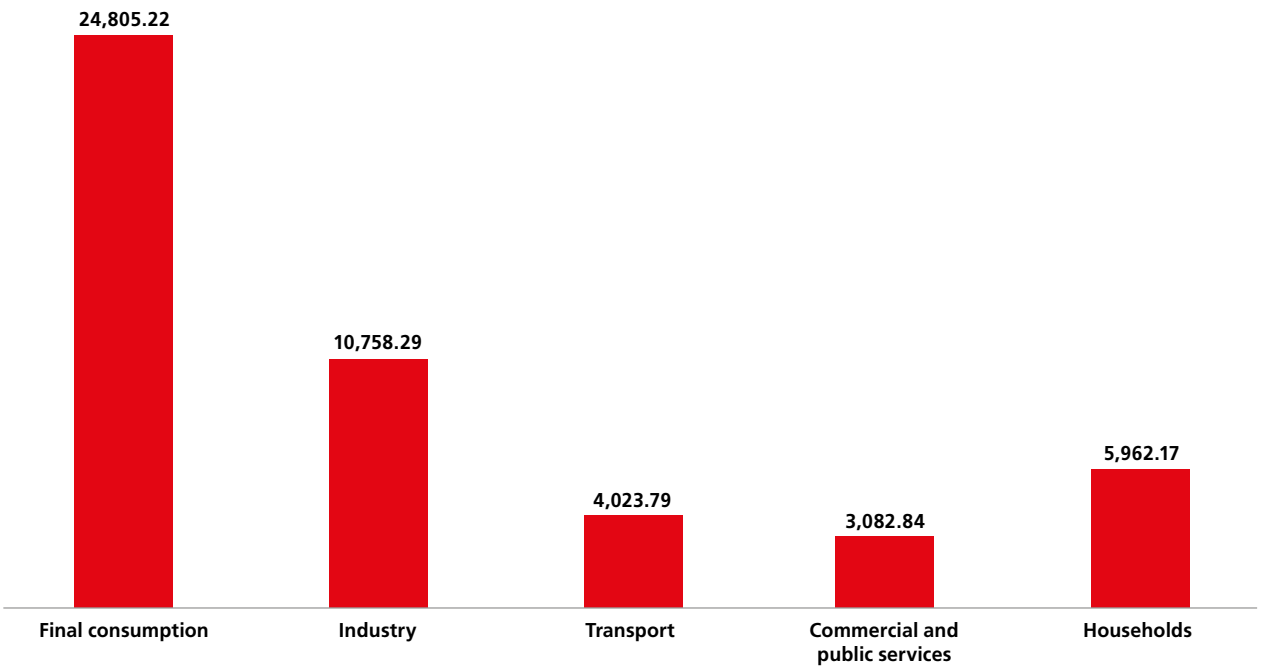
1 This level of consumption is typical for the entire 21st century – 2000: 1 324 PJ, 2015: 1 304 PJ, 2021: 1 360 PJ. Statistics Finland (2020, 2022): https://www.stat.fi/tup/julkaisut/tiedostot/julkaisuluettelo/yene_efp_202000_2020_23210_net.pdf, https://www.stat.fi/julkaisu/cku4c03s803du0b05fxruenwl

Table 1
Finnish Energy consumption in 2019

Energy source	Energy consumption (PJ)	Percentage of total
Oil	308.5	23%
Coal	91.4	7%
Natural gas	72.8	5%
Peat	56.3	4%
Nuclear	250.1	18%
Hydro power	44.2	3%
Wind power	21.4	2%
Wood fuels	379.3	28%
Net imports of electricity	72.2	5%
Others	68.6	5%
Total	**1,362**	**100**

Source: Statistics Finland

Figure 2
Final Energy Consumption by Sector in 2021 (in ktoe)



Source: Eurostat

refinery and chemical processes) and to some extent in district heating, while use in households (heating, cooking) has been marginal.

In terms of consumption, industry is the biggest sector. Finland's northern location explains the relatively large portion of consumption via space heating at 26 per cent, with transport at around 16 per cent of the final consumption. All in all, energy consumption was 247 GJ/capita (5.9 toe/capita).

In the decades after the Second World War, trade with the Soviet Union was a mainstay of the Finnish economy. In 1989, 15 per cent of Finnish exports went to the Soviet Union, which was its main trading partner.[2] This high share of exports explains in part why the dissolution of the Soviet Union caused an economic depression in Finland in the 1990s. However, trade with Russia eventually picked up again with imports of energy products leading the way.

In imports, the role of oil was paramount, so that during periods of high oil prices, oil and oil products accounted for up to 70 per cent of all imports from Russia; in 2019 the portion of oil was still over 50 per cent of all imports.[3] In addition to providing up to 90 per cent of all oil in energy use in Finland, Russian oil was also an important raw material for Finnish exports. Neste Oyj, of which the Finnish state is a major owner, sold diesel and other fuels refined from oil imported from the Urals. Thus, during some years the single largest export item from Finland in euro terms was petroleum products.[4]

In addition to oil, Finland imported natural gas and coal from Russia. As noted above, the role of natural gas in the energy system was much smaller than in many European countries. Roughly one third of the imported natural gas was used in combined heat and power production and another third in the chemical industry. The forest industry used natural gas, mainly for heat for drying intermediate products. The energy use of coal has been banned by 2029 by a specific climate-inspired law, which has led to a rapid decline in its use. However, some transit of Russian coal has continued during the war.

Finland also imported peat and wood from Russia, and some of the wood was intended for energy use in CHP plants – however, there is no comprehensive data on the portion used for heating and for other purposes. The wood imports amounted to around 10 Mm^3 annually. As domestic logging levels have already been relatively high, the discontinuation of imports caused extra pressures, indicated by increases in wood prices.[5]

2 Hukkinen, J. 1990. Suomen vientimenestys Neuvostoliiton markkinoilla 1970–1986. Bank of Finland. https://publications.bof.fi/bitstream/handle/10024/47954/Muut_keskustelualoitteet_14_90.pdf?sequence=1&isAllowed=y

3 Lavikainen, Kasperi Lavikainen, Sini Liukkonen, Merja Myllymäki, Matti Paavonen, Kristian Taskinen 2002. Venäjän merkitys vientimarkkinana supistunut jo vuosia – tuonti tärkeämpää. Tieto & Trendit 28.4. 2022. https://www.stat.fi/tietotrendit/artikkelit/2022/venajan-merkitys-vientimarkkinana-supistunut-jo-vuosia-tuonti-tarkeampaa/

4 Finnish Customs, 2023, 'International trade in goods', https://tulli.fi/en/statistics/statistical-releases

5 Natural Resources Institute, 21.2.2023. 'Wood trade decreased by 12 per cent in 2022'. https://www.luke.fi/en/news/wood-trade-decreased-by-12-per-cent-in-2022-the-highest-price-increase-was-recorded-for-birch-pulpwoodhttps://www.luke.fi/en/news/wood-trade-decreased-by-12-per-cent-in-2022-the-highest-price-increase-was-recorded-for-birch-pulpwood

Table 2
Contributions of Russian exports to Finnish energy sector in 2019

	Total imports to Finland from Russia	% of total imports to Finland in category	Energy use	% of energy use in category
Oil and petroleum products	13,574,000 tons	76	72 TWh	91
Natural gas	2,289,000,000 m³	100	20 TWh	100
Coal and coal products	2,007,000 tons	59	8 TWh	32
Wood fuels	74,000 tons/8.7 Mm³	73	no data	no data
Nuclear fuel	21 tU	38	21 tU	38
Electricity	8 TWh	33	8 TWh	33
Electricity	8 TWh	33	8 TWh	33

Source: Statistics Finland, Eurostat

Two of the 4 nuclear reactors in operation before 2022 (and continuously running) are of Russian origin (VVER-440), and the fuel for them has been sourced from Russia.

Finally, Finland also imported electricity from Russia, in 2019 around 8 TWh.

All in all, the discontinuation of the imports – with the exception of imports of LNG which have continued – meant a considerable challenge to the Finnish energy system and economy (see Table 2).

2

AD HOC RESPONSES AFTER FEBRUARY 2022

The immediate political reaction in Finland after Russia's attack on Ukraine was to strive towards energy independence from Russia. Prime Minister Sanna Marin had already announced by 1 March 2022 that the goal is to decouple from Russian energy imports 'as soon as possible'.[6]

With regard to imports of energy products, Finland faced three options: sourcing fossil fuels, wood, and electricity from elsewhere; moving to domestic sources; or cutting demand.

A fourth option – cutting transactions even in the absence of replacement – occurred in the case of a planned nuclear power plant in Hanhikivi, Pyhäjoki. The plant site had been under construction since 2014 by the Fennovoima company, which had agreed to obtain the nuclear technology from Rosatom. At the end of March, the Finnish minister for economic affairs and employment, Mika Lintilä, declared that it would be impossible to give an operating license to the plant.[7] Consequently, Fennovoima terminated its agreement with Rosatom, which in practice stopped the work on the new plant. The cancellation, of course, affects only future energy production, not the current situation.

The biggest item on the list, oil, was dealt primarily by imports from alternative sources. Out of these, Norway took first place with an over 60 per cent share of the imports, with the UK and US as the next biggest sources.[8] Despite increases in the price of oil, consumption in total was essentially unchanged between 2021 and 2022. However, there was some internal shift, as fuel oils replaced some of natural gas use in industry and heating, while the consumption of petrol decreased,[9] presumably due to higher prices that also became a point of discussion and controversy leading up to the elections in April 2023.

The shift to alternative sources was made easier by the fact that the main importer and refiner, Neste Oyj, had already started a project of upgrading its technologies to work with several different types of oil, and not only the Urals variant. In addition to the Neste refinery in Porvoo, the other source for oil products for Finland is a refinery owned by the private company ST1 in Gothenburg, Sweden. According to ST1, even before the war it used oil only from North Sea sources (mainly Norway) and North America, with occasional imports from Africa.[10]

Before the war, the use of natural gas was already in slow decline, down from over 4 Mm^3 in 2010 to 2.3 Mm^3 in 2019, due to its increasing price. Natural gas via pipeline was used in CHP production and in the chemical and forest industries. In heat and CHP production, both oil and wood were used as replacements for gas. In the chemical sector, Neste Oyj, as the biggest user of natural gas in its refinery in Kilpilahti, switched from methane to propane.[11]

Natural gas was also increasingly sourced as LNG. In early 2022, Finland had two LNG terminals, in Pori and Tornio, and a third one in Hamina was completed and brought into use in summer 2022. With the end of gas imports via pipeline from Russia in sight, plans for increased LNG capacity were made. The chosen model was to hire a FSRU (Floating Storage and Regasification Unit), essentially a ship that functions both as a storage unit and a regasification plant. The FSRU was commissioned together with Estonia, to which Finland has a connection via the BalticConnector pipeline, and placed in Inkoo on the southern coast of Finland, and connected to the national gas grid in early 2023.[12] Imports of LNG by tankers from Russia have continued, as the importer, the state-owned company Gasum, has a take-or-pay contract of unspecified length that it has not wished to break.[13]

---

6 Marika Kataja, YLE, 'Marin: Energiariippuvuudesta Venäjään irtauduttava "niin nopeasti kuin mahdollista"', 1.3.2022. https://yle.fi/a/3-12339279

7 Annette Blencowe, YLE, 8.3. 2022, 'Elinkeinoministeri Lintilä Fennovoiman ydinvoimahankkeen valmistelun jatkumisesta'. https://yle.fi/a/3-12349831

8 Finnish Customs, 28.2. 2023. https://tulli.fi/documents/2912305/h3439475/Kuvioita%20Suomen%20ulkomaankaupasta%202022/49cf7a96-5aeb-f511-4592-262e95c6bea4/Kuvioita%20Suomen%20ulkomaankaupasta%202022.pdf?version=1.26&t=1677567608258

9 Information Centre of Road Transport, 12.5. 2023. https://www.aut.fi/tilastot/liikenteen_energiankulutus/liikennepolttonesteiden_myynti#:~:text=98%2Doktaanisen%20bensiini%C3%A4%20myytiin%20tammi,-v%C3%A4hentynyt%20vain%200%2C2%20prosentilla

10 Heidi Hammarsten, *Tekniikan Maailma*, 22.10. 2022. 'Mistä öljy tulee?'. https://tekniikanmaailma.fi/lehti/18b-2022/tankkerit-seilaavat-nyt-lannesta/

11 Jarno Hartikainen, *Helsingin Sanomat*, 29.4. 2022, 'Neste varautuu Venäjän öljy- ja kaasuvirran katkeamiseen'. https://www.hs.fi/talous/art-2000008784399.html

12 Matti Virtanen, *Tekniikan Maailma*, 17.5. 2022. 'Venäjän putket poikki – mutta miten?'. https://tekniikanmaailma.fi/lehti/10a-2022/venajan-putket-poikki-mutta-miten/

13 Sammeli Heikkinen, *Apu*. 18.1. 2023. 'Miksi Suomi tuo Venäjältä kaasua vieläkin?'. https://www.apu.fi/artikkelit/venajan-kaasua-tuodaan-suomeen-yha-2023-gasum-kertoo-miksi

Russia invoked Finnish refusal to use routes of payment specified by Russia as reason for cutting the exports of electricity in mid-May 2022. The discontinuation affected the price of electricity somewhat. However, the larger hikes in electricity prices were due to higher prices in Europe later in the year. These pressures were to an extent alleviated by new wind power coming online (altogether 2.43 GW in 2022),[14] and by lengthy test-drive sessions of a new nuclear reactor, Olkiluoto number 3, which finally started regular production in spring 2023. The electricity market and the grid turned out to be quite robust in the absence of imports from Russia, helped greatly by imports from northern Sweden and Norway. However, later in the year problems were created by the coupling to prices in central Europe, which, in turn, were closely coupled with the price of natural gas. When production in Finland and northern Sweden was low, the European electricity prices ended up increasing prices in Finland as well.

The missing imports of wood from Russia were mainly replaced by imports from Baltic countries, and some from Sweden. Overall, there was a small cut in wood imports. These changes led to increases in wood prices, benefiting forest owners.

The tighter market in wood used in CHP plants also prompted demands for increased use of domestically sourced peat. Peat use had fallen drastically up to 2022, as the price of CO2 emissions were making peat uncompetitive. However, only marginal increases of peat use for energy were seen in CHP units, also due to the fact that some of the infrastructure for collecting peat had already been dismantled and the labour directed elsewhere.[15]

All in all, the disruption of energy imports from Russia in 2022 did not cause major emergencies in energy provision for Finland. There were no blackouts, no rationing was needed, and there were no empty supermarket shelves; the problems consumers faced came in the form of higher prices for electricity, heat, and liquid fuels.

---

14 Finnish Wind Power Association, 10.1. 2023, 'Tuulivoimavuosi 2022'. https://tuulivoimayhdistys.fi/ajankohtaista/tiedotteet/tuulivoimakapasiteetti-kasvoi-75-ja-toi-suomeen-yli-29-miljardin-investoinnit#:~:text=-Suomeen%20on%20rakennettu%20vuoden%202022,Suomen%20tuulivoimasta%20on%20kotimaisessa%20omistuksessa

15 Aino Ässämäki, YLE, 19.4. 2022. 'Turvetuotanto väheni Suomessa ennakoitua nopeammin'. https://yle.fi/a/3-12400943

3

MAIN CONSEQUENCES OF THE CONFLICT AND SANCTIONS SO FAR

The main consequences for the energy sector have been sourcing oil mainly from Norway, and a rapid decline in the use of natural gas. Industry switched from gas to biogas, wood, and oil use and to some extent electrification. For citizens, the main consequences were price rises and price volatility in oil products and electricity.

In order to help with the price rises and possible scarcities, the government launched an information campaign in the autumn of 2022, designed to curb energy use. The campaign concentrated on suggesting lower temperatures for heated spaces, with the slogan 'down a degree'.[16] Electricity consumption decreased by around 10 per cent in the autumn months of 2022, and, year on year was 6 per cent lower.

During late autumn and winter 2022–2023, there were some price 'shocks' in the Nordic electricity market, with the highest prices (Finland has a unitary price throughout the country) hitting 665.01 €/MWh.[17] It was feared that if these prices continue, both consumers and companies will face insurmountable economic difficulties. In order to help consumers, the government instituted a temporary mechanism for subsidising the highest electricity bills. In the event, the relatively mild weather and build-up of wind power alleviated the situation considerably. In the second half of 2022 the electricity prices for non-households in Finland were the lowest in Europe.[18]

One of the Finnish peculiarities was the epic story of Olkiluoto 3. The nuclear power plant had been under construction since 2005, and at the estimated cost of 11 billion is one of the most expensive buildings in the world.[19] After all the delays, it was expected once again to start producing electricity in 2022 – exactly when there was a huge need for electricity. The national drama of waiting for Olkiluoto 3 to come online continued throughout the 2022–2023 winter. When the third unit finally started regular production in spring 2023, the electricity prices had already been lower for some time, close to previous levels. Ironically, during high levels of hydro power production and near zero prices in the spring of 2023, the unit was working with diminished power to save costs.[20]

16 https://www.astettaalemmas.fi/

17 Fingrid, 30.3. 2023, 'Sähköjärjestelmän toiminta talvella 2022–2023' https://www.fingrid.fi/globalassets/dokumentit/fi/kantaverkko/sahkonsiirto/sahkojarjestelman-toiminta-talvella-2022-2023.pdf

18 Eurostat, 2023, Electricity price statistics, https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Electricity_price_statistics#Electricity_prices_for_non-household_consumers

19 YLE, 12.3. 2022. 'Olkiluoto 3 reactor plugged into national grid, 13 years behind schedule', https://yle.fi/a/3-12356596#:~:text=Olkiluoto%203%20was%20originally%20scheduled,the%20world's%20most%20expensive%20buildings

20 Onni Kari, *Iltalehti*, 18.5. 2023. 'Sähkö on niin halpaa, että Olkiluoto 3 on säästöliekillä.' https://www.iltalehti.fi/kotimaa/a/af3aed45-1a97-4cad-8458-2ae7efd5bb7b

4

MEDIUM- AND LONG-TERM ANSWERS

Finland was one of the countries that was able to (almost) completely and quickly decouple from the use of Russian natural gas. Currently, LNG is still used in some industrial processes that have not been able to pivot their production quickly, and also as maritime fuel. Oil imports ceased quickly, compared to other European countries.

The outstanding problems with regard to discontinuation of imports from Russia are related to the use of wood and electricity. Pressures towards wood use have come not only from energy use, but also from the forest industry, where global demand for pulp, paper, and cardboard has pushed production higher. This has meant that logging levels have increased, which in turn has decreased the level of forest (and, consequently, LULUCF sector) carbon sinks, jeopardising Finland's climate goals.[21] Increased loggings are also a problem for biodiversity, as forest species constitute the majority of endangered species on the national red list.[22] To add to the problem, the rate of annual forest growth, which had been steadily increasing since the 1970s, stopped increasing in the past few years. Given all of these constraints, the amount of sustainably sourced timber has a dynamic but binding upper limit. Within this limit, there is a trade-off between wood use in energy and in other forest industry uses. Currently, there is scientific and political debate concerning the energy use of wood and the climate consequences of lost carbon sinks. For instance, the Finnish Climate Change panel has suggested various possible methods for domestically limiting loggings, including a tax for wood in energy use.

In view of these limitations on wood biomass use, the energy solution that has gained increasing traction is wind power and, as a still small but increasingly important alternative, solar power. Wind power is expected to grow rapidly, necessitating upgrades to the power grid, and solutions for intermittent production, including storage and time-wise flexibility in use. The question of how to guarantee demand for wind power during hours of high production (and, consequently, low price) is crucial for continued strong growth in the wind power sector. Flexible use in industry and by consumers is one solution; another is different ways of storing energy (in batteries, as heat, converted to gas or liquid fuels). Several smaller-scale initiatives are underway in all of these directions, including power-to-X solutions and heat batteries. The relatively extensive district heating networks in cities provide some needed buffers during the colder months.

Hydrogen is seen as one potential solution for storage and utilisation, and as a source for further power-to-X solutions. Finland has a national hydrogen strategy, and two regional initiatives, one around the Gulf of Bothnia and another in south-eastern Finland. Here, too, some small-scale projects are up and running, but large-scale utilisation is still a long way off.

Given the existing levels of nuclear power and use of wood biomass, and the expected growth of wind and solar power production, Finland will decarbonise its electricity production with ease. The main challenge is the availability of sustainably sourced wood, and land-use issues with regard to wind and solar power. The decarbonisation of the traffic sector is a more difficult goal. In its energy and climate policy, Finland has supported the production of biofuels, and Finnish companies like Fortum Oyj, Neste Oyj, and ST1 are some of the leading producers. Like in many European countries, electrification of traffic has picked up pace recently in Finland, but growth rates are still too slow to reach the climate targets. A domestic carbon trading system for the traffic sector has been proposed as a possible solution.[23]

The forest sector is crucial in Finland's energy production and use, as well as for its climate and biodiversity policy. In terms of energy, the forest industry uses around 60 per cent of all energy consumed in industry, but produces only around 9 per cent of value added. Furthermore, more than half of all harvested wood ends up used as energy, either directly or indirectly in the processes of the forest industry. An economic problem arises if Finland loses forest sinks and

---

21 The Finnish Climate Change Panel, 2023, 'Suuntaviivoja Suomen ilmastotoimien tehostamiseen'. https://www.ilmastopaneeli.fi/wp-content/uploads/2023/02/ilmastopaneelin-julkaisuja-1-2023-suuntaviivoja-ilmastotoimien-tehostamiseen.pdf

22 Hyvärinen, E. Juslén, A. Kemppainen, E. Uddström, A & U.-M. Liukko (Eds.), *The 2019 Red List of Finnish Species*, Ympäristöministeriö & Suomen ympäristökeskus, Helsinki, 2019. http://hdl.handle.net/10138/299501

23 Finnish Climate Change Panel, 2022, 'Tieliikenteen kansallinen päästökauppa auttaisi Suomea saavuttamaan päästövähennystavoitteet kustannustehokkaasti'. https://www.ilmastopaneeli.fi/tiedotteet/ilmastopaneelin-raportti-tieliikenteen-kansallinen-paastokauppa-auttaisi-suomea-saavuttamaan-paastovahennystavoitteet-kustannustehokkaasti/

thereby fails to reach the goals negotiated within the EU. Finland might need to buy compensating sinks from other member states at a high cost.[24] This has raised concerns that biogenic carbon emissions released by the forest industry should be measured, counted, and priced equally with other industrial sectors that are included in the Emission Trading System. However, such a situation would most likely increase the price of wood drastically, causing major challenges for forest industries. On the other hand, pricing biogenic carbon could encourage the forest sector to increase its energy and resource efficiency as has happened in other industrial sectors.

The share of variable renewable energy sources (wind and solar) is expected to grow rapidly to cover almost half of the electricity consumption in 2030. In order to maintain the power balance, elasticity of demand and price sensitivity of electricity consumption must increase rapidly. This means that the industrial and heating sectors need to be encouraged to invest in new technologies and energy storages.

Finland is tightly connected to the Scandinavian and EU electricity market design and development of transmission infrastructure. With increased investments in variable renewable energy production, Finland is particularly dependent on future development of both transmission capacity and technologies, and the capability that the European market design has in creating incentives for elasticity of demand.

---

24 Petja Pelli, *Helsingin Sanomat*, 18.12. 2022. "Hiilinielujen romahdus voi maksaa Suomelle miljardeja euroja jo kolmen vuoden kuluttua". https://www.hs.fi/politiikka/art-2000009272342.html

5

FORESEEABLE CONSEQUENCES WITH REGARD TO EU CLIMATE GOALS/TARGETS?

Generally, Finnish energy policy – as well as climate and industrial policies – has adopted a market-based and technology-neutral approach. However, 'silent' energy and industrial policy has supported energy intensive industry, for instance, through lower electricity taxation, and the forest sector enjoys the support of tens of national strategies starting from educational policies up to subsidies and taxation. Currently, the Finnish economy is one of the most energy- and material-intensive in Europe.[25]

In terms of energy policy, the attitude of the government in office between 2019–2023, headed by Sanna Marin from the Social Democratic Party, was mainly reactive – supporting consumers through price spikes with lower prices (via lower biofuel obligations) for liquid fuels and subsidies for high electricity bills.[26] No major moves were made in terms of energy transition – building new infrastructure or abandoning fossil-based ones. At the time of writing, a new government is starting its term, and it is unclear what its approach will be. Out of the right-wing parties that won the election, the moderate Coalition party has expressed support for the climate neutrality goal, including rapid electrification, while the extreme right-wing Finns party has emphasised lower gasoline prices as a major goal.

Given the past (and future?) governments' 'hands-off' approach, it can be expected that from the industry perspective, the EU's Green Deal and green transition strategies are the main drivers for industrial and energy sectors. The energy sector and industry, in general, are taking their cues from the market signals and EU policies. Consequently, there is an increased push for large wind-power parks onshore and offshore, especially in the Bothnian Bay area, and these will involve large-scale land-use decisions. For these companies the main hurdles for expanding infrastructure are local permission processes that often cause delays simply due to lack of employees in permission processing. There is very little possibility for expanding hydropower. At the moment, it also seems that private investors are not planning new nuclear projects. In terms of heat production, the increased pressure on wood availability and the virtual end to peat in energy use has meant that many companies have invested in electric boilers and large-scale heat pumps.

For the climate goals the main impact from Russian energy decoupling is on the LULUCF sector. The increased use of biomass for energy due to higher energy prices and the end of Russian energy imports is increasing the demand for logging. At the same time Finland's ambitious climate targets have relied on a large land sink, where forests have been by far the biggest contributor. During the last decade the LULUCF sink has been decreasing, and has actually turned from carbon sink to source in 2021–2022.[27] This will have an effect on the Finnish climate actions, depending on what options are available for reaching the targets otherwise.

Another issue that brings energy provision and biodiversity to the forefront is the faster push for a green transition. The discontinuation of Russian energy imports necessitates a faster transition, both in electrified production in the industry and in traffic. A green transition will demand large amounts of specific raw materials, and these raw materials will be different than in fossil fuelled societies. There is increased demand for rare earth as well as other metals and minerals, often categorized in the group of 'critical raw materials'.[28] Current production of these materials in Europe is not adequate. This is already pushing European policies towards securing raw materials globally and nationally – meaning opening mines and re-defining regulations. The discussion on the availability of minerals in Finland and the conflict of interest between other sectors of economy, biodiversity, land-use, and mining is picking up speed.

---

25 Eurostat, 2023, 'Energy intensity', https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Energy_statistics_-_an_overview#Energy_intensity, Eurostat, 2023, "Material footprint", https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Material_flow_accounts_statistics_-_material_footprints#Material_footprint_of_European_countries

26 Ministry of Economic Affairs and Employment, 2023, 'Lower distribution obligation for transport fuels to continue in 2023'. https://valtioneuvosto.fi/en/-//1410877/lower-distribution-obligation-for-transport-fuels-to-continue-in-2023

27 National Resource Institute, 'Kasvihuonekaasuinventaarion ennakkotiedot vahvistavat: maankäyttösektori päästölähde vuonna 2021, metsät pysyivät edelleen nettonieluna'. 14.12. 2022. https://www.luke.fi/fi/seurannat/maatalous-ja-lulucfsektorin-kasvihuonekaasuinventaario/kasvihuonekaasuinventaarion-ennakkotiedot-vahvistavat-maankayttosektori-paastolahde-vuonna-2021-metsat-pysyivat-edelleen-nettonieluna

28 European Commission, 2023, 'Critical Raw Materials'. https://single-market-economy.ec.europa.eu/sectors/raw-materials/areas-specific-interest/critical-raw-materials_en

IMPRINT

Friedrich-Ebert-Stiftung
Publisher: Friedrich-Ebert-Stiftung Budapest
1054 Budapest | Fővám tér 2–3.
Email: fesbp@fesbp.hu

Responsible for content and editing:
Ernst Hillebrand, Head, European Economies of the East
ernst.hillebrand@fes.de

Orders/Contact: fesbp@fesbp.hu

ISBN 978-615-6289-70-4

Design/Typesetting: pertext, Berlin

FRIEDRICH EBERT STIFTUNG