

NET ZERO CARBON FINAVIA ROADMAP

Finavia's commitment to
Net Zero Carbon emissions
defines the destination of
Finnish airports' decarbonisation journey



Finavia in brief

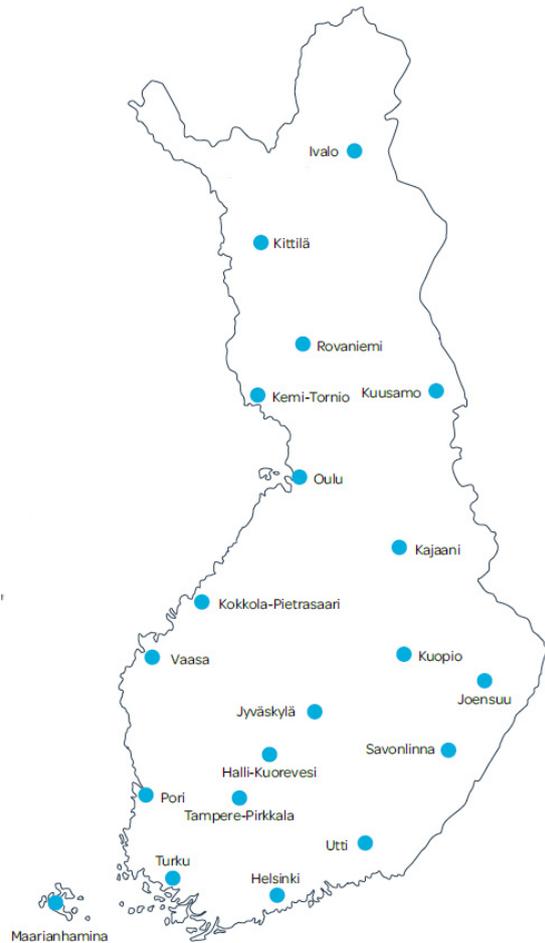
Functional flight connections are crucial for Finland's vitality and competitiveness. Air traffic is needed, for example, for imports and exports of goods, establishing international networks, and the management of cross-border value chains. Connectivity is vital for the growth and development of tourism in Finland. Flight connections also serve companies that operate internationally.

Finavia is an airport company whose goal is to make travel smooth and stress-free. We enable good flight connections from Finland to the rest of the world through our nationwide network of airports. Our main airport, **Helsinki Airport**, is a leading European hub for long-haul and connecting flights

We run a network of 20 airports in Finland. The northernmost airports have the brand name **Lapland Airports**

We develop and maintain airports and manage large-scale operations ranging from demanding construction projects to complex logistics, passenger flows and data. We work together with our customers and partners to promote the mobility of Finnish people and Finland's international competitiveness.

We bear our responsibility for the impact of our activities on people, the environment and society at large. Safety, security, sustainable development and connectivity are at the core of our responsibility.



In 2023 Finavia runs a network of 20 airports in Finland.

Finavia's climate programme

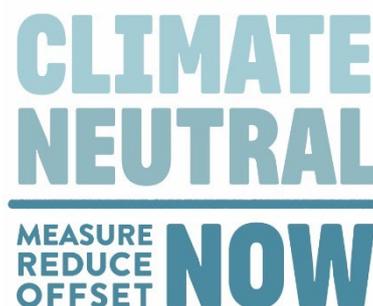
In 2008 Finavia composed its Climate and Energy Program and started evaluating its carbon footprint. In 2011 Finavia joined the Airport Carbon Accreditation (ACA) scheme of Airports Council International Europe (ACI/E). In 2022 Helsinki Airport and four of Lapland Airports were accredited on the highest Level 4+ (Transition).

The rest of the network follows same principles of carbon management outside the formal ACA procedure. The steps laid out in our climate programme enabled us to achieve carbon neutrality in our own operations at all our airports already in 2019.

CO₂ emissions caused by Finavia's own operations have been reduced and the residual emission have been offset. We use zero-emission wind power and generate electricity ourselves using solar panels. At all our airports, we have replaced diesel fuel with renewable diesel produced from waste and residual materials. We expand the use of renewable motor-oil for non-registered machinery and emergency electricity production. Half of our airports are heated using Finnish wood-based biofuel and we source renewable thermal energy from district heating networks. Finavia has also invested in energy efficiency improvements.

We offset our remaining emissions by funding ACA-compliant projects that reduce CO₂ emissions in developing countries.

In 2019, we signed the ACI/E commitment to net zero carbon emissions by 2050. In 2021 we signed an even more ambitious ACI/E target aiming at 2030. However, Finavia is proceeding faster and aim to achieve Net Zero emissions by 2025. Net zero emissions mean that our airports' own CO₂ emissions will be so small that we can capture them from the atmosphere.



In 2022 Helsinki Airport and four of Lapland Airports (Ivalo, Kittilä, Rovaniemi and Kuusamo) were accredited on ACA Level 4+ (Transition) which is currently the highest level of achievement in the scheme.

Finavia commits to Net Zero Carbon emissions

Finavia's operations at its 20 airports are already carbon neutral. Net Zero Carbon emissions is much more challenging to achieve. Our emission shall gradually decrease so much that the residual emissions can be removed from the atmosphere.

In a nutshell, "Net Zero carbon emissions" is the state our global civilisation needs to reach by 2050 at the latest, to avoid the most acute repercussions of Climate Change. According to scientific evidence by the Intergovernmental Panel on Climate Change (IPCC) the global warming of 1.5°C should not be exceeded. This is also the target of the Paris agreement under the UN Framework Conference on Climate Change (UNFCCC).

Net Zero in the definition proposed by IPCC is explained as the state "when anthropogenic CO₂ emissions are balanced globally by anthropogenic CO₂ removals

over a specified period." In other words, to achieve that, we need to either stop producing new CO₂ or eliminate the remaining or already existing emissions from the Earth's atmosphere.

Finavia commits to reach Net Zero target by further reducing the absolute emissions from company's own activities to the furthest extent possible and address any remaining emissions through investment in carbon removal and storage. Ideally this would mean that the commitment requires Finavia to reduce the emissions down to zero.

Finavia will build its carbon management and reduction on the experience gained within the Airport Carbon Accreditation programme. We aim at having Net Zero emissions by 2025. Our daughter companies will establish their own commitments later.

Definitions of Carbon Neutrality and Net Zero emission as elaborated in ACI Europe's Guidance document "Developing an Airport Net Zero Carbon Roadmap".

What does Net Zero Carbon emissions mean?

- Globally, Net Zero Carbon emissions will be achieved when all CO₂ emissions released by humans are counterbalanced by removing CO₂ from the atmosphere through negative emissions technologies (i.e. nature-based or technology solutions).
- At an airport, achieving Net Zero Carbon will involve two main elements. Firstly, the airport reduces carbon emissions from its own operations (Scope 1 and Scope 2 emissions) as a minimum to as close to zero as possible. Secondly, any remaining emissions that are difficult to avoid are neutralised through carbon removal.

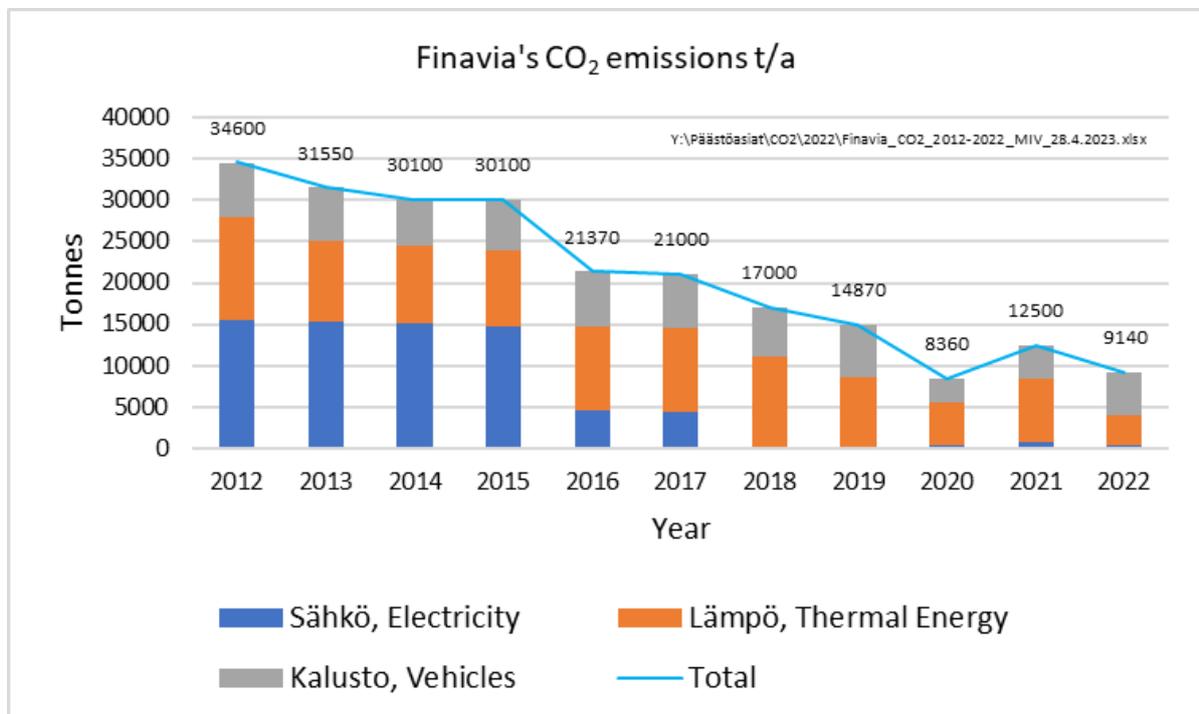
What is the difference between Carbon Neutrality as defined under Airport Carbon Accreditation and Net Zero Carbon?

- To achieve Carbon Neutrality, airports reduce carbon emissions and compensate for the remaining carbon emissions through the purchase of certified carbon offset credits - i.e. by investing in emissions reductions or removals elsewhere (in other sectors/organisations).
- To achieve Net Zero Carbon, airports reduce carbon emissions as close to zero as possible and any residual emissions can only be addressed by carbon removals. This does not allow for offsetting through carbon reductions in other sectors/organisations.

Historic carbon emission from Finavia's activities

Through the work initiated in the 1980s as efforts to improve energy saving and further reduction of carbon dioxide emissions as defined in the 2008 Energy and Climate Programme, Finavia has been

able to cut CO₂ from 35000 tonnes in 2012 to 9100 tonnes in 2022. Emission in 2020 were exceptionally low mainly due to closures of airports during the COVID19 pandemic.



Finavia's historic CO₂ emissions since 2012 from the main sources (electricity, thermal energy, vehicle fuels, emergency generators from 2020 on-wards). The year 2020 was exceptional due to closure of many airports during the COVID19 pandemic.

Gradual reduction of emissions towards Net Zero

Our emissions from heating and cooling, emergency electricity generation and from use of fuels in machinery and vehicles reached 9100 tonnes in 2022.

We will gradually intensify emission reduction measures, however the financial situation permitting, as the COVID19 pandemic and hostile activities in Eastern Europe have impacted Finavia's capacity to invest and to increase operative costs.

We will continue sourcing all electricity from renewable sources.

We will reduce the use of fuels by replacing our vehicles with electric ones.

We will switch to using of 100% renewable fuel (motor fuel oil) in all our machinery and power generation. Today we already use 100% renewable diesel in our road-registered vehicles.

We will switch to renewable district heating power based on the Law on Certificates for Origin of Energy and the new registry of certificates for guarantees of origin of green heating power supervised

by Energy Authority. Today half of our airports are already heated with renewable wood-based fuel.

For the residual emissions we will start acquiring carbon elimination (carbon capture and storage) credits from projects fulfilling the high-level criteria of the ACA guidance.

We have started implementing these measures and intensify them from 2023 onwards, gradually covering more airports. We will first focus on the four of Lapland Airports in 2023 and Helsinki Airport in 2024 followed by the rest of the network in 2025.

At the mean time we are committed to improving energy efficiency and to reducing carbon emissions further from a variety of sources covered of the ACA scheme's Level 4+ scope. Finavia aims at reaching the forecoming ACA Level 5 (Net Zero Carbon) accreditation for the four of Lapland Airports with 2023 data and Helsinki Airport with 2024 data.

The Roadmap to Net Zero emissions Finavia

Year	The ACA level reached	Finavia's emissions CO ₂ , t (all airports)	Reduction measures
2022	ACA Level 4+ (Helsinki and Lapland Four)	9100	<p>A fraction of district heating power guaranteed as renewable at Helsinki Airport.</p> <p>Switch from fossil motor fuel oil to 100% renewable at some Lapland airport(s) for part of the year.</p>
2023	ACA Level 4+ (Helsinki) and Level 5 (Lapland Four) Lapland Airports Net Zero Carbon	8800	<p>Additional measures A major fraction of district heating power guaranteed as renewable at Helsinki Airport.</p> <p>Switch from fossil motor fuel oil to 100% renewable at four Lapland airports.</p> <p>Removal of residual emission of the four Lapland Airports thought purchase of carbon elimination credits.</p>
2024	ACA Level 5 (Helsinki and Lapland Four) Also Helsinki Airport Net Zero Carbon	3600	<p>Additional measures All of district heating power guaranteed as renewable at Helsinki Airport</p> <p>Switch of fossil motor fuel oil to 100% renewable also at Helsinki airport</p> <p>Removal of residual emission of also Helsinki Airport thought purchase of carbon elimination credits.</p>
2025	ACA Level 5 (Helsinki and Lapland Four) Net Zero Carbon emissions at all Finavia airports	(200) 0	<p>Additional measures All of district heating power guaranteed as renewable at all airports</p> <p>Switch from fossil motor fuel oil to 100% renewable at all airports</p> <p>(The residual CO₂-emissions before carbon capture and storage 200 t at all airports)</p> <p>Removal of residual emissions of all airports through acquiring of carbon elimination credits and thus reaching Net Zero Carbon emissions throughout the airport network.</p>

Finavia airports are forerunners in carbon reduction in air transport industry

Finavia's airports are economic and societal hubs, with a vital role to play in Finland and further in the regions. We safeguard the connectivity of Finland, the northernmost country of the EU, and enable air transport services.

Airports have always been and are today a powerhouse of decarbonisation in the air transport industry. By a public commitment to reaching Net Zero carbon emission from airport operations within its own control by 2025 Finavia wants to show an example to the entire air transport eco-system and the public that our European industry is on a journey to Net Zero future¹.

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¹ www.destination2050.eu