

NET ZERO CARBON 2030

TORP SANDEFJORD AIRPORT

SUSTAINABLE DEVELOPMENT

INTRODUCTION

- As a **responsible corporate citizen**, Torp Sandefjord Airport has an important role in contributing to both local and global sustainable development.
- Important elements in this community role are to **facilitate sustainable value creation** that safeguards social conditions and the working environment, which does not compromise with internal and external environmental and climate obligations.
- Sandefjord Airport has implemented a **Corporate Governance structure** which, among other things, includes guidelines for social responsibility and guidelines for ethics. The documents have been approved by the board, are part of the company's integral management system and must be complied by all employees.
- We **support the UN's 17 Sustainable Development Goals (SDGs)** and recognize that the business activities have both positive and negative impacts. We have a holistic approach to ensure that the company positively contribute to each goal while minimizing adverse effects. To achieve this, Sandefjord Airport collaborate with partners in and outside the value chain to continuously develop the integral sustainability work.

We have a particular focus on the following SDG's:



Sustainable value creation creates real healthy green growth and encompasses all three ESG dimensions (climate and environment, social conditions, governance). Real healthy green growth means fair sustainable development within the earth's tolerance limits, where economic value is created while the total environmental impact is reduced.

NS-EN ISO 14001:2015 CERTIFIED

Sandefjord Airport has a well-established and systematic approach to environmental and climate work at the airport and has been certified according to the NS-EN ISO 14001-standard since 2002. The ISO 14001-standard requires an annual audit by an external accredited auditor and recertification every third year. Last recertified in according to the NE-EN ISO 14001:2015 standard was November 2022.

CLIMATE & ENVIRONMENTAL IMPACT

Airport operations affect both the local and global environment. The local environmental impact is primarily related to aircraft and helicopter noise, local air quality, water and soil pollution, as well as biodiversity. The global impact is primarily linked to greenhouse gas emissions from energy consumption, fuel consumption and waste.

Global climate impact

Local environmental impact

Noise



Noise from airport operations, as well as arrivals and departures by plane and helicopter can create noise disadvantages for neighbors.

Biodiversity



Operation of the airport, airport development and projects affect biodiversity in and around the airport.

Water and soil



Operation at the airport requires the use of various chemicals with associated potential emissions.

Road traffic



Travelers to and from the airport, passenger services and transport deliveries affect local air quality and global greenhouse gas emissions.

Waste



Waste from airport operations and flights affects both global greenhouse gas emissions, local air quality and can cause littering.

Energy



Energy consumption from airport operations, buildings and charging stations primarily affects global greenhouse gas emissions and resources.

OUR APPROACH TO REDUCE NEGATIVE IMPACT

NOISE POLLUTION

Aircraft noise affects the immediate areas around the airport, and we work actively to limit the noise pollution from aircraft and helicopter traffic in close dialog with neighbors. To reduce noise from helicopters and small aircraft, a system has been introduced for noise-minimizing maneuvers during landing rounds and other exercises related to approach routes and approach altitudes. To reduce noise from airport operations, several noise reduction measures have been introduced at the airport, e.g., use of a separate noise-reducing area when revving the aircraft engine at night.

NATURE ENVIRONMENT

Our operations, development plans and projects affect biodiversity in and around the airport in several ways. Decommissioning, drainage, discharge of microplastics, use of chemicals and more are negative influences. Airport operation requires use of chemicals with associated potential emissions. The use of de-icing chemicals is necessary to reduce ice and snow on aircraft and runways to ensure compliance with the safety regulations. Spread of de-icing chemicals from the airport's areas can affect the natural environment's tolerance and degradation capacity. If we do not have control of chemicals use and possible sources of pollution, this can have a negative impact on life in water, flora, and fauna. We have emission permits given by Vestfold County, Norway which regulate consumption and discharge of de-icing chemicals and use of hazardous chemicals. The permits state, among other things, requirements for risk-reducing measures, sampling, and preparedness against acute pollution. Permission has also been granted for spreading smaller amounts of glycol-containing snow and water for decomposition on the green areas. In accordance with the permission, the airport has a well-functioning and comprehensive environmental monitoring program which, among other things, includes sampling and routine inspections of waterways to observe environmental conditions and any changes related to fouling, iron deposition, erosion, oil film, etc.

OUR APPROACH TO REDUCE NEGATIV IMPACT

TRAVEL TO AND FROM THE AIRPORT

To reduce greenhouse gas emissions from transport of passengers and employees to and from the airport, and to improve local air quality, we will be a driving force and facilitate good public transport and emission-free means of transport. It is a goal that the delivery service becomes greener, and our most important contribution is to ensure that the infrastructure is in place at the airport and contribute with good information about the services to the travelers.

CIRCULAR ECONOMY

We want to be part of the transition to a circular economy which also involves the prevention of waste and wastage. The resources must be used far more efficiently to reduce the need to take out new resources. The products must last as long as possible, be repaired, upgraded, and reused. When the products cannot be reused in their original form, the waste materials must be recycled and used as raw materials for new production. By reusing products and materials, the same resources are utilized several times and as little as possible is lost. Several measures have been introduced to increase the sorting rate at the airport, and we are continuously working to reach our target that at least 60% of generated waste at the airport shall be sorted at source.

VEHICLE FLEET

To achieve the target of fossil-free operation within 2030, we will replace our fossil-fuel vehicles with zero-emission vehicles such as electrical, biogas or hydrogen. Today, it is hard to decarbonize our heavier vehicles, since zero-emission technology does not exist for some of these vehicles. In the coming years, it is important to keep up with the market. All electric sweepers, trucks and wheel loaders will come in larger classes in the coming years.

OUR APPROACH TO REDUCE NEGATIV IMPACT

ENERGY AND ELECTRIFICATION

In 2023 an external consultant analyzed the energy potential at the airport and recommended an overall energy and electrification strategy. As part of the mapping, a feasibility study was done for production of solar energy on roofs and facades as well as from a ground-mounted solar cell system. The report is a basis for drawing up our Net Zero Carbon Roadmap and includes life cycle analyses, proposals for sustainable solutions and an action plan. The purpose of the analysis was to identify building parts and technical facilities with energy potential and to describe profitable measures that are feasible also regarding to operation. The areas discussed are, among other things, water-borne heating, use of snow dumps for cooling, de-icing, and optimization of the geothermal heating plant (59 wells of 200 meters).

FOSSIL-FREE AIR TRAFFIC

From January 2020, it has been a requirement of 0,5% biofuel as a share of all aviation fuel traded in Norway (except for the Armed Forces). Norway was the first country in the world with such a turnover requirement and Norwegian aviation have been early adopters of sustainable aviation fuel. The biofuel must be advanced, i.e., fuel made from waste and residues. It is expected that airlines and travelers' ambitions to cut emissions will lead to a strong increase in demand for sustainable aviation fuel. When applicable, we will facilitate the use of sustainable fuel for aircraft and the electrification of short-haul aviation. In addition, we will facilitate replacement of today's aircraft at the Pilot Flight Academy (PFA) with electrical aircraft.

CLIMATE ACCOUNTING

GREENHOUSE GAS INVENTORY

Sandefjord Airport has reported a detailed inventory of the company's emission sources and associated greenhouse gas emissions for the period 2019 – 2023. The emissions are quantified according to the Greenhouse Gas (GHG) Protocol, which is the most widely used and recognized standard for corporate footprint accounting. The company's activities and transactions are calculated into metric tonnes of CO₂-equivalents using emission factors from vetted sources.

The greenhouse gas inventory allows us to identify emission hot-spots in our operations and in our value chain, and consequently to initiate measures to mitigate our contribution to climate change. The annual report allows us to measure our emissions over time and thereby manage our progress.

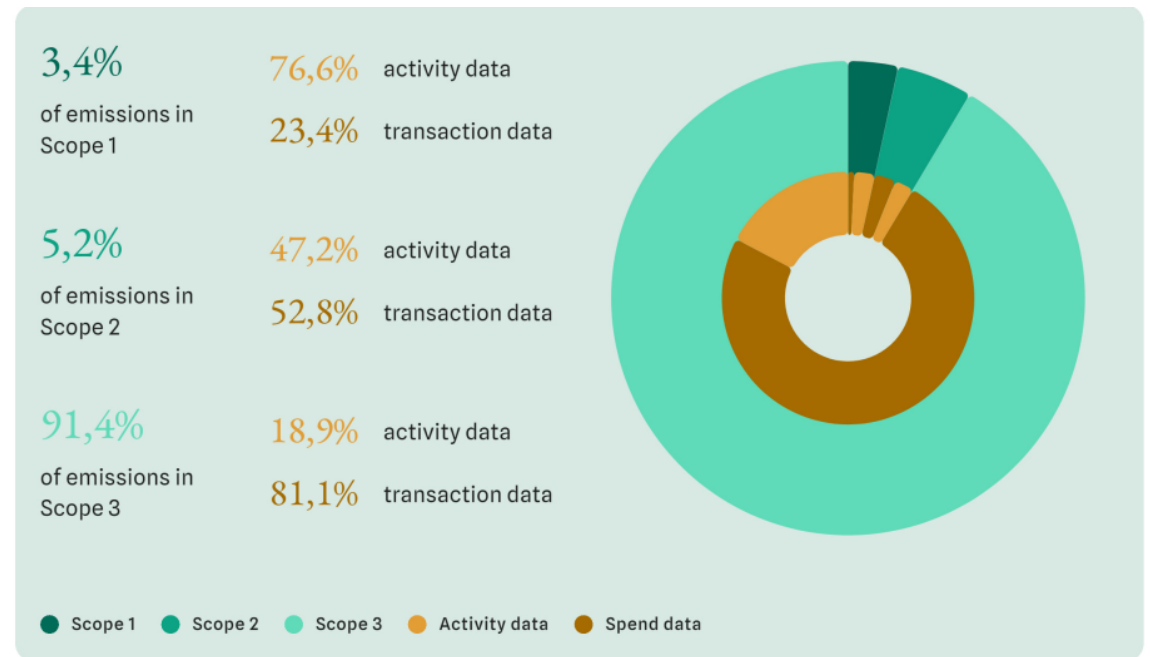
DEFINITION OF ANNUAL INVENTORY 2023

Scope 1 & 2

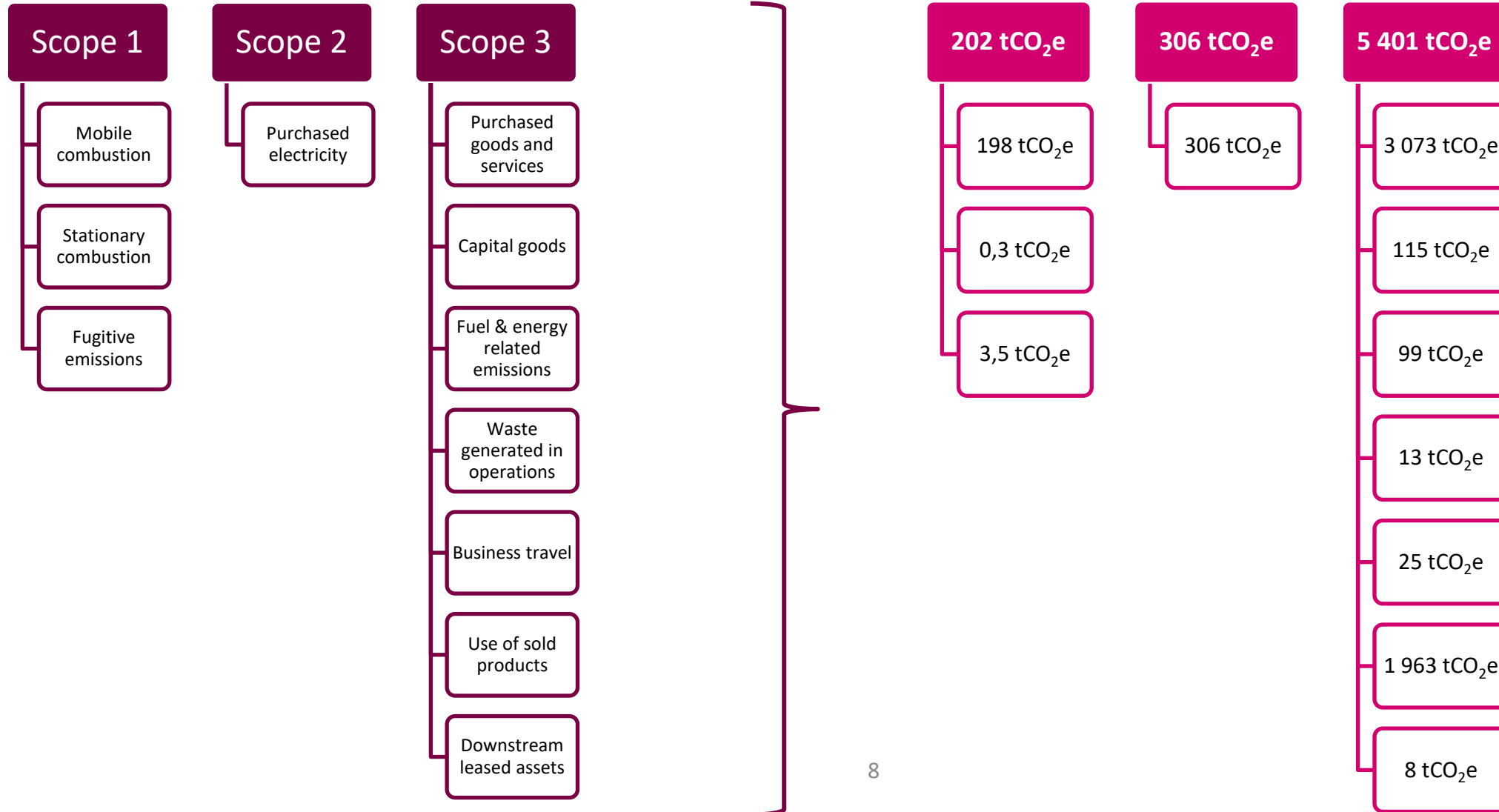
The inventory includes all material emissions sources in Scope 1 & 2. 58,9 % of our emission in Scope 1 & 2 is calculated based on bottom-up activity data, while 41,1 % is calculated based on top-down transaction data.

Scope 3

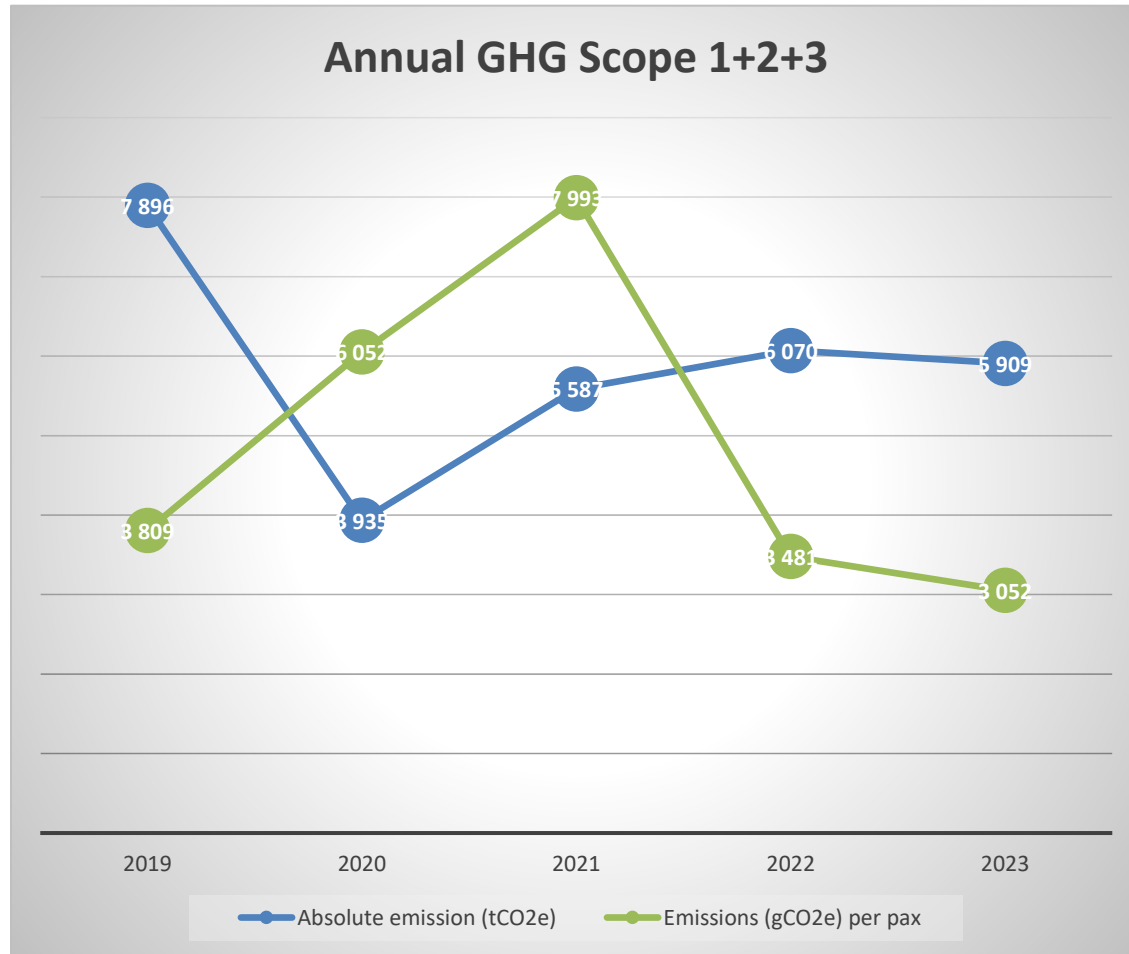
18,9 % of our reported emissions in Scope 3 is calculated based on bottom-up activity data, while 81,1 % is calculated based on top-down transaction data.



ANNUAL GREENHOUSE GAS EMISSIONS 2023

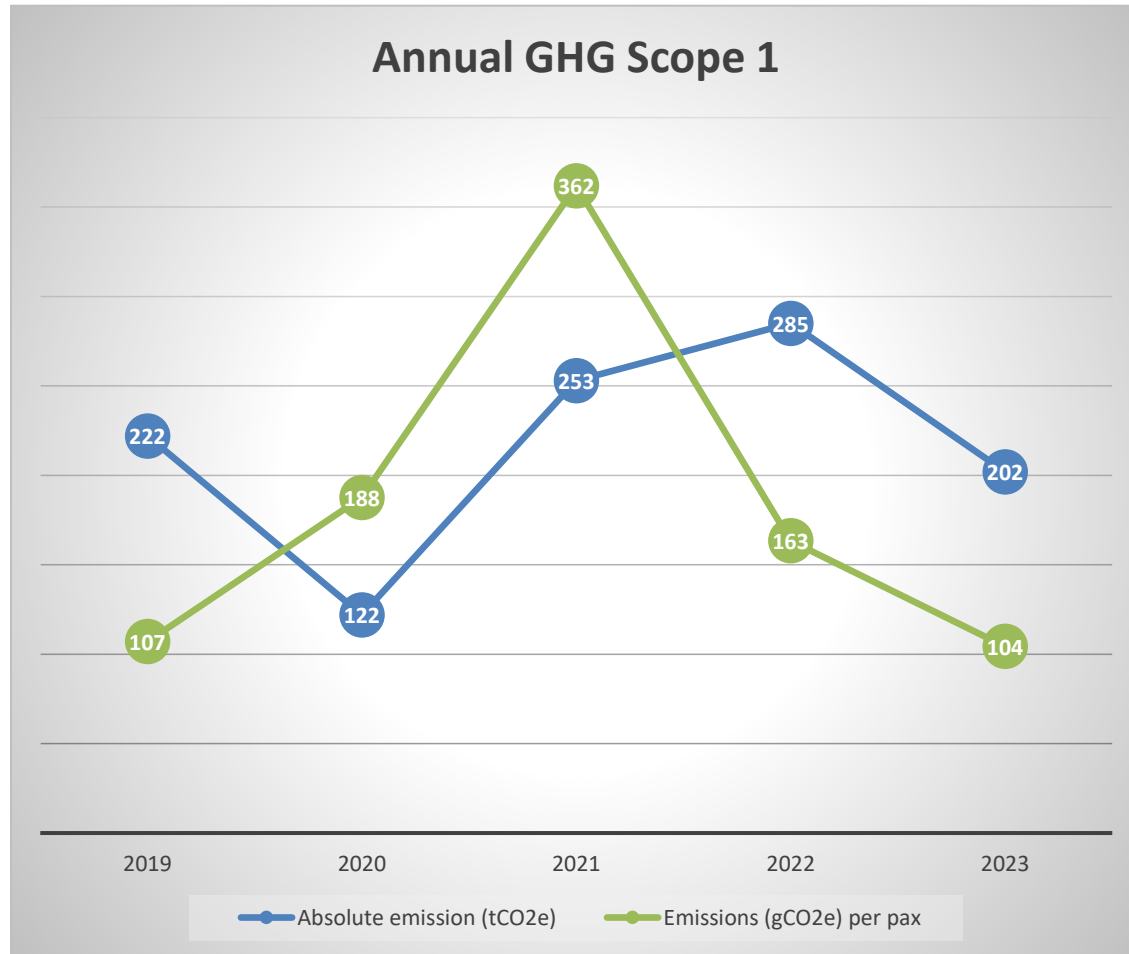


TOTAL EMISSION INVENTORY



Emissions categories	
Scope 1	1.1 Mobile combustion
	1.2 Stationary combustion
	1.3 Fugitive emissions
Scope 2	2.1 Purchased electricity
Scope 3	3.1 Purchased goods and services
	3.2 Capital goods
	3.3 Fuel and energy related emissions
	3.4 Upstream transport and distribution
	3.5 Waste generated in operations
	3.6 Business travel
	3.11 Use of sold products
	3.13 Downstream leased assets

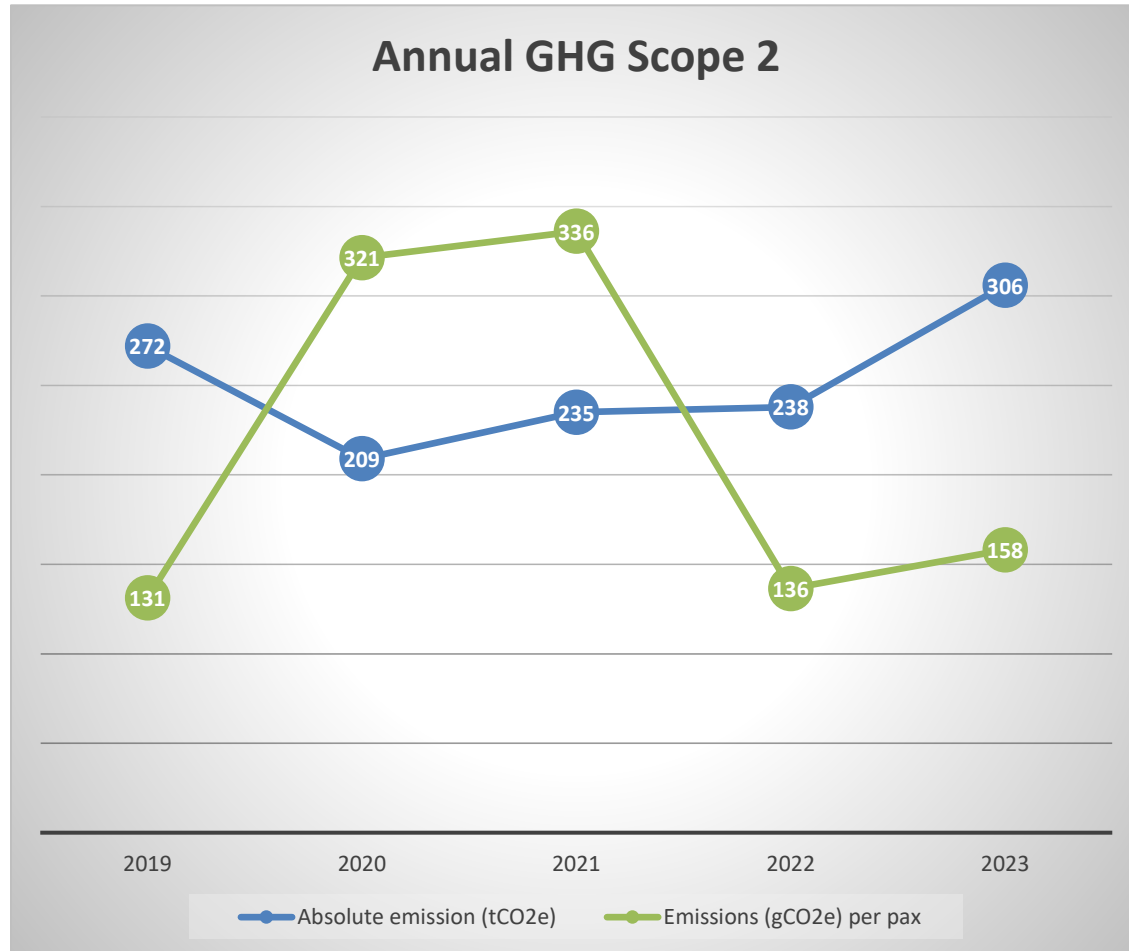
SCOPE 1 EMISSION INVENTORY



Ambition 2030

- **Mobile combustion:** No single energy solution will be able to meet all the challenges associated to Sandefjord Airport's diverse vehicle fleet. The ambition is that all cars and vans are electrical within 2030, and that the specialized large and heavy vehicles used for winter operations and fire trucks will be either electrical or use biogas or hydrogen as an energy source, depending on available technology. Electrification of cars and vans has already begun. Some equipment will also be replaced by electric autonomous equipment, e.g., lawnmower.
- **Stationary combustion:** Natural gas, which is used to heat one of our hangars, will be replaced with an emission-free energy source. Backup generators which operates on fossil fuel, may undergo a remodeling to be able to use advanced biodiesel.
- **Fugitive emissions:** Leakage from refrigerants to be minimized by using artificial intelligence for monitoring and maintenance planning. In addition, number of non-climate-friendly refrigerant will be reduced.

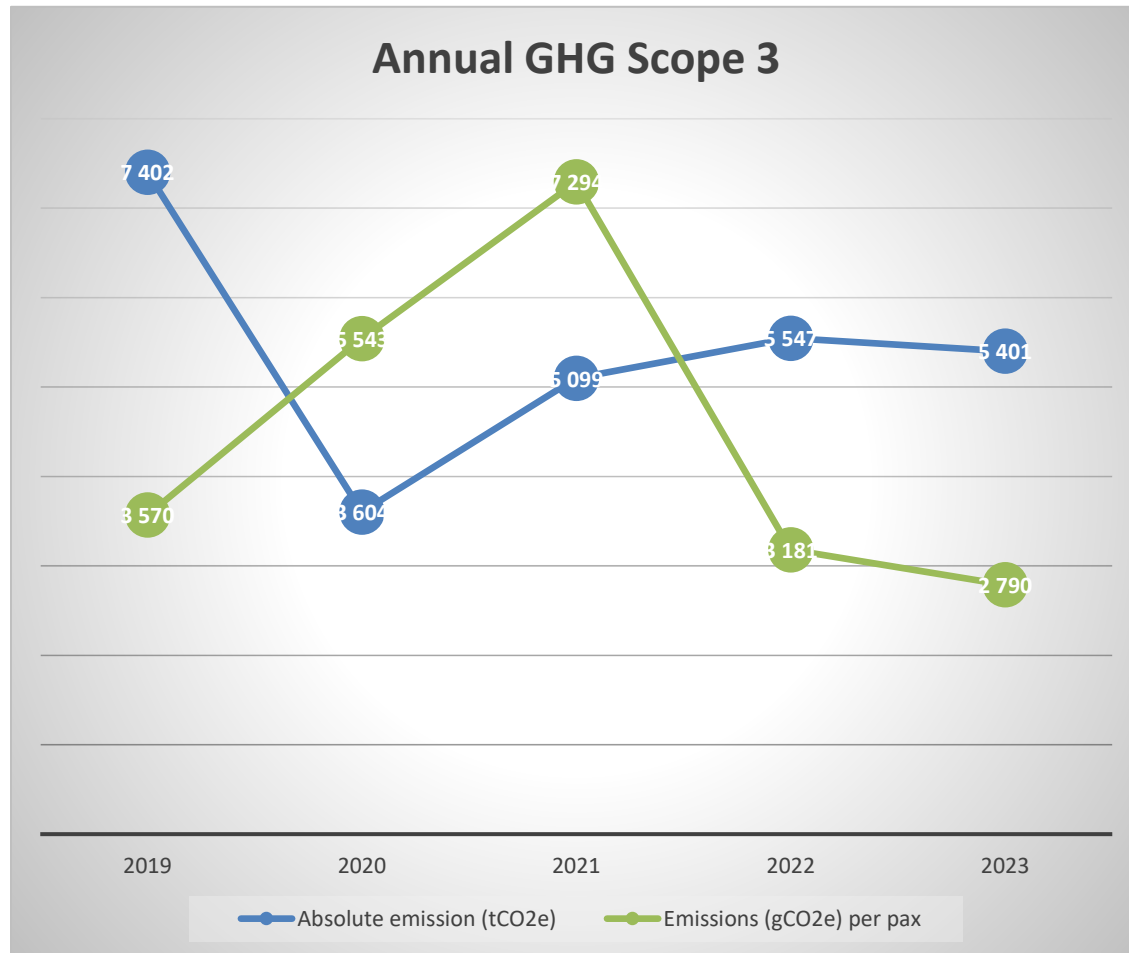
SCOPE 2 EMISSION INVENTORY



Ambition 2030

- **Purchased electricity:** The future energy consumption at Torp depends on various parameters. This includes the implementation of energy-saving measures, own energy production at the airport, as well as development of the area and electrification.
 - To reduce energy consumption, several energy saving initiatives have already been done, and will continue in the coming years. This includes installing LED lighting and energy meters, new energy efficient equipment, and energy-saving measures for buildings. The terminal building is connected to an energy center with a heat pump that uses energy wells as an energy source. The load on the energy center will be increased to utilize its potential to its fullest.
 - Solar cell systems at the airport will ensure Torp self-produced and short-haul renewable energy to cover internal electricity consumption, as well as potentially feed excess production into the local power grid. A feasibility study was carried out in 2023 for the utilization of solar energy for 9 buildings and 6 ground areas. Some of these facilities will be installed in the coming years. In addition, it will be considered to install other relevant energy sources.
 - The infrastructure is arranged for increased use of electric cars and will be prepared for use of electric aircraft.

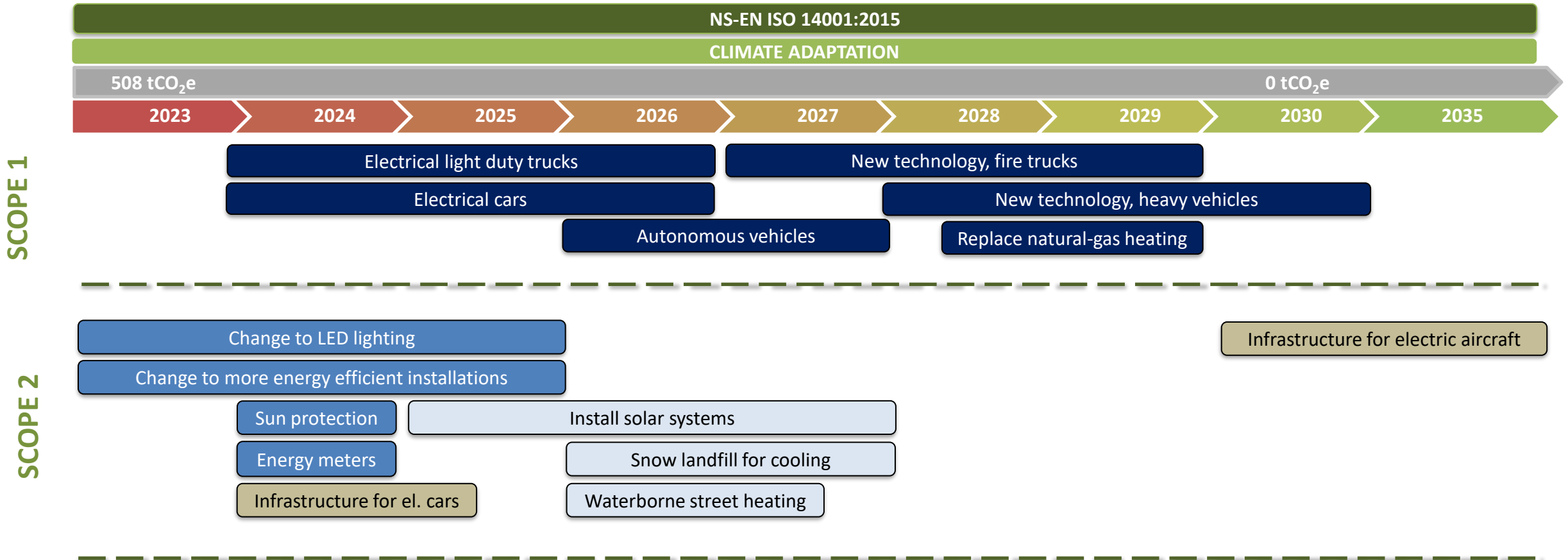
SCOPE 3 EMISSION INVENTORY



Ambition 2030

- **Purchased goods and services:** All acquisitions from and including January 2024 emphasize climate and environment 30 %, including life cycle assessments.
 - **Runway de-icing chemical:** To reduce the volume of de-icing chemicals used on the runway, sensors and monitoring with artificial intelligence will be installed to optimize the use. Biogenic de-icing chemicals may be used in the future if they comply with quality criteria.
 - **Aircraft de-icing:** We are looking into solutions for recycling of glycol.
- **Upstream transport and distribution:** Preferred transporters using electricity, biogas or hydrogen as an energy source.
- **Waste generated in operations:** Reduce the amount of waste by reducing the use of packaging, increasing the proportion of reuse and increasing circularity and the degree of sorting at the airport. Use of artificial intelligent to optimize use of containers and smart bin.
- **Business travel:** Use climate-friendly vehicles such as electrical cars and trains, as well as aircrafts using sustainable aviation fuel and electrification aviation when available.

ROADMAP NET ZERO 2030 - SCOPE 1 & 2





TORP

Sandefjord lufthavn