

# AVINOR'S CSR REPORT 2013



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The report on Avinor's corporate social responsibility (CSR) 2013 has been prepared in accordance to the Global Reporting Initiative guidelines (G4/Core).

READ MORE ABOUT AVINOR:

#### **ANNUAL AND QUARTERLY REPORTS**

Avinor's annual report consists of the directors' report, financial statements with notes, information on corporate governance, declarations from the board and CEO, including the external auditor's report.

Financial reports are also prepared and published on a quarterly basis, showing the key figures and accounts, including a brief statement on finances. Avinor's annual and quarterly reports are available on [www.avinor.no](http://www.avinor.no).

#### **ARTICLE 10 PLAN**

Article 10 of Avinor's statutes state that the board shall prepare a report each year on the company's overall activities, including plans for the future. This document is called the Article 10 Plan, and it is submitted to Avinor's owner, the Ministry of Transport and Communications. At least every fourth year, Avinor's Article 10 Plan forms the basis for a report to Norway's parliament, the Storting, on Avinor's activities.

#### **AVINOR'S CONTRIBUTION TO THE NATIONAL TRANSPORT PLAN 2014-2023**

The Government issues a report to the Storting every four years, covering details regarding Norway's transport sector. Aviation infrastructure is also addressed in the report, [www.ntp.dep.no](http://www.ntp.dep.no).

#### **AVINORPULS**

Avinorpuls is Avinor's in-house magazine, covering topics ranging from Avinor's own activities to general aviation issues. Subscriptions are open to everyone.

**VISJON:** Avinor creates valuable relationships

**MISSION:** Avinor shall develop and operate a safe, efficient and sustainable aviation system throughout Norway.

**VALUES:** Open – Responsible – Dynamic – Customer-oriented





# INTRODUCTION

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Avinor was established to ensure access to good aviation services throughout Norway. The services we provide for Norwegian society are carried out with respect for people, the environment and the community. In 2013, Avinor's board adopted a strategy for corporate social responsibility - CSR. The OECD's guidelines for responsible business conduct underlie this strategy and Avinor has joined the UN Global Compact. This report provides a broad account of how Avinor benefits and serves the greater community, as well as how the corporation handles its responsibility issues. The report has been prepared in accordance with the principles of the Global Reporting Initiative (GRI).

In aviation, safety work is a continuous process where new challenges are met with new measures. Avinor maintains a high level of safety, founded on comprehensive national and international regulations. Aviation safety is key in Avinor's investment policy.

Systematic work is constantly under way to improve the airports' environmental results. One of the important goals in Avinor's business strategy for 2014 – 2020 is that the company will be a driving force in the climate change and environmental work in Norwegian aviation.

One of our central tasks is to minimise emissions of greenhouse gases and chemicals, as well as to minimise the noise impact from aviation. The aviation industry has been successful in significantly reducing the amount of CO<sub>2</sub> per passenger, but the strong growth in both business and recreational travel has, nevertheless, led to increased emissions overall. Avinor, along with the rest of the industry, is determined to reduce overall emissions. The airlines' commitments to new and modern aircraft that use considerably less fuel, along with the development of climate-friendly bio-fuel, are key measures in this work.

Adaptation to climate change is also high on Avinor's agenda. We have implemented significant improvements at a number of airports to prepare the enterprise for a wilder, warmer and wetter climate.

Biodiversity at all of Avinor's airports was mapped in a comprehensive project carried out from 2008-2013. This survey provides thorough documentation of these natural assets. It forms the basis for avoiding activity in valuable areas, as well as for minimising negative effects in areas where we cannot avoid intervention. The survey also provides advice on how rare biotopes and threatened species can be preserved and, in some cases, even achieve better conditions, in and around the airports.

Systematic work is being done to further develop the working environment and individual expertise in Avinor. Avinor recruits the desired expertise, but Avinor's employees remain a relatively homogeneous demographic group. For this reason, Avinor is working on a diversity strategy, scheduled for completion in 2014. This strategy will examine which concrete measures can be initiated to promote diversity. There is good and constructive cooperation between management and employee representatives in Avinor.

Major construction projects are a constant feature of Avinor's daily operations, and such projects pose the risk of social dumping, undeclared labour and outright criminal behaviour. Avinor is working systematically to minimise this risk. A good example from 2013 is the exposure of social dumping at a construction site at Oslo Airport. Good routines and cooperation with the trade unions led to the disclosure of the conditions, so that necessary steps could be initiated.



Dag Falk-Petersen, CEO Avinor AS

# ABOUT AVINOR

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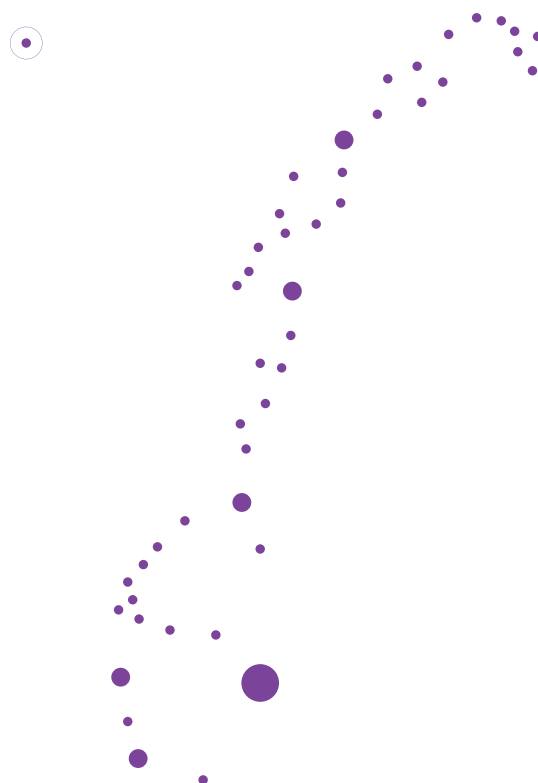
Avinor is a wholly-owned state limited company under the Ministry of Transport and Communications. Avinor is responsible for the 46 state-owned airports and for air navigation services for civil and military aviation. Avinor had 3,156 permanent employees in 2013. The headquarters is in Oslo. Avinor operates 12 airports in cooperation with the Norwegian Armed forces. Contact with the Ministry is formalised in owner meetings, and each year Avinor submits a plan for the company's activities to the Ministry (Article 10 plan).

In addition to the airports, Avinor operates control towers, control centres and other technical infrastructure for safe air navigation. As from 1 June 2014, the air navigation services are organised in a subsidiary which is wholly-owned by Avinor.

Avinor is self-financed. Airport operations are managed as a single unit, in which financially profitable airports finance the financially unprofitable airports. The primary sources of income are fees collected from the airlines and passengers, as well as commercial revenue from rental of space to tax-free shops, cafes and restaurants and other services for passengers. Avinor also receives income from airport hotels and parking facilities<sup>1</sup>.

Oslo Airport is the hub for Norwegian air traffic. Nearly half of all flights take place to or from Oslo Airport, and this airport alone accounts for nearly 50 per cent of the Group's income.

	<b>2013</b>	<b>2012</b>	<b>2011</b>
Number of passengers	48 330 000	46 357 000	44 278 000
Number of aircraft movements	831 000	814 000	794 000
Freight to/from Norway	74 508	70 773	63 803



# PRIORITIES

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Avinor is an enterprise that affects the entire country and its population. Broad, good contact with those who depend on our services, or are affected by our operations, is essential if we are to carry out our assignment well, and choose the right priorities. Avinor therefore conducts regular meetings with stakeholders, and the Group's plan for dialogue with key stakeholders is renewed annually.

The airlines are our most key stakeholders, along with politicians and the business community at the central, regional and local levels, the Armed Forces, as well as regulatory authorities within aviation and the environment. Important topics for these stakeholders include finances, capacity, reliability and handling of environmental and climate change issues.

Avinor also has regular, but informal contact with various special interest organisations (NGOs). The topics raised include environmental and climate issues, universal design and accessibility at the airports. Customer surveys are also conducted on a regular basis. Important issues for travellers include reliability, capacity and airport services.

The employee representatives are important partners in the effort to realise the Group's objectives. In 2013, Avinor enjoyed good cooperation with the employee representatives, both as regards daily operations and comprehensive change processes. Nevertheless, our objective is to

further develop the cooperation model between employee representatives and management to ensure good working conditions, stable operations and cost-effectiveness throughout the Group. Avinor's employees are represented on Avinor's board of representatives, holding four of ten seats. Representatives are also elected by and among the employees to the boards of the various Avinor subsidiaries.

Using Avinor's strategy and stakeholder dialogue as a point of departure, four topic areas have been identified as key for Avinor's corporate social responsibility priorities:

- Ensure good aviation services for all of Norway
- Be a driving force in the work on climate change and environmental challenges for the aviation industry
- Be a good, professional employer
- Ensure responsible business conduct

Avinor does not have a dedicated staff to handle corporate social responsibility issues. The strategy director is responsible for this report, and the work on the respective topics takes place in the line. The environment and climate area is organised in a separate environment section.





AVINOR



# AVINOR'S ROLE IN SOCIETY

## ENSURE GOOD AVIATION SERVICES FOR ALL OF NORWAY

According to Avinor's statutes, the company's role in society is – "to own, operate and develop a national network of airports for the civilian sector and joint air navigation services for the civilian and military sectors. The company's operations shall be carried out in a safe, efficient and environmentally-friendly manner and ensure good availability for all groups of travellers."

Norway is a country with challenging topography and vast distances, and Norwegian businesses are oriented to international markets. These businesses are entirely reliant on aviation. Aviation is also crucial for settlement, travel, the public health service, education, sports and culture.

### Analysis of how aviation benefits society

Avinor needs additional facts about what aviation means for Norway in order to ensure that the corporation develops in the direction needed by society. Publication of a report designed to quantify the ripple effects of Avinor's airports on local communities and regions is slated for September 2014. The Institute of Transport Economics, Møreforskning and the University of Nordland are contributing to this study.

So far, interim studies have been made to map what the airport means for the business community in Bergen, Stavanger and Trondheim:

	Bergen	Stavanger	Trondheim
"Flight availability is crucial for business"	86 %	86 %	75 %
"Travel needs will increase for our business"	68 %	70 %	60 %

### Northern area strategy

- Long distances and major challenges for land-based transport make aviation more important in Northern Norway than in any other region. Twenty-eight of Avinor's airports are located in the country's three northernmost counties. In order to achieve greater insight into Northern Norway's unique challenges and opportunities, and to ensure that Avinor's services help address the region's transport needs in the best way possible, Avinor has developed a Northern Area Strategy<sup>2</sup>. This strategy has been developed in close cooperation

with the authorities, businesses and education institutions. Avinor expects to invest between NOK 8-13 billion in Northern Norway up to 2040.

Scenarios for the Northern Areas moving towards 2040:

- Oil and gas, tourism, aquaculture and mineral production are all growth sectors
- The population in Northern Norway will grow by 10 per cent
- Air traffic will double, from 6 to 12 million passengers

### SAFETY

Avinor maintains very high safety. The basis for this safety work is a comprehensive set of national and international regulations. Safety work is a continuous process where new challenges must be met with new measures. Aviation safety is a key element in Avinor's investment policy, and priority is assigned to the measures that yield the best safety benefit compared with use of resources. Avinor has an active safety culture based on transfer of experience, audits, surveys and analyses.

A project was initiated in 2011 – the SMART project – with the objective of improving management from the strategic to the operative level. Among other things, the individual employee's roles, responsibilities and work tasks will become clearer. Work has proceeded full force on this project in 2013 and it will be concluded during the first half of 2015. A new process and new tools for handling nonconformities will be implemented in early 2015 to bolster Avinor's ability to carry out proactive and safety-focused management.

New requirements for security checks are introduced at the airports at pace with new threats and incidents. Some of the measures are controversial, and have been met with fundamental questions as to individual personal integrity. A number of aviation players have therefore taken the initiative for the "Better security" project, a brainstorming effort to develop a new security check regime. Avinor is participating in this work.

Results 2013:

There were no aviation accidents involving personal injury in Norwegian aviation in 2013 where Avinor was an active participant.

There was one serious aviation incident where Avinor contributed to the cause.

<sup>2</sup> Available on [www.avinor.no](http://www.avinor.no)

## RELIABILITY

Ensuring that air traffic goes according to plan is important for everyone. Avinor's on-time target<sup>3</sup> is 88 per cent, and the regularity<sup>4</sup> target is 98 per cent. Regularity was in line with the objective in 2013, which has been the case in recent years.

Punctuality fell to 85.7 per cent in 2013, compared with 87 per cent in 2012. The share of delays attributable to the airline and handling companies rose from 66 per cent in 2012 to 72 per cent in 2013.

Winter poses challenges for air traffic in Norway and Avinor's goal is to be the world leader in winter operation of airports. Every year, all of Avinor's airports submit a winter maintenance plan, developed in cooperation with the airlines. The plans are evaluated following each winter season, with a focus on improvement items.

## ACCESSIBILITY

Air transport must be accessible for everyone who needs it. In 2013, the Ministry of Transport and Communications introduced a new set of regulations for universal accessibility at Norwegian airports. Avinor cooperates with several organisations for the physically challenged to obtain input on measures that can improve accessibility.

New construction and modifications at the airports are based on universal accessibility. The new terminal at Oslo Airport will safeguard universal accessibility throughout all aspects of the buildings and installations.

Avinor's airports will, however, continue to vary in terms of standard. For example, jetways between the terminal and the aircraft will not be an option for the vast majority

of Avinor's smaller airports. Testing of new lifting and hoisting gear is therefore ongoing.

The assistance service helps passengers with reduced mobility. Avinor conducts approx. 150,000 assistance assignments per year, from arrival at the airport until the passenger is on board the aircraft.

## AMBULANCE FLIGHTS AND PATIENT TRIPS WITH SCHEDULED FLIGHT

To ensure emergency medical transport, Avinor's has a duty to maintain the airports in a state of readiness for ambulance planes and helicopters, also outside of normal opening hours. Airports in Northern Norway comprise about two-thirds of all ambulance traffic in Norway. The ambulance traffic has nearly doubled during the course of the last 10 years. In 2013, more than 22,000 movements of ambulance aircraft took place at the airports in Northern Norway. In addition, there were 323,000 patient trips with scheduled flights at Norwegian airports in 2013.

## INVESTING TO INCREASE CAPACITY<sup>5</sup>

The importance of air traffic for society is consistently rising. That is why Avinor prioritises investments in measures to boost capacity at a number of airports. Some examples are the terminal expansion at Oslo Airport, new terminal at Bergen Airport, new terminal at Trondheim airport, as well as measures to augment capacity at both the Stavanger and Kristiansand airports.

In connection with the Ministry of Transport and Communication's work on the new National Transport Plan (2018 – 2027), Avinor has been asked to examine the need for a third runway at Oslo Airport and the future airport structure in Norway.

- 323,000 patient trips with scheduled flights
- 22,000 aircraft movements with air ambulances
- Two of three Norwegians have access to an airport within a one-hour radius
- 99.5% of the population can travel by plane to Oslo, round-trip - same day
- In addition to Avinor's 3,156 employees, 60,000 – 65,000 people are employed in airport-related positions in other enterprises
- 300 direct connections to international destinations from Avinor's airports, via charter and scheduled flights
- More than 35% of all tourists come to Norway by plane

<sup>3</sup> Punctuality – Departures with delays less than 15 minutes

<sup>4</sup> Regularity – Planned departures that are actually executed

<sup>5</sup> Read more about Avinor's investments in the Annual Report for 2013 and the Article 10 plan

# AVINOR SHALL BE A DRIVING FORCE IN THE WORK ON CLIMATE CHANGE AND ENVIRONMENTAL CHALLENGES IN AVIATION

## GREENHOUSE GAS EMISSIONS

Avinor's greenhouse gas emissions goal for the 2012-2015 period is to reduce total greenhouse gas emissions which the corporation controls, regardless of traffic growth, as well as to be a driver in the work to reduce overall greenhouse gas emissions from Norwegian aviation.

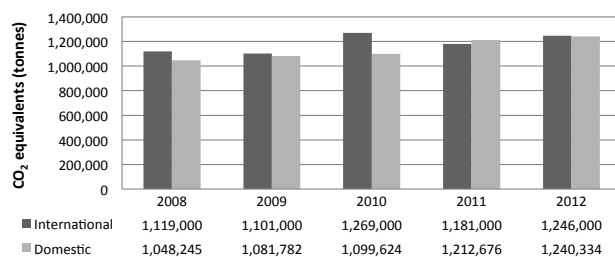


Figure: Greenhouse gas emissions civil domestic and international aviation

According to Statistics Norway (SSB), greenhouse gas emissions from all civil domestic aviation in 2012 amounted to 2.3 per cent<sup>6</sup> of overall domestic emissions (1.24 of 51.7 million tonnes). These emissions are covered under the Kyoto Protocol. Greenhouse gas emissions from international traffic, i.e. from Norwegian airports to the first destination abroad, totalled 1.25 million tonnes of CO<sub>2</sub> equivalents. Total greenhouse gas emissions from all jet fuel for civil applications sold at Norwegian airports in 2012 thus amounts to around 2.5 million tonnes of CO<sub>2</sub> equivalents, which represent an increase, compared with 2011.

The growth in air traffic will entail increased greenhouse gas emissions if measures are not initiated. Therefore, Avinor has cooperated with the airlines and the Federation of Norwegian Aviation Industries (NHO Luftfart) since 2007 to facilitate reduced greenhouse gas emissions. Two reports<sup>7</sup> outline emission-reducing measures and compare the effect of these measures with the expected development in traffic. According to the projections, greenhouse gas emissions from domestic air traffic could be less in 2025 than in 2007, despite significant growth in traffic. Emissions will probably rise in international traffic.

The most important emission-reducing measures are linked to fleet renewal, efficient airspace and bio-fuel:

### The airlines are continuing work on energy efficiency and fleet renewal.

SAS and Norwegian now have almost exclusively the latest generation aircraft in their fleets. For example, the new Boeing 737 planes consume around 30 per cent less fuel per seat than the previous generation of aircraft. Starting from 2016, the A320 NEO and Boeing 737-Max aircraft will be phased in. This will yield a further reduction of around 15 per cent.

**More efficient airspace along with optimisation of arrival and departure routes** are important measures where Avinor has a considerable opportunity to make an impact. Improved navigational capability can yield more precise and tailored approach and departure procedures. Test flights are being conducted at Oslo Airport in 2013 confirming the possibility of reduced noise loads, shorter approach routes and reduced greenhouse gas emissions. A new airspace structure will be implemented in Southern Norway in November 2014<sup>8</sup>. This change will encompass new approach and departure routes at 15 airports. The objective is to improve safety, ensure future capacity, reduce environmental impact and standardize and streamline delivery of air navigation services.

### Avinor has allocated up to NOK 100 million over a ten-year period for initiatives and projects that can contribute to the realisation Norwegian biofuel production.

Along with the airlines and NHO Luftfart, Avinor has explored opportunities to establish large-scale production of biofuels for aviation, based on biomass from Norwegian forests. The conclusion is that this can be realised from 2020-2025. The initiative will be able to reduce greenhouse gas emissions from Norwegian aircraft and helicopter traffic by between 10 and 45 per cent, depending on how much biomass from the forest industry is used for the purpose. A partnership has been formed with Viken Skog in view of a possible plant at Follum, and Avinor has close ties with other industry players.

### Allowances and carbon taxes

As one of the few countries in the world, Norway has introduced a carbon tax on domestic flights. Furthermore, aviation is encompassed by the European Emissions Trading System (EU ETS), under which airlines also have to buy emission allowances for emissions from flights within the EU/EEA.

<sup>6</sup> 2013 figures will be released in February 2015

<sup>7</sup> See [www.avinor.no/avinor/miljo](http://www.avinor.no/avinor/miljo)

<sup>8</sup> Southern Norway Airspace Project - SNAP

## AVINOR'S ENVIRONMENTAL POLICY

Avinor shall be a driving force in environmental work in aviation and actively contribute to the improvement of the industry's overall environmental performance. Environmental considerations are crucial for the sustainable development of Avinor's activities.

### Principles for environmental work:

- Avinor complies with laws, regulations and regulatory requirements and will in some areas seek opportunities to exceed requirements.
- Avinor's management system is adapted to ISO14001, ensuring coordination, control and monitoring of environmental activities.
- Avinor ensures a high level of environmental awareness and expertise. Roles and responsibilities for strategic and operational environmental work are clearly defined centrally, in air navigation services and at the airports. Together we will create continuous improvement, minimise pollution and avoid negative impact on the environment.
- Avinor emphasises and integrates environmental considerations early in planning, projects and procurement. Development projects are implemented with a strong environmental focus.
- Avinor engages in open, constructive and proactive dialogue with partners, local communities, authorities, aviation organisations and other stakeholders.

## AVINOR'S ENVIRONMENTAL TARGETS

- Emission of greenhouse gases  
Avinor shall reduce total GHG emissions under its own control in the period 2012-2015, regardless of traffic growth, and be a driving force in reducing overall GHG emissions from Norwegian aviation.
- Aircraft noise  
In this period, there shall be no increase in the number of residents exposed to outdoor noise levels from aircraft and helicopters exceeding  $L^{den}$  60 dB and  $L^{night}$  55 dB.
- Effluents to water and soil  
Avinor shall not violate discharge permits.

- Avinor seeks solutions to environmental challenges through collaboration with research and development institutions, authorities and other organisations.

### Avinor is committed to:

- Identifying GHG emissions from airport operations and working to reduce GHG emissions both in the air and on the ground.
- Seeking to reduce the noise impact of civil aircraft and helicopter traffic as well as conducting regular noise mapping at all airports and recording the flight paths used at the major airports.
- Having a risk-based approach, where Avinor minimises the use of and prevents release of chemicals to ensure that water and soil are not contaminated.
- Choosing products and materials with a view to minimising their environmental impact from a lifecycle perspective.
- Increasing energy efficiency in operations and seeking a transition to renewable energy solutions.
- Minimising waste and optimising the percentage of source-separated waste.

- Consumption of products and materials  
Avinor shall choose products and materials with the least possible impact on the environment from a lifecycle perspective.
- Waste  
Avinor shall achieve a source separation rate of 60 per cent.
- Energy consumption  
Avinor's total energy consumption in buildings shall be cut by 25 per cent in 2015 compared with energy consumption in 2010.

### Transport to and from the airport

In cooperation with transport operators and authorities, Oslo, Bergen, Trondheim and Stavanger airports aim to increase their public transport shares in the ground transport link in the period up to 2020.

Public transport share				
Airport	OSL	Bergen	Trondheim	Stavanger
Status 2009	64%	27%	42%	14%
Status 2013	67%	36%	45%	18%
<b>Goal 2020</b>	<b>70%</b>	<b>40%</b>	<b>60%</b>	<b>30%</b>

### Greenhouse gas emissions from own operations

Avinor prepares annual greenhouse gas inventories in accordance with the methodology in the GHG Protocol. Emissions from its own operations are offset by purchases of UN-approved emission allowances. Oslo Airport, Trondheim Airport, Værnes, and Kristiansand Airport, Kjevik, are also certified by Airport Carbon Accreditation (ACA), a voluntary carbon management programme for airports that entails preparation of a detailed carbon audit, action plans and binding targets for emission reductions. More Avinor airports will participate in the ACA scheme over the next few years. Bergen Airport, Flesland joined spring 2014.

The basis for Avinor's greenhouse gas inventories are activities within the Group's organisation and activities that the Group manages, even if they are carried out by other enterprises (e.g. outsourcing of airside winter maintenance at OSL and renting of fire training sites). No greenhouse gases other than CO<sub>2</sub> have been surveyed so far, but there is ongoing mapping of cooling systems in buildings, with a view to including other greenhouse gases. Avinor does not have reliable figures for non-fossil CO<sub>2</sub> emissions from bio-based district heating. Such information will, however, be obtained from reporting suppliers starting in 2014.

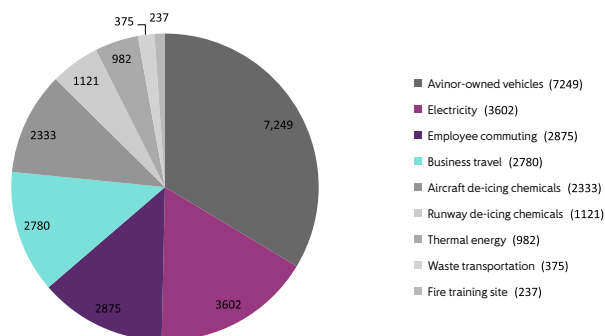


Figure: Avinor's greenhouse gas emissions (tonnes CO<sub>2</sub>)

Greenhouse gas emissions from Avinor's airport operations are highly dependent on the weather. Precipitation and temperature affect emissions from heating of buildings, de-icing and snow removal. Energy efficiency, choice of energy sources in buildings, collection of aircraft de-icing fluid and renewal of Avinor's large fleet of vehicles are the main carbon reduction measures. The introduction of sustainable bioenergy will become a very important reduction measure in the future.

### Adapting to climate change

Due to large greenhouse gas emissions in the past, the global mean temperature will continue to rise even with massive cuts in future emissions. This will lead to climate change on the entire planet. Norway can expect a warmer, wilder and wetter climate, albeit with considerable regional and local variations. Climate model projections indicating that our climate may change significantly from about year 2040 have ramifications for current investments in infrastructure. Since 2001, Avinor and the other national transport administrations (the Norwegian Public Roads Administration, the Norwegian Coastal Administration and the Norwegian National Rail Administration) have taken this into account in their work on the National Transport Plan (NTP). In addition, Avinor has conducted its own risk and vulnerability analyses.

A number of measures to reduce climate vulnerability have been implemented, including the establishment of new design criteria for critical infrastructure. Avinor will continue this work. The airspace and runways are continuously monitored from control centres, the tower at the airport and by friction measurements. The airports may be closed for shorter or longer periods if weather and road conditions make it necessary. The likelihood of harm to human life and health as a result of changing climatic conditions is believed to be very limited.

### AIRCRAFT AND HELICOPTER NOISE

Aircraft and helicopter noise is perceived as more troublesome than other traffic noise with the same level. Aircraft noise events are single occurrences, often plotted against a calm background level. Due to the noise source originating high above the ground, these events can be relatively lengthy. One cannot shield outdoor areas against aircraft noise, and buildings do not have a "quiet side". Aircraft noise is also more unpredictable than other traffic. As runway use and flight paths are controlled by wind direction, aircraft noise may be absent one day and significant on the next. The regulations for noise mapping are therefore stricter for air travel than for other traffic.

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The authorities' goal is to reduce the overall national noise impact by 10 per cent by 2020 compared with 1999. Aviation's contribution to the overall national noise disturbance index is about seven per cent, and less than two per cent of the population lives in an area where outdoor aircraft noise on average is higher than 50 dBA. People who are subjected to higher levels than this are characterised as aircraft noise-exposed. Since 1999, the number of aircraft noise-exposed remained relatively constant despite the strong growth in traffic, mainly due to reduced noise from newer aircraft engines.

Aircraft and helicopter noise is one of Avinor's main external environment action areas because it is an important issue in the local communities. Under the Group's environmental policy, Avinor is committed to "Seeking to reduce the noise impact of civil aircraft and helicopter traffic as well as conducting regular noise mapping at all airports and recording the flight paths used at the major airports." The goal is that "the number of residents exposed to outdoor noise levels from aircraft and helicopters exceeding Lden 60 dB and Lnight 55 dB<sup>9</sup> should not increase in the period 2012-2015."

The most important tool for preventing increased aircraft noise exposure in residential areas is good noise zone maps. Municipalities are obliged to use these maps in

their land use planning. The overall aircraft noise around an airport depends on aircraft types, traffic volume, runway use, choice of flight path and distribution of traffic throughout the day. In addition to mapping noise, Avinor's main tools are traffic control and adjustment of approach and departure procedures. Oslo Airport has tested new satellite-based navigation technology, and calculations have confirmed the significantly reduced noise. The ability to limit noise levels during approaches and departures is a factor in planning the new airspace organisation for large parts of Southern Norway.

The introduction of Sikorsky S92 helicopters for offshore transport has caused a significant increase in aircraft noise impact at some airports and may impede the Group's achievement of its goals. The change has triggered noise mitigation measures for several homes near the Stavanger and Bergen airports, and five homes in Bergen were noise-isolated in 2013. Avinor took the initiative to establish a national helicopter noise range in 2012, and worked actively on the issue in 2013.

In 2013, Oslo, Bergen, Stavanger and Trondheim airports worked on local noise abatement action plans based on noise surveys conducted in 2012.

<sup>9</sup> Lden = an A-weighted equivalent noise level for day-evening-night with a 5dB/10 dB penalty for evening-night. The Lden level is calculated as the average noise level over one year. Lnight = an A-weighted equivalent level for an 8-hour night period from 2300 to 0700.



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## **EFFLUENTS TO WATER AND SOIL**

The risk of water and soil contamination at airports is primarily related to aircraft de-icing, runway de-icing, fire drills and risk of fuel leaks.

Avinor has prepared a vulnerability classification of its airports, which reveals which airports have the most fragile natural environment in their vicinities. Those with the most vulnerable natural areas have the most stringent protection measures.

The results of environmental monitoring are reviewed annually and monitoring programmes are revised on an ongoing basis. Continuous environmental monitoring also shows the effect of the implemented measures.

### **Discharge permits**

All of Avinor's airports have valid discharge permits that regulate and stipulate requirements for the maximum use of chemicals for fire training, and aircraft and runway de-icing. The permits also require emergency preparedness in case of acute spills and environmental risk assessments to identify potential sources of pollution accidents and possible damage to the external environment. The discharge permits apply to the entire area within the airport boundaries with the exception of military property. Under Norway's Internal Control Regulations, Avinor is responsible for ensuring that all parties operating at the airports fulfil the general terms of the current environmental regulations. The risk analyses carried out by Avinor identified a need for risk-reducing measures in connection with the activities of these parties as well.

In 2013, Oslo Airport had seven violations of the discharge permit for groundwater and one violation for waterways. During the 2012-2013 season, consumption of de-icing chemicals was exceeded at five of Avinor's other airports. There were no exceedances of the permitted amounts of de-icing chemicals.

### **The environmental project**

The "Environmental Project" was established in 2010 after risk analyses were completed of the external environment at Avinor's airports in 2008 and 2009. The goal of the project is to study and take action at Avinor's airports to ensure that they are operated in compliance with the discharge permits and Pollution Control Act. The Environmental Project is scheduled for completion in 2015. By that time, technical facilities at the airports will have been upgraded, procedures will be updated and ordinary operation of the facilities will be carried out by operations personnel.

One sub-project deals with contaminated soil. Extensive examinations were conducted in 2011 and 2012 at all of

the Group's old and new (active) fire training sites. It was revealed that the ground was contaminated with PFOS, a fluorine-containing compound that has previously been used as an additive in fire-fighting foam. PFOS does not degrade in nature, and can be spread from soil to water and/or living organisms, thus becoming concentrated through the food chain. Avinor phased out the use of PFOS-containing fire-fighting foams in 2001, before the substances were banned in Norway in 2007. In 2013, Avinor continued mapping and monitoring PFOS contamination in soil, water and living organisms. The risk to human health and ecosystems due to pollution in fire training areas is being assessed based on the results of these surveys. This work is expected to be completed in 2014. Avinor wants to take responsibility and implement appropriate measures should the risk assessments show that action is necessary. Except for laboratory and pilot scale experiments, there is little experience with full-scale treatment of PFOS-contaminated areas. Avinor is in dialogue with the Norwegian Environment Agency in connection with the matter.

At Oslo Airport, a treatment plant was established at a hangar in 2013 to process PFOS contamination in groundwater and further examinations and studies of water and soil contamination-related measures were carried out at the fire training area.

Other sub-projects have dealt with tank farms, oil separators, water and sewer systems, aircraft de-icing, recipient analysis and monitoring, as well as environmental emergency preparedness.

### **De-icing of aircraft and runway systems**

For safety reasons, snow and ice are removed from the aircraft before take-off and runways and taxiways must be cleaned and have satisfactory friction. If needed, aircraft are de-iced before take-off and runways and taxiways are cleared, swept and de-iced with chemicals. Aircraft de-icing chemicals contain very low concentrations of an additive that is toxic, but biodegradable.

Toxic additives are not used to de-ice runways and the chemicals have the lowest environmental impact of available runway de-icing chemicals. Runoff and diffusion of chemicals from airport grounds can negatively impact the natural environment if consumption exceeds the natural environment's degradation capacity.

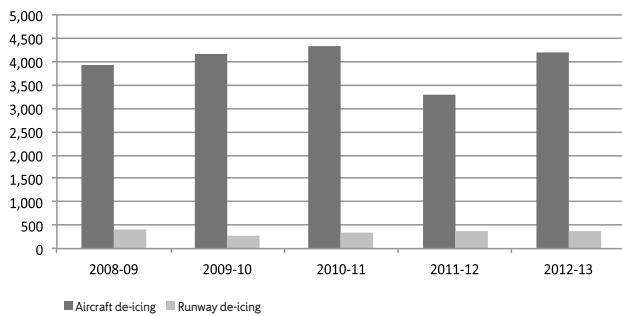


Figure: Consumption of de-icing chemicals by Avinor over the past five winter seasons (tonnes COF).

Systems have been established for collecting glycol from aircraft de-icing at the larger airports. In 2013, several eco-friendly measures were implemented, including a new de-icing platform at Haugesund Airport, and collection systems at Førde and Sogndal airports. With these measures, most of the chemicals will be contained.

#### Other discharges to water and soil

Avinor and other players at airports perform activities that generate oily wastewater. Sources include fire training, tank farms, workshops and washing halls. This water is routed through oil separators to municipal systems or the recipient. The risk of accidental spills is reviewed at each airport, and training and materials are adapted to the risk scenario. Exercises in handling incidents must be carried out at least once a year.

Maintenance, testing and reporting of environmental conditions for oil separators are regularly monitored.

#### ENERGY

An airport consumes a vast amount of energy, and also affects greenhouse gas emissions. Avinor is committed to energy efficiency and the use of renewable energy solutions. Avinor's objective for the period 2010-2015 is to reduce energy consumption in buildings by 25 per cent.

In December 2013, Trondheim Airport opened Norway's first airport terminal built according to the strict standards of the international BREEAM<sup>10</sup> environmental certification system. The extended domestic terminal features a number of efficient and environmentally friendly choices relating to energy, water systems, ventilation, lighting and materials. Trondheim Airport has also established an energy efficiency programme with significant results. Measures include replacing oil heating with heat pumps, replacing lighting with LED technology, and upgraded control of lighting, ventilation and heating.

Similarly, Oslo Airport is also extending its terminal according to the BREEAM Excellent standard, which includes innovative solutions such as utilising both snow deposits and wastewater as energy sources.

Kristiansand Airport's new energy plant uses a seawater heat exchanger as a renewable energy source.

Since 2010, Avinor has conducted a comprehensive energy conservation project with NOK 13 million in funding from Enova. Ten airports have now implemented efficiency measures, which in 2013 alone amounted to a total saving of 11 GWh. All these airports have established an energy monitoring system (EMS<sup>11</sup>). A large number of smaller steps have been carried out at other airports.

A sufficiently extensive network of electricity meters in terminals and rental spaces has not been established to date at all airports. Avinor cannot quantify exactly how much energy is consumed by other enterprises, or distinguish between energy for heating and cooling. Total energy consumption varies with seasonal temperatures. Joint Group procedures for evaluating programmes and measuring results will be a key part of Avinor's climate action plan, which will be adopted in 2014.

With the exception of Stavanger Airport, which has its own wood chip heating plant, district heating is supplied by third parties. Energy carriers for these facilities vary from biomass to coal (Svalbard). Mapping of these sources is under way in 2014.

<sup>10</sup> BREEAM is the world's leading design and assessment method for sustainable buildings. A building's environmental performance is judged on the basis of a number of different criteria and characterised as: PASS, GOOD, VERY GOOD, EXCELLENT or OUTSTANDING.

<sup>11</sup> Tool for systematic recording of detailed energy data and monitoring of energy consumption in buildings



<b>ENERGY (TJ)</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
Electric power (renewable)	708	757	734	774	799
District heating (partly fossil)	87	101	75	85	93
Groundwater (renewable)	49	48	53	53	58
Oil heating (fossil)	11	20	15	12	7
Auxiliary power (fossil diesel)	7	5	6	7	5
Vehicles (fossil diesel)	89	99	94	93	94
Vehicles (fossil petrol)	5	4	5	4	3
<b>TOTAL</b>	<b>956</b>	<b>1034</b>	<b>982</b>	<b>1026</b>	<b>1059</b>

### LANDSCAPES AND BIODIVERSITY

Many of Avinor's airports are located by river deltas, river banks, shorelines, marshes or similar flat areas which, by nature, are often biologically rich areas.

Avinor owns cultural landscapes covers a total area of approximately 1,116 decares. The largest areas include hayfields along the runway at Ålesund and Kjevik airports and the coastal heath at Haugesund Airport. The older airports in particular have important natural values associated with unfertilised adjacent land. Here, indigenous masses of soil seed banks have facilitated species-rich flower-covered meadows maintained by the airport. Flower fields were once a common sight in the country, but overgrowth and fertilisation have vastly reduced such areas in recent decades. The airports are therefore important replacement biotopes for such habitats. Both endangered and rare vascular plants, fungi, butterflies, beetles and wasps, as well as several bird species, are associated with these areas.

Habitats in the main group of freshwater lakes and wetlands, dominated by calcareous lakes, sea meadows and salt tidal marshes and naturally fish-free lakes, also occur relatively frequently (about 500 decares). Dune areas, especially at Stavanger Airport, are also important natural areas, as is calcareous areas in the mountains in the north.

Five of Avinor's airports share borders with protected areas, particularly protected wetlands. Ten have very important or important wildlife areas on their properties, and 18 have important wildlife areas (nesting, resting, breeding and feeding areas for birds) in their area of influence. Six are located by major salmon rivers and salmon fjords. Twenty airports have registered red-listed (near-threatened and endangered) species on their properties.

Avinor seeks to have a good overview of the natural resources on its land and the areas that may be affected

by airport operations. Biological diversity was mapped at all airports in a project that ran from 2008 to 2013. Reports for the areas, including maps and management advice, were continuously posted on Avinor.no and the data will also be entered in the Natur2000 and Naturbase databases.

Following an approved planning process with the authorities, interventions were undertaken at the airports in Lofoten, Bergen and Ålesund in 2013. The interventions at Leknes, Bergen and Ålesund were required to comply with aviation safety legislation. Efforts were made to carry out the interventions with as little impact on the localities as possible, and a number of compensating and restorative measures were undertaken.

### CONSUMPTION OF PRODUCTS AND MATERIALS

Avinor is major purchaser of products and services – procurement totalled about NOK 4 billion in 2013 - and can influence the supply industry in many sectors. Avinor is also executing major construction projects in connection with terminal extensions, runway extensions and other measures carried out by contractors. In 2013, environmental standards were stipulated in 70 per cent of all procurement processes. Avinor's goal for 2014 is 90 per cent.

To execute construction projects, Avinor will prepare an environmental implementation plan that will safeguard the environment in the planning and construction phase, as well as ensure environmental considerations in its choice of solutions. This tool has been incorporated into the framework of development projects.

### WASTE

Airport-related waste is generated in public areas (terminals), by office activities (administration, tenants) and by workshops and garages at the airports. Avinor also handles, to varying degrees, waste from other activities at airports (shops, cafes, handling companies, etc.).

Avinor wants to minimise waste and optimise the share of sorted waste, and aims to achieve a source separation rate of 60 per cent in 2015.

Avinor has a nationwide waste disposal agreement that covers the collection, transport and delivery of waste to approved waste facilities and leasing of collection equipment. The goal is to provide solutions that are environmentally friendly, economical and practical. In 2013, all Avinor airports, with few exceptions, were covered by this agreement. Some have also delivered waste to other approved waste companies, typically waste from minor construction activity and some hazardous waste. Contractors are responsible for waste management in large construction projects. Oslo Airport has its own waste disposal agreement covering all operations at the airport. However, waste from the T2 (Terminal 2) project's building and construction activities is reported separately.

The Group's total waste in 2013 amounted to 13,311 tonnes, an increase of just under 3 per cent compared with 2012.

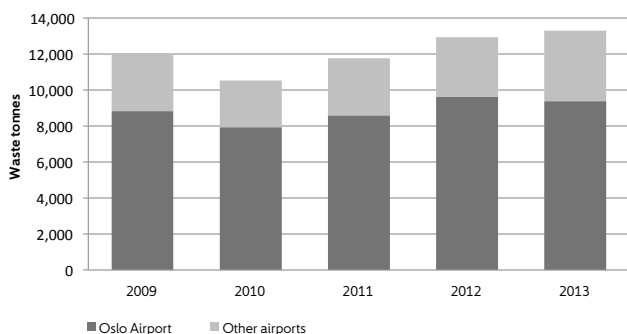


Figure: Waste quantities 2009-2013. Tonnes.

Sorted waste amounted to 7,451 tonnes, while residual waste totalled 5,887 tonnes. This yields a source separation rate of 56 per cent, a slight decline compared with 2012. Steps must be taken to achieve the Group's goal of 60 per cent separation rate in 2015, measures must be taken.

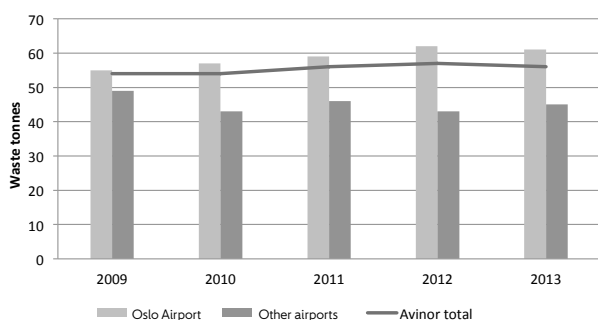


Figure: Source separation rate %

## AIR QUALITY

Air quality monitoring is only applicable at Oslo Airport, and the measurement results indicate, as in previous years, that the air quality was well within regulatory requirements. The same is true for all other Norwegian airports, all of which have significantly less traffic than Oslo Airport.

Many of the measures that reduce emissions of greenhouse gases also contribute to the improvement of local air quality at airports.

On the basis of measurements undertaken at Kastrup, questions have been raised about whether the outdoor air at jetways and aprons at Oslo Airport also contain particularly high concentrations of ultrafine particles, particles with diameters less than 0.1 µm (microns). There are currently no statutory threshold values for concentrations of ultrafine particles in outdoor air. Until recently, measurements were difficult to perform, and knowledge about possible harmful effects is limited. Avinor has chosen to identify concentrations of ultrafine particles at the aprons at Oslo Airport as part of the Group's follow-up of HSE. Avinor is participating in a project under the auspices of the National Institute of Occupational Health (STAMI) with financial support from the Confederation of Norwegian Enterprise (NHO)'s working environment fund. Measurements conducted in 2012 and 2013 showed low concentrations of ultrafine particles at Oslo Airport.

## CULTURAL MONUMENTS AND CULTURAL ENVIRONMENTS

Avinor is one of the major players in Norwegian transport, and a key part of Norway's aviation culture, which dates back to the early 1900s. Avinor has mapped cultural monuments at the airports and prepared a land protection plan. The project was supervised by experts from the Directorate for Cultural Heritage, State Historical Properties project and Norwegian Defence Estates Agency. The land protection plan is a management plan for cultural heritage properties where the primary purpose is to ensure the protection of a representative selection of buildings that document the history of the aviation sector with regard to technical solutions, function, architecture and the like.

However, to ensure that Avinor's airports meet the terms of the technical and operational approvals, it has been necessary to change the design of the safety areas on the sides and at the end of the runway at several airports in recent years. All such matters are decided in consultation with the relevant authority, and environmental requirements are stipulated for construction contractors.

# AVINOR SHALL BE A PROFESSIONAL AND GOOD EMPLOYER

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The employee survey for 2013 produced better results than the previous survey from 2011. Three of four employees have a high or very high commitment to their job. In the employees' opinion:

- Avinor has a good working environment
- Job satisfaction is high
- There is a high degree of pride, loyalty and commitment

## **Cooperation**

The percentage of trade union members is high in Avinor and collective agreement coverage is 100 per cent in Avinor AS and Oslo Lufthavn AS (subsidiary of Avinor), each of which has a collective agreement. Union representatives therefore play an important part in realising the Group's objectives. In 2013, Avinor enjoyed a good relationship with the unions, both in terms of daily operations and comprehensive change processes. Avinor remains committed to the goal of continuing to develop the cooperation model between union representatives and management, in order to ensure good working conditions, stable operation and cost efficiency throughout the Group. Avinor's employees are represented on Avinor's board of representatives, holding four of ten seats. Representatives are also elected by and among the employees to the boards of the various subsidiaries.

## **Training and education**

Employees with the right skills are crucial to Avinor's success, and regulatory changes require continuous

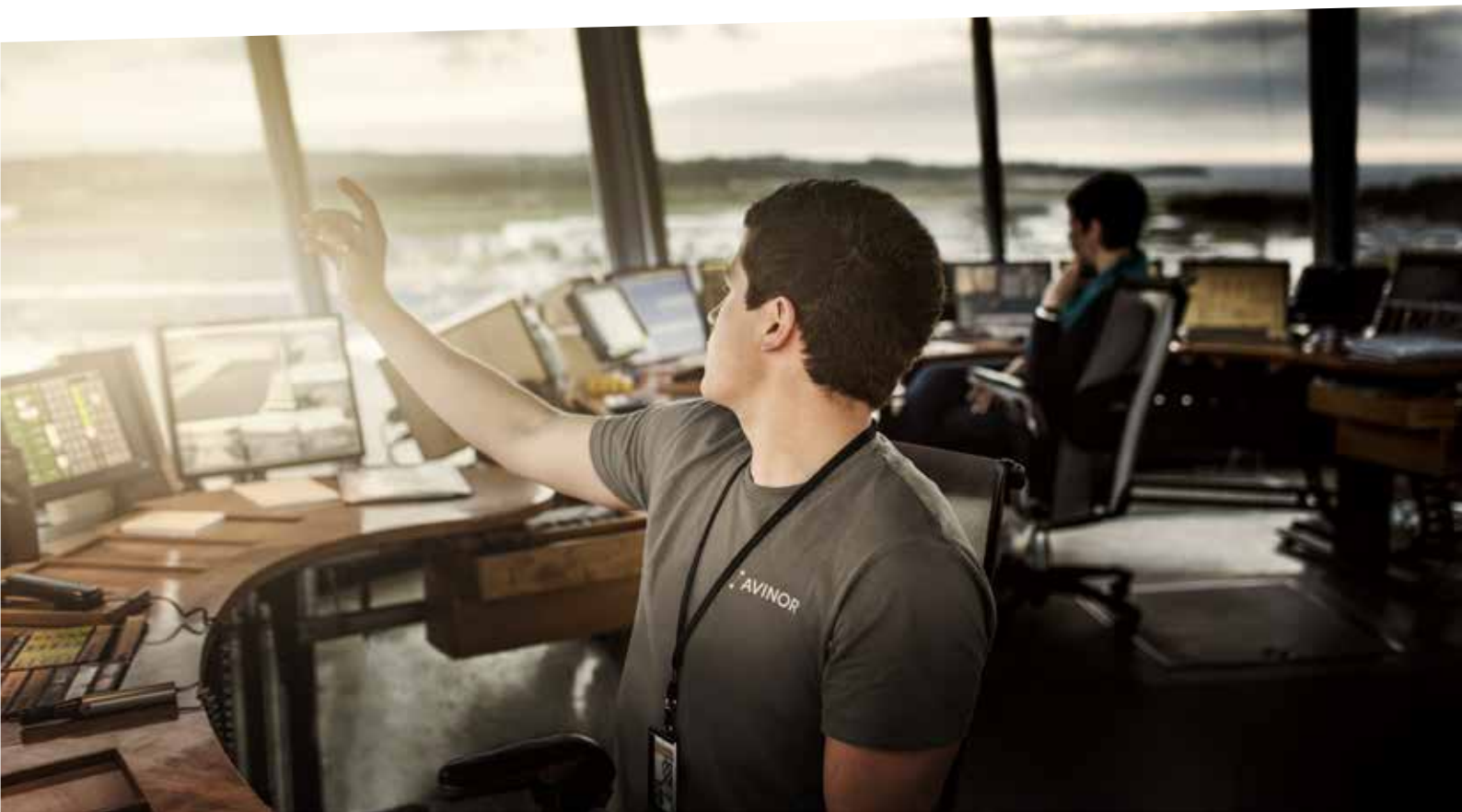
updating of employee competencies. All employees are therefore offered training in their fields. The training is systematic, so that performance appraisal, action plans and training requirements are coordinated. Avinor offers courses in aviation subjects, financial and management systems, ethics and law, environment, HSE, communication, project management and leadership development. Avinor has its own air traffic management education system, and annually trains about 25 air traffic controllers and 15 Aerodrome Flight Information Service (AFIS - officers who serve pilots at small airports where there are no air traffic controllers.)

## **Recruiting for greater diversity**

Avinor believes that the composition of the Group's employees should reflect the composition of the Norwegian population. Avinor is therefore working on a diversity strategy, which will be completed in 2014. Among other things, the strategy will address the specific measures that can be taken to increase the share of women in male-dominated groups.

## **Decline in violation of working hours rules**

There were significant decreases in violations of working hours rules in 2013, both overall (-41 per cent) and for violations following the agreement on extended working hours (-35 per cent). Special courses have been held for managers of units with numerous violations.



### Preventive HSE and sick leave work

Avinor is divided into several safety areas, with one responsible safety delegate per area. All airports have at least one safety delegate, and many have more. Units not located at an airport have their own safety delegates. Working environment committees are established at the central, division and local levels. The committees are composed of safety delegates and employee and management representatives. The company health service, chemical committee and the Workplace Advisory Centre for issues related to alcohol, drugs and addictive gambling in the workplace (AKAN) are also part of the safety service in Avinor.

Avinor's systematic sick leave efforts are aimed specifically at employees who work shifts in operational positions where there are physical and medical requirements. Avinor is participating in a multi-year research project researching the effects of various measures<sup>12</sup>.

Each of the 42 regional airports has a designated health motivator, an employee who is responsible for spreading knowledge and encouraging a commitment to exercise and healthy living. Avinor deals systematically with the prevention of harmful effects of alcohol and drugs through internal regulations, skills building and awareness rising. The Group's goal is a sick leave rate below 4.5 per cent. The result in 2013 was 4.5 per cent. It is important that incidents are reported. The reporting rate in the group is high and stable, with an increase in 2013.

Forty-seven work accidents resulting in injuries to employees were reported in 2013. There were nine injuries resulting in absence, yielding an LTI rate<sup>13</sup> of 1.8 in 2013, which is somewhat better than the Group's target of 3. No serious accidents have been reported so far at the T2 project at Oslo Airport. In 2013, the project had an LTI rate of 2.0 (the industry average for construction projects is 7.3).

### Key figures on employees in Avinor

	2013	2012
Permanent employees	3123	3109
Temporary FTEs (temps)	150	140
Women employees, total	23,7 %	23,4 %
Women in management	21,2 %	n/a
Women in group management	30 %	30 %
Average age of permanent employees	44,4 år	45 år
Turnover	3,4 %	4,7 %
Sick leave	4,5 %	4,7 %
LTI rate	1,8	3,6

<sup>12</sup> The FARVE project is a collaboration between the Norwegian Labour and Welfare Administration (NAV), the University of Stavanger and Synergy Health AS.

<sup>13</sup> Lost-time injuries per million hours worked.



**AVINOR**

# AVINOR AS SPONSOR

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In June 2013, the Group's executive management team adopted a sponsorship strategy for Avinor. The sponsorship strategy encompasses the whole of Avinor – the airports, the air navigation service and Avinor's central operations.

The strategy states that Avinor's sponsorships predominately shall be directed towards local measures and activities for children and youth. Implementation of the sponsorship strategy will have full effect from the 2014 budget year.

Many airports provided support to local sports teams and associations in 2013.

Avinor also supports the Church City Mission in Oslo through the "Nabosamarbeid i Bjørvika (The neighbour partnership in Bjørvika)" project. Avinor's Christmas

present also went to the Church City Mission - to the campaign "Gled en som gruer seg til jul (Make someone happy who is dreading Christmas)". The Norwegian Red Cross and Save the Children Norway received financial support in connection with aid for the victims of flooding in the Philippines.

An agreement has also been signed with the environmental organisation Zero, whereby Avinor provides financial support to Zero. Zero provides specialist support to Avinor in connection with the work on developing biofuel for aviation in Norway.

Avinor has partnered with Global Dignity Norway, which works to involve young people through Global Dignity Day, an international event to promote dignity and respect.



Avinor is a significant purchaser. Avinor's development projects are often very large and span several years. Avinor is therefore subject to significant risks both in terms of default and corruption, and poor working conditions and human rights violations by suppliers and subcontractors.

## ETHICS AND ANTI-CORRUPTION

Avinor's Code of Conduct<sup>14</sup> applies to the board and all employees. In 2013, 93 per cent of all employees completed a course in the Code of Conduct. In 2009, Avinor appointed a committee to deal with notifications of Code of Conduct violations and other improprieties.

Avinor has established a group-wide compliance function in the legal department to follow up Avinor's compliance with external and internal regulations relating to corruption, fraud and ethics, as well as the internal audit function, which is part of Avinor's overall internal control system.

An eight-point action plan has been prepared:

1. Establish governing documents
2. Compliance with the Code of Conduct for external suppliers and partners
3. Compliance with the Code of conduct for employees of Avinor
4. Risk analyses as a basis for spot checks and controls
5. Annual communications plan and training plan to promote knowledge about ethics and social responsibility
6. Cooperation with organisations
7. Mapping the maturity in the organisation
8. Control of supply chains

### Social dumping in construction sites

Oslo Airport is expanding its capacity to handle 28 million passengers a year. The expansion is scheduled to be completed in 2017, has a budget of NOK 13.5 billion, and is one of Norway's largest construction projects.

To ensure decent working conditions and a good climate of cooperation between the parties in the giant construction project, Avinor hired a Norwegian Confederation of Trade Unions (LO) coordinator. This coordinator received a tip that one of the subcontractors working on the construction site may be engaged in social dumping and relayed the information to the Development organisation in early March 2013. Avinor then proceeded to initiate an investigation, which revealed six nonconformities:

- Wage payments were not in accordance with the provisions relating to general application of wage agreements
- Working hours deviated from the Working Environment Act without the approval of the Norwegian Labour Inspection Authority

- Companies did not have procedures to ensure compliance with the provisions on wages and working conditions
- Safety delegates were not properly trained
- Two persons lacked HSE - ID cards
- Several people had not completed the client's safety course.

On the basis of the investigation report findings, follow-up work was initiated to correct nonconformities and ensure workers the wages they were entitled to. Together with the main contractor, Oslo Airport established a group to review staffing agency procedures.

For Avinor, the matter involved two principles: workers on our construction sites shall be treated responsibly, and our responsibility to contribute to fair competition: Crime, underpayment and unacceptable living and working conditions among contract foreign labourers must not outcompete Norwegian companies and workers.

An additional LO coordinator for the project was hired after this incident.

<sup>14</sup> The Code of Conduct is available on Avinor's website

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## PROCUREMENT

Each year, Avinor procures goods and services worth hundreds of millions of kroner and over the years the company is in contact with thousands of suppliers. To ensure that the Group stipulates appropriate requirements and follows up suppliers in a sound manner, a working group has been appointed to improve Avinor's system and procedures. Avinor aims to be even clearer in its requirements, have a better overview of risks, and follow up requirements in a systematic way.

70 per cent of the 271 contracts signed in 2013 contained requirements for the supplier's management of CSR (environmental, working conditions, human rights). The target for 2014 is 90 per cent.

Governing principles for procurement:

- Avinor complies with the Public Procurement Act and regulations relating to procurement in the supply sectors
- Group Policy for Procurement communicates that the

Group shall request and purchase goods and services that are both economically, environmentally and socially responsible

- The Code of Conduct describes the rules for how Avinor's employees are to behave
- Avinor's standard conditions in contracts used to procure goods and services obligate the supplier to take environmental protection into consideration (product, packaging and waste reduction requirements) and to ensure that deliverables are produced in accordance with the laws of the country of manufacture
- A declaration from the supplier shall ensure that deliverables are not produced under conditions that are contrary to the prohibition of child labour, forced labour, slavery, prohibition of discrimination, the right to freedom of association and collective bargaining, according to the conventions adopted by the UN and ILO<sup>15</sup>.

<sup>15</sup> UN Declaration of Human Rights, Article 32 of the UN Convention on the Rights of the Child, ILO Convention Nos. 29, 87, 98, 100, 105, 111, 138 and 182.



# KEY FIGURES

<b>ENERGY (GWh)</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
Electric energy	197	210	204	215	222
District heating	24	28	21	23	29
Groundwater	14	13	15	15	16
Oil heating	3	6	4	3	2
Auxiliary power	2	1	2	2	1
<b>TOTAL</b>	<b>239</b>	<b>259</b>	<b>245</b>	<b>258</b>	<b>267</b>
<b>FUEL FOR VEHICLES (M<sub>3</sub>)</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
Incl. OSL					
Diesel vehicles	2 463	2 727	2 606	2 567	2 593
Petrol vehicles	140	116	145	123	80
<b>DE-ICING CHEMICALS (TONNES)</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>
<b>Aircraft de-icing chemicals</b>					
- Formate	2 344	2 477	2 585	1 953	2 502
- OSL's share	1 470	1 481	1 398	988	1 526
- Chemical oxygen demand	3 938	4 161	4 343	3 281	4 202
<b>Runway de-icing chemicals</b>					
- Formiat	3 576	2 504	3 104	3 598	3 586
- OSL's share	1 598	681	696	1 072	1 205
- Acetate	2	1	0	0	0
- Urea	9	0	0	0	0
- Chemical oxygen demand	399	267	335	376	375
<b>FIRE FIGHTING CHEMICALS</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
Fuel: Jetfuel A1 (tonnes)	33	46	54	53	51
Fuel: Paraffin (tonnes)	36	25	29	29	17
Fuel: Others (diesel, petrol, propane) (tonnes)	9	15	7	8	7
Extinguishing agents: Foam (m <sup>3</sup> )	30	30	33	36	27
Extinguishing agents: Powder (tonnes)	27	24	26	19	21
<b>ENERGY (TJ)</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
Electric energy (renewable)	708	757	734	774	799
District heating (part fossil)	87	101	75	85	93
Groundwater (renewable)	49	48	53	53	58
Oil heating ( fossil)	11	20	15	12	7
Auxiliary power ( fossil diesel)	7	5	6	7	5
Seawater heating, Alta, Kjevik, etc. (renewable)	n/a	n/a	n/a	n/a	n/a
Vehicles ( fossil diesel)	89	99	94	93	94
Vehicles ( fossil petrol)	5	4	5	4	3
<b>TOTAL ENERGY CONSUMPTION</b>	<b>956</b>	<b>1034</b>	<b>982</b>	<b>1026</b>	<b>1059</b>
<b>GREENHOUSE GAS EMISSIONS CONTROLLED BY AVINOR (TONNES)</b>		<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
Avinor AS		17 024	16 769	16 212	15 970
- OSL's share		4 759	4 923	4 855	4 468
- other 45 airports' share		12 265	11 846	11 357	11 502

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<b>WASTE (TONNES)</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
Total	11 960	10 538	11 773	12 930	9 977
- OSL's share	8 836	7 940	8 589	9 625	6 048
<b>SOURCE SEPARATION RATE</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
Total	54	54	56	57	56
- OSL's share	55	57	59	62	61
- other 45 airports' share	49	43	46	43	45





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