A sustainable Hafslund Eco

Hafslund Eco's core activity is generating clean, renewable energy and delivering smart electrification solutions. The Group's business creates significant socio-economic ripple effects and helps provide secure jobs. Hafslund Eco's social mission is to generate long-term value through renewable energy, secure supply of energy and develop a smart and fully electrified zero-emission society. Through this core activity, Hafslund Eco plays an important role on the road towards a sustainable society, where fossil energy is replaced by zero-emission, renewable energy.

Even though the Group makes an important contribution to societal and environmental goals, the company's operations can still have some undesired effects. The Group's activities can cause injuries to its own employees, contractors, and other affected parties, while watercourse development and regulations can negatively impact the natural environment. The Group works systematically and purposefully to minimise the negative consequences of its operations, and at the same time produce more renewable energy.

Sustainability strategy

Hafslund Eco's sustainability strategy was revised in 2021 and continued with the following strategic objectives:

Hafslund Eco shall be an industry leader in sustainability in terms of ambitions, measures, achieved results and reporting. This means that:

- Hafslund Eco will reduce its own greenhouse gas emissions, and emissions from projects and business travel, by 95 per cent by 2030 compared with levels in 2019.
- The Group will adopt new and existing zero-emission solutions to cut its own emissions.
- All Hafslund Eco's facilities will be operated with zero non-conformances.
- All else equal, Hafslund Eco will endeavour to employ local service providers and partners.
- Hafslund Eco will identify opportunities to increase production of clean renewable energy, through both new production and upgrading/ expansion of existing facilities.

In addition to improving the Group's impact on its surroundings, Hafslund Eco aims at making sustainability beneficial for the business. Better loan terms, an improved reputation, increased employer attractiveness and greater influence on the development of framework conditions are some of the potential direct or indirect benefits of good sustainability work.

Important sustainability areas

Hafslund Eco supports the UN's Sustainable Development Goals, and the Group's activities have an impact on several of these goals. As a hydro-power producer, the Group focuses its efforts on the following five sustainability goals:

The Group updated its materiality analysis for sustainability in 2021. The materiality analysis is based on topics considered significant for Hafslund Eco's activities and for its stakeholders, and highlights both risks and opportunities.

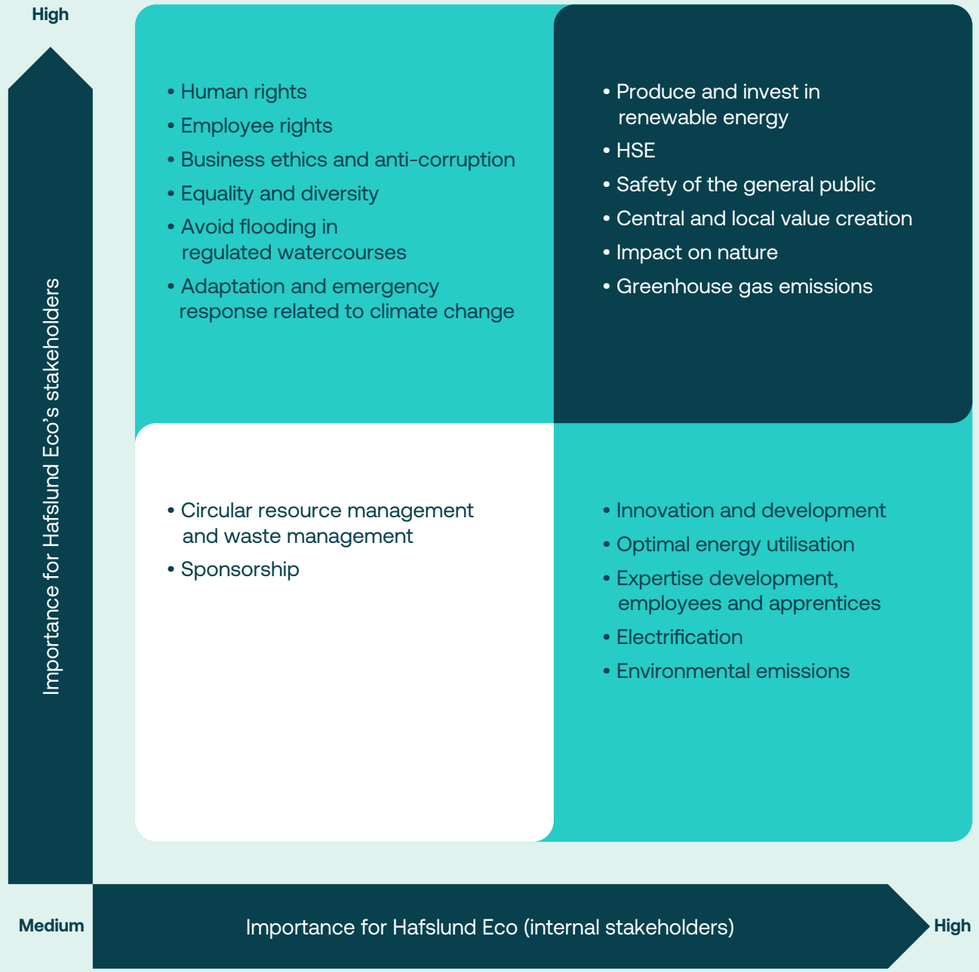
Each of the most material areas are described in the following sections, including the Group's principles, goals, results and measures.

Stakeholder engagement

It is vital that Hafslund Eco has a good relationship with its stakeholders. Consequently, the company works closely with businesses, local authorities and local communities. The Group's activities help to secure jobs, safeguard society's supply of clean renewable energy and increase value creation. In this way, Hafslund Eco creates value locally, regionally, and nationally, while contributing to the reduction of greenhouse gas emissions, which has a positive effect globally.

Due to the Covid-19 pandemic, contact with several stakeholder groups has been at a lower level than usual in 2021, and many meetings have been conducted virtually.

Materiality analysis for sustainability



Sustainability reporting

Hafslund Eco reports on sustainability in accordance with the principles of the Global Reporting Initiative (GRI). Reference to relevant GRI indicators can be found in the indicator list for sustainability. Data for sustainability reporting is obtained from all companies where Hafslund Eco is the operator.

In 2021, Hafslund Eco prepared a framework for green funding in accordance with the ICMA Green Bond Principles and LMA/LSTA/ALPMA Green Loan Principles. Under this framework, Hafslund Eco aims to comply with best market practice by following relevant standards and guidelines for the green finance market. The Center for International Climate Research (CICERO) has certified Hafslund Eco's green framework and awarded the Group's sustainability work the grade dark green, which is the best grade in this classification system. Dark green means that projects and solutions support the long-term vision of creating a climate-adapted, low-emission society. Both the framework and Cicero's certification can be viewed at www.hafslundeco.no.

The EU taxonomy is a classification system for identifying sustainable activities. To be classified as sustainable, the activity must make a substantial contribution to one or more of the Taxonomy's six environmental objectives, whilst avoiding doing significant harm to any of the other objectives, and at the same time comply with the minimum social safeguards. In 2021, Hafslund Eco started mapping whether the Group's activities meet the criteria in the EU taxonomy. So far, activities corresponding to 40 per cent of turnover have been surveyed to establish whether they satisfy the requirement for making a substantial contribution to achieving one of the environmental goals. All activities reviewed have met the requirements for making a substantial contribution to environmental goal 1, climate change mitigation. For more details, see the section on greenhouse gas emissions and climate risk. The mapping will be completed during 2022, and reporting for 2022 will be prepared in accordance with requirements of the EU taxonomy.

Produce and invest in renewable energy

Hafslund Eco's principles: Hafslund Eco produces clean, renewable hydropower. Hydropower is part of the climate solution, and Hafslund Eco continuously works to increase power production, and thus reduce Norway's and Northern Europe's emissions of greenhouse gases in the long term.

Production of renewable energy is Hafslund Eco's most important climate contribution. In addition, the Group is contributing to the transition from fossil to renewable energy consumption by developing and supplying the electrification solutions of the future.

Aim: Hafslund Eco aims to increase the production of renewable power to secure society's access to clean, renewable energy.

Goal	Result 2021 (2020)	Status	Comments
Produce renewable energy.	18.3 TWh (17.8)	●	Hafslund Eco's share of production in all power plants.
Increase installed capacity	119 MW (104)	●	Both reinvestments and new facilities
Increase production through reinvestments.	28 GWh (23)	●	Various upgrade projects and expansions.
Increase production by developing new power projects and power plants.	412 GWh (315)	●	Tolga and Hinøgla power plants (both 75 per cent ownership) and the Austri Kjølberget wind farm (20 per cent ownership).

Risk

Hydropower production is weather-dependent, and years with high precipitation result in higher production than years with low precipitation. These are non-influenceable factors. Hafslund Eco can, however, influence the development of new power projects and upgrades of existing facilities, and is continuously looking for good, realisable projects.

Status and measures

Hafslund Eco aims to be an efficient hydropower producer with a strong ability to innovate. The Group owns, maintains, constructs and operates hydropower facilities, delivers system and balancing services to the power system, and sells power in the wholesale market. The Group also engages in innovation and business development to create smart electrification solutions.

Power production

Through its many hydropower plants with a high degree of regulatory capacity, Hafslund Eco ensures renewable power production, even during periods of low precipitation. This allows the Group to contribute to the efficient utilisation of hydropower resources and to maintain the balance and quality of the power system.

To contribute with even more renewable power to replace fossil energy sources, the Group continually works to increase production through upgrades, expansions, improvements and new projects. In 2021, Tolga power plant was put into operation (see fact box on page 30). Hinøgla power plant was also completed, and Mork power plant will be put into operation this year. Tolga is a new power plant in Os and Tolga municipalities in Innlandet. The plant has an annual production of around 205 GWh. The development started in the summer of 2018 and the power

plant was opened by the Norwegian Prime Minister in October 2021. Hinøgla power plant in Skåbu in Innlandet is a small-scale power plant with annual production of 10.5 GWh. The power plant was completed in 2021. Both Tolga and Hinøgla power plants are owned by Opplandskraft, in which Hafslund Eco has a 75 per cent ownership share. Mork power plant, which is located in Lærdal municipality in Vestland, will generate an annual production of 42 GWh. The development started in winter 2019 and will be completed in spring 2022. Work on the tunnel was delayed due to hard rock, delays with the tunnel boring machine (TBM) and Covid-19.

Several upgrade projects have also been carried out in the hydropower plants in 2021. In Hemsil 1, unit 2 was replaced during the year, one year after unit 1. The upgrades will increase production by 9.5 GWh. Unit 2 in Usta power plant was upgraded in 2021. This has resulted in increased production of around 17 GWh and increased power of 15 MW per unit. In Mesna power plant in Lillehammer, unit 2 was refurbished, one year after unit 1 and will provide close to 2 GWh in extra production. At Hafslund power plant, one unit has been replaced, resulting in an estimated production increase of 7.5 GWh as a result of improved efficiency. The substation's output has been raised from 30 to 33.6 MW.

Austri Kjølberget DA completed Kjølberget wind farm in Våler municipality in 2021. The wind farm consists of 13 wind turbines which combined generate around 196 GWh of new renewable energy. The Group holds a 20 per cent stake in the company, Hafslund Eco's expertise resource pool has made a significant contribution to the project, assisting the client in areas such as environmental follow-up and communication during the construction. The plant was officially opened in October 2021.

Offshore wind

In June, Ørsted joined the offshore wind collaboration that Hafslund Eco established with Fred. Olsen Seawind in 2020. The joint venture, which has been named Blåvinge, will develop offshore wind in Norway and compete in Norway's upcoming application round for offshore wind. Initially, the joint venture will apply for licences to develop offshore wind on the Norwegian shelf, in the two areas of the North Sea, Utsira North and Southern North Sea II, that have been opened for applications by the Norwegian government. For Hafslund Eco, investment in offshore wind power presents a growth opportunity that will dovetail neatly with the Group's flexible hydropower production. Hafslund Eco is investing in offshore wind power solutions, together with an associated North Sea grid with access to multiple markets, where Norway can reap the rewards of the interplay between flexible hydropower and intermittent wind power.

Electrification

The transition from fossil to electric consumption is a prerequisite for a zero-emission, climate-neutral society. For Hafslund Eco, the electrification of society represents a commercial opportunity. In particular, the Group plays an important role in the electrification of the transport sector. The Group maintains a close dialogue with, and assists, various public transport organisations, as well as private customers, housing associations and other businesses, by facilitating services and providing electric solutions.

Hafslund Eco has established the charging company Ladeklar, which manages investments in charging infrastructure for housing associations and co-owners. This will lower the threshold for electrification solutions for the residents. In 2021, Ladeklar was merged with Eviny's charging company to secure a better position for further growth. The company later changed its name to Elaway. Elaway passed 30,000 projected

charging stations and 400 charging facilities during 2021 and will now market its solutions in Europe.

Similarly, the consultancy business Hafslund Rådgivning assists customers with the sustainable roll-out of electrical infrastructure and renewable energy technology. The consultancy business is well established in the market and has completed around twenty projects.

Constantly testing new products and services in the market is important. At the end of 2021, a battery was installed in a large housing association in Oslo to reduce the housing association's total electricity bill and provide charging facilities in the association's parking spaces. This battery service will be tested with a view to potential larger-scale development during the year.

During 2021, Hafslund Eco also started work on facilitating the establishment of new green industry in its immediate environments, with a particular focus on hydrogen production.

Power exchange

Hafslund Eco part-owns and has applied for a licence for an interconnector, NorthConnect. Increased exchange capacity makes it possible to exchange renewable power across national borders, and so reduce the use of fossil energy. The Norwegian government has decided not to consider licensing new interconnectors during the current parliamentary term. Consequently, the project has been shelved.

Goals and ambitions for further work

Hafslund Eco aims to increase the production of renewable power to provide more renewable energy for consumers. This will be necessary to secure lower power prices for Norwegian households, companies and industry. Over the next few years, this will be achieved by upgrading, developing and constructing new power that takes account of nature, the environment and the cultural landscape. It is also important to preserve existing production as part of an environmentally friendly power system. In 2022, Hafslund Eco will continue its ongoing work to maintain power plants, develop new renewable energy and strengthen its investments in electrification.

205 GWh of new renewable energy put into operation in Tolga and Os

Development of Tolga power plant in Tolga and Os municipalities started in 2018 and was completed in the spring of 2021. The project was finished five months ahead of schedule, under budget and with no serious injuries. The plant was officially opened by the Norwegian Prime Minister Erna Solberg in October 2021.

Tolga power plant will have an annual production of around 205 GWh of new, renewable energy. This equates to the power consumption of around 10,000 households. The power plant is owned by Opplandskraft DA, which in turn is owned by Hafslund Eco (75 per cent) and Akershus Energi (25 per cent). The plant is operated by Hafslund Eco's personnel in Nord-Østerdal.

The power plant has a sill dam and exploits the 88 metre drop in the Glomma river as it runs through the centre of Tolga from Hummelvoll down to the foot of the Eidsfossen waterfall. There are three fish ladders in the sill dam, so that fish can migrate both upstream and downstream in all water flows.

Impact on nature

Hafslund Eco's principles: In power plant developments, reservoir construction, and reinvestments in production activities, every effort shall be made to keep the environmental effects to a minimum, by using knowledge-based techniques and best practices.

Goal	Result 2021 (2020)	Status	Comments
Avoid violations of licensing terms	3 (4)		In 2021, three violations of the regulation terms were registered and reported to NVE. The violations relate to Strandafjorden, Svartavatn and Moksa power plants.
Conduct at least ten voluntary environmental assessments per year.	36 (17)		
Implement at least five voluntary environmental measures per year.	3 (6)		

Hafslund Eco's goal is to operate without environmental non-conformances or serious violations of licensing terms. The company's internal control system for watercourse facilities, which is required in accordance with the Norwegian Water Resources Act, is an important tool for achieving this goal. In addition, Hafslund Eco has a comprehensive monitoring system designed to ensure that all licensing terms are met. The monitoring takes place at the Group's operations centres in Lillehammer and Gol. Follow-up of licensing terms and conditions is also important in order to reduce negative impacts, and to improve the natural conditions in regulated watercourses. Hafslund Eco actively participates in several R&D projects designed to improve various aspects of biodiversity in watercourses that are affected by the Group's activities, or in areas directly related the company's regulations.

Risk

The construction, operation and maintenance of hydropower plants and regulations affect the natural environment to differing degrees. The effects mainly relate to physical interventions in the natural environment, land use, and impacts on biodiversity through changes in water flow and water temperature. In regulated watercourses, there is also a risk of deviations from licensing terms and accidents during operation of the hydropower plants. There is a regulatory risk that the authorities will issue orders that limit production, and that these orders may not be established through knowledge-based decision-making processes.

Status and measures

Monitoring

Monitoring data is important for documenting the environmental status of regulated watercourses. The frequency, method and scope of monitoring, varies from watercourse to watercourse, depending on the issues associated with each body of water.

Hafslund Eco conducted 36 surveys throughout our regulated rivers and lakes in 2021. This monitoring contributes to important information and knowledge about the impact, status and development in the waterbodies associated with the regulations and run-of-river power plants.

In response to the Action Plan for Fish Migrations in Glomma and Trysil, an automatic fish counter was installed in the old fish ladder on the east side of Sagnfossen waterfall. This means that there are now fish counters in both fish ladders at Sagnfossen, and that all migration is registered. There has been a remarkable increase in migration: Between 2005 and 2012, an average annual increase of 27 fish was registered using manual traps. In 2021, a net increase of 300 fish was registered by the two fish counters.

An automatic fish counter was also installed in the fish ladder in Braskereidfoss waterfall. Due to technical problems, the counter was only in operation for a short period during the 2021 season. A net increase of 26 fish was registered, which is still far more than previous registrations using manual traps during the entire season.

Theoretical calculations have been made on mortality to fish that pass through the turbines at the Kongsvinger, Braskereidfoss, Strandfossen, Løpet, Sagnfossen and Lutufallet power plants.

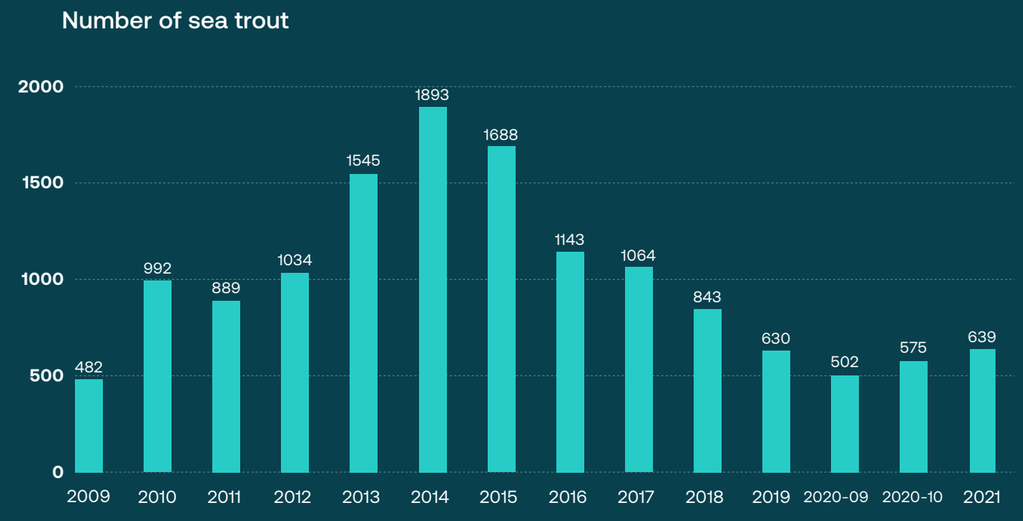
The fish recruitment monitoring programme for the main rivers in Hallingdal (Hallingdalselva and Hemsil) has been carried out as planned. A more extensive survey has been carried out in Storåne in Hol municipality. This provides good data for comparison and implementation of environmental measures in the river below the outlet of the Hol 1 power station. In the tributaries to Strandevatn, more extensive electrofishing was carried out to monitor recruitment of trout with the aim to minimalize the need to stock trout in the lake.

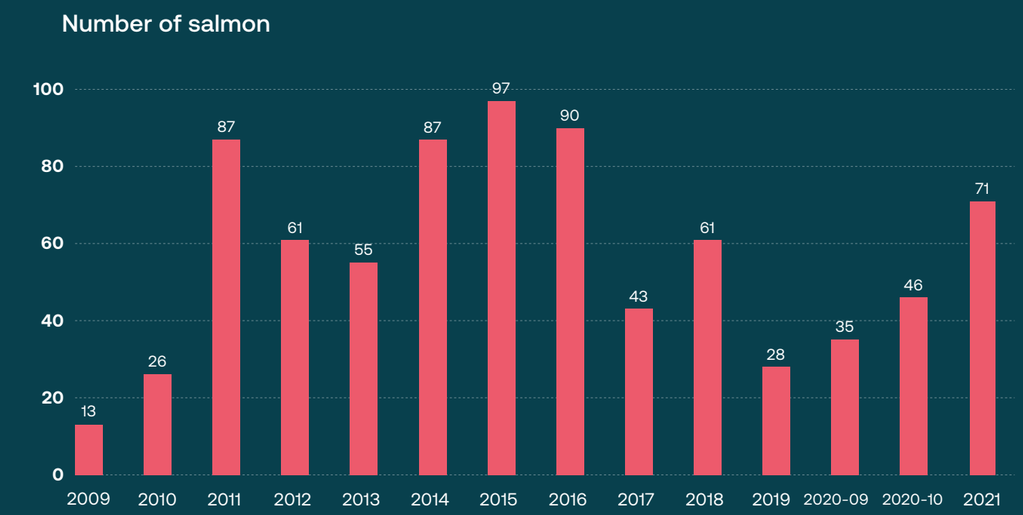
In the lower part of Hallingdalselva, extensive electrofishing has been carried out by boat to improve data quality on the effects of pike populations in the lower part of the river.

Spawning fish counts in Aurland

The NORCE research institute counted spawning fish by snorkelling in Aurlandselvi at the end of October last year, and in Vassbygdelvi at the beginning of November. Normally these counts are performed at the same time, but high water levels in Vassbygdelvi meant that the counting here had to be postponed.

Spawning fish counts in Aurland





Registrations that have been conducted since 2009, show great variation in the inflow of spawning fish to Aurlandselvi in individual years. A total of 639 sea trout mature enough to spawn were registered in Aurlandselvi and Vassbygdelvi in 2021 (see figure). The spawning stock target for the watercourse has been reached, and the observed negative trend will hopefully reverse. The observed variation is on a par with other rivers in Inner Sogn, and is following the same pattern, with good inflow in 2014 followed by a subsequent decline. Sea trout are even more vulnerable to salmon lice since they do not migrate out of the fjord systems like salmon. Read more about salmon lice and the impacts.

The salmon stock in the watercourse is at a very low level, but this year's registration shows a small increase to 71.

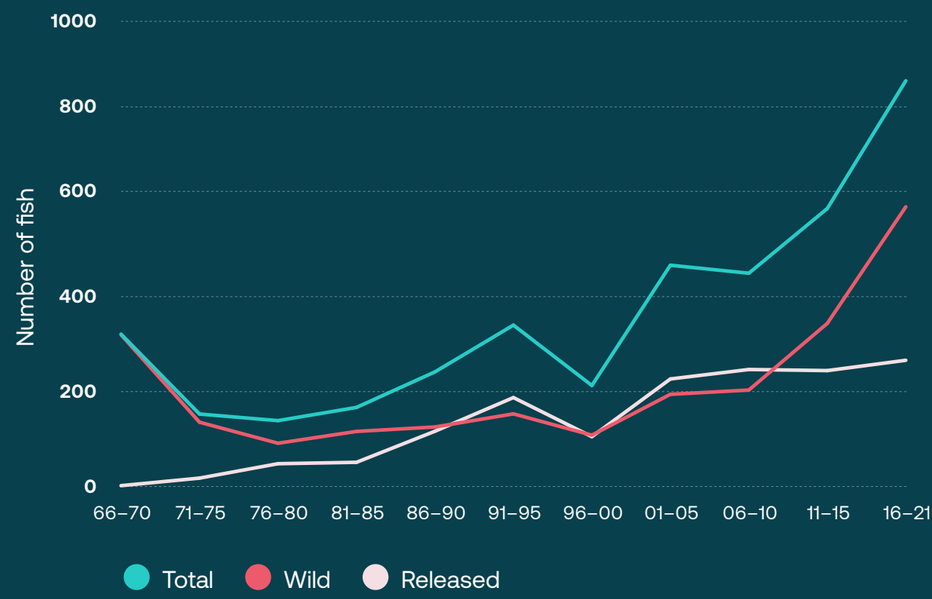
Fish migration in Hunderfossen

At Hunderfossen power plant, a new, voluntary regulation schedule is being trialled in the period 2017–2022. This involves increased minimum water flow, artificial floods, and optimised hatch use.

The migration of the Hunder-Trout has risen sharply in the last five years, to an average of 915 fish. In the period 2000–2016, the annual average was 497 fish. This, close to doubling in the number of migrating fish, is mainly due to an increase in the number of wild fish (see figure). The hatchery fish share was on average 48 per cent in the period 2000–2016, but only 31 per cent in the period 2017–2021. The increase in fish migration could be a result of varying factors, but using automatic fish counters instead of manual traps, optimised hatch use and artificial floods are probably the main reasons.

In the new regulation schedule, the water flow during the spawning period (from 1 October to 5 November) has been increased from 1.8 m^3/ s

Rise of the Hunder Trout 1966–2021



to 7 m^3/ s, and from 1.8 m^3/ s to 5 m^3/ s during winter. This has resulted in a significantly larger spawning area in the most important spawning section below the dam and is probably contributing to increased recruitment of wild fish. It has also led to a much larger proportion of the spawning fish migrating back to Mjøsa in the autumn after spawning, instead of remaining in pools in the river over winter until the spring flood. This could potentially have a major impact on recovery and survival after spawning.

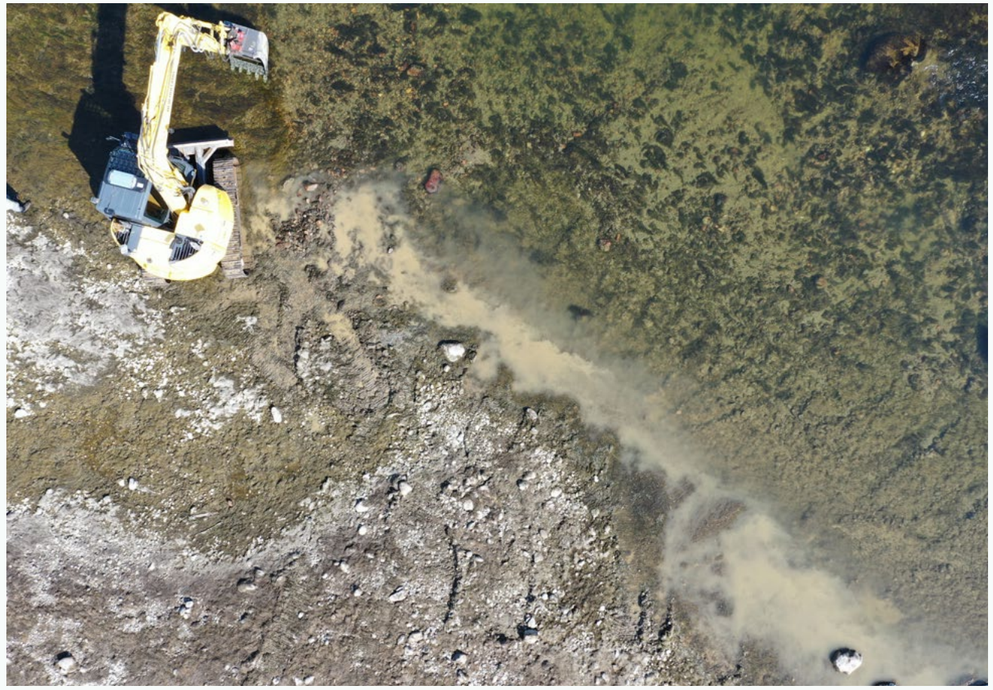
Implemented environmental measures

Vorma has its own, unique lake trout stock. The stock is small and vulnerable, partly due to poor spawning conditions and strong competition from other fish species. The most important spawning grounds are at Ertesekken, just downstream of the regulation dam in Svanfoss. From the tributaries, Vorma receives a large volume of sediments that sludge up and compress the gravel in the spawning grounds, creating problems for spawning and the survival of the roe. In order to improve conditions, the riverbed was physically altered (ripped) in spring 2021. This was done by an excavator with a claw that harrowed the bottom so that the fine sediments were washed away with the water flow, loosening the gravel and making it more suitable for spawning. The area was examined by divers both before and after the ripping. Large, new spawning hollows after the spawning period in the autumn of 2021 proved that the lake trout had used the ripped area.

The obligation to stock trout in Krøderen has been temporarily suspended, and in 2021, a five-year project began to remove common whitefish and implement measures in tributaries. Two large traps (20 metres in diameter) have been purchased to be deployed together with two five-metre traps and one ten-metre trap. The purpose of the measure is to improve the conditions for naturally recruited trout (from small rivers and from Hallingdalselva) that migrate out into Krøderen.

Relatively large quantities of spawning gravel have been placed in Aurlandselvi since 2010. This has resulted in a better distribution of the spawning areas in the river. The restored spawning areas change with floods over time. This means that more gravel must be added from time to time, and that there are areas where there is still “space” for more gravel. In 2021, 745 m2 of new spawning area was made. All the gravel is sourced locally.

Because the intake of the Vangen power station in Aurland is locaded in Vassbygdvatnet, which is part of the anadromous stretch of the river, concerns have been raised about how much of the trout and salmon



Repair of the river bottom in Vorma.

population that migrate down through the tunnel and are damaged in the turbines. In March 2021, a solution deploying fine bar screens on the intake screens at Vangen power station was fully operational. Preliminary video analyses from monitoring the fine bar screens show that the fish have no problems swimming in front of the screen, and there is no indication that fish are getting trapped by the water flow and stuck on the screen. The screens have functioned as intended throughout the year, but on one occasion a large volume of leaves was pulled in with the waterstream and the screen almost clogged up. Inspections were carried out after the incident, and the lodged leaves were washed away. There was some minor damage to the netting, but nothing that reduced the functionality.

Voluntary release of minimum water flow

In the Hemsil and Aurland watercourses, some water is discharged on a voluntary basis to maintain the ecological processes on sections of the water-course with significant environmental value. In Hemsil, water is released from Eikrebekkdammen and in Aurland from the Vetlebotn dam. In 2021, the costs of these measures were NOK 0.8 and 5.3 million, respectively.

In Gudbrandsdalslågen, a trial regulation is being carried out with increased minimum water flow from Hunderfossen to map the potential effects on the trout population downstream of Hunderfossen. The cost of this water release in 2021 was NOK 6.3 million.

In the Roppa watercourse, a voluntary minimum water flow of 50 l/s is discharged from Hornsjøen to the outlet river Hynna. The stretch of the Hynna river between Hornsjøen and Ropptjern covers 3.83 kilometres and the water is released to improve conditions for fish and fishing in Hynna. The loss of power production is minimal, since the minimum water flow discharge from Hornsjøen only results in a very small increase in flood water loss at the Roppa power plant.

Minimum water flow at Vermefoss in Hallingdalselva.

Environmental supervision

During 2021, 32 internal environmental audits were carried out on watercourse facilities owned and/or operated by Hafslund Eco.

In summer 2020, there was a major overflow at the Flævatn dam, and there was major damage to the stream that runs into the new quarry lake that was built downstream of the dam. The inlet to the new stream has now been changed, and with increased water flow, a higher proportion of the water will flow down along the original river course and reduce the erosion potential in the new stream. In addition, the stream down to the quarry pond has been erosion-proofed with stone from the sills that were originally constructed in the stream, and the number of pools has been reduced.

The dam at the outlet of Rødungen south is classified as a class 2 dam due to the population of whitefish. Whitefish has been transferred from Ustevann through the tunnel connecting Ustevann to Rødungen. A further migration of whitefish down to Tunhovdfjorden and/or Pålsbufjorden is unwanted. Whitefish have been registered in some smaller lakes in the catchment area of Tunhovdfjorden, but this information has not been verified. In order to confirm the presence of whitefish, water samples were taken from three lakes and the Rødungselva in the autumn of 2020. The results show that there are whitefish in Hakatjønn and Nedre Djuptjønn, while no whitefish were detected in Tunhovdfjorden, Pålsbufjorden or in Rødungselva.

Establishment of the Kjølberget wind farm in Våler municipality has been ongoing since 2019, and the last of the plant's 13 turbines was put into operation in September 2021. In parallel with the installation of the last turbines, restoration of temporarily affected construction areas has also started. Areas that have no specific function when the plant is in operation have been restored and facilitated for natural re-vegetation. An environmental advisor from Hafslund Eco has been responsible for environmental control of the contractor's activities, advised on nature-related and landscape issues and assisted the client in contact with the authorities in licensing matters.

Trout stocking

In Hallingdal, there were problems at the fish hatchery in 2020 with a reduced number of fish available for stocking in 2020. In 2021, part of the stocking deficiency was compensated for, but some will have to wait until 2022 as there is a limit to the number of fish that can be stocked each year in a lake. In Aurland and Innlandet, the stocking program was conducted according to plan.

Termination of watercourse facilities

In 2021, Hafslund Eco sent an application to NVE to close and demolish the intake dam for the old Sølna power plant. The new Sølna power plant, which was put into operation in 2016, was built with an intake upstream of the intake to the old Sølna power plant. The old Sølna power plant has now been decommissioned and the intake dam for this power plant no longer plays any role in hydropower production. In order to continue to serve a purpose, the dam would have to be rebuilt to meet current safety standards. Sølna power plant is owned by Østerdalen Kraftproduksjon (ØKAS) but operated by Hafslund Eco. ØKAS have decided that they wish to demolish the dam. Hafslund Eco has therefore prepared the application for closure and demolition, which was sent for review in April 2021. NVE is still reviewing the case.

In 2019, Hafslund Eco applied to NVE for a licence to terminate the Hundsjø regulation and change the regulation schedule for Hyllsjøene. The application is still being processed by NVE, which will issue a recommendation to the Ministry of Petroleum and Energy (OED).

Revision of framework conditions

In June 2021, OED set new conditions for the Hemsil regulation, including the stretch of river down to the confluence with Hallingdalselva. No new reservoir restrictions were introduced, but requirements were introduced for minimum water flow in Hemsilelva from Eikrebekkdammen and from Flatsjø/Brekkefoss dam in Grøndøla. The power loss due to the new requirements is around 6 GWh. Modern nature management conditions, which are managed by the Norwegian Environment Agency and NVE, were adopted last year. OED also introduced a fund with a one-off payment of NOK 2 million to support wild reindeer in Nordfjella. The fund will be managed by a steering committee consisting of NVE, the regulator, other contributors and wild reindeer stakeholders. A sectoral tax for cultural heritage was also introduced, since the licence pre-dates 1960. The sectoral tax exceeding NOK 5 million was paid in autumn 2021.

In the autumn of 2021, NVE submitted a recommendation for new licensing terms for the regulation of the Uste and Hallingdal watercourses, and for the Usta and Nes power plants. The conditions provide an opportunity to impose mitigating measures to improve the environmental and natural conditions in the watercourse. NVE recommends increased discharge of minimum water flow in Usteåne, and the introduction of minimum water flow in Rukkedøla. NVE also recommends transferring flood water from Ustevatn to Rødungen to reduce the risk of flood along Usteåne. The measures mean a reduction in power production at the Usta and Nes power plants of around 4 GWh per year.

In February 2021, NVE decided on opening revision of the watercourse regulation licences for the Raua and Roppa watercourses in Gausdal Municipality. The revision requests from fishing organisations, the Municipality and the County Governor relate mainly to improving the living conditions for large trout in the lower part of The Raua watercourse, from the outlet of Raua power plant down to Raua's confluence with the main river Gausa. The requests are for detailed studies related to the living conditions for the large trout in Raua and to implement measures to ensure water flow for a stretch of river that guides large trout in the event of a stoppage at Raua power plant. Installation of a bypass valve in the Raua power plant has been proposed as a possible measure by the requesters. In addition, a request has been made for studies of the living conditions for large trout in the lower part of Raua and formalisation of minimum water flow releases that are practised from Hornsjøen to Hynna in Roppavassdraget. An important element in the revision matter is a cost-benefit assessment of the measures proposed by the requesters. A draft revision document was sent to NVE in September 2021 for quality control. A final revision document is expected to be sent out for public consultation during the first quarter of 2022.

A request has been presented by Øieren Village Association (Øieren Grendeforening) for revision of the watercourse regulation licence for Brøbølvassdraget. The watercourse has three regulating reservoirs: Øyersjøene, Varaleden and Møkeren. As of now, the revision requests only relate to Øyersjøene. The revision requests from the Village Association have been commented on in a letter of 26 August 2021. NVE has not yet made any decision on opening a revision case for Brøbølvassdraget.

It is expected that NVE's report on revision of the licence for the regulation of Savalen, Unndalen (Fundinmagasinet) and the transfers from Einunna to Savalen and from Glomma at Høyegga will be available in the spring of 2022. NVE sent the report for the Hols regulation to the Norwegian Ministry of Petroleum and Energy in 2020, and a final decision on the matter is still pending at the Ministry.

Failure to comply with licence conditions

Three violations of regulation schedules were reported to NVE in 2021. These involve violations of lowest regulated water level (LRV) in Strandafjorden in Hallingdal, in Svartavatn in Aurland and violations of a requirement for soft changes in operating water flow in Moksa power plant in Gudbrandsdalen. Moksa power plant is owned by Gudbrandsdal Energi Produksjon AS but is operated by Hafslund Eco. The first two violations mentioned have been internally assessed to result in negible environmental impacts, but the last-mentioned resulted in some stranding of young trout. NVE has not levied any sanction for LRV violations in Strandafjorden. A response is still awaited from NVE on the latter two violations. Hafslund Eco looks seriously upon incidents that result in violations of the regulation schedule, and appropriate measures have been established to avoid future violations.

Gas supersaturation

At Hol 1 power plant there have been episodes with high levels of gas saturation in the outlet for the power station. This has been a problem for the fish hatchery, which previously used water from the outlet for the power station. The problem was particularly associated with flood situations in the stream inlets, and in particular the inlet at Greinefoss. However, it is uncertain whether flood situations are the problem. The fish hatchery was moved in 2020, but gas supersaturation can also be a problem for the fauna in the river downstream from Hol 1, and monitoring equipment was set out at the end of May last year. Higher values than recommended (>110% TDG) were recorded. Further investigations strengthened the suspicion that the stream inlet at Greinefoss is the problem. Measures are currently being assessed.

Environmental spills

There were five oil spills in 2021 to waterways at Hafslund Eco's installations. At the end of July, there was an oil leak at Hunderfossen power plant because of a failure in the trash rake. About 350 litres of decomposable oil was released from the machine, of which approximately 110 litres ended up on the concrete floor and was collected, while approximately 240 litres ended up in the waterway. The oil that ended up in the waterway was carried into the power plant, and it is assumed that the oil remained in pockets in the outlet tunnel and was washed out over time. The environmental effects were considered to be minimal because the oil was decomposable and the volume relatively small in relation to the size of the river. The screen rake has now been repaired in such a way that any future fault in the hydraulic system will not result in oil leaks greater than about 15 litres.

At Hemsil 2, approximately 40 litres of oil were sucked out of the turbine bearing and down into the boom chamber. A boom was laid out with an absorption agent and thickener in order to remove the oil from the boom chamber.

At the inlet gate at Faslefoss power plant, a leak occurred on the pressure instrument for the hydraulic plant which led to an oil leak. An estimated 20–25 litres ended up in the inlet tunnel before staff arrived and collected the oil with the aid of absorbent pads. The limited quantity of oil combined with a high water flow in the tunnel (approximately 30 m^3/s) meant that it was not considered appropriate to try to gather up the oil from the waterway.

There were two incidents with the trash rake at Harpefossen power plant that led to discharges of decomposable oil into the waterway of approximately four and ten litres.

In 2021, there were also two other accidental discharges in the Group. One discharge of 800 grams of SF_6 gas at Torpa power plant, as a result of a leak, and one sewage discharge from a barracks.

Hazardous substances inventory

Instructions that include chemical handling were updated in 2021. Hafslund Eco has established an internal chemicals committee which will ensure uniform monitoring of relevant laws, internal instructions and best practices for the purchase, handling and storage of chemicals for the Group. The committee is responsible for conducting risk assessments for new and old chemicals, finding more environmentally friendly alternatives to existing chemicals, maintaining order in the hazardous substances inventory, and seeing to it that the number of chemicals used is as low as possible. In addition, the committee will follow up and ensure that necessary and suitable expertise regarding chemicals is present at all levels in the organisation, provide advice on proper handling and establish good purchasing procedures.

Offshore wind

Hafslund Eco, together with its partners at Blåvinge, has a focus on the environment and sustainability in the offshore wind project as well. There is a desire to make knowledge-based decisions, and Hafslund Eco/Blåvinge are actively part of and support various research projects and initiatives that aim to improve the knowledge base regarding various effects wind power in Norwegian maritime areas will have on life above and below the surface.

State of the art fish migration solution at Tolga power plant

Tolga power plant utilises a fall of 88 metres in the Glomma River through the centre of Tolga. The project has set a new standard for fish migration solutions in large hydropower projects. The best available knowledge and technology have been applied for migration up and down the river.

Thorough feasibility studies showed important spawning and growth areas for both grayling and trout in the minimum water stretch between the inlet and outlet, and there was two-way migration past the inlet dam. Ensuring that fish migrations could be maintained therefore became a prerequisite for the project.

Fish migrating downstream often follow the main current, and to prevent fish from swimming into the turbine inlet the weir grate has an opening of 15 mm. No power plant in Norway of this size has such a small opening in the weir grate, and there is a good deal of interest related to operational experience. The weir grate is slanted and leads the fish towards two diversion pipes that terminate in a deep pool below the dam. The inlet dam itself is a low threshold dam with two fish migration passageways, specially designed to make the upstream migration easy.

The minimum water flow is released through the fish passageways so that there is always plenty of water for the fish to migrate in. For water flows greater than the throughput, the water goes over the dam crown and enables fish to migrate up and down the entire width of the dam.

Video monitoring has been rigged at all the fish passageways to evaluate the migration solutions. This will start operating in 2022 and will tell us something about fish behaviour and any needs to adjust water flows, as well as information about which species are migrating.

Intake with fish catchers on the right and two fish migration runs with minimum water flow discharge on the left

Greenhouse gas emissions and climate risk

Hafslund Eco's principles: Hafslund Eco will actively employ zero-emission solutions. Low emissions of greenhouse gases shall be given priority when procuring equipment, materials, transport means, construction work and design methods.

Goal	Result 2021 (2020)	Status	Comments
Reduce greenhouse gas emissions from own operations, projects and business travel by 95% by 2030 compared with 2019	49% (60%)		49% emission reduction from 2019 to 2021. The emissions depend to a large degree on activity level. Project activity in 2021 was considerably reduced compared with 2019, but somewhat higher than in 2020. Climate measures in own operations also contribute to the reduction.
100% electric vehicle fleet by 2025.	17% (8%)		17% of the vehicle fleet was electric at the end of 2021.

Risk

Construction and installation work, as well as daily operation and maintenance, lead to greenhouse gas emissions through use of fuels and other materials.

Climate risk

Hafslund Eco conducted a climate risk analysis in 2021. As a producer of renewable energy and services in electrification Hafslund Eco is considered to be well equipped for dealing with changes in the climate, while at the same time climate changes entail increased risk the Group must deal with. Integration of climate risk in the company's risk management will continue in 2022.

Climate risk at Hafslund Eco	Influences	Measures	Risk
Physical risk • Changes in precipitation patterns present challenges for production planning. • Changes in precipitation patterns present challenges for maintenance planning. • Major floods increase risk of dam failures. • An increase in extreme weather could result in more grid outages and present a challenge to the management of hydrology in our own power system. • Increased winter temperatures lead to changes in ice formation and increased risk of harm to third parties.	• Life and health • External environment • Reputation • Emergency Response • Finance	• Climate-adjusted statistics. • Continuous improvement of models and analyses. • Plans and exercises for managing emergency response situations. • Ensure compliance with the Dam Safety Regulations. • Climate surcharges in planning projects. • Regular checks of ice-covered areas, ice fences and clear marking.	
Transition risk • New technology and new markets represent new opportunities, at the same time, this can result in increased competition. • Charges and/or prohibitions on environmentally harmful substances and greenhouse gas emissions increase the costs of renovation and construction of new installations. • Renewable hydropower is part of the climate solution, but it is still uncertain how large a share of the Group's activities will achieve the status of sustainable under the EU taxonomy.	• Finance	• Scenario-based strategy process. • Strategy with focus on innovation and development. • Focus on emission reduction in projects, with the use of low-emission materials and machinery.	

Status

Greenhouse gas accounting, metric tonnes of CO_2e	2021	2020*	2019*
Direct emissions (Scope 1)			
Fuel, vehicles and machinery	568	739	671
Insulating gas, SF_6	51	103	278
Indirect emissions from electricity (Scope 2)			
Electricity consumption, market-based**	-	-	-
Electricity consumption, place-based	243	192	236
Other indirect emissions (Scope 3)			
Business travel***	123	118	204
Helicopter use	6	19	17
Diesel use on major projects	2.825	1.859	5.861

** Figures for 2020 and 2019 have been updated with new emissions factors.*
*** The electricity consumption of Hafslund Eco has been certified as renewable.*
**** A new category, business travel, consists of air travel and fuel for vehicles on business travel.*

The greenhouse gas accounting is based on the international standard for reporting greenhouse gas emissions, the GHG Protocol, and is divided into the protocol's three categories for emissions: Scopes 1, 2 and 3. Scope 1 includes direct emissions from sources owned or controlled by Hafslund Eco. Scope 2 consists of indirect emissions resulting from consumption of electricity, and Scope 3 includes other indirect emissions. Indirect emissions are emissions that Hafslund Eco's activities contribute to, but the emissions source is not owned or controlled by the company.

Hafslund Eco's greenhouse gas emissions are mainly related to consumption of fuel, emissions of the insulating gas SF_6, business travel, helicopter use and electricity consumption. The emissions depend to a large degree on project activity, and even with initiated climate measures, the emissions will vary with activity level.

In the EU taxonomy for sustainable financial activities, Annex[1], three specific technical screening criteria are presented for hydropower production to fulfil the requirement for a substantial contribution to achieving the environmental goal of climate change mitigation:

- The power installation is a run-of-river power plant that is not associated with a reservoir. Such installations are exempted from requirements for documentation of greenhouse gas emissions.
- The energy density of a power installation is greater than 5 W/m^2.
- The life cycle emissions of greenhouse gases from hydropower production are less than 100 $g/CO_2e/kWh$.

According to the taxonomy, hydropower production must fulfil at least one of the above-mentioned criteria. In order to document that we meet the technical screening criteria in the taxonomy, a process has been initiated at Hafslund Eco to calculate the energy density in the watercourses affected by our hydropower plants or regulation installations. The energy density in Aurlandsvassdraget and Hallingdalsvassdraget was calculated in the winter of 2021 with the aid of GIS software and available production data. The methodology used in the analysis is based on the approach recommended in SINTEF's memorandum "Vurdering av klimagassutslipp fra vannkraft til EUs taksonomi" ("Assessment of greenhouse gas emissions from hydropower for the EU taxonomy") (2021)[2], and it was decided to use an approach that assesses the entire watercourse as a whole, including all power plants, as well as the gross area (entire area of the water surface) of all reservoirs.

[1] https://ec.europa.eu/finance/docs/level-2-measures/taxonomy-regulation-delegated-act-2021-2800-annex-1_en.pdf
[2] SINTEF: Harby, A. 2021. Memorandum: Vurdering av klimagassutslipp fra vannkraft til EUs taksonomi ("Assessment of greenhouse gas emissions from hydropower for the EU's taxonomy")

The calculations resulted in a total energy density of 29.35 W/m^2 for the power production in Aurlandsvassdraget. This is well over the requirement of 5 W/m^2. Hallingdal is a more complex system with multiple power plant owners, and the system boundaries are not as clear as in Aurland. Hafslund Eco is the only operator and watercourse regulator in Aurland and majority owner in all the power plants. If the system boundary is set so that only Hafslund Eco's own installations are included, the calculations for Hallingdal show an energy density of 8.52 W/m^2. If power plants that are not owned and operated by Hafslund Eco, but use the water from the reservoirs, are included in the calculation, it results in an energy density of 7.62 W/m^2 at the outlet in the Drammensfjord[3]. Calculating the energy density for all of Hafslund Eco's power plants will continue in 2022.

The third screening criterion in the taxonomy states that the life cycle emissions of greenhouse gases from hydropower production must be less than 100 g CO_2e/ kWh. A life cycle analysis shows total emissions over a product's lifespan. Compared with other energy sources, hydropower has extremely low emissions. Norwegian hydropower also emits substantially less greenhouse gases than hydropower plants elsewhere in the world. This is due in part to limited vegetation in dammed-up areas and thus relatively low emissions of CO_2 and methane (CH_4). Hafslund Eco has not calculated the life cycle emissions for the Group's installations specifically, but the Norwegian Institute for Sustainability Research (NORSUS) have through life cycle analyses of several Norwegian hydropower plants calculated the greenhouse gas emissions (the GWP value) from a typical Norwegian hydropower plant to be 3.3 g/CO_2e/kWh (Østfoldforskning, Memo AR 01.19). This is well below the requirement of 100 g/CO_2e/kWh set in the EU taxonomy. There is good reason to believe that Hafslund Eco's installations also fulfil this criterion.

[3] *Figures for installed output for external power plants have been obtained from NVE's installation database*

Based on NORSUS's calculations, emissions for the entire life cycle for Hafslund Eco's total production of 18.3 TWh in 2021 are around 60,000 metric tonnes of CO_2. In comparison, a recalculation of emissions from the production, based on the European energy mix of 231 g CO_2/kWh[4], shows that the Group's emission-free hydropower production of 18.3 TWh in 2021 corresponds to a savings in emissions of approximately 4.2 million metric tonnes of CO_2 per year. This is as approximately equal to the yearly emissions from two million fossil fuel vehicles.

Measures

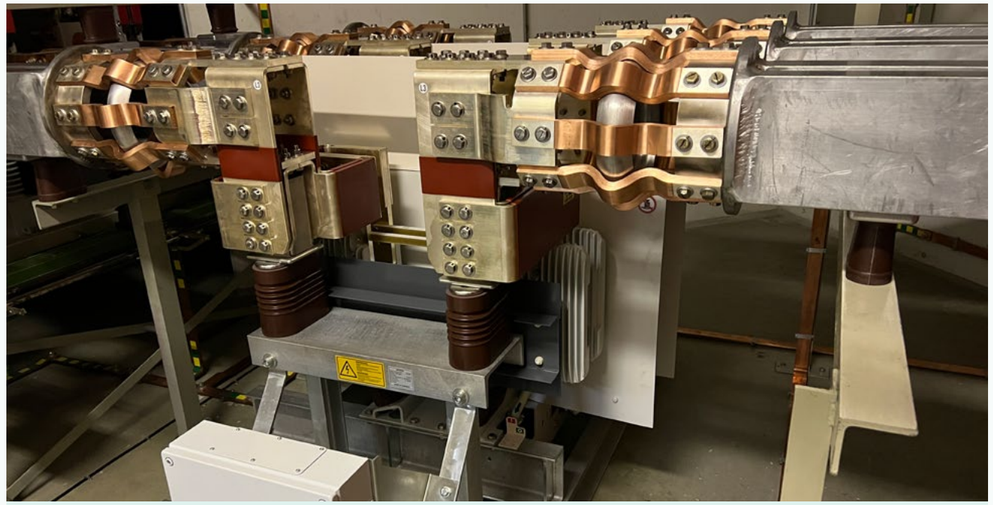
In order to reduce greenhouse gas emissions from the Group's own operational activities, all fossil fuel passenger and goods vehicles will be replaced with electric vehicles by 2025. This work continued in 2021, and 20 fossil fuel vehicles were replaced by electric vehicles. At the end of the year, the share of electric vehicles was 17 per cent.

Use of SF_6 gas is one of the industry's greatest climate challenges. In the spring of 2021, the SF_6 circuit breaker at Nedre Vinstra power plant, which had been in operation since 1989, was replaced with an emission-free vacuum circuit breaker. In addition, the Group adopted a goal of using SF_6-free solutions in new installations, and over the course of the next year a strategy will be prepared for phasing out SF_6.

The hydropower projects account for the greatest indirect greenhouse gas emissions in the Group. Hafslund Eco has a goal of reducing these emissions, and in autumn of 2021 two pilot projects were started on more climate-friendly hydropower projects. Reduced greenhouse gas emissions from materials, material transport and machinery fleet are the focus of these projects.

[4] *https://www.eea.europa.eu/ims/greenhouse-gas-emission-intensity-of-1*

To replace a substantial part of the Group's helicopter use, drones are used to a larger extent during inspection of installations and powerlines. Currently helicopters are only used for carrying loads to locations that are difficult to access in another way.



SF_6-free circuit breaker at Nedre Vinstra power plant

SF_6 gas is one of the industry's greatest climate challenges. The gas is 22,000 times more potent than CO_2 and is currently used as an insulation gas and circuit breaker medium in circuit breaker installations. In the spring of 2021, the SF_6 circuit breaker at Nedre Vinstra power plant was replaced with an SF_6-free circuit breaker. The new circuit breaker is a customised vacuum circuit breaker, adjusted to performance, dimensions and site considerations. The chosen solution reduced installation time and thus the down-time for the generator as well, in addition to being a preferred climate solution.

Responsible workplace

Hafslund Eco's principles: Health, safety and the environment (HSE) must be the basis for all of the Group's activities. Every employee must take the time to work safely and to plan and assess overall risk in all work processes. Everyone who works in or for the Group must safely return home without any harm to their life and health. The same requirements for HSE standards also apply to Hafslund Eco's suppliers and business partners.

Hafslund Eco will facilitate competence development for each individual employee.

Hafslund Eco will strive for equality in all parts of the organisation. This includes equal treatment with respect to pay, duties and responsibilities, irrespective of reporting location, gender, orientation, functional level and ethnicity.

Risk

The Group's projects, operational and maintenance activities involve various risks of harm and adverse events for employees and hired personnel. The greatest risks include work operations in the mountains under changing weather conditions, on live electric systems, work at height, heavy lifting, use of heavy equipment and during transport. In 2021, Hafslund Eco increased the attention paid to individual risk understanding in planning job duties and detecting near misses. Work has been carried out on becoming better at overall risk assessment in large and small projects where there are relationships among human, technical, organisational and financial factors. Further development in the systematic risk work continues.

Goal	Result 2021 (2020)	Status	Comments
No harm to life, health and welfare for our own or suppliers' employees.	8 (14)	🟡	The result for 2021 shows a remarkable reduction in the number of harmful occurrences to life and health in relation to the year before, both internally in the organisation and among suppliers.
No cases of undesirable behaviour.	0 (0)	🟢	There has been an increased focus on psychosocial working environment conditions in 2021. The purpose is to increase the assurance of openness, among both employees and managers in operations and in home offices. Managers with personnel responsibilities complete mandatory HSE training for employee monitoring.
Minimum 1,200 observations (OBS).	1,279 (880)	🟢	OBS is openness about, and reporting of, injuries, adverse events, near misses and improvement suggestions. It contributes to an active approach to one's own working environment, increased understanding of risk and training across the organisation.
Sickness absence < 3.5 per cent.	2.8 (2.2)	🟢	Sickness absence was low in 2021 despite dealing with Covid-19 and continued work on integration.
Increase percentage of women to >25 per cent by 2025.	22 (22)	🟡	The trend in 2021 has been normal. A collaboration has been established with an external partner to strengthen the work on diversity with a long-term perspective.

Status and measures

HSE

In 2021 Hafslund Eco had eight personal injuries, including suppliers, one of which resulted in lost time. The number of injuries per million working hours (H2) for 2021 was 6.9, compared with 13.4 in 2020. There were no injuries to employees that resulted in long-term absence.

The Group has worked systematically to strengthen the HSE culture, increase knowledge and hold managers and employees accountable at all levels in the organisation. Among other things, this is carried out through clear communication, training and clarifying expectations for each role. In Group management meetings and manager and department meetings, HSE is always first on the agenda. Preventive HSE measures and “best practices” are also a topic in management development programmes and at company gatherings. In addition to an internal focus on preventive HSE work across the board, Hafslund Eco has addressed clearer expectations for the HSE standard among suppliers. This is specified in requirements for purchasing processes, audits, the planning of projects and follow-up under way. The Group also maintain close dialogue with its suppliers, with an expectation of transparency in the event of any injuries, adverse events or near misses that may arise during assignments for Hafslund Eco.

In 2021, sickness absence at Hafslund Eco closed on 2.8 per cent. This is a satisfactory result, even though it is a slight increase from 2020. It is important to take into consideration that the organisation is continuing to work on integration after the merger and the persistent pandemic. The Group is conducting targeted work on monitoring sickness absence and on sickness prevention at the individual level, with external assistance from occupational health services (OHS) as needed.

Employees

The Group had 438 employees at the end of 2021. All work must be based on the Group’s values: Open, responsible, innovative. Management and employee organisations cooperate constructively and provide valuable input to address the various challenges facing the Group.

Hafslund Eco aims to be an attractive workplace and wants to have a working environment based on loyalty and trust – and a corporate culture that attracts and develops competent and motivated employees. In 2021, a pilot project was conducted with frequent surveys to gain insight into how employees view their duties, work situation, cooperation and management, among other things. The pilot had a good response among managers and employees, and the solution for employee surveys will be implemented for the entire Group in 2022.

Diversity and gender equality

Twenty-two per cent of Group employees in 2021 were women. This is unchanged since 2020 and an increase from 19 per cent in 2019. Group management consisted of three women and three men at the end of 2021. The number of part-time employees is limited. External help has been employed to assist with increased capacity requirements and to supply expertise on dealing with integration activities. The work on achieving better gender balance and increased diversity will be strengthened in 2022 through a long-term project with an external business partner. New requirements for reporting through the activity duty and duty to issue a statement (Norwegian acronym: ARP) will also strengthen this work.

Expertise

Leading expertise environments are essential for developing today's employees and recruiting new necessary expertise. The Group aims to build one of Norway's strongest expertise resource pools in hydropower production.

In 2021, we started systematic work on manager and employee development to set the stage for the development of expertise. Opportunities for physical meetings were limited during 2021 due to the Covid-19 pandemic, consequently, the Group has held more digital meetings than ideal. There are internal development programmes in Hafslund Eco, and in 2021, a new GNIST programme was initiated with nine participants from Hafslund Eco and 19 participants from Eidsiva. GNIST is the Group's talent development programme. The work on strategic expertise development, common development processes and strengthening of critical expertise within the various technical and specialist areas will continue in 2022.

Ethical business conduct

The Group's code of conduct governs work on ethics and anti-corruption. All employees must behave with respect and integrity towards their colleagues, business associates, customers or others with whom they come in contact.

The Group's code of conduct requires employees to avoid situations where conflict may arise. In order to arrange for reporting of worrisome events, Hafslund Eco has its own whistleblowing channel administered by an independent third party.

Responsible supply chain

Promoting a responsible workplace does not end with the Group's own employees. Hafslund Eco is committed to maintain the highest ethical standards in all business operations. This is highlighted by one of the Group's core values: Responsible.

Hafslund Eco has implemented the Oslo model, which is an umbrella term for a wide range of ethical standards applied in contract terms and conditions for the purchase of goods, services and construction. The Group makes clear demands on suppliers in all goods and services areas. All suppliers and their subcontractors must comply with nationally and internationally recognised principles and guidelines regarding human and labour rights, corruption, health, safety and the environment. The

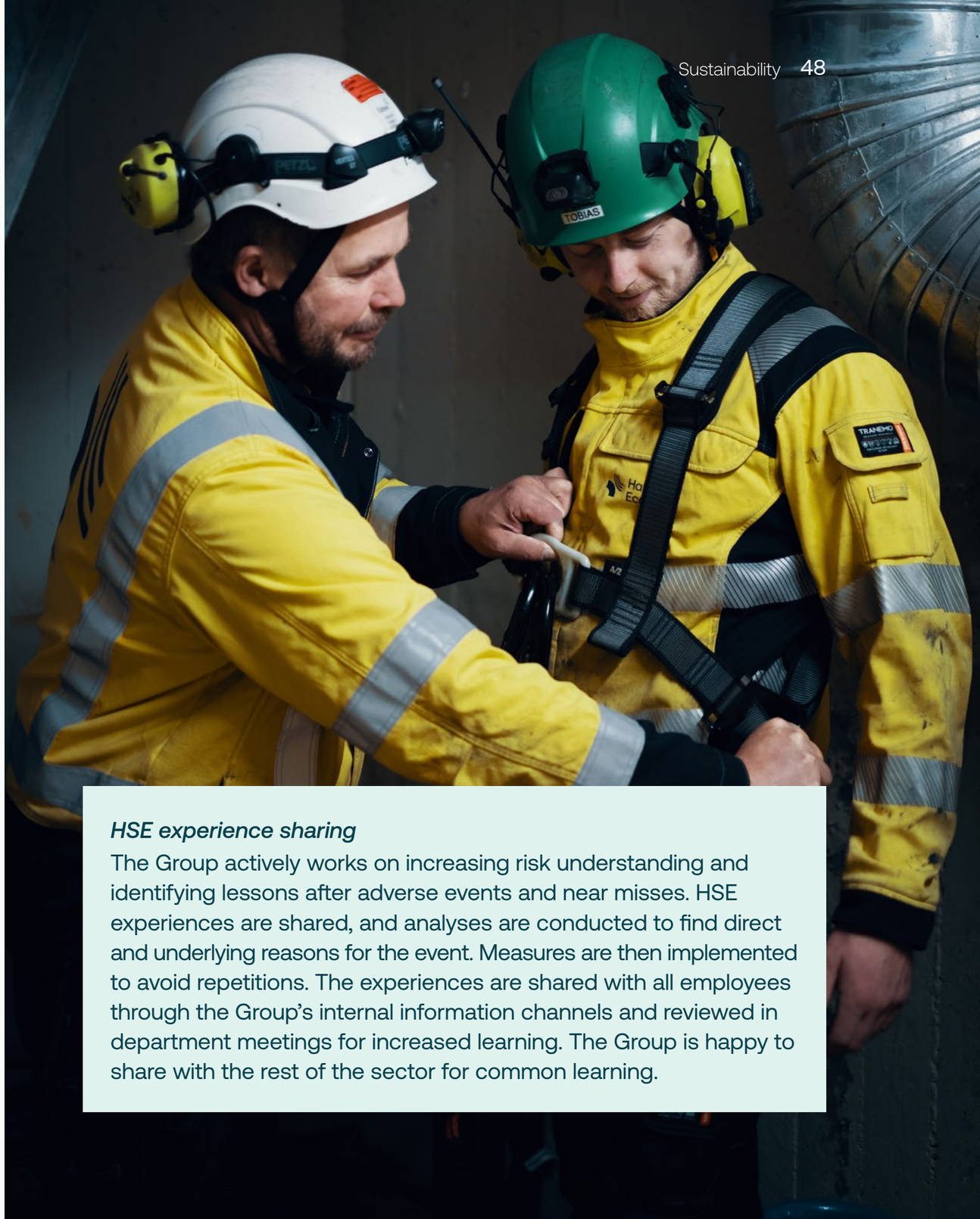
Group purchases shall comply with principles of good faith and fair dealings.

Hafslund Eco has developed a supplier code of conduct based on international ILO and UN conventions. Choosing the right suppliers and partners is essential in promoting a sustainable industry, and Hafslund Eco wants to take greater responsibility for the environmental and social effects in the value chain of which the Group is a part. Efforts to influence suppliers and partners to reduce emissions, improve environmental management and good social conditions continued in 2021.

The Group's purchasing principles stipulate that:

- Hafslund Eco will, to the extent possible and together with its suppliers, come up with good environmental and climate solutions.
- The supplier must ensure that all equipment for use in watercourses is dry prior to use, possibly disinfected, to prevent the spreading of organisms between watercourses.
- Hafslund Eco requires suppliers to be registered in UNCE to qualify to deliver goods and services to the Group's major projects, and only suppliers with environmental management systems are used.

Hafslund Eco has adopted standards for socially responsible procurement to prevent work-related crime and social dumping in the construction industry. These standards aim to ensure decent working conditions for employees and contractors, limit the number of links in the supply chain and promote recruitment of apprentices and trained personnel. These standards were well-received by our suppliers, and in 2021, suppliers have been monitored with respect to compliance with the requirements. Compliance has been monitored in the UNCE system, but due to the Covid-19 pandemic, audits have been limited.



HSE experience sharing

The Group actively works on increasing risk understanding and identifying lessons after adverse events and near misses. HSE experiences are shared, and analyses are conducted to find direct and underlying reasons for the event. Measures are then implemented to avoid repetitions. The experiences are shared with all employees through the Group's internal information channels and reviewed in department meetings for increased learning. The Group is happy to share with the rest of the sector for common learning.

Safety for the surroundings

Hafslund Eco's principles: Hafslund Eco must strive to ensure that its activities do not cause increased risk of injury or incidents for the general public. Hafslund Eco must strive to actively regulate waterways to reduce the risk of flooding.

Goal	Result 2021 (2020)	Status	Comments
No injuries or incidents involving third parties because of company activities.	0 (0)		

Risk

Hafslund Eco's operations result in an increased risk of accidents and incidents involving the general public. The watercourses Hafslund Eco manages are used for hiking, sports and recreation, while also being part of Hafslund Eco's production facilities, and thus affected by Hafslund Eco's activities. Facilities in the watercourse may therefore cause risks that differ from other risks the general public generally encounter while interacting with nature.

Status

The Group works continuously to ensure that watercourse installations are safe to the general public. In 2021, there were no injuries or accidents to third parties resulting from the Group's activities.

Watercourse facilities also contribute positively to protecting the local environment. Reservoirs mitigate floods and reduce the risk of flood damage in the watercourses. Hafslund Eco actively uses the reservoirs to limit and level out flooding in periods of high precipitation and inflow. We maintain close and regular contact with the NVE, regulatory agencies, public authorities and affected parties in flood alleviation and flood situations.

The hydrological year

Hallingdal/Valdres and Aurland

At the end of April, when the snowpack is usually at its greatest, the snow-pack was 96 per cent of normal in Hallingdal and 79 per cent in Aurland. A cool first half of May resulted in a delayed spring thaw. The spring thaw proceeded nicely without major flooding. The water flow at Bergheim in Hallingdalselva culminated at 354 m^3/s (24-hour mean) on 16 May. This is well under the average for the last 20 years (510 m^3/s).

The summer had sparse precipitation. This resulted in extremely low inflows after the spring thaw was over and up until the beginning of October. The summer inflow (May – September) was approximately 75 per cent of normal in both Aurland and Hallingdal.

After a wet October with high levels of inflow, because the precipitation mostly fell as rain, it was dry the rest of the year. The snowpack was slightly more than half of normal at the end of the year in both Hallingdal and Aurland. The annual inflow was approximately 85 per cent of normal in both Hallingdal and Aurland.

At year end, the reservoir level in Aurland was the lowest recorded. In Hallingdal, there was a lower level in 2002.

Innlandet and Glomma

In 2021, the annual inflow in Glommavassdraget was approximately 4 per cent below normal.

At the end of April, the total inflow was 430 m^3/s, which is on par with the lowest observed in the last 30 years at this time of the year. The snow levels in the beginning of April were 85 per cent of normal, and the year's spring flooding was relatively slight. At Solbergfoss, the water flow culminated on 22th of May at 2,000 m^3/s, which is approximately 90 per cent of the mean flood.

The period July–September had less inflow on average than any of the years in the comparison period (1990–2020). Large quantities of precipitation in the beginning of October led to a great deal of inflow and major flooding in the smaller tributaries to the Glomma River, and most reservoirs were filled to normal levels. In December, the reservoirs were heavily tapped during a period with little inflow, and at the end of the year, total reservoir content was just under 80 per cent of normal. The snowpack was then about 70 per cent of normal.

Measures

Hafslund Eco pays great attention to safety measures in and around our watercourse installations. The most common safety measures are permanent fences, gates and signs. Each year, temporary fences and warning signs are set up in areas with weakened ice. The Group also display information online and place adverts in local newspapers and in other channels warning people of the dangers of thin ice in regulated watercourses.

Hafslund Eco regularly perform risk and vulnerability analyses on the safety of the public. Hafslund Eco is a developer that performs major work on reconstruction of old dams, refurbishment and construction of new power plants and grid facilities. In all projects, the Group go to great lengths to protect the safety of the general public by putting up signs and barriers and develop procedures to make sure all activity is contained to clearly defined construction sites. Job safety analyses are carried out for all jobs, which include risk assessments for third parties. Hafslund Eco owns and operates multiple electrical installations connected to our power plants. Ensuring the safety of the public using signs, fencing and safety measures also play an important role here. Examples of specific measures in 2021 included extensive measures on ice protection in Hallingdal, securing the outlet to Rosten and the slope by the gatehouse at Øvre Vinstra, plus signage in Sagefossvassdraget and Golsjuvet.

Extensive ice protection measures in Hallingdal

Hafslund Eco has considerable power production in Hallingdal. For the natural areas to be safe to the general public during winter, the Group each year implements measures for ice protection around the Group's hydropower reservoirs. In both Ustareguleringen and Holsreguleringen, kilometres of ice fences are set up each winter. Throughout the season, the fences are regularly checked, maintained, and moved inasmuch power is produced and the water level in the reservoir is reduced. Dangerous areas are also signed with temporary hazard signs.

Financial contributions to society

Hafslund Eco's principles: Hafslund Eco wants to be an important player in the local communities where the Group operates and endeavours to use local service suppliers and partners whenever possible.

Indicator	Status	Comments
Local taxes and fees.	NOK 1,133 million	The Group pays property tax, natural resource tax, licence fees and concessionary power to the host municipalities.
Taxes and fees paid to the Government of Norway.	NOK 132 million	Resource rent tax, ordinary income tax, licence fees and employer contributions.
Dividend to owner.	NOK 850 million	Dividend paid to the City of Oslo.

Hafslund Eco's activities create value in the local communities in which it operates. Owners receive dividends, employees receive wages, and municipalities and authorities receive revenues through taxes and fees.

Hafslund Eco prioritize working with local service providers and partners whenever possible. Using local service providers puts less strain on the environment and local infrastructure, while also safeguarding local jobs.

Hafslund Eco indirectly contributes to local value creation in the municipalities where the power is produced. The Group operates, develops and maintains existing and new installations. This creates added value by purchasing goods and services from local suppliers and partners.

Risk

Like the Group's results, the Group's financial contributions to society vary to a large extent with production volume and the price of power.

The share of local service purchases depends on available local expertise and delivery capacity.

Status

In 2021, the Government of Norway received NOK 132 million in resource rent tax, ordinary income tax, licence fees and employer's contributions. The figures relate primarily to last year's result, which was characterised by record low power prices. In comparison, tax due on approximately NOK 5 billion at the end of 2021 will be paid during the first half of 2022.

Taxes and fees to host municipalities

Natural resource tax, property tax and the value of concessionary power to the host municipalities from Hafslund Eco in 2021 amounted to NOK 1,051 million. Of this, natural resource tax represented NOK 215 million, property tax NOK 249 million and the value of concessionary power NOK 586 million. About 70 municipalities received such taxes and fees from Hafslund Eco in 2021. Of these, 19 municipalities obtained more than NOK 10 million.

In addition, there are licence fees where the municipalities receive NOK 82 million and the Government of Norway NOK 20 million. The municipalities of Aurland, Vang and Hol receive NOK 16 million, NOK 15 million and NOK 11 million, respectively.

Natural resource tax	Property tax	The value of concessionary power	Licensing fees	Total
215	249	586	82	1,133

All figures in NOK mill. The table includes all taxes and fees from all hydropower plants in the Hafslund Eco Group.

Dividend to owner

Hafslund Eco AS is 100 per cent owned by the City of Oslo. In 2021, a dividend was paid to the City of Oslo in the amount of NOK 850 million. The dividend applies to the 2020 financial year, and the dividend level was adjusted to market and operating conditions, uncertainty due to Covid-19 and the Group's dividend capacity.

Compensation paid to private parties

Development of hydropower plants and regulation installations often triggers compensation to private parties that is determined subjectively. For 2021, total compensation of about NOK 47 million was provided by Hafslund Eco including its subsidiaries and regulation associations.

The largest amounts of compensation involve common lands and large landowners (who may be co-ownerships). The largest was Aurland statsallmenning which received NOK 0.27 million in 2021.

Investments

Investments in fixed assets were NOK 590 million in 2021. Among other things, this includes investments in the new Tolga, Mork and Hinøgla power plants, of which Tolga and Hinøgla were put into operation in 2021.

The Group's investments provide local value creation in the form of activity for local contractors, service suppliers and purchases of goods. The Group's investments vary from year to year, but substantial sums are reinvested in upgrading dams and regulation installations in response to orders from the authorities. The local share of service purchases varies from approximately 10 per cent in pure turbine upgrades to up to 30 per cent in dam rehabilitation projects.

Measures

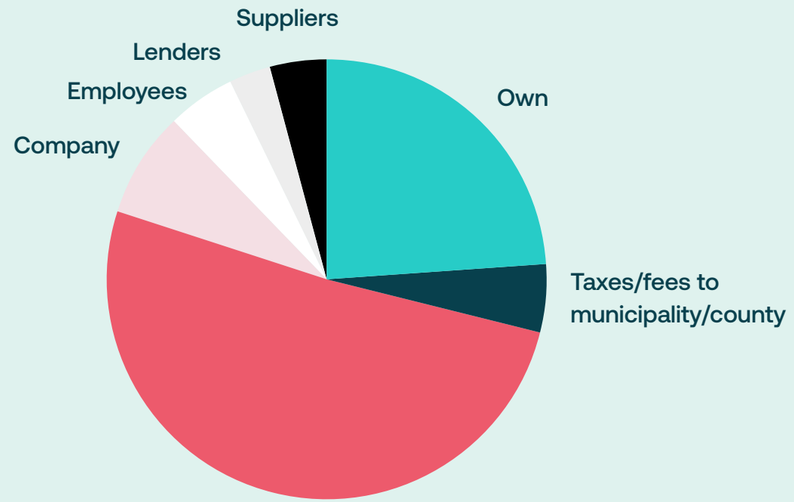
In several of the projects, the contracts with the suppliers have been put together in such a way that it will be easy for local suppliers to make partial deliveries. In connection with large projects, meetings are held with local business associations to provide information about the kinds of goods and services can be needed in the project.

Focus on local ripple effects in the development of Tolga power plant

The development of Tolga power plant resulted in economic ripple effects in the local community. Goods and services totalling NOK 85 million were purchased locally, from contractors, electricians, grid companies and others. In addition, the three municipalities of Tolga, Os and Røros will receive tax revenues from the installation, and Tolga Municipality will get a withdrawal right to six per cent of the power production after 25 years.

The local contractor HR Entreprenører is in the process of establishing a catchment area.

Value creation for 2021 based on recognised earnings amounts



This diagram allocates the recognised earnings amounts, instead of the paid amounts that have been reviewed above. The value creation of the Hafslund Eco Group has been calculated by taking the annual recognised revenue of the year and subtracting transmission costs and values that the company does not itself create (energy purchases and transmission costs, result from affiliates and value changes In land compensation rights). This corresponds to NOK 10,256 million.

Sustainability key figures

Sustainability topic: ***Produce and invest in renewable energy***

Indicator	Unit	2021 Result	2020 Result	2021 Comments	GRI
Production of renewable energy	GWh	18,315	17,839	Hafslund Eco's share of production in all power plants	
Production of Guarantees of Origin	GWh	18,150	17,000		
Production of electricity certificates	GWh	852	800		
Power losses as a result of regulatory revisions	GWh	6.7	-	Hemsil Regulation pursuant to Royal Decree in 2021.	
Hydropower reputation among the population	Per cent	90	86	Share who respond that they view hydropower favourably in TNS Kantar Climate Barometer 2021	
Increased installed output	MW	118.9	103.8	Both reinvestments and new installations.	
Reinvestment in production installations	GWh	28.2	23.3	Upgrade projects and expansions	
Investment in new production	GWh	412	315	The Tolga and Hinøgla power plants (both 75 per cent ownership share) and the Austri Kjølberget wind power plant (20 per cent ownership share)	
Renewable energy projects being planned	MW and GWh	5 MW and 26 GWh	5 MW and 46 GWh	Fosen power plant	

Sustainability key figures *(cont.)*

Sustainability topic: Impact on nature

Indicator	Unit	2021 Result	2020 Result	2021 Comments	GRI
Affected rivers with anadromous fish	Number	3	4		
Affected national salmon watercourses	Number	1	1		
Number of heavily modified water bodies (HMWB), lakes	Number	57	76		303-2
– Did not attain environmental goal(s)	Number	23			303-2
Number of heavily modified water bodies (HMWB), rivers	Number	149	93		303-2
– Did not attain environmental goal(s)	Number	50			303-2
Reported non-conformance with licence conditions to NVE	Number	3	4		307-1
Completed environmental inspections	Number	32	18		307-1
Completed environmental measures	Number	7	6		304-3
– Voluntary	Number	3	6		304-3
Completed environmental studies	Number	41	17		307-1
– Voluntary	Number	36	17		307-1
Setting out salmon roe	Number	350,000	387,500		307-1
Migration in fish ladders and migration routes. Number of fish ladders with monitoring	Number	9	9		
Closed watercourse installations returned to natural conditions	Number	-	-	Two applications are being processed at NVE. In 2021, an application was submitted for a licence to shut down and demolish the inlet dam for the old Sølna power plant. In 2021, an application was submitted to shut down the Hunsjø Reservoir and change the regulationschedule for Hyllsjøene.	304-1
Voluntary release of minimum water flow to protect fish in the watercourses	NOK mill.	12.4	1.7		304-3
Incidents with oil spills	Number	5	3		306-3
Incidents with other accidental discharges	Number	2	-		306-3
Review of chemical use to comply with the substitution duty	Number/year	-	700	No reduction in the number of chemicals in 2021.	306-3

Sustainability key figures *(cont.)*

Sustainability topic: Greenhouse gas emissions and climate risk

Indicator	Unit	2021 Result	2020 Result	2021 Comments	GRI
Scope 1 – Direct emissions of greenhouse gases from the Company's operations	Metric tonnes of CO_2e	619	841	Updated figures for 2020 due to improved calculation method and updated emissions factors.	305-1
Scope 2 – Indirect emissions of greenhouse gases related to energy consumption, location-based	Metric tonnes of CO_2e	243	192	Updated figures for 2020 due to updated emissions factors.	305-2
Scope 2 – Indirect emissions of greenhouse gases related to electricity consumption, market-based	Metric tonnes of CO_2e	-	-		305-3
Scope 3 – Other indirect emissions of greenhouse gases	Metric tonnes of CO_2e	2,954	1,996	Updated figures for 2020 due to improved calculation method and updated emissions factors.	305-3
Share of electric vehicles	Per cent	17	8		
Share of sorted waste delivered to public reception site – Projects	Per cent	84	86		306-2
Energy consumption in the Group	Million MJ	59	50		302-1
Share of electrical energy in total energy consumption	Per cent	87	82		302-1
Critical watercourse situations	Number	-	1		
Incidents with lack of flood diversion capacity	Number	-	-		

Sustainability key figures *(cont.)*

Sustainability topic: Responsible workplace

Indicator	Unit	2021 Result	2020 Result	2021 Comments	GRI
Employees who have completed development discussions and performance reviews	Discussion	-	-	Beginning in 2021, guidance and requirements were prepared for all managers to conduct performance appraisal interviews during the first quarter.	
Use of whistleblowing channel	Number/year	-	-	Digital whistleblowing channel on intranet.	
New employees and turnover	Number and per cent	35 and 3.4 per cent	41 and 3.6 per cent		401-1
Lost time injuries per million hours worked	H1 indicator	1	9		403-2
Injuries per million hours worked	H2 indicator	7	13		403-2
Days absent per million hours worked	F indicator	203	231		403-2
Recording of adverse events and suggestions for improvement	Number	1,279	801	Positive trend and activity.	
Sickness absence	Per cent	2.8	2.2	Slight increase, but still lower than the Group's goal	
Employees who have committed to following the Company's ethical guidelines	Discussion	-	-	All new employees sign ethical guidelines in connection with their employment contracts.	404-3
Employees who have participated in courses on ethics and anti-corruption	Per cent	-	-	No courses conducted in 2021.	205-2
Percentage of women in the Group	Per cent	22	22		
Percentage of women in management functions	Per cent	28	28		

Sustainability key figures *(cont.)*

Sustainability topic: Safety of surrounding environment

Indicator	Unit	2021 Result	2020 Result	2021 Comments	GRI
Injuries among third parties caused by the Group's activities	Number	-	-		403-2
Incidents reported to NVE (accidents and incidents), see NVE reporting form, Section 7-11 in the Dam Safety Regulations	Number	-	2		
Completed risk and vulnerability assessments (RVAs) for public safety according to plan, see Section 7-6 in the Dam Safety Regulations	Number	21	3	Completed RVAs cover many installations.	403-2
Incidents reported to Norwegian Directorate for Civil Protection and Emergency Planning (DSB) (accidents and incidents), see form for reporting accidents and incidents, Section 8 of the Norwegian Safety regulations related to the maintenance and operation of electrical installations	Number	-	-		
Emergency response exercises to ensure a high standard for internal preparedness and flood management	Number	23	14		
Applications to NVE for deviations from regulation schedules or conditions in order to reduce risk of flood damage in time	Number	1	11	Application for advance tapping of Krøderen in spring of improve flood management.	
Incidents with notification to the public of flood tapping according to established procedure	Number	-	1		

Sustainability key figures *(cont.)*

Sustainability topic: Financial contributions to society

Indicator	Unit	2021 Result	2020 Result	2021 Comments	GRI
Group employees	Number	438	434	Slight increase in 2021, partly because of lower recruitment activity in first six months, plus an undertaking transfer of 8 employees.	
Group employees by municipality	Number	56	56	The figure is the number of municipalities that receive income tax from employees of Hafslund Eco.	
Reported value of watercourse compensation to private parties	NOK mill.	47	39	Annual compensation and “free power”.	
Reported volume of free power delivered to recipients in host municipalities	MWh	35,930	35,930		
Contributions to local “compensation funds”	NOK	2,623,026	516,000		
Value creation and distribution to host municipalities in the form of direct taxes	NOK mill.	465	441	Natural resource tax and property tax.	
Financial value creation and distribution to the Government of Norway in the form of direct taxes	NOK mill.	132	1903	Taxes, employer contributions and licence fees paid.	
Interest payments to lenders	NOK mill.	605	568	Including subordinated loans.	
Contributions to host municipalities/county authorities in the form of concessionary power	NOK mill.	586	-17	Benefit of concessionary power. Estimate = volume * (market price in the power plant’s price area -(Ministry of Petroleum and Energy price + fixed part)).	
Contributions to host municipalities/county authorities in the form of licence fees	NOK mill.	82	79		
Total remuneration to employees	NOK mill.	472	445		
Return for owner, city of Oslo, in the form of dividends	NOK mill.	850	700	Dividends paid, including from merged Oslo Energi Holding AS.	

Hafslund Eco

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