



altera
INFRASTRUCTURE

Sustainability Report | 2020

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“Through TEAMwork and innovation we are shaping the infrastructure of offshore energy, leading the industry to a sustainable future.”

-Altera mission

2020 has secured its place in the history books due to the global pandemic of Covid-19. The outbreak of the largest and most intrusive pandemic in modern times has changed how we live, work and interact with each other. 2020 may also stand out as the year that society truly awoke to the challenge and necessity of the energy transition required to meet the goals of the Paris accord.

Our customers are global energy companies producing the hydrocarbons that today constitute the backbone of the energy system required to make the world go round.

But the science is clear - we need to reduce our dependence on hydrocarbons, make renewable energy sources available and affordable, and decarbonize the energy systems. This challenge is massive. As an industry, we need to act with urgency and boldness. At the same time we, as global leaders, must find systems for capital, technology, business models, new industry partnerships and appropriate legislation to work together to chart a desired and necessary pathway.

At Altera we will play our part. Our vision is to lead the industry to a sustainable future. This means that all our innovation efforts, technical and commercial, will be directed at pushing the industry forward. This journey started many years ago and our E-shuttles are a prime example of what is possible when the goal is clear. This new generation of shuttle tankers has set a new industry standard for both fuel consumption and emissions with their ground-breaking technology.

We should not let the big questions stand in the way of what each one of us can do today – for Altera that includes our commitment to find energy efficiencies in our operations, reduce waste and take “cradle to grave” responsibility for our assets. In this sustainability report we share many stories of how our teams around the world integrate ESG topics into our daily work and our culture. It is a journey. Every step of the way reminds us how we can do more, how we can act faster, and how we can be more impactful.

Our most immediate challenge in 2020 was to protect our seafarers and offshore workers from the effects of the pandemic. Many sacrificed a lot. They spent months away from their families and loved ones when the pandemic struck, imposing travel restrictions, quarantines, and confinement onboard. They have been our silent heroes, securing global trade in

unprecedented times. We urge all relevant government bodies to recognise seafarers and offshore workers as key personnel operating on the front line and give them priority access to COVID-19 vaccines. The industry and authorities need to work together to find better ways to facilitate their safe travel between place of work and home.

2020 was also the year we embarked on a new journey, under the name Altera Infrastructure. Our name – Altera – is derived from the Portuguese word for change. We believe the energy transition will induce more change in society the next decades than we have seen since the industrial revolution. We want to use the platform we have created over many decades to transform the industries in which we operate, to meet the decarbonization challenges ahead of us and to pivot into infrastructure solutions that are sustainable for future generations. That is why we embrace such change, that is why we are Altera.

Ingvild Sæther

*President & Chief Executive Officer
Altera Infrastructure Group Ltd.*

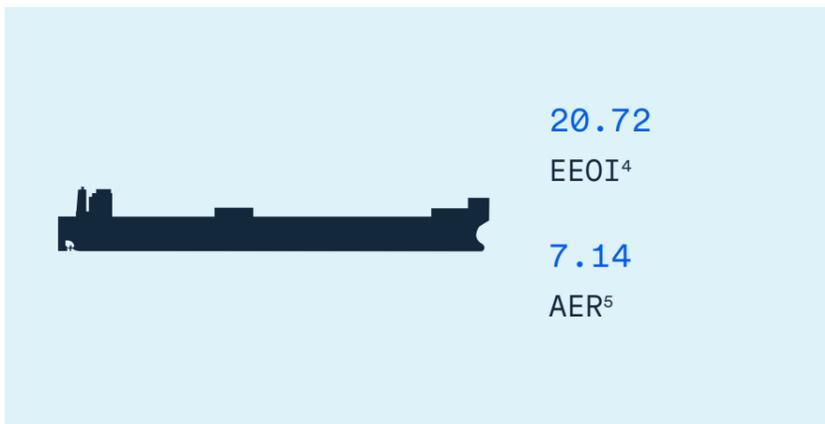
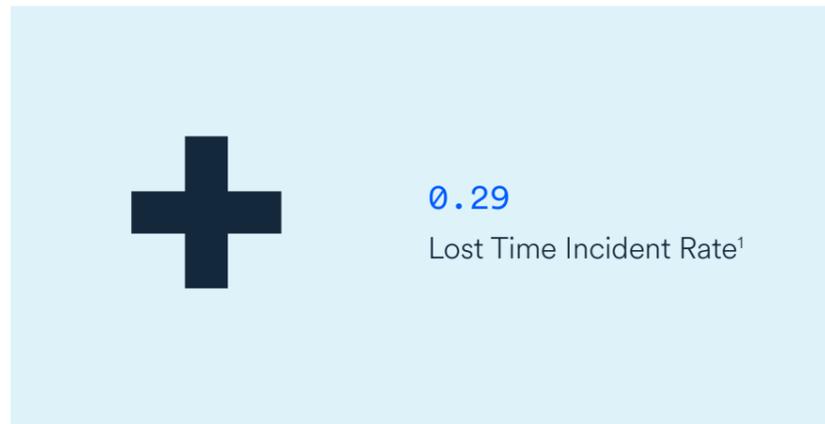
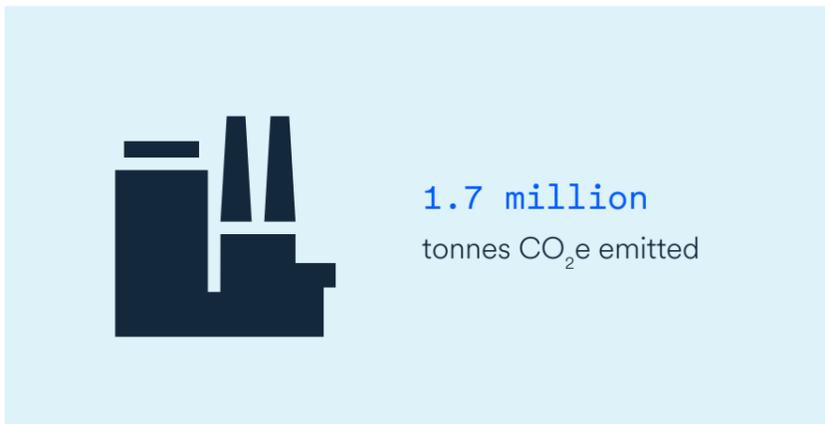
Leading the industry to a sustainable future

► Altera Vision



Altera Infrastructure at a glance

Notes
¹ Per million man-hours.
² Joint ventures are included based on our equity share of greenhouse gas emissions.
³ CO₂e emissions from FPSOs only.
⁴ Shuttle tankers only.
⁵ Shuttle tankers only [gCO₂/DWT-nm].





About the report

This report presents key sustainability-related metrics for Altera Infrastructure (Altera) for fiscal year 2020. Altera's businesses have been covered and reported on as part of the Sustainability Reports of prior owners for many years, however this year's report is only the second sustainability report published under our new brand name and follows the 2019 Report which was published in June 2020. The report contains information based on the Global Reporting Initiative (GRI) Standards disclosures. It has been prepared using the Norwegian Shipowners' Association's environment, social, and governance (ESG) reporting guidelines.

Reporting boundaries

We strive for consistent and transparent reporting in line with industry practice and our stakeholders' expectations. We currently report on Scope 1 greenhouse gas (GHG) emissions and have started reporting on Scope 3 GHG emissions for 2020. We report according to the GHG protocol, based on an operational approach. For our joint venture, we report GHG emissions based on an equity share of 50%. Workforce and safety information, including HSE-related metrics, are reported from an operational control basis. This report includes the business lines Altera Production, Altera Shuttle and Storage, and ALP Maritime Services BV, as well as corporate resources. Economic data are reported on an equity basis, unless otherwise stated. The report for 2020 also includes the Teekay Corporation owned vessels, Petrojarl Banff, Petrojarl Foinaven, and Petrojarl Hummingbird, for which Altera has provided operational services.

Restatement of information

The estimated CO₂-equivalent reduction calculations for our E-Shuttles were made before the vessels were built. We have since discovered that these calculations do not include the negative effect of methane slip, which for the E-Shuttles reduces the CO₂-equivalent estimated reduction from 50% to 40%. See the information on methane slip in the climate change and energy efficiency section for more information.

In the 2019 report we reported our GHG emissions based on asset ownership and all the emissions from our JV owned assets were included. This year we have included all emissions from all assets based on operational control, and the JV emissions are reported on a 50% equity share basis. The historic figures in this 2020 report have been adjusted accordingly.

Regarding our financial statement, we adopted International Financial Reporting Standards (IFRS) effective 30 September 2020. Prior to the adoption of IFRS, the partnership prepared its financial statements in accordance with United States generally accepted accounting principles (USGAAP) or previous GAAP. As a result, the 2019 comparative information has been adjusted from amounts reported earlier in the partnership's financial statements, which were prepared in accordance with its previous accounting principles.

Want to learn more about our governance, including policies, guidelines and statements? Please visit alterainfra.com

We appreciate your feedback, comments and queries on this report. Please get in touch via sustainability@alterainfra.com

Who we are



Our Vision

Leading the industry to a sustainable future.

Our Mission

Through TEAMwork and innovation, we are shaping the infrastructure of offshore energy.

Our Values

Our TEAM values guide our decisions and actions in everything we do.

TRUST

We value and respect each other and we do what is right. Every one of us. As true team players, we are inclusive and resourceful. Our customers, partners, and colleagues can rely on our full commitment to transparency, honesty, and reliability.

EXCELLENCE

We put safety first. Always. Everything we do is shaped by our desire to make a difference and to find the best solutions. Our unrelenting determination to set higher standards for quality and precision allows us to create lasting results.

ACCOUNTABILITY

We keep our word and deliver on our promises. No surprises. Acting responsibly, we create context, follow through, and take ownership of our actions. Our ambitious leadership will help to ensure the industry's relevance and value, far into the future.

MOMENTUM

We bring passion, enthusiasm, and energy to work. Every day. By always seeing the opportunity and being intentional, we are continuously moving forward, embracing change and learning from our mistakes. Our collective creativity and vitality keep us progressing.

2,663

Employees

12

Offices

51

Vessels

11

Countries of Operation

Petrobras, Esso, Equinor, BP, Chevron, Total, Suncor,
Husky, Aker BP, Vår Energi, Shell, Enauta, ExxonMobil

Major customers



What we do

Altera provides critical infrastructure assets to the offshore oil and gas industry. Through our three business lines - Altera Production, Altera Shuttle and Storage, and Ocean Towing and Offshore Services (under our ALP brand) – we maintain a fleet of over 50 assets, including floating production, storage and offloading (FPSO) units, shuttle tankers, floating storage and offloading (FSO) units, long-distance towing and offshore installation vessels, and a unit for maintenance and safety (UMS). The majority of our fleet is employed on medium-term, stable contracts. Our primary markets are the offshore regions of the North Sea, Brazil, and the East Coast of Canada.

Our structure

Altera Infrastructure L.P. is a limited partnership, established in 2006. The partnership is managed and controlled by our general partner, Altera Infrastructure GP L.L.C., which exercises its authority through its board of directors. Accordingly, references in this report to ‘our directors’ and ‘our board’ refer to the board of directors of our general partner.

Until 2020, we traded under the name Teekay Offshore and were a part of the Teekay Corporation (NYSE:TK) group. In January 2020, global asset manager Brookfield Business Partners L.P. (NYSE:BBU) (TSX:BBU.UN) (Brookfield) acquired Altera and owns 100% of our general partner, Altera Infrastructure GP L.L.C. Altera Infrastructure L.P.’s preferred units trade on the New York Stock Exchange under the symbols ‘ALIN PR A’, ‘ALIN PR B’, and ‘ALIN PR E’ respectively.

Effective 24 March 2020, to reflect our new identity as a stand-alone company within the Brookfield portfolio, we changed our name to Altera Infrastructure.

In December 2020, we completed a relocation of our principal office and main place of business from Bermuda to the United Kingdom, specifically to our current office at Altera House in Westhill, Aberdeenshire. Consequently, we closed our Bermuda office and relocated the headquarters of a number of subsidiaries to the United Kingdom, Norway, and Canada.

Our business lines

Altera Production

Altera Production specialises in designing, providing and operating Floating production storage and offloading (FPSOs) to extract hydrocarbons in deep waters and harsh weather conditions for our oil and gas clients.

With our fleet of FPSOs, our highly skilled employees and our 45-year experience in the floating sector, we are the largest and most experienced independent FPSO operator in the North Sea and the fourth largest leased FPSO operator in the world.

As of 31 December 2020, we wholly owned five FPSO units, two of which are in lay-up, and held a 50% stake in two further FPSOs. All operate or are in lay up in the North Sea and Brazilian waters.

Altera Shuttle and Storage

A shuttle tanker is a specialised ship designed to transport crude oil and condensates from offshore oilfield installations to onshore terminals and refineries. Shuttle tankers are equipped with sophisticated loading systems and dynamic positioning systems that allow the vessels to load cargo safely and reliably even in harsh weather conditions, such as those found in the North Sea.

Our shuttle tankers are primarily subject to long-term, fixed-rate time-charter or bareboat charter contracts or are under contracts of affreightment for various fields. As of 31 December 2020, we owned or part-owned 25 shuttle tankers, with ownership interests ranging from 50% to 100%, had three shuttle tankers under construction, and one additional chartered shuttle tanker. Our vessels operate primarily in the North Sea, Brazil, and along the eastern coast of Canada.

Floating storage and offloading (FSO) units provide on-site storage for oilfield installations that have no storage facilities or that require supplemental storage. Each is equipped with an export system that transfers cargo to shuttle or conventional tankers. FSO units are often conversions of older shuttle tankers or conventional oil tankers. These conversions, which include installation of a loading and off-take system, and hull refurbishment, can generally extend the lifespan of a vessel by up to 20 years.



Our FPSO units are generally placed on long-term, fixed-rate time charter or bareboat charter contracts as an integrated part of the offshore field development plan. As of 31 December 2020, we owned four FPSO units, including one in lay-up. These operate in Norway, Qatar, and Thailand.

Units for safety and maintenance (UMS) are used primarily for offshore accommodation, storage and support for maintenance, and modification projects on existing offshore installations, or during the installation and decommissioning of large floating production and storage units, floating liquefied natural gas (FLNG) units, and floating drill rigs. As of 31 December 2020, we owned one UMS, which is in lay-up.

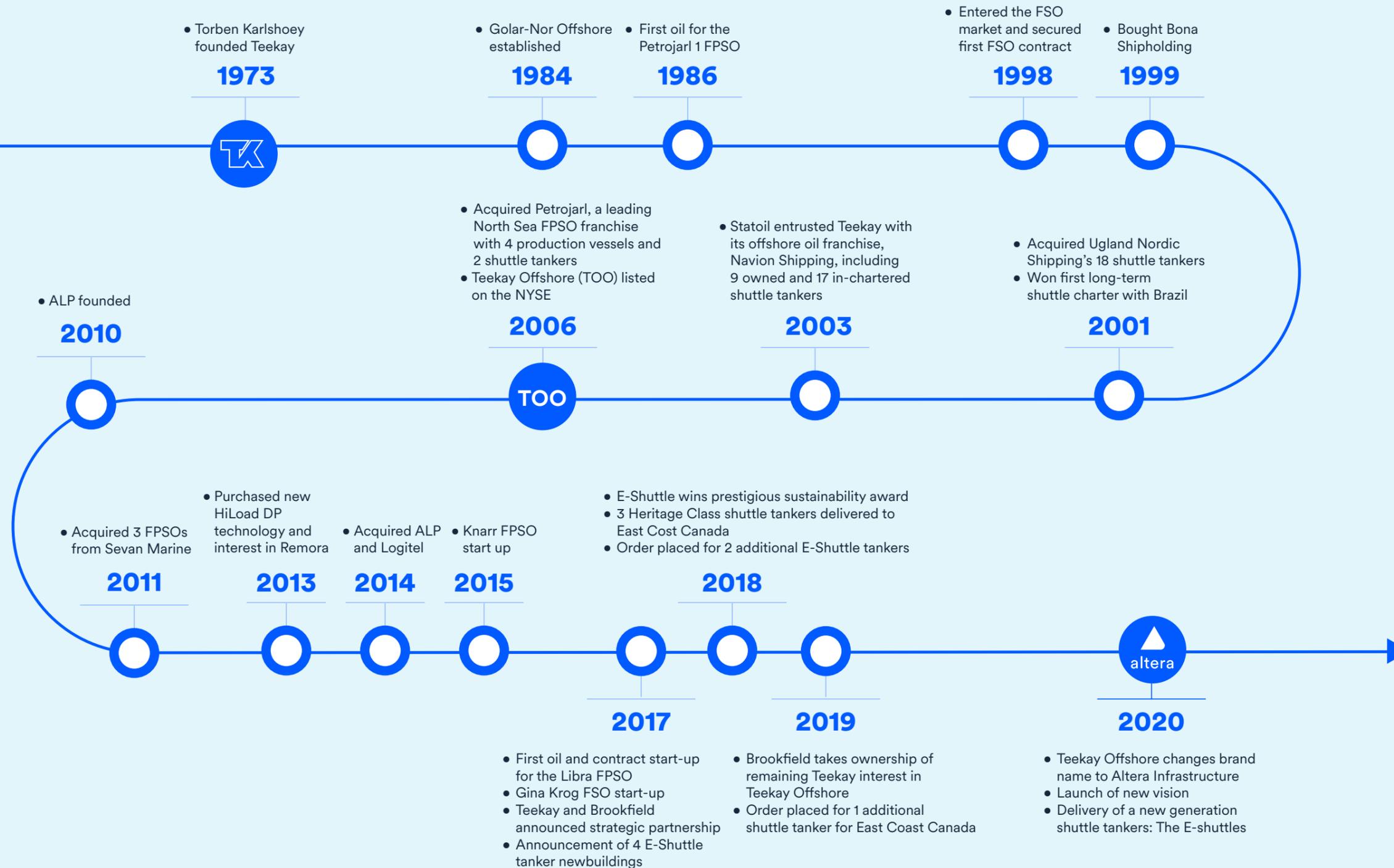
Ocean Towing and Offshore Services

Long-distance towing and offshore installation vessels are used for the towing, station-keeping, installation, and decommissioning of large floating objects, such as production and storage units, including FPSO units, FLNG units, and floating drilling rigs. We operate long-distance towing and offshore installation vessels with a bollard pull generally greater than 200 tonnes and fuel capacity for at least 35 to 40 days of operation. Our focus is on intercontinental towing requiring trans-ocean movements.

Our vessels operate on voyage-charter and spot contracts. As of 31 December 2020, we owned ten towing vessels.



Facts & History



SUSTAINABLE DEVELOPMENT GOALS



Sustainability at Altera Infrastructure

Charting our course

The year 2020 was a time of transformation for us. We completed a corporate separation from our former parent, Teekay Corporation, and established ourselves as a new stand-alone company within the Brookfield portfolio with the vision to lead the industry to a sustainable future. Our vision reflects our ambition to provide the critical infrastructure assets needed to support the energy transition and our pledge to deliver those assets responsibly.

We have long focused on delivering technically innovative solutions to our clients, together with operational excellence and an unwavering commitment to health, safety, security, environmental compliance, and the highest business ethics. In 2020, we took the first steps towards aligning these focus areas into a comprehensive sustainability strategy by launching a renewal of our stakeholder analysis and materiality assessment to identify the social, environmental, and governance (ESG) topics that are most important to our stakeholders and have the most impact, positive or negative, on broader sustainable development goals. This work is inspired by the UN's Sustainability Goals.

Our stakeholders

As a group we have multiple stakeholders. In working to define material topics, we have identified and defined our most important stakeholder.

Our key stakeholders include those parties directly impacted by or with a direct interest in our business activities - our clients, employees, investors, lenders, suppliers, and relevant government authorities. We maintain close ties and engage in frequent dialogue with these parties to ensure our expectations are aligned. Those impacted indirectly by our activities, such as the communities in which we operate, non-governmental public-interest organisations, and the public at large, are also our stakeholders. Although we have not engaged these parties on sustainability matters in a formal way, we will work to do so in the future.

Material focus areas

Since our 2019 sustainability report was published in 2020, we have updated the list of material topics for the group. Based on a comprehensive dialogue initiated with both internal and external stakeholders, we identified 13 ESG topics of key relevance; some new and some that we had already identified. We categorised these topics across three areas of focus:

- **Operational:** topics that are fundamental to our business and constitute our license to operate
- **Strategic:** topics that drive our business forward, differentiating us from our peers
- **Leading:** topics where we can make bold, ambitious contributions defining the future of the industry and our role in it

This report summarises our work and impact, positive and negative, in relation to each of these topics in 2020. In some areas, our efforts have been ongoing over time; in others, our journey has just begun. Regardless, implementation, management, and monitoring of these topics will be further integrated into our business operations in 2021 and beyond.

Operational

The fundamentals of how we operate

- Asset integrity and process safety
- Cyber security
- Compliance and risk management
- Responsible business conduct
- Emergency preparedness
- Local community investment
- Occupational health and safety
- Green operations
- Ship recycling

Strategic

Driving us forward

- Attractive workplace
- Risk and opportunity management

Leading

Leading the industry to a sustainable future

- Climate action and low-carbon technology
- Innovation

■ Environment ■ Social ■ Governance



Sustainability governance

We apply the precautionary principle to all our operations and continuously work to improve sustainability governance across the group. Our board has ultimate authority for sustainability at Altera. The board reviews and approves our Code of Conduct and our compliance programme and oversees our health, safety, security, and environmental performance. Furthermore, the board reviews, approves, and monitors fundamental financial and business strategies, major corporate actions, and relevant enterprise risk assessments. The board has formed several committees to which it has delegated responsibilities in these areas.

Our executive leadership approves our global sustainability policy and sets our sustainability ambitions, while our individual business lines are accountable for delivering on those ambitions and for managing relevant risks and performance. Risks related to sustainability are identified and assessed along with other business risks as part of our enterprise risk management process.

Policies, procedures, and guidelines for topics related to sustainability, including safety, security, labour, compliance, and environmental management are integrated into our group control framework and business-line management systems. Dedicated staff in each business line are tasked with implementing these requirements in our operations. Our management systems are certified in accordance with the International Safety Management Code, ISO 9001, ISO 14001, and ISO 45001.

We use an accountability leadership framework to ensure team and individual priorities are aligned with overall company targets.

Long-term value creation

The segments included in the consolidated financial statements are Altera Shuttle and Storage, Altera Production, and ALP Maritime Services BV.

The table below presents highlights of our consolidated operating results for 2017 to 2020. Each financial year ends on 31 December.

Consolidated operating results

	2020	2019	2018
	<i>(in thousands of US Dollars, except per unit, unit and fleet data)</i>		
GAAP:	IFRS	IFRS	USGAAP
Income Statement Data:			
Revenues	1 182 110	1 252 938	1 416 424
Net (loss) income	(346 163)	(159 067)	(123 945)
Basic and diluted earnings (loss) per limited partner common unit	(0,90)	(0,44)	(0,36)
Non-GAAP:			
EBITDA	165 846	407 790	466 799
Adjusted EBITDA	599 323	673 199	782 521

Read our full 2020 annual report at alterainfra.com



The E-Shuttle Green Bond

Issuer: Altera Shuttle Tankers L.L.C.
Status: Senior unsecured
Outstanding notional: \$200 million
Maturity date: 18 October 2024
Coupon: 3m Libor + 650bps
Listing: Oslo Stock Exchange
Second opinion: Cicero – light-green shading



Proceeds from the E-Shuttle Green Bond were used to partly finance the E-Shuttle tankers Aurora Spirit, Rainbow Spirit, Tide Spirit, and Current Spirit. These vessels are expected to achieve CO₂ equivalent (including GHG effect of VOC emissions reductions) savings before the brackets of approximately 40%¹⁾ compared to the last series of vessels we built for the North Sea.

The newbuilds were delivered during 2020, but due to COVID-19 the delayed commissioning of many onboard systems prevented the vessels from becoming operational in 2020. To assess the environmental performance of the vessels, we have compared official average efficiency ratio (AER) figures reported to the *International Maritime Organization* (IMO) for our last Explorer class vessels built for the North Sea (Amundsen Spirit, Nansen Spirit, Scott Spirit, and Peary Spirit) to the new E-Shuttles.

AER is reported in unit grams of CO₂ per tonne-mile (gCO₂/dwt-nm).

Vessel Class	Annual Efficiency Ratio
Explorer Class	6.56
E-Shuttles	4.72

The results represent an AER reduction of 28%, which is an indicator of CO₂ reductions. However, this figure does not consider the positive effects of VOC emissions reductions, nor the negative effect of methane slip, both of which are unaddressed in the IMO AER methodology. The full emission reduction effects will not become apparent until the VOC reduction plants are fully operational. This is expected to happen during 2021. The first full year of operation with all systems commissioned for all four vessels is projected to be 2022.

¹⁾ The estimated CO₂-equivalent reduction calculations were made before the E-Shuttles were built. We have since discovered that these calculations do not include the negative effect of methane slip, which reduces the CO₂-equivalent reduction from 50% to 40%. See the information on methane slip under the climate change and energy efficiency section in this report.



Responsible business

Ethical business practices

As our assets operate all over the world, we rely on a vast global network of suppliers to support our operations. Our core values of trust and accountability reflect our belief in conducting business ethically and in compliance with all applicable requirements regarding anti-corruption, competition, privacy, and human and labour rights.

In 2020, in connection with our rebranding as Altera Infrastructure, we launched a new Code of Conduct to clearly embed and communicate business ethics in our daily operations. We communicate our Code of Conduct and supporting requirements extensively internally and require our board members, employees, and contract staff to confirm their commitment to the Code of Conduct in writing annually. In 2020, all our board members and 98% of onshore employees and crew completed this written commitment. Our Code of Conduct is further available to our stakeholders on our website and is incorporated by reference in our general terms and conditions.

We have implemented several practices and procedures to integrate business ethics and compliance into our decision-making, including:

- Focused legal compliance risk assessments of ongoing operations and new undertakings to appraise the strength of our compliance programme and inform our consideration of new business opportunities
- A rigorous risk-based, anti-corruption due diligence process for potential suppliers, customers, and counterparties
- Regular sanctions and restricted-party screenings of suppliers and customers
- Sanctions compliance reviews of proposed business transactions
- Mandatory annual compliance training for governance board members, employees, and contract staff, including targeted training for functions with the highest exposure to compliance risks
- Specific fleet-based procedures targeting maritime corruption risks

Highlights from 2020

Our 2020 annual e-learning programme covered anti-bribery, financial integrity, working with third parties, and the appropriate exchange of hospitality. This was completed by all of our board members and 97% of our onshore employees. In addition, more than 130 staff attended targeted anti-corruption webinars.

In 2020, we also built a system interface between our master financial system and our due diligence application to ensure full implementation of our due diligence requirements and create visibility of the compliance status of all third parties in our financial system. We also undertook a broad review of our internal handling of equipment subject to export controls within our fleet to ensure full compliance with these requirements.

Our vessels may face maritime corruption risks when dealing with shore-side port authorities in certain countries, such as persistent requests for cartons of cigarettes from our vessels' bonded stores. Such requests are pervasive in certain locations, but we work consistently against them. We have implemented specific onboard procedures to guide our vessel crew to manage and resist such requests. In 2020, we recorded three instances where a small number of cartons of cigarettes were provided to shore-side authorities from our vessels. In each instance, the value of the cartons provided was less than \$125. All incidents have been booked accurately and transparently in our records and handled in line with internal procedures.

We did not receive, nor were we the target of, any complaints regarding personal-data handling in 2020. We did report two potential personal data breaches to relevant supervisory authorities; both incidents were closed without further action.

We have not been the target of any legal or enforcement actions regarding anti-competitive or monopolistic practices. Nor did we receive any significant fines or non-monetary sanctions for non-compliance with laws or regulations during the reporting period.

In 2021, we plan to revise our compliance risk assessment methodology to further integrate consideration of these risks into our established enterprise risk management process and to design and undertake focused monitoring procedures to test the strength of our compliance practices.

We also plan to undertake a targeted human rights impact assessment to provide a roadmap for more robust management and mitigation of adverse human rights impacts created by our operations.

Reporting concerns

We encourage anyone with concerns about potential misconduct in connection with our business activities to report them – either directly to line management, to the legal, compliance or HR functions, or anonymously via the Altera Reporting Hotline. The Reporting Hotline is a confidential and secure reporting tool administered by an independent third party that allows for anonymous reporting, where permitted by local law. It is accessible to our employees, as well as the general public, via our website.

In 2020, we received seven reports of alleged misconduct in our operations, either directly through our Reporting Hotline or via internal channels. All were investigated and handled in accordance with internal procedures.

Cyber security

As a global company in the offshore industry, we have several unique security risks. The cyber security threat is growing in all sectors and the COVID-19 pandemic has only raised the danger. Reports show that [cybercrime increased by 600% in 2020](#), demonstrating that cyber criminals take advantage of people working from home, which makes both individuals and companies more vulnerable.

We actively work to manage these risks through continuous improvements in our competence, routines, and systems in order to safeguard our people, our assets, and our information. One of our main strategic IT efforts has been focused on raising awareness throughout our company about the risks and implications of cybersecurity threats. Cybersecurity is no longer an IT matter, it is a business matter, and we all play an important role in keeping our company safe. We have a strong safety culture, and cybersecurity needs to be an integrated part of this. Of all cyber-attacks, [97% consist of trying to trick users](#), with 95% of all breaches caused by human error. So, although we have implemented several security measures this past year, our main focus has been, and will continue to be, awareness training and information.

Our improvement efforts are based on the three

levers: people, process and technology. The same applies to our cybersecurity efforts. We need to have the right technology in place, make sure our processes are capable, accountable, and efficient, and empower our people to make the right decisions. In 2020, we implemented several new technological security measures. We have also developed new policies, standards, and procedures as part of our global governance framework. Our processes have been practiced and iterated, to prepare us for possible attacks and incidents.

We have also launched a global training programme where awareness videos and material are distributed to our employees every month, and we have put cybersecurity on the agenda for managerial and operational meetings.

Responsible ship recycling

In 2020, we strengthened our strict audit and inspection regime to include approval of the ship recycling facilities (SRFs) we utilise, beyond the standards set by the Hong Kong Convention. Through active participation in industry forums and our membership in the Ship Recycling Transparency Initiative (SRTI), we promote responsible ship recycling practices on an industry level.

As a responsible shipowner, we take full ‘cradle-to-grave’ accountability for our assets. Our preferred alternative to recycling an asset is always to secure responsible redeployment and we are active in our efforts to find viable opportunities. We will only choose to recycle a vessel if there is no feasible alternative. In 2020, five ships were recycled: four shuttle tankers and one FPSO.

When we do recycle a vessel, we select SRFs on the basis of a strict audit and inspection regime that goes

beyond the standards set by the Hong Kong Convention. To ensure compliance with all applicable rules and regulations, and to minimise health and environmental risk, our dedicated staff with expertise in ship recycling oversee the entire recycling process until the very last part of the vessel has been dismantled. As part of our follow-up work, we collaborate with the SRFs to collectively learn and share competence, with the aim of continuously improving both our and their practices. Through these efforts, we have built close working relationships with top-tier SRFs in India, Turkey, and Norway.

We are promoting responsible ship recycling practices on an industry level, through active participation in industry forums and our membership in SRTI. The vision of the SRTI is a world where ships are recycled responsibly – socially, environmentally, and economically. It goes even further than the leading international conventions and is setting a new norm for responsible ship recycling. Our representative remains on the SRTI steering committee.

“Through active participation in industry forums and our membership in the Ship Recycling Transparency Initiative, we promote responsible ship recycling practices on an industry level.”

As previously reported, in January 2020, Økokrim (the Norwegian National Authority for Investigation and Prosecution of Economic and Environmental Crime) and the local police carried out a search of the premises of Altera Infrastructure Norway AS (formerly Teekay Shipping Norway AS, not a part of the Shuttle Group) in Stavanger, Norway. The search and seizure warrant was issued pursuant to suspected violations of Norwegian pollution and export laws in connection with the export of the Navion Britannia shuttle tanker from the Norwegian Continental Shelf in March 2018. Having reviewed relevant materials together with our advisors, we continue to believe that we acted in accordance with the relevant rules and regulations and deny the alleged violations.

Recycling projects relating to assets owned at end-of-life by Altera Infrastructure group companies in 2020:

Vessel	Recycling Location	Project Start	Project Complete
Stena Sirita	Turkey	January 2020	June 2021
Navion Hispania	Turkey	January 2020	June 2021
Petrojarl Cidade de Rio das Ostras	India	May 2020	March 2021
Navion Bergen	India	September 2020	Projected H2, 2021
Apollo Spirit	Turkey	December 2020	Projected H2, 2021

Apollo Spirit – The Swiss Army knife of ships

As responsible shipowners, we always seek to maximise the lifespan of any vessel, as long as it is sustainable and safe to do so. The oldest ship in our fleet, Apollo Spirit, is a remarkable example of repurposing.

In 1976, she was built as an LNG carrier named El Paso Cove Point at Avondale Shipyards in New Orleans. Due to cracks in the tank insulation and a downturn in the economy, she was never used for her original purpose. Instead, she was converted into a dry bulk carrier. Jade Phoenix carried her first cargo in 1983 and even transported grain from the US to Egypt.

In 1991 she was again converted, this time to a Single Buoy Mooring (SBM) Floating Storage and Offloading (FSO) vessel named Nordic Apollo, to serve the Choasset Panuke Oilfield off the east coast of Canada.



El Paso Columbia and El Paso Cove Point at Avondale Shipyard (Photo: Karsten Petersen ©)



Apollo Spirit



Apollo Spirit during recycling in Turkey

Come 2000, she was given new life again. As the Apollo Spirit, a Submerged Turret Loading (STL) FSO vessel, she was stationed on the Banff Field off the Scottish coast until December 2020 when she took her last voyage to a ship recycling facility in Turkey. The vessel will be recycled and the steel used afresh – perhaps in yet another ship sailing the world’s oceans.

Responsible supply chain

In our global operations, we depend on suppliers from all around the world. We expect the same of them as we do of ourselves—they need to comply with our Code of Conduct and give the same consideration to their social and environmental impact as we do.

In 2020, we have aligned supply chain systems and processes across the company. Sustainability policies, standards, and procedures will be further coordinated over the coming year. Moreover, we will implement human rights reviews for our organisation in 2021.

In 2020, we purchased goods and services from more than 2,800 suppliers for a total of \$660 million. We strive for continuous improvement and engage closely with key partners to identify ways to improve our social impact and reduce our environmental footprint. These activities range from lessening environmental impact of catering and housekeeping on our FPSOs to close partnership with our key equipment suppliers in the development of new energy-efficient and low-emission vessels.

Production

In Production, purchases for our Norwegian operations accounted for approximately \$50 million, UK operations \$135 million, and Brazil operations \$45 million. Our supply chain management department is responsible for the management of all purchases for all entities in Altera Infrastructure Production.

Shuttle and Storage

In Shuttle and Storage, main areas of operations are the North Sea, East Coast Canada, and Brazil. Purchases in 2020 amounted to approximately \$290 million, supported by the procurement department in Norway, Brazil, and Manila.

ALP

Serving worldwide operations, Towage purchased goods and services for \$55 million in 2020, with procurement support from our supply chain team in Manila.

Membership of Associations

In Altera, we believe in cooperation and sharing of best practices, both internally and externally, to help improve health and safety, sustainability, and operational performance.

Here is a selection of associations where we are a member:

- Norwegian Oil & Gas (NOROG)
- Norwegian Shipowners Association (NSA)
- SINTEF Low-emission Research Centre
- Ship Recycling Transparency Initiative (SRTI)
- Oil and Gas UK
- Step Change in Safety UK
- ABESPetro (Brazil)
- Norwegian Brazilian Chamber of Commerce
- Green Shipping Programme (Norway)

Local community investment

Our business is co-dependent on all of our stakeholders from employees and investors to suppliers and the local communities where we operate. We believe that, as a truly sustainable organisation, the way we interact with all stakeholders is critical to our long-term success.

We are proactive and we take our responsibilities very seriously. We work as a team and encourage our employees to become actively involved in helping their communities and to continue our tradition of raising funds, donating to those in need, and contributing to a cleaner environment.

Offering a helping hand

As an integral part of each of our local communities around the world, we take our responsibility to make life a little better very seriously. The way we interact with all of our stakeholders – local communities included – forms the basis for a successful and sustainable business. Taking responsibility doesn't only mean meeting our legal requirements. It means caring and being proactive, whether it's raising funds for good causes, donating to those in need or contributing to a cleaner environment.

Here are a few of the areas where we made a difference in 2020:

- A partnership with Dream Learn Work, which offers young Brazilians from less-developed areas a chance for a better future
- The Norwegian Red Cross project in Stavanger 'Network after Prison', where volunteers provide much-needed support for recently released prisoners integrating back into society
- Donations to local sports teams for kit and equipment
- Sponsoring the Heritage Class SPIRIT Award, which provides a scholarship for a student enrolled in the Nautical Science or Marine Engineering programmes at the Marine Institute of Memorial University of Newfoundland, Canada
- Financial aid for WWF, via the Norwegian Broadcasting Corporation's telethon appeal
- Funding for Highland Hospice in Kishorn, Scotland
- Financial support for 'Caring Café', which helps drug addicts, homeless, and the poor in Trondheim, Norway
- Monetary assistance for Lochcarron shinty sports club, Scotland
- Financial support for the Salvation Army
- Economic aid for Florø Volunteer Centre, Norway
- Gifting furniture to a seniors' home in Macaé, Brazil
- Financial support for Community Food Initiative North East, UK

Moving tribute in Brazil

In early 2020, with the move to new premises in Rio de Janeiro, our Macaé office found itself with a significant surplus of furniture and other equipment. Printers, projectors, and excess office supplies were happily received by Dream Learn Work (see article on page 34), while furniture and white goods were gifted to Recanto dos Idosos, a home for seniors in Macaé.



Dream, learn, and work for a better future

Our partnership with the Brazilian organisation Dream Learn Work continued through 2020. By giving financial support and our time, we helped this innovative non-profit organisation offer young Brazilians from less-developed areas a chance of a better future.

Many young people from poor, low-income areas in Rio de Janeiro lack a basic understanding of what their professional opportunities are. Often, they have few positive role models. Levels of crime and drug-trafficking are high, and they run the risk of losing their lives or futures to opportunities for short-term gains.

Dream Learn Work encourages young people to choose education through targeted information, inspirational meetings, motivational workshops,

seminars, and company visits. It offers life-skills development and vocational training at recognised educational institutions, with close follow-up during and after the courses. It's this approach that helps keep students motivated through their studies. Even in 2020, a full 97% completed their courses.

On graduation, students are helped into the labour market through active recruitment practices, such as employment and internships with partner companies, sharing of employment opportunities through social media and building a corporate network of HR professionals.

During the pandemic, Dream Learn Work distributed grocery staples, personal hygiene products, and cleaning supplies to help programme participants and their families in the most challenging of times.



Buoy ahoy

A forty-year-plus challenge is finally over. A very large orange buoy has been slowly working its way upstream in the Viker river, near Brønnøysund in northern Norway. Despite numerous attempts to remove the buoy – one group even tried to set fire to it – the environmental NGO In the Same Boat finally succeeded where others failed.

The buoy was too heavy for a standard helicopter lift and too remote for vehicular access, so ingenuity and hard work were put into play. Using ropes and hoists, the intrepid team of twelve dislodged the obstruction, pulled it to the riverbank, and waited for high tide, whereupon it was coaxed downstream and transported further

to a recycling facility. We congratulate In the Same Boat on its resourcefulness and are honoured to have sponsored the organisation with nearly \$6,000 in 2020.

It's In the Same Boat's goal to reduce litter and clear the Norwegian coast of discarded plastic. By combining professional methodologies with volunteer manpower, the NGO clears beaches along the entire length of the country; not a mean feat when you consider Norway has Europe's longest coastline. To learn more, go to inthesameboat.eco.

Through TEAMwork and innovation, we are shaping the infrastructure of offshore energy.

▶ Altera Mission



Climate change and energy efficiency

We believe that human activity significantly contributes to climate change. Global warming is here and its effects are apparent around the globe. We support the Paris Agreement, IMO 2050, and the transition to a net-zero-emissions industry.

Business context

It is likely that fossil fuels will remain an important part of the world's energy mix in the decades to come, even with a significant increase in renewable energy sources. This underlines the importance of energy efficiency and technological development for the oil and gas industry.

We recognise that the world's energy systems must be transformed in a profound way to drive decarbonisation, while at the same time ensuring universal access to affordable, clean energy and realising the United Nations Sustainable Development Goals. As a global operator in the oil and gas industry that supplies the world with oil, we have a significant negative impact on climate change.

Our carbon footprint is strongly related to emissions from production and transport of oil and gas.

Managing and reducing emissions are priorities for us and we are fully committed to finding solutions for a low-carbon future.

The process to identify and manage our climate risks in accordance with the Task Force on Climate-related Financial Disclosures' recommendations will be initiated in 2021. Focus will be on how to adapt our existing oil and gas-related activities, and the long-term transitional risks and opportunities for our industry in a decarbonized future.

Our actions

Energy efficiency

In 2020, we reduced our overall energy consumption by 5% compared to 2019. Overall emissions of CO₂ are also in steady decline. This is a result of our continuous and thorough focus on reducing

emissions across our fleets. We are committed to minimising emissions from our operations by focusing on operational optimisation, as well as the adoption of new technologies. We also partner with other companies and research institutions in pursuit of a low-carbon future.

Altera E-Shuttles

When we embarked on a fleet renewal programme in 2015, we recognised the importance of building vessels that are relevant throughout their entire 20-year-plus lifespan. Technological advances today are progressing at a rate many times faster than seen over the last two decades. We also see stronger environmental regulations, especially with regard to energy efficiency, and a move towards low-to-zero carbon emissions. To safeguard the substantial investment a Shuttle tanker newbuild programme represents, we developed the most future-proof design possible.

This was partly funded by the Norwegian Ministry of Climate and Environment through its ENOVA programme, which helped us realise delivery of our E-Shuttles in 2020.

The fuel-optimised design and technological advancements allow both LNG and potential VOC emissions to be used as fuel. Since the vessels use gas-electric propulsion, installation of future electric power sources, such as fuel cells, is also possible. Furthermore, with the ability to utilise potential zero-emissions fuels, such as Bio LNG or environmentally friendly synthetic methane, the vessels are made future proof.





The innovative future-proof E-Shuttle design has led to the most energy efficient shuttle tankers ever built. We are excited to set new standards for both fuel consumption and emissions. The following figures show estimated reductions compared to our last shuttle tankers built for the North Sea:

- Annual CO₂ equivalent emissions reduced by 40%
- Annual NO_x emissions reduced by 80%
- Annual SO_x emissions reduced by more than 95%
- Annual fuel consumption reduced by 11%
- Annual VOC emissions reduced by 95%

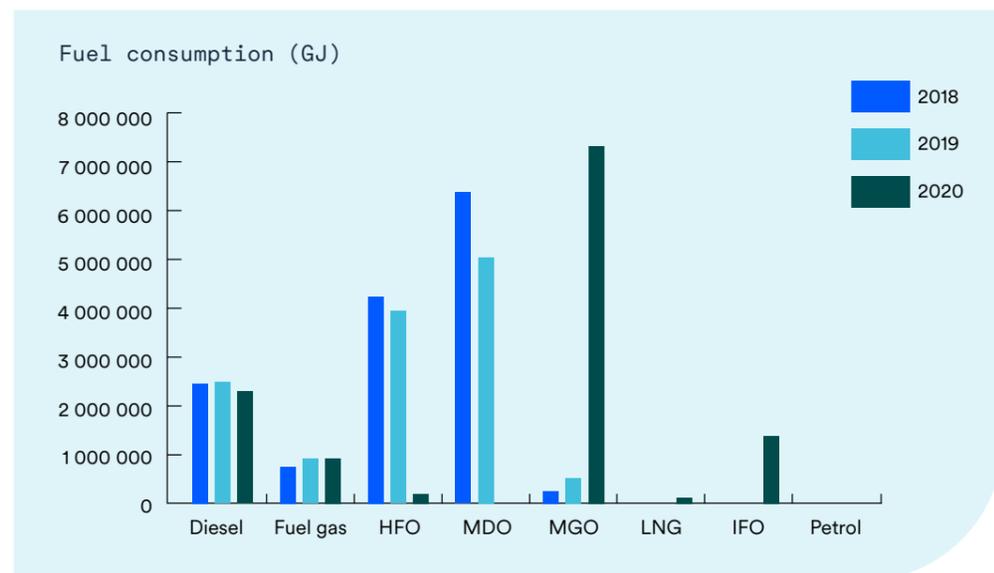
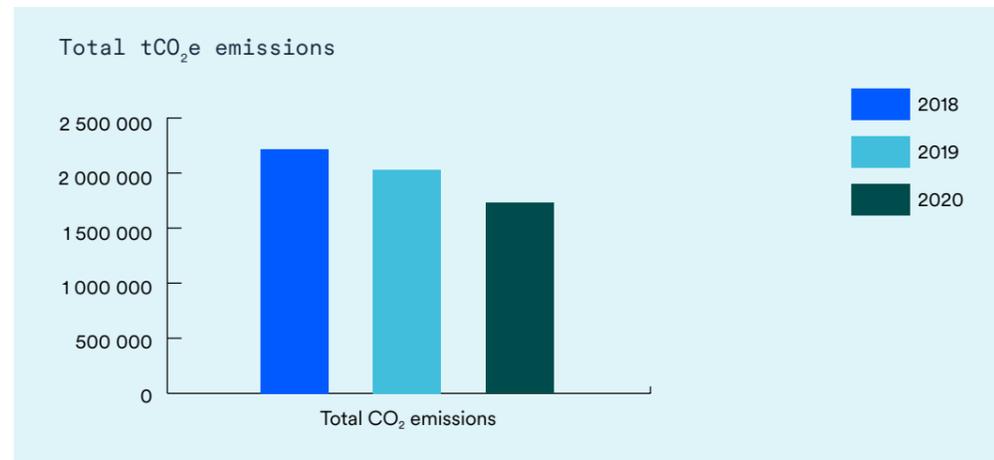
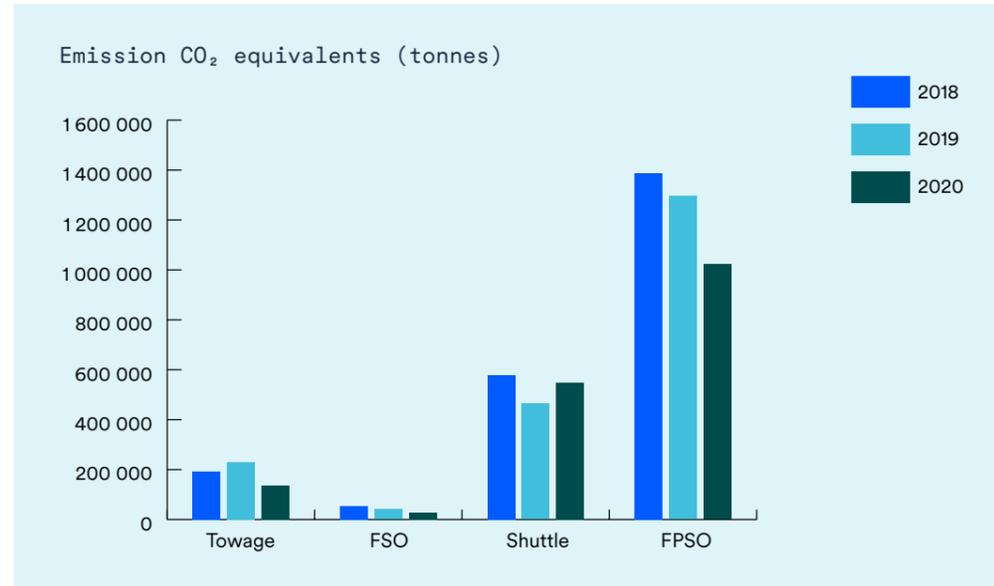
Our E-Shuttles have won several industry awards and nominations, including:

- Tanker Shipping & Trade Environmental Award 2018
- Top-four nomination for the 'Next Generation Ship Award' at Nor-Shipping 2019
- Rystad Gullkronen - Green Initiator of the Year Award 2019
- Seatrade Fuel Efficiency Award 2019
- Sulphur Cap Emissions Reduction Award 2020

Our performance

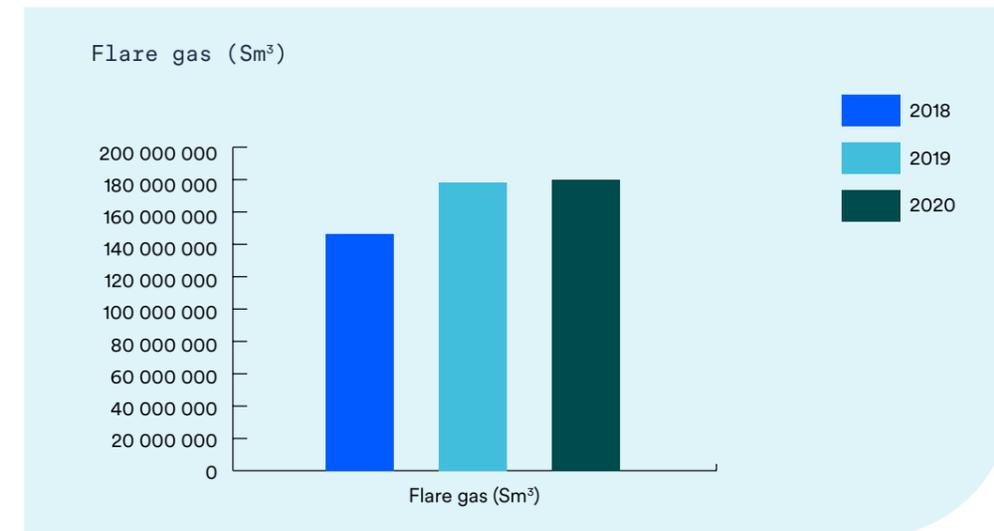
We monitor overall GHG intensity for our activities by tracking GHG emissions and dividing these by our annual turnover. We see that our total CO₂ emissions for 2020 is reduced compared to 2019. Our emissions in tonnes of CO₂e per million dollars has decreased by 9%. We have yet to establish a quantitative overarching goal for this key performance indicator for Altera as a whole. However, in 2020 for our shuttle tankers, we have set an ambitious target of a 50% reduction in average efficiency ratio on a fleetwide level by 2030 compared to our 2008 performance.

This target is beyond the 40% reduction set by IMO in the same time period. The 2020 AER for our shuttle tankers was 7.14. A more detailed analysis of our 2008 baseline and our 2020 and 2021 performance will be included in the 2021 sustainability report. In 2021, we will start the process of determining specific GHG-related targets for our other business units as well.



Flaring

Flaring is still one of the major sources of emissions for our production fleet, even if we have seen a decline in recent years. For 2020, we observed a reduction of GHG emissions compared to 2019, at the same time as the amount of flaring was increased slightly. This change is due to the varying installation's flare gas composition: In 2020, two of the FPSOs we operate – the Petrojarl Banff and the Voyageur Spirit – both in the North Sea, came off contract. It must also be highlighted that our continued focus on eliminating routine flaring has given effect, and installations such as Piranema Spirit, Itajai and PD Libra, have reduced their emissions from flaring.



Methane slip

When vessels run on LNG, as our E-Shuttle tankers, there is a certain portion of the methane from the LNG that does not fully combust. This leads to small amounts of methane emissions. Even though the methane emissions are relatively low, their CO₂ equivalent global warming potential over a 100-year perspective is 25 times that of CO₂. With an estimate of 4g methane emitted per kilowatt-hour of energy produced by the engines, our total estimated emissions are 238.2 tonnes of methane in 2020.

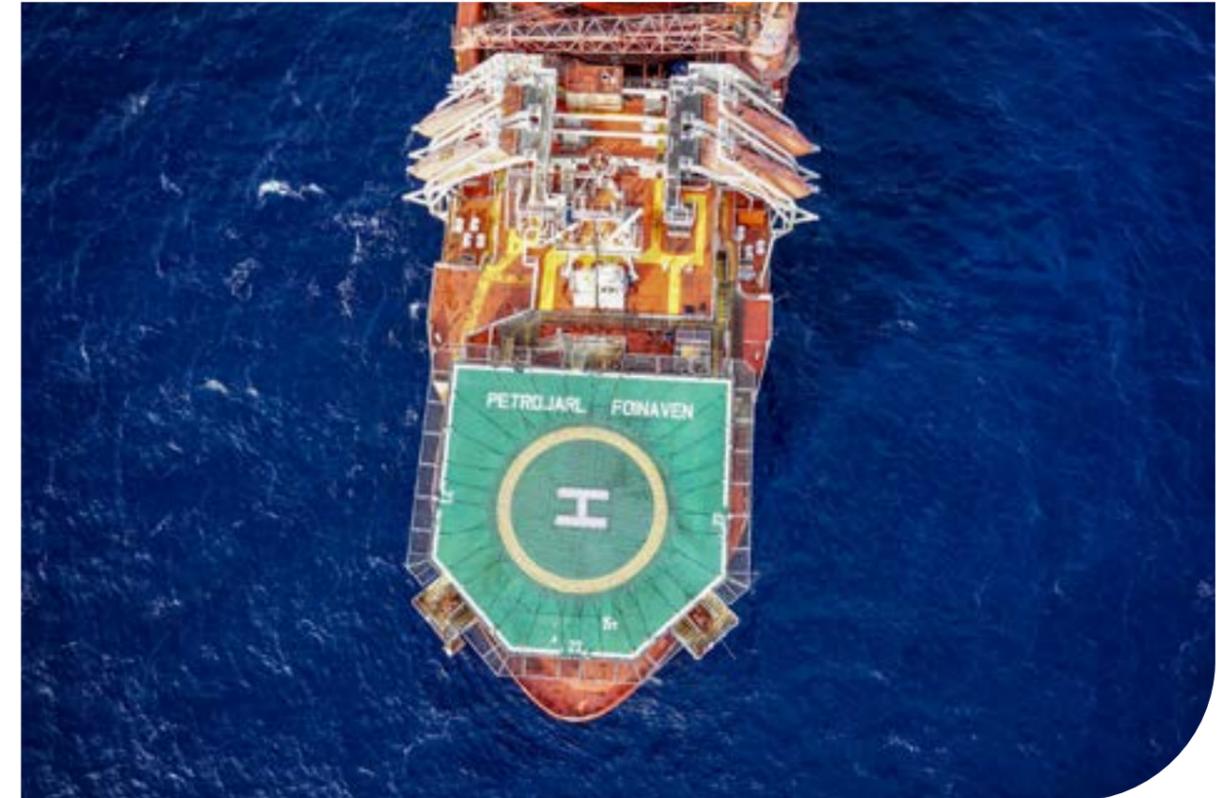
Environmental impact

Our oceans cover over 70% of the planet's surface and are more biodiverse than anywhere else on Earth. As we operate in this incredible environment every day of the year, it's essential that we play our part in ocean conservation by minimising our impact as much as we possibly can.

Business context

We evaluate and monitor environmental performance in all aspects of our operations and are always looking for ways to reduce our environmental footprint. We recognise that the impact from our offshore activities, including discharge of produced and processed water, is significant, and aim to mitigate the consequences. We continually focus on optimising production, reducing chemical use, and switching those chemicals we do use for more environmentally friendly alternatives. We minimise all discharges and waste and dispose of these in a responsible manner.

Dedicated and competent employees are essential in identifying and deploying the best solutions to meet our environmental responsibilities. We work continuously to avoid spillage and report and investigate spills to identify root causes and ways to prevent recurrence. In addition, we have up-to-date spill response and emergency preparedness procedures to minimise any potential consequences.



Green Teams

Each of our FPSOs has a dedicated Green Team. These are environmentally focused resource groups that everyone on board the vessels can join. Their mission is to find improvement opportunities for the environmental performance of their vessels. These teams meet regularly to discuss and elaborate on relevant ideas, which they share within the fleet. Over many years, Green Team members have made a difference to our operations with their thoughts on how to improve our environmental performance. Together with offshore management, they have established improved technical and procedural solutions in processing facilities, identified energy-saving measures, such as improved turbine optimisation, and instigated various waste reduction initiatives. The Green Teams' efforts have received significant recognition from our customers, as well as improving our overall environmental footprint.

Our actions

Altera works continuously to improve our own environmental footprint and challenge our suppliers on theirs. We only engage with business partners who share our ambitions on environment and sustainability. In our own operations, we work to reduce waste production and to properly segregate and recycle our waste. In 2020, we have worked to align waste data between our different business units.

Cutting plastics

We are acutely aware of the rapid increase of plastics in the world's oceans and are working to reduce our plastic use wherever possible.

We have installed filters to refine drinking water on our towing vessels, saving 70,000 single-use bottles annually. Similar initiatives are implemented across our fleets—reusable drinking bottles are now widely used instead of single-use bottles. Single-use cutlery, cups, and shoe covers are now either banned or considerably reduced. Just by removing single-use plastic shoe covers from our FPSOs, we save an estimated 78,000 pairs per year for each vessel.



Cleaning up with WWF

In October, the Norwegian National Broadcasting Company held its annual telethon 'NRK TV-aksjonen'. Every year since 1974, this high-profile event has collected funds for a chosen charity. In 2020, it was the turn of WWF.

The fundraiser is the world's largest, measured in terms of donated value per capita and number of participants. The monies raised will aid WWF's efforts in tackling plastic pollution at source by establishing and improving waste management systems for more than 900,000 people living in Thailand, Vietnam, Indonesia, and the Philippines.

To support WWF's efforts, we connected our annual Norwegian Beach Clean-Up Day to the fundraiser. Friends and family joined us and we quickly managed to pick up several hundred kilograms of rubbish from the coastline close to our Trondheim and Stavanger offices.

Ballast water management

The transfer of invasive marine species through ships' ballast water is of major ecological concern, which is why the IMO has implemented the strict Ballast Water Management Convention. We use tailored technology specific to each vessel type to ensure compliance with this treaty.

Setting VOC-reduction standards

Our operations emit Volatile Organic Compound (VOC) gases during loading of crude oil. VOC gases contain mainly methane and propane. Both contribute to the greenhouse effect, but the Non-Methane VOCs (NMVOCs) form ground-level ozone that can harm both human health and plant life.

The NMVOC emission limit on the Norwegian Continental Shelf (NCS), established in 2002, drove the formation of the VOC Industry Cooperation (VOCIC), which consists of all NCS field license owners using shuttle tankers to transport crude oil. This group collectively invests in onboard VOC reduction technologies and reports its members' NMVOC emissions to the Norwegian Environment Agency.

We have held the VOCIC Administrator role since the start of the alliance, which means we provide technical support to all shuttle tanker owners on the NCS with VOC reduction technologies onboard their vessels. We also monitor emission performance, set budgets, and make short- and long-term investment plans on behalf of the group. Since its launch, VOCIC has spent close to \$500 million on VOC reductions.

Our performance

In 2020, we experienced four spills of oil or chemicals to the sea. Two of these were below two litres, one was 1,241 litres of cooling fluid, and the most serious was 268,000 litres of diesel from a minor crack in a tank onboard the Petrojarl Foinaven FPSO. An investigation concluded that the leak had been ongoing for some time. Improvements in systems and procedures were then implemented, both onboard this FPSO and on all FPSOs in our fleet, to prevent this type of leak from happening again.

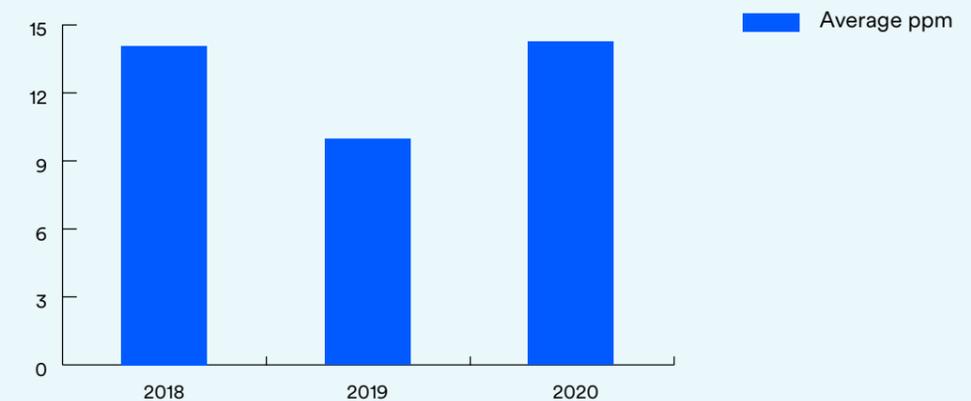
Chemical spills

	2020	2019	2018
Number	1	6	1
Volume (liter)	1 241	2 224	0,5

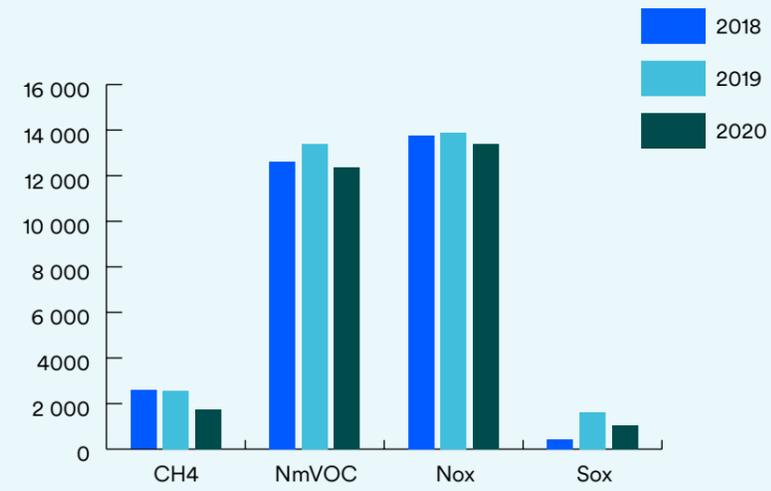
Oil spills

	2020	2019	2018
Number	3	1	5
Volume (liter)	268 002,8	0,5	769

Oil in Water – average ppm

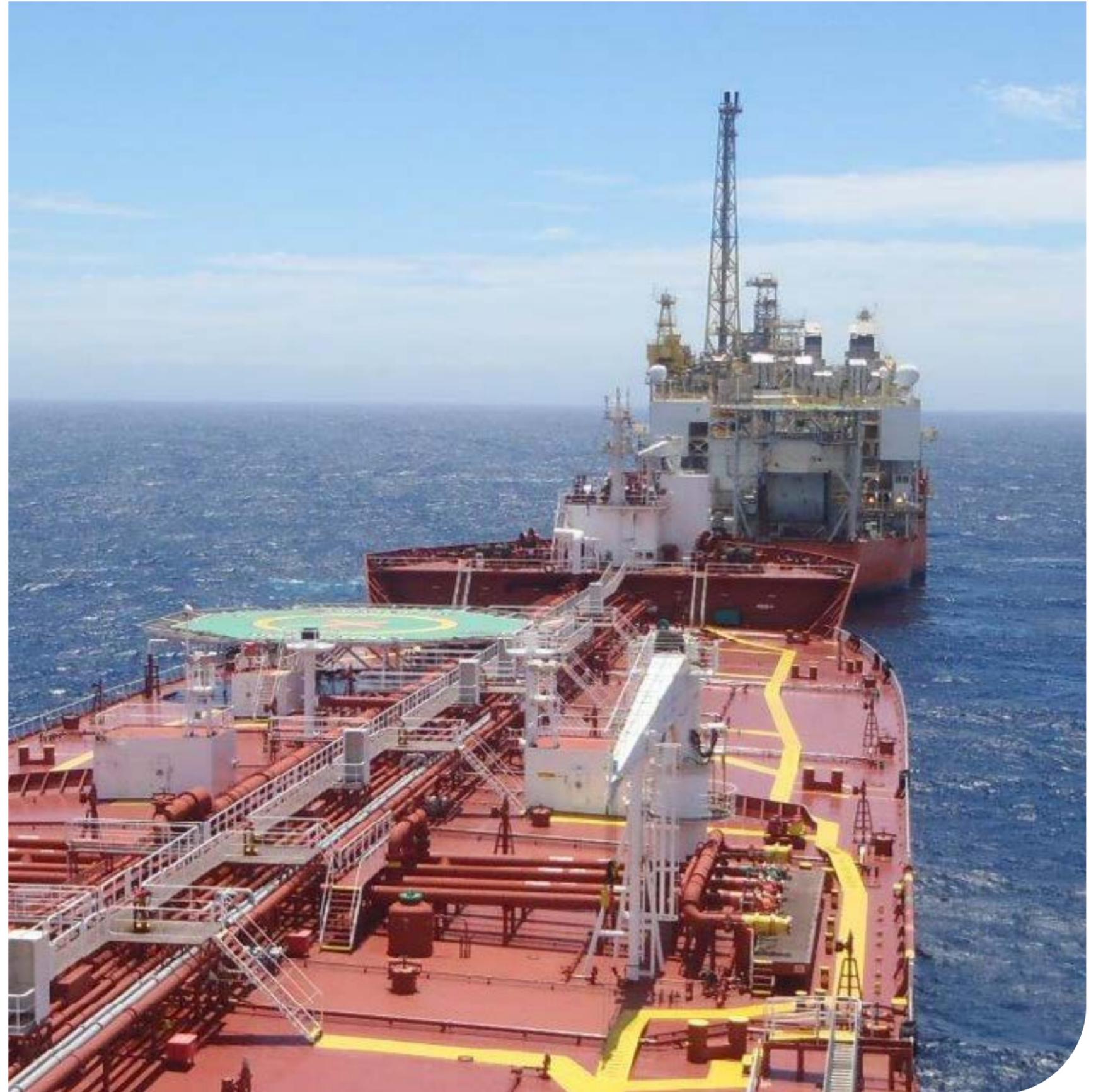


Other emissions to air (tonnes)



VOC emissions

	2020	2019	2018
NM VOC emissions [tonnes]	12 367	13 402	12 620
Methane emissions [tonnes]	1 740	2 578	2 584



Safe operations



Business context

The health and safety of our personnel is our first priority and a prerequisite for our operations. Our goal is zero incidents. We incorporate a strong risk and opportunity-based approach to safety in our strategic and daily decisions and meet or exceed all applicable legislation and regulatory requirements.

To fulfill our responsibilities, we:

- Use well-established and proven procedures, systems, and tools
- Extensively train our personnel
- Ensure safety is a line responsibility
- Actively engage with our employees and their representatives
- Empower everyone to stop work when safety is at risk
- Manage hazards to prevent major accidents
- Systematically identify, assess, and control health and safety risks
- Continuously improve our processes and performance
- Only engage with business partners and suppliers who share our approach to health and safety

An important factor for the success of our health and safety policies is our culture. Transparent reporting and training of our people offshore and onshore is essential and forms a platform for continuous development. Everyone is encouraged to suggest ideas and improvements, and report incidents and hazards. This feedback is shared across our fleets to improve the way we work.

Our actions

Since February 2020, we have concentrated on preventing the spread of COVID-19 onboard and in our offices onshore with preventive measures, protocols, and guidelines. The pandemic and the measures taken to combat it have placed a great strain on our people, particularly our crews—many are onboard for long periods, many are concerned for their families, and many have had to spend weeks in quarantine hotels at the beginning and end of their rotations. To address these pressures, we increased our focus on

good mental health and wellbeing. We introduced new mental health awareness training for our managers and the ‘Make a Change’ campaign aimed at all employees. These were in addition to the extensive training matrixes everyone onboard must complete and keep up to date to maintain safe operations. Despite the pandemic, we have managed to maintain an excellent safety record in 2020.

Our extensive experience of operating offshore and the continued synergising of cross-system data has improved the way we work generally and enabled us to build a cumulative risk model to better understand potential hazards, improve asset integrity, and prevent accidents.

Behaviour-based reporting and hazard reporting show that crew members have been supportive of each other and have continued to build our onboard safety culture. Several tailored activities were implemented in 2020, including health checks, fitness awareness, a relaunch of our operational leadership programme for shuttle crews, heavy-lifting safety and PPE awareness campaigns, and increased emphasis on the management of change process and behavioural safety in our towage fleet.

Emergency preparedness has always been important for us, which is why we train weekly to ensure our emergency response teams are prepared for any scenario. In 2020, this training incorporated both Covid-related exercises and new routines for handling emergency preparedness scenarios from home offices. The tools and processes for handling emergency response situations in the FPSO fleet have now been extended to our shuttle tankers and the Altera and Ocyan joint-venture fleet of FPSOs in Brazil.

To ensure healthy and safe home-office working, we have provided office personnel with furniture and equipment such as chairs, and monitors. We’ve also added guidance on the best ergonomic practices for structuring their personal working areas and on the importance of ‘moving while working’, and generally keeping active.



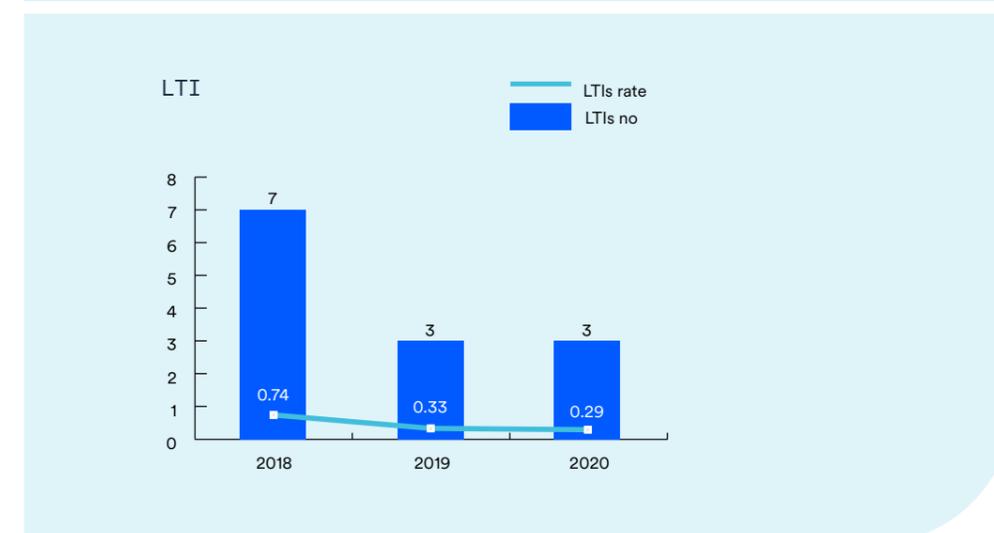
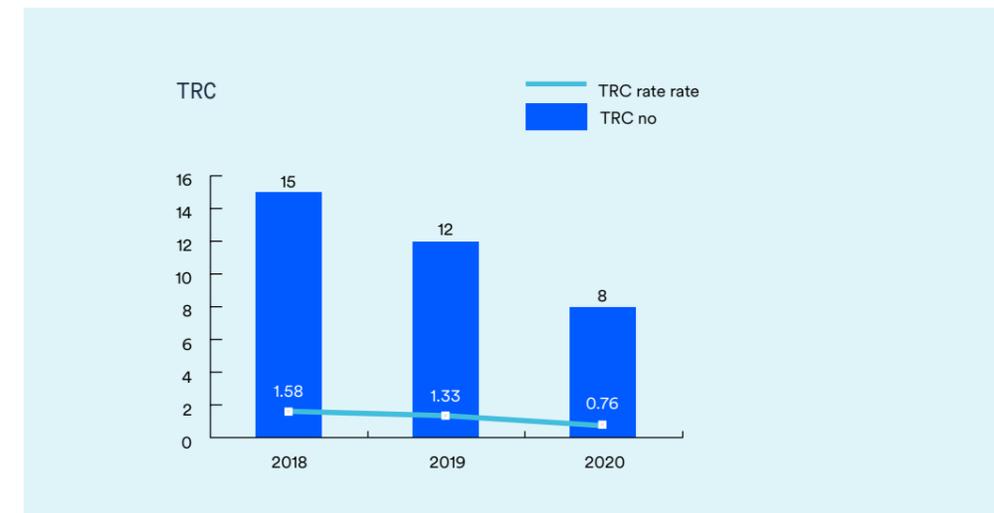
Our performance

In 2020, we had three lost-time incidents (LTIs); one dislocated shoulder, one fractured thigh bone, and one sprained ankle. As we aim for zero incidents, we are unhappy with this result. In 2019, the number of incidents was also three, down from seven in 2018, giving a low rate of 0.32 per million manhours. We actively work to meet our target by investigating and learning from each incident, as part of our greater safety focus.

Total reportable-injury case (TRC) frequency was 0,76 per million manhours in 2020, down from 1.33 in 2019, which shows a satisfying downward trend.

We had no serious gas leaks above 0.1 kg/s in 2020, which is the same as 2019 and a notable reduction from five leaks in 2018. This shows our systematic work to prevent leaks is paying off.

Proactive reporting stays high in our FPSO fleet through our Safe Card system. All observations and ideas are shared throughout the entire company with some even being nominated for the President HSE Award. See next page for more details about this initiative and the winners for 2020.



Looking after our mental health

Keeping mentally healthy in current times has been more challenging than ever. The isolation of lockdown, home schooling and working, and the disruption to routines have taken their toll. Our people's health and wellbeing are top priorities for us, which is why we introduced mental health awareness training for our managers. This training increased their knowledge and gave them the confidence and tools to identify and help those struggling. To assist further, our campaign 'Make a Change', run during Health Awareness Month, raised awareness of the importance of physical activity and a balanced diet, closeness to nature, and generally taking care of ourselves.



Awards for excellence

Our President HSE Award is presented to employees with remarkable achievements or who have shown exceptional initiative in the areas of health, safety, environmental protection or sustainability. For the FPSO fleet, four President HSE Awards were given in 2020:

- Joseph Rotheram, for his notable work as a safety representative onboard the Hummingbird FPSO.
- HR and logistics teams in Norway, UK, and Brazil, for the extraordinary work ensuring safe travel for our offshore crews during the pandemic.
- The offshore medics and nurses, for their outstanding and extraordinary efforts during decommissioning and in tackling COVID-19.
- Andrew Hutchison onboard Petrojarl Foinaven FPSO, in recognition of his proactive critical thinking, which identified a potential safety issue.

We congratulate all of our recipients.



Clap for Carers

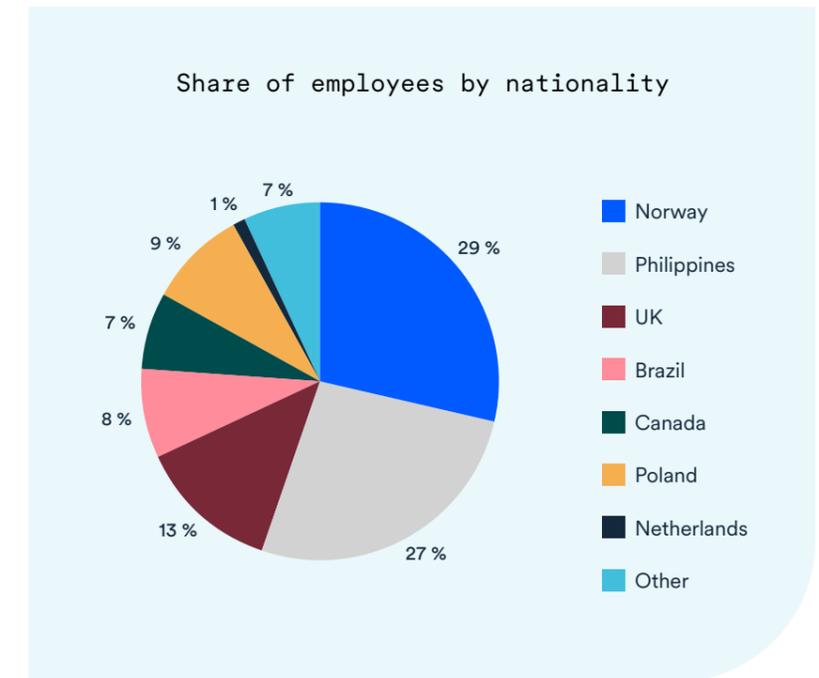
The crew of our three FPSOs operating in UK Waters – Foinaven, Banff, and Voyageur – joined the 'Clap for Carers' initiative to show appreciation for the incredible work of all UK National Health Service staff and other key workers tackling the COVID-19 crisis.

Our people and competence



Business context

We are a company of accountable, skilled people who thrive in our inclusive work environment. Our employees are competent, well trained and committed to operational excellence – they value and respect each other, create mutual trust, and succeed together. At the end of 2020, we employed 2,663 people from over 30 countries. The leading nationalities with employment contracts are Norwegians, Filipinos, British, Polish, Brazilian, Canadian, and Dutch citizens. A total of 28% of employees are covered by collective bargaining agreements.



Our actions

The way we work

Our framework of high-level common policies and processes, complemented by more detailed local procedures and handbooks, is constantly reviewed and updated. Policies cover areas such as recruitment and selection, use of drugs and alcohol, anti-discrimination, anti-harassment, and fraternisation.

In 2020, we saw no confirmed instances of discrimination in Altera.

In our 'People Portal' on the intranet, employees can find relevant information and tools in one central location. This has naturally been updated with support and guidance regarding COVID-19, including practical information on crew travel, safety protocols and guidelines, and advice on how to work remotely and manage teams from home.

Our focus is to ensure that our people's time is spent on value-added activities. We are taking steps to reduce manual work and reporting by introducing performance dashboards. Offshore, we are introducing tools like connected worker, sensor technology and remote-access to work smarter and more effectively.

To ensure alignment and information sharing, frequent team, departmental and townhall meetings are held, and company updates provided on our intranet. These meetings have increased during COVID-19 to ensure we stay connected.

Strategy and leadership

A key milestone was achieved in January 2020, when our new vision, mission, and values were rolled out to the entire organisation. Workshops were held across the organisation in January to ensure employees became personally connected to the vision, mission, and values, and committed to following them with meaning and action.

Our leadership approach follows the LEAD principles; leverage, engage, align, and develop. To ensure clear expectations and common understanding, leadership training has been developed in 2020 with rollout in 2021. The Executive Leadership Team meets regularly with the aim of maintaining a common direction for the organisation and further enhancing leadership at all levels.

For all leaders, COVID-19 means a change in how to follow up teams and individuals. Employees have had very different reactions to the working situation during the pandemic, which has required even closer and more individual follow up. There have been different forums for managers to discuss and share experiences, and to develop best practices.

Training and development

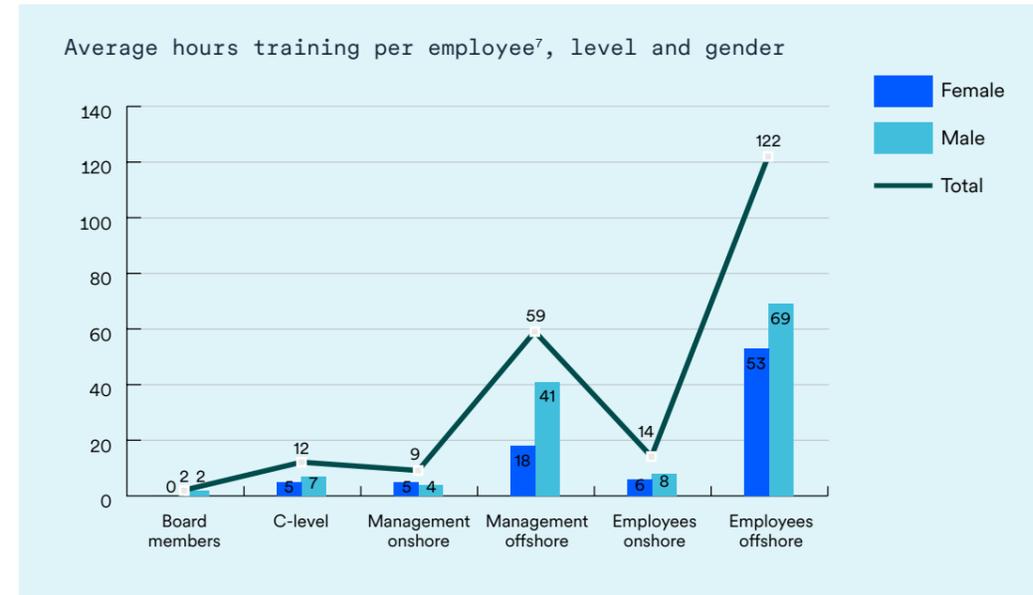
Training forms an integral part of our safety management and competence management systems. All training objectives and programmes are determined by national, international, regulatory, and industry requirements, and are continuously reviewed, adjusted, and improved.

Our employees have a set of training requirements related to their position or role, which are typically organised in a training matrix. Relevant professional development activities can also be included. The matrix is reviewed continuously to ensure that we always have the required skills available at any given time. The main focus area in 2020 was to ensure compliance with training requirements during the COVID-19 pandemic when many training centres were closed.

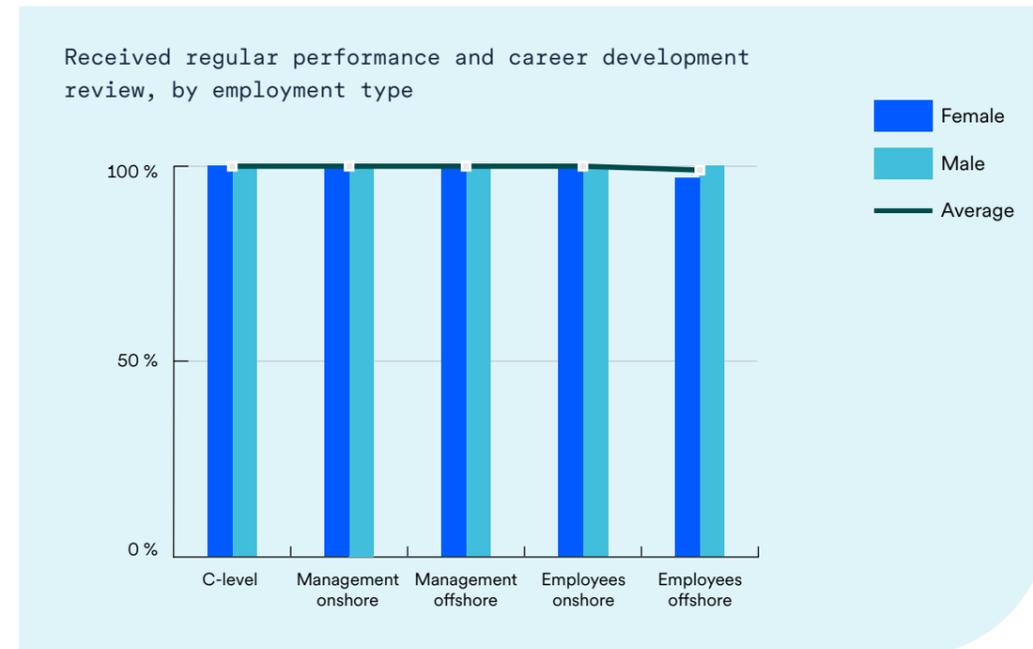
Exemptions from regulatory requirements were granted by most authorities, which meant much training was postponed. However, alternative compulsory basic training was provided to a large extent.

Training of all onshore and offshore managers, and mental health awareness initiatives have been prioritised to help handle the consequences of the pandemic. In total, we provided more than 127,000 hours of training to employees throughout the year.

To ensure that our employees reach their full potential, we are implementing a process for reviewing their roles and capabilities to create an effectiveness review tool for personal development. Senior Management were trained in this tool in 2020 with full implementation scheduled for 2021, including integration in all performance reviews and check-ins.



⁷ Includes both onshore and offshore employees.



Our performance

We set annual goals at group level, business-unit level, and individual level through accountability plans.

It's our belief that a high proportion of permanent employees drives ownership, accountability, and motivation. In total, 26% of our employees work onshore and 74% onboard our vessels. At the end of 2020, 86% were permanently employed.

Attrition varies considerably across business units

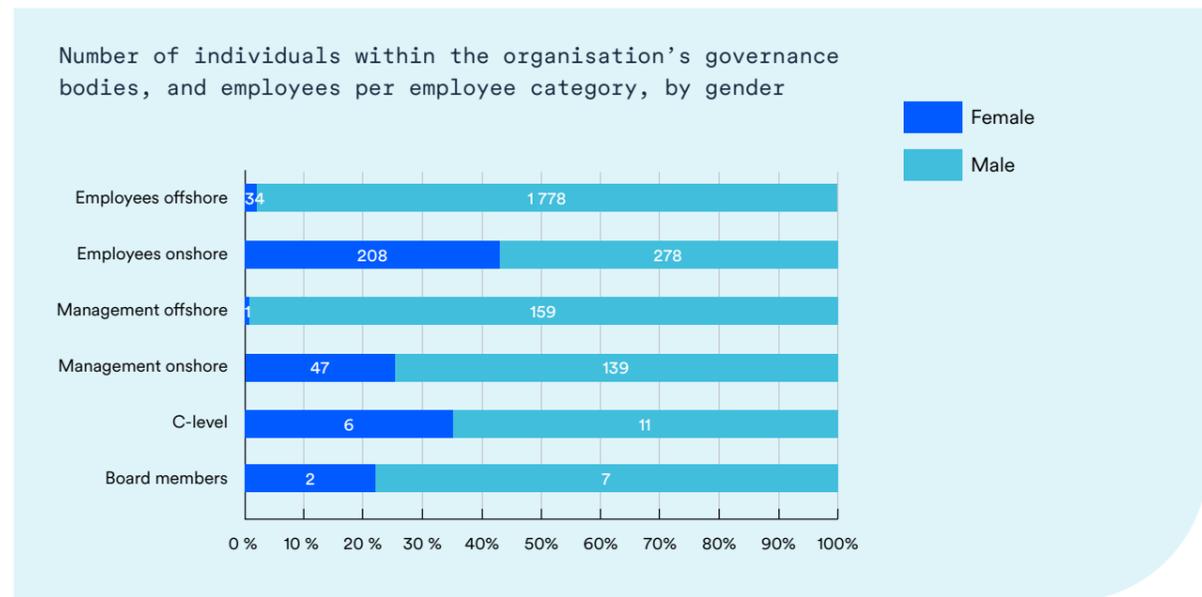
and fleets. It is a constant focus area for us, and we strive to manage attrition at industry leading levels, while we continue to implement relevant actions and initiatives.

For the FPSO fleet, as contracts were terminated for two vessels operating in the UK sector, 98 offshore employees were made redundant. However, we secured new placements for 36 of these on other vessels, including temporary contracts, which mitigated the overall impact. For those working onshore, the effect was minimal as we moved them to alternative work on other customer-financed projects.



The industries we operate in are traditionally male dominated, which is reflected in our employee profile. In 2020, 38% of our onshore employees were female. Amongst our seafarers and offshore personnel, this number is 2%, which means 13% of our total employees are female. In 2020, our executive leadership team included one woman, our CEO, and the extended leadership team included eight women.

Turnover 2020 (2019)			
	Shuttle and FSO	FPSO	Towing
Onshore turnover %	0.6 (3.4)	3.4 (10.53)	4.2 (4.0)
Offshore turnover %	1.5 (2.1)	18 (7.4)	0 (11.7)



Attractive workplace

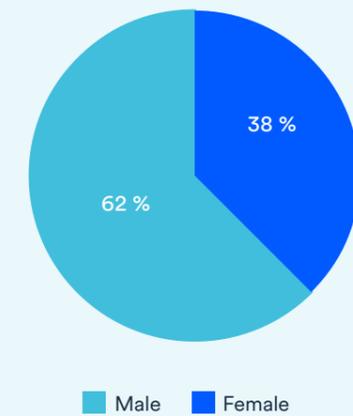
We have always been able to attract and retain highly competent and committed people. The positive feedback we get from employees indicates that our workforce is motivated by challenging tasks, a trust-based culture, competent colleagues, and a friendly working environment.

We have a strong team of highly skilled professionals. As we prepare for future growth, we will build on existing competence to develop our employees, as well as strengthening our company with supplementary external resources in defined areas. Technological developments demand new skills to operate existing vessels, which is one reason why employee development is very important to us.

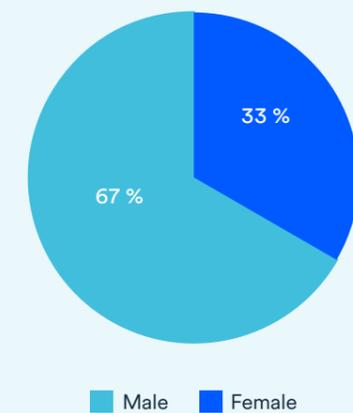
During 2021, we will benchmark and align the compensation structure for our onshore organisation to ensure that we are competitive and fair, and to facilitate smoother transfers across locations and business units.

We are making changes to improve our learning culture and see this as a prerequisite for being successful in the future. With rapid change and technological growth, we need to transition from 'knowing it all' to 'learning it all'. Furthermore, as an attractive employer, we need to provide employees with opportunities to both upskill and reskill.

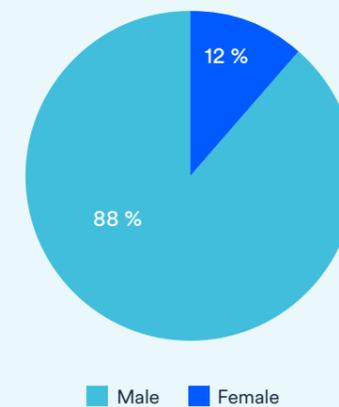
Share of employees by gender onshore



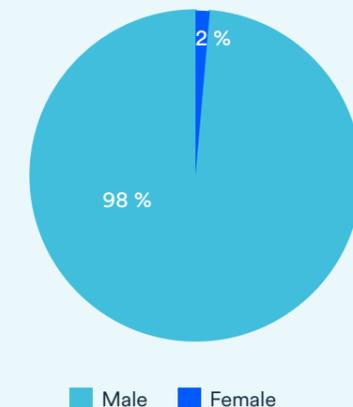
Share of employees by gender in the Extended Leadership Team



Share of employees by gender



Share of employees by gender offshore



Innovation

Business context

Much of our success can be attributed to innovation and our willingness to embrace technical advances, new systems and processes, and improvements in working practices. We place innovation at the core of our business, as evidenced by the introduction of our groundbreaking E-Shuttles, to create long-term value and meet the energy infrastructure needs of the future.

Our initiatives

Next-generation FPSOs

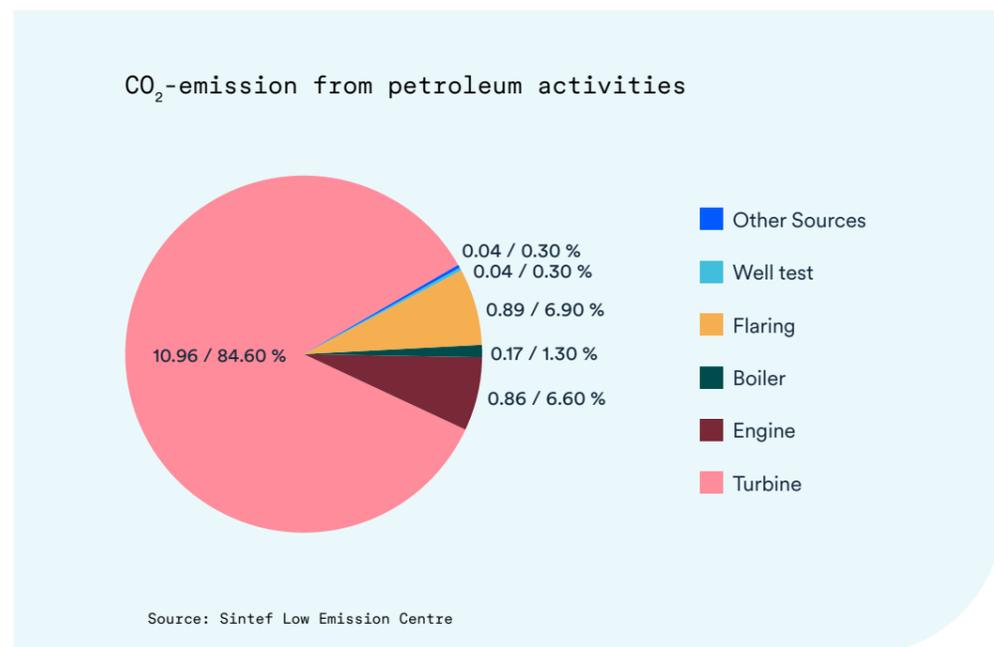
The transition to a more sustainable future has significant impact on FPSO field developments. Government policies, new regulations, and net-zero emission targets are changing the requirements for oil and gas field developments. Future solutions must leave a smaller environmental footprint.

Although many of these new solutions are still under development, they are mainly based on technology proven onshore, which can be relatively quickly adapted for offshore use, albeit at significant additional cost.

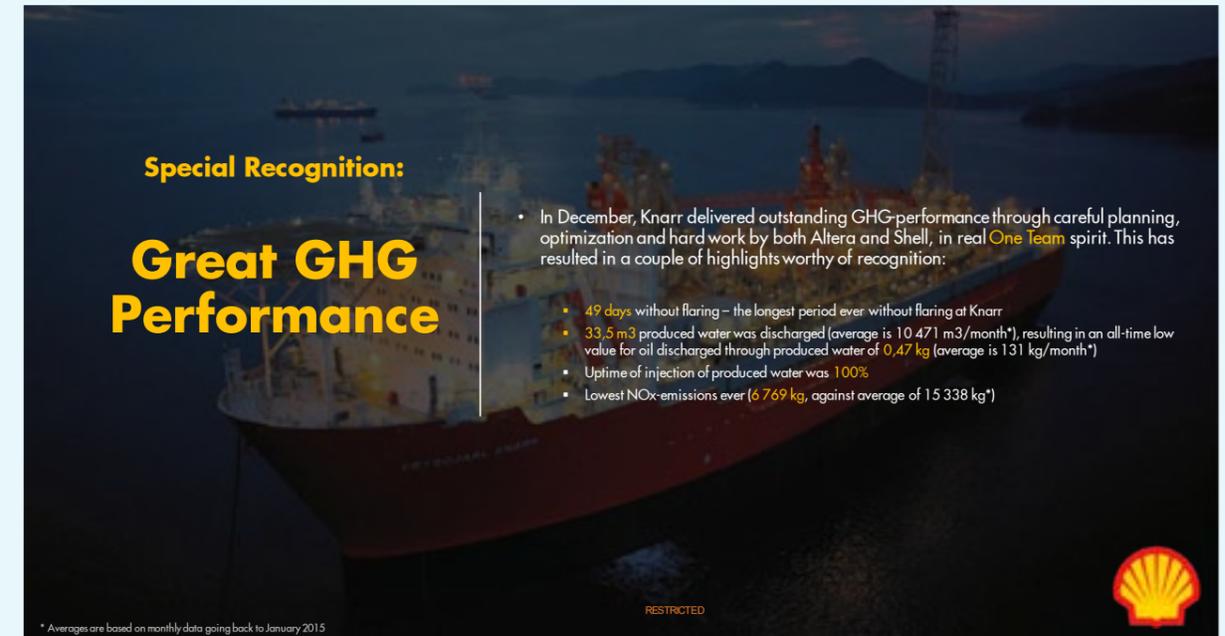
New technological developments are in areas such as:

- Digitalisation
- Power supply; switching to shore-based sources or local off-grid wind parks
- Non-gas fired turbine technology based on ammonia and hydrogen
- Carbon capture and storage solutions, including compact carbon capture technology used during production

By using these new technologies, it is envisaged that total emissions from new-generation FPSOs can be reduced by more than 90%, when compared to existing FPSOs in operation today.



Knarr breaks emission-reduction records



December saw Shell’s Knarr field in the North Sea hit a number of significant milestones. Through careful planning and a strong customer partnership, we assisted Shell in reducing emissions, and earned a Special Recognition Award in the process.

Key achievements were:

- 49 days without flaring – the longest period ever at Knarr
- 33.5 m³ produced water discharged (average is 10,471 m³/month¹), resulting in an all-time-low value for oil discharged through produced water of 0.47 kg (average is 131 kg/month¹)
- Lowest NO_x-emissions ever (6,769 kg vs. an average of 15,338 kg¹)
- 100% uptime for produced water reinjection

State of the art FPSO design

Close to 100% of all GHG emissions on a conventional FPSO come from power turbines, engines, heaters, and flaring (see figure above). Finding non-gas solutions to power turbines and other equipment would reduce emissions on an FPSO by 70%, while adding a closed-flare system would cut emissions by close to 100%.

The Knarr FPSO (delivered in 2015) already made use of a closed-flare system when it went into production, reducing emissions by around 29% compared to earlier-generation FPSOs. New non-gas solutions for turbines and engines, utilising onshore and off-grid wind-power sources and ammonia-fired engines, would reduce emissions from an FPSO to less than 5% of the current benchmark. These are all solutions that have been significantly developed in the last five to ten years and are now on the verge of being deployed in the next generation of FPSOs.



Our FPSO technology positioning

We have made significant changes to the focus of our offshore infrastructure customer offering. Our market approach is based on our vision of ‘leading the industry to a sustainable future’. By building on our experience and listening to customers and supply partners, we are developing sustainable, digitally advanced, and more effective FPSO solutions for harsh environments and benign waters alike.

This approach will deliver:

- Standard solutions for our main markets
- Front-end-loaded project execution
- Shorter project schedules
- Lower project development costs
- Lower crew numbers offshore
- Lower emissions
- Higher operational efficiency at lower cost

Sintef Low Emission Centre

In 2019, we became a member of the Low-emission Research Centre. World-leading Norwegian and international industrial entities, including vendors, operators, and energy companies, are joined with SINTEF and the Norwegian University of Science

and Technology (NTNU) in Trondheim, and other top-rated universities and research institutes to form this exciting initiative. Its mission is to pave the way for zero-emission production of oil and gas. This collaboration has significantly advanced our efforts in developing the next generation of ultra-low emission FPSOs.

Four of the projects run by the Low Emission Centre are key focus areas for our FPSO design development:

- Electrification
- Efficiency enhancement of gas turbines
- Carbon-free firing of gas turbines
- Energy-efficient processing

Our FPSO-technology roadmap

Over the past two years, we have developed a detailed technology roadmap, which gives a very good overview of applicable and available technologies, technologies under development, and technologies not sufficiently mature for studies or project development.

Status of the different technologies are reviewed and updated twice a year to ensure sufficient focus on the most promising technologies that can help us meet our sustainability and operational goals. By incorpo-

rating the best of these into our vessel designs, we can influence the customer early on to help meet the project’s sustainability targets. The impact that design has on our environmental footprint is tracked and monitored, and the results fed back to improve future performance.

To ensure we track how our design impacts our environmental footprint, we monitor our performance and impact through a set of KPI’s.

Stella Maris project – carbon capture and storage

The UN Climate Panel states that the capture, transport, and storage of CO₂ emissions from industrial production is a key step in reducing global greenhouse gas emissions. Disused oil and gas reservoirs are ideal for such storage.

The Stella Maris (Star of the Seas) project, started in 2019 and supported by Norwegian state-run Gassnova, is a feasibility study for large-scale transport and injection of CO₂. Together with partner organisations, we have conducted an initial study to demonstrate that large-scale maritime carbon

capture and storage solutions capable of handling 10 million tonnes of CO₂ per year are realistic with existing technology. The concept is to do what we do today with our FPSOs and shuttle tankers, but in reverse, i.e. to use large dynamically positioned CO₂ carriers to transport captured CO₂ to offshore sites, where it will be injected safely into subsurface reservoirs.

In 2021, we will partner with other key companies, so that the Stella Maris concept can include input from a wider cross-section of the transport and injection infrastructure sector. The most cost-efficient concept, measured in cost per tonne injected CO₂, will be evolved further and be ready for a front-end engineering and design study in 2022, targeting a three-year development programme to bring the solution to market.



Our performance

Remote operation and support

With the advent of the pandemic, we have needed to rethink the way we work. By utilising new digital technology, we have strengthened collaboration across offices and between on- and offshore teams, even though most of us are working from home or remote locations.

We acknowledge that digitalisation is reshaping the energy industry and that we need to be at the forefront of this revolution to help ensure a sustainable future. Our digitalisation strategy is an integral part of our overall business strategy; improving leadership, building capabilities, empowering workers, upgrading tools, and enhancing communication.

Roadmap for digitalisation

The main goals of our digitalisation programme are to reduce cost, increase efficiency, and improve operational safety. Our roadmap for digitalisation, called

Operational Excellence Toolbox, is the key enabler for operational excellence, where improvements within safety, sustainability, and performance are strengthened through digital technologies. The Operational Excellence Toolbox maps our digitalisation journey and describes how to nurture innovation within our company. It further explains how to develop, test, and implement technologies through empowerment and collaboration.

In 2020, we have further developed our remote support and working capabilities, through the Connected Worker programme and remote access support system, to improve efficiency and optimise onshore resources. This means we conducted more remote inspections, surveys and audits to save time and cost for both our clients and ourselves.

Technological development

We take an active role in developing technology by participating in research and innovation projects to best meet the needs of the energy industry.

The TA-I project, a regional joint-industry innovation project, connects companies from various industries with technology companies developing artificial intelligence. Here, we learn from each other and are currently conducting a trial for condition-based monitoring and predictive analysis, aimed at better utilisation of our onshore and offshore structures.

With governmental support through Innovation Norway, we have entered a partnership with Squarehead to adapt ‘super hearing’ and change-detection algorithms for offshore installations. Specifically, we utilise sound profiles to detect signs of wear and tear or imminent failure of equipment.

Our drone inspection programme has become part of the university-run SENTIENT research project, which develops technology for autonomous navigation of aerial drones in confined and narrow spaces. By using drones, we reduce HSE risk by eliminating the need for personnel to enter tanks or work in other hazardous environments.



Keeping our distance

The COVID-19 pandemic has put remote support firmly on the agenda. Response speed and faster problem solving, cost efficiencies, smoother and more effective partnerships between on- and offshore teams and, of course, considerable time and cost savings on the travel front have always been strong reasons to choose remote support. However, 2020 saw safety take centre stage. In many cases, COVID-19 has either prevented personnel from visiting units or significantly increased the risks to their health of doing so.

Our tailor-made dashboards allow remote users to access critical information, troubleshoot equipment, and optimise production. We are on-hand with specific expertise, including equipment monitoring, flow-meter calibration, and factory acceptance testing.

The recent partnership with Scout Drone Inspection AS is paying dividends. Used for tank, flare, and crane-boom inspections, as well as corrosion development monitoring, remote drones allow real-time images to be transmitted for onshore evaluation. Furthermore, this solution eliminates personnel risk from entering tanks, removes need for scaffolding, increases documentation quality, and reduces overall costs.



Summary table

	2020	2019	2018
Oil production and revenue			
Total production bbl o.e ¹	28 345 477	27 550 676	34 264 052
Total revenue (million dollars)	1 182	1 268	1 416
Emissions of CO₂e¹			
Total emissions tCO ₂ e per business segment	1 729 967	2 029 137	2 215 832
FPSO	1 020 206	1 293 975	1 388 350
ALP	136 440	230 785	193 141
Shuttle	546 911	463 778	579 149
FSO	26 409	40 581	55 191
Scope 3 emissions tCO ₂ e	8 652	27	16
Flights	7 385	-	-
Hotel stay	1 124	-	-
Km remuneration	60	-	-
Waste	82	27	16
Key Performance Indicators (KPI)			
tCO ₂ e per bbl o.e	0.04	0.05	0.04
tCO ₂ e emission per million dollar revenue	1 464	1 600	1 564
EEOI ⁴	20.7	23.3	26.6
Other emissions to air (tonnes)¹			
CH ₄	1 740	2 578	2 584
NmVOC ²	12 367	13 402	12 620
NO _x	13 408	13 901	13 784
SO _x	1 038	1 636	419
Fuel consumption (GJ)			
Total energy consumption	12 268 043	12 907 920	14 076 031
Diesel	2 296 294	2 488 514	2 455 634
Fuel gas	925 424	916 810	751 892
HFO	203 620	3 938 550	4 235 771
MDO	4 244	5 036 082	6 375 190
MGO	7 325 953	527 964	257 544
LNG	125 725	-	-
IFO	1 386 744	-	-
Petrol	40	-	-
Flaring³ (sm³)			
Flaring (Sm ³)	180 014 949	178 339 260	146 259 199
Accidental discharges to sea			
Chemical spills, number of	1	6	1
Chemical spills, volume (liter)	1 241.0	2 224.0	0.5
Oil spills, number of	3	1	5
Oil spills, volume (liter)	268 002.8	0.5	769.0
Regular discharge to sea			
Oil in Water (tonnes)	287 690.2	5.0	2.5
Oil in Water (average ppm)	14.3	10.1	14.1

Summary table

	2020	2019	2018
Safety⁵			
Fatalities (number of)	-	-	-
Total recordable cases (number of)	8	12	15
Total recordable cases (rate)	0.8	1.3	1.6
Lost Time Incidents (number of)	3	3	7
Lost Time Incidents (rate)	0.29	0.33	0.7
Workforce			
Total number of employees	2 663	2 304	
Women	310 (12 %)	237 (10 %)	
Men	2 353 (88 %)	2 067 (90 %)	
Employment contract			
Permanent employees (women/men)	244 / 2 052	191 / 1 759	
Temporary employees (women/men)	66 / 301	56 / 308	
Diversity			
Onshore % (women/men)	38 % / 62 %	34 % / 66 %	
Offshore % (women/men)	2 % / 98 %	3 % / 97 %	
Nationalities (%)			
Norway	29 %	26 %	
Philippines	27 %	24 %	
UK	13 %	20 %	
Brazil	8 %	13 %	
Canada	7 %	7 %	
Poland	9 %	6 %	
Netherlands	1 %	2 %	
Other	7 %	3 %	
Turnover (%)			
Onshore			
Shuttle	0.6 %	3.4 %	
FPSO	3.4 %	11 %	
ALP	4.2 %	4 %	
Offshore			
Shuttle	1.5 %	2 %	
FPSO	18.0 %	7 %	
ALP	0.0 %	12 %	
Training (hours)			
Full-time employees			
Women	3 408	1 425	
Men	124 167	13 125	
Part-time employees			
Women	134	149	
Men	41	89	

Notes

1 Operational control basis, and equity basis for Joint Ventures.

2 Only for FPSOs and Shuttle tankers on the NCS.

3 Only relevant for FPSOs.

4 Only relevant for Shuttle tankers.

5 Including contractors

6 CO₂e emissions are calculated following the GHG protocol and using the IPCC Global Warming Potential (GWP) values adapted from the IPCC Fifth Assessment Report (AR5). Scope 1 and scope 3 CO₂e emissions are included.

Definitions

AIP	<i>Altera Production</i>	LNG	<i>Liquid Natural Gas</i>
AIS	<i>Altera Shuttle and Storage</i>	LTI	<i>Lost Time Incident</i>
ALP	<i>ALP Maritime Services BV</i>	NCS	<i>Norwegian Continental Shelf</i>
Bbl	<i>Barrel</i>	nmVOC	<i>non-Methane Organic Compounds</i>
BoD	<i>Board of Directors</i>	NOx	<i>Nitrogen Oxides</i>
Boe	<i>Barrel of oil equivalent</i>	OIM	<i>Offshore Installation Manager</i>
BU	<i>Business Unit</i>	Produced water	<i>Water that is brought to the surface during operations which extract hydrocarbons from oil and gas reservoirs</i>
CCS	<i>Carbon Capture and Storage</i>	Scope 1 GHG emissions	<i>Direct GHG emissions from operations on an ownership equity basis</i>
CO₂e	<i>The global warming potential of emitted gases as Carbon Dioxide equivalents</i>	SOx	<i>Sulphur Oxides</i>
CSR	<i>Corporate Social Responsibility</i>	Spill	<i>Accidental discharge of oil or chemicals to sea</i>
Energy consumption	<i>Energy used for power generation and heat production in combustion processes</i>	SRF	<i>Ship Recycling Facility</i>
FPSO	<i>Floating Production Storage and Offloading</i>	SRTI	<i>Sustainable Ship Recycling Initiative</i>
FSO	<i>Floating Storage and Offloading</i>	TRC	<i>Total Recordable Cases Includes Medical treatment injuries and Lost time Injuries for both employees and contractors. Does not include first aid cases.</i>
GHG	<i>Greenhouse Gases</i>	TRC rate	<i>Rate of recordable cases per 1 000 000 man-hours for employees and contractors</i>
GHG Protocol	<i>A comprehensive global standardised frameworks to measure and manage greenhouse gas (GHG) emissions from private and public sector operations, value chains and mitigation actions</i>	UN SDGs	<i>United Nations Sustainable Development Goals</i>
GRI	<i>Global Reporting Initiative</i>	VOC	<i>Volatile Organic Compounds</i>
GWP	<i>Global Warming Potential</i>	VOCIC	<i>VOC Industry Cooperation</i>
HCI	<i>High Consequence Injuries</i>		
HSE	<i>Health Safety and Environment</i>		
IMO	<i>International Maritime Organisation</i>		
IPCC	<i>Intergovernmental Panel on Climate Change</i>		
KPI	<i>Key Performance Indicator</i>		

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Eli Tangen



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