TEEKAY GROUP
Sustainability Report 2019
## Contents

Sustainability in Teekay .................................................. 4  
Teekay Vision and Values. .............................................. 5  
President's Introduction ............................................... 6  
Facts & History .......................................................... 7  
About Teekay ............................................................ 8  
2019 Key Figures .......................................................... 9  
2019 Highlights ............................................................ 10  

**PEOPLE** ...................................................................... 11  
Breakdown of Seafarers by Nationality and Gender .......... 12  
Shore Employee Breakdown ........................................... 13  
Diversity ......................................................................... 14  
Health and Wellbeing .................................................... 14  
Seafarer Welfare ............................................................ 14  
Seafarers Terms and Conditions .................................... 14  
Training and Development ............................................ 15  
Shore-based Employee Health and Wellbeing ................. 15  
Corporate Social Responsibility. ...................................... 16  
Integrity at Teekay ........................................................... 17  

**OPERATIONAL LEADERSHIP** ........................................ 18  
Operational Leadership: The Journey ............................... 19  
Everyone is a Leader ....................................................... 19  
Health ............................................................................. 19  
Safety ............................................................................. 20  
Environment .................................................................... 20  
Quality ............................................................................. 20  
Vetting ............................................................................. 21  
Teekay SPIRIT in Action .................................................... 21  
Awards ............................................................................. 22  
Preparedness, Continuity, Engagement ......................... 22  
Management System Upgrade ........................................ 23  

**PLANET** ....................................................................... 24  
Climate Change ............................................................... 25  
Sustainability Initiatives Milestones ............................... 25  
Compliance and Decisions Around Scrubbers ................. 28  
Ballast Water Treatment System ...................................... 28  
Looking at the MEGIs, Reductions Achieved by the New Technology ............................................. 28  
Supply Chain Management ............................................. 29  
Supporting Sustainable Ship Recycling ......................... 30  
Partnership and Forums .................................................. 31  

**PERFORMANCE** .......................................................... 32  
Digitalization at Teekay .................................................... 33  
2019 Sustainability Goal Results ..................................... 34  
2020 Sustainability Goals ................................................ 35
This report focuses on the sustainability issues that significantly affect our business performance and that matter most to our key stakeholders, including emissions data and reductions, ship recycling, supply chain management and transparency with respect to anti-corruption and ethics.

You will find many examples on how the company works with sustainability as a guideline throughout the entire organization. We hope, whether you are a current or future employee, existing or potential business partner, shareholder, regulator, or simply someone with a keen interest in what we do, that the stories can help you understand how Teekay considers sustainability in all of our decisions and actions.

Contact Us

We appreciate your comments, feedback or queries on this publication. Please send them to _Sustainability@teekay.com_. Remember to mark your email “Sustainability Report 2019”. You can visit our website and learn more about us at [www.teekay.com](http://www.teekay.com).
Safety & Sustainability

We put safety first

No compromises. We look after each other and make sure everyone gets home safely. We consider people, planet and performance in all of our decisions and actions. We contribute to a sustainable business, environment and community.

Reliability

We deliver

We do what we say we will do. We have high standards and deliver quality results. We build enduring customer relationships and solutions. We hold each other accountable and follow through on our commitments. We are operational leaders!

Passion

We live our spirit

We bring energy and enthusiasm to our work. We balance hard work and fun and we take pride in doing a job well. We strive to make a difference every day with our colleagues and customers. We care!

Innovation

We embrace change

We seek and promote new thinking and ideas. We support change and encourage others to do the same. We look for ways to be ahead of the curve and to create value added results. We strive to constantly learn and improve.

Integrity

We do what is right

We are open and honest, and lead by example. We build trust with others and are trustworthy. We admit our mistakes and use them as an opportunity to improve our skills and processes.

Teamwork

We are team players

We value and respect each other. We work together and promote a spirit of cooperation. We encourage diverse perspectives, and value the opportunity to listen and be listened to. We help others be successful. We celebrate success!
As a leading oil and gas transportation company, Teekay cannot separate ourselves from the environmental challenge that the world is facing. We have built our company on a deep commitment to responsible safety and environmental practices and have for decades run environmental leadership initiatives and allocated our capital to reflect the energy transformation that the world has and must go through. Following the divestment of our offshore business in 2019, approximately 75% of our group invested capital is now in LNG carriers and approximately 25% is in crude oil tankers. This transformation of our company, which used to be 100% invested in crude oil tankers reflects our commitment in responding to the shift in the global energy mix as we use more of the fossil fuel with the lowest environmental footprint – natural gas. Over the past decade, we have worked with industry and been pioneers, investing in increasingly more energy efficient vessels. Our latest LNG carrier newbuildings produce about 50% less CO₂ emissions per cubic meter of LNG transported.

As part of the IMO 2020 new fuel regulations, all of Teekay’s vessels are now burning either LNG or very low sulphur fuels. In addition, we are driving vessel efficiency through improved voyage planning and digitalization. As our industry has set itself the challenge of progressively becoming carbon neutral by 2050 and we expect oil and gas to continue to be part of the global energy mix by that time, we have a gigantic task ahead of us. In the near-term, we need to operate our existing fleet as safely, responsibly and efficiently as possible, something that our 5,500 employees at sea and on shore consider their core purpose as illustrated through our stories in this report. We are also embarking on new industry partnerships to drive necessary technological developments and finally, we will in 2020, reassess our reporting framework so that we have the best possible foundation for the important work ahead of us.

In early 2020, as we release our 2019 Sustainability Report, the world is facing the COVID-19 pandemic which has had an impact on all of us in some way. It is also a reminder, in the ever-changing environment we live in, of the need to adapt, to show resilience and to work together as a company and as a society to overcome the challenges we face. We continue to work closely with our stakeholders to bring essential energy to the world, whilst following all the recommended steps by the WHO and local governments to ensure the health and safety of our people. For our people at sea, we are extending their time onboard and finding ways to reduce the impact on them and their families through active communication and other ways. Most of our people on shore are working from home, and we are fortunate that our digital platform enables us to do so in an effective and connected manner.

The Board and management are proud and thankful for the Teekay SPIRIT being displayed throughout our organization at an unprecedented time for our globe.
About Teekay

Teekay is an operational leader and project developer in the marine energy space. Established in 1973, Teekay has developed from a regional shipping company into one of the world’s largest marine energy transportation companies.

With offices in 10 countries and approximately 5,500 seagoing and shore-based employees, Teekay provides a comprehensive set of marine services to the world’s leading oil and gas companies.

Our reputation for safety, quality and innovation has earned us a position as a trusted partner. Over the past two decades, we have undergone a major transformation from being primarily an owner of ships in the cyclical spot tanker business to being a diversified service provider in the marine midstream sector.

To fund growth, we developed a corporate structure of publicly traded entities including Teekay Corporation (NYSE: TK) and its two daughter subsidiaries: Teekay LNG Partners L.P. (NYSE: TGP) and Teekay Tankers Ltd. (NYSE: TNK). The combined Teekay entities manage and operate assets of approximately $11 billion, comprised of 140 vessels.
# 2019 Key Figures

## PEOPLE

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Staff¹</td>
<td>Sea Staff – 6,700</td>
<td>Sea Staff – 7,215</td>
<td>Sea Staff – 6,591</td>
<td>Sea Staff – 4,759</td>
</tr>
<tr>
<td></td>
<td>Shore Staff – 1,156</td>
<td>Shore Staff – 1,200</td>
<td>Shore Staff – 1,150</td>
<td>Shore Staff – 736</td>
</tr>
<tr>
<td>Total Recordable Case Frequency²</td>
<td>1.33</td>
<td>0.86</td>
<td>1.24</td>
<td>1.30</td>
</tr>
<tr>
<td>Loss Time Injury Frequency³</td>
<td>0.31</td>
<td>0.14</td>
<td>0.34</td>
<td>0.23</td>
</tr>
<tr>
<td>Fatalities⁴</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

## ENVIRONMENTAL PERFORMANCE⁵,⁶

Includes shuttle tanker data from Altera Infrastructure (formerly known as Teekay Offshore) to maintain consistency across the year.

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operated Vessels</td>
<td>122</td>
<td>125</td>
<td>119</td>
<td>116</td>
</tr>
<tr>
<td>Carbon Dioxide Emissions⁷ (Metric Tonnes)</td>
<td>4,766,904</td>
<td>5,054,714</td>
<td>5,279,233</td>
<td>5,225,313</td>
</tr>
<tr>
<td>Energy Efficiency Operational Indicator (EEOI)</td>
<td>13.59</td>
<td>12.44</td>
<td>17.14</td>
<td>16.08</td>
</tr>
<tr>
<td>Sulphur Oxide Emissions (Metric Tonnes)</td>
<td>39,732</td>
<td>43,464</td>
<td>35,904</td>
<td>32,822</td>
</tr>
<tr>
<td>Nitrous Oxide Emissions (Metric Tonnes)</td>
<td>95,046</td>
<td>101,706</td>
<td>104,665</td>
<td>103,733</td>
</tr>
<tr>
<td>Number of Oil Spills Overboard (over 1 barrel)</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1³</td>
</tr>
<tr>
<td>Total Vessel Waste Generated (Cubic Meters)</td>
<td>14,937</td>
<td>14,649</td>
<td>13,336</td>
<td>14,112</td>
</tr>
<tr>
<td>- Disposed to shore facilities</td>
<td>10,366</td>
<td>10,344</td>
<td>9,404</td>
<td>10,130</td>
</tr>
<tr>
<td>- Incinerated onboard</td>
<td>2,578</td>
<td>2,751</td>
<td>3,366</td>
<td>3,475</td>
</tr>
<tr>
<td>- Disposed at sea (food waste &amp; bulk cargo residues (non-hazardous to marine environment)</td>
<td>1,993</td>
<td>1,554</td>
<td>566</td>
<td>507</td>
</tr>
</tbody>
</table>

¹ All active seafarers and shore employees, employed by Teekay, not including contractors and riding crew.
² Sum of lost time injuries, restricted work cases, and medical treatment cases per unit of exposure hours. This unit used is one million-man hours.
³ Sum of fatalities, permanent total disabilities, permanent partial disabilities and lost workday cases per unit of exposure hours. This unit used is one million-man hours.
⁴ Safety related fatality
⁵ Environmental figures includes Teekay Offshore Logistics emissions but excludes third party managed and time chartered vessels not operated by Teekay.
⁶ Figures in the environmental statistics are total numbers, hence will vary dependent in total fleet size, fleet composition and market conditions.
⁷ Carbon dioxide accounts for over 99% of our greenhouse gases.
⁸ Non-tanker related spill
2019 Highlights

Bahrain LNG Terminal

The Bahrain LNG terminal is a joint venture project between Teekay, Nogaholding, Gulf Investment Co. and Samsung C&T to construct and operate for a period of twenty years an LNG import terminal in the Kingdom of Bahrain for the National Oil and Gas Authority (NOGA).

Final Terminal construction was completed in Q3 of 2019 with commissioning being completed in January 2020.

Bahrain Spirit (FSU), 100%-owned by Teekay LNG, arrived at the terminal in September 2019 to commence terminal start-up.

LNG Fleet Growth

The delivery of Yakov Gakkel on the 4th December 2019 marked the completion of Teekay's LNG order book, the world’s largest at the time.

In total, 21 vessels were delivered to six different Charterers on budget and on or ahead of schedule, including; nine M-type, Electronically Controlled, Gas Injection (MEGI) LNGs and six Arc7s at Daewoo Shipbuilding & Marine Engineering, two MEGIs at Hyundai Samho Heavy Industries and four dual fuel diesel electric (DFDE) at Hudong.

Teekay Offshore Transition

In April 2019, Teekay agreed to sell our remaining interests in Teekay Offshore to Brookfield. This was an anticipated final step in our journey to exit the offshore space and aligns with our current strategy to simplify and focus on our core gas and tanker businesses.

Over the last 20 years, Teekay Offshore was an important part of Teekay’s history. From our first entry into the offshore space with the Dampier Spirit FSO to our major investments in shuttle tankers, FPSOs, UMSs and long-haul tugs, Teekay Offshore has contributed to our significant growth and success. As our partnership comes to an end, we wish Teekay Offshore, now re-branded as Altera Infrastructure, success, safe seas and fair winds.

ISWAN Award

In September 2019, Teekay won the “Shipping Company of the Year” award at the International Seafarers’ Welfare awards. The award recognizes the best examples of seafarers’ welfare provision across the globe and honours those who are helping to raise standards in the industry. Mental health and wellbeing is an area of increased focus in the maritime industry and we are proud to be recognized amongst our peers for the efforts made.
Breakdown of Seafarers by Nationality and Gender

Total Seafarers: 4,759

- Great Britain: 119
- Indonesia: 93
- Philippines: 129
- Croatia: 162
- Spain: 171
- Russia: 217
- Australia/New Zealand: 216
- Other European: 2,074

**Gender Distribution:**
- Male: 99%
- Female: 1%

*Sea staff of Teekay, not including riding crew*
Shore Employee Breakdown

Total Shore Employees 736

46% Female

54% Male

attrition 10%

average years of service for existing staff 6

voluntary attrition 71
At Teekay, we bring energy to the world with Teekay SPIRIT! Our people make this happen. Day and night, 365 days a year, we focus on the health, safety and wellbeing of our employees, ensuring they get home safely.

**Diversity**

As an international company, Teekay puts emphasis on a diverse workforce and inclusion in the global workplace. We recognize a varied set of experiences, perspectives, cultural backgrounds and are proactive in promoting equal career advancement opportunity for all our employees. Teekay has no tolerance for discrimination and unfair acts, whether on board ships or in our offices ashore.

At Teekay we support inclusiveness. In 2019, we held events in our offices around the world to celebrate International Women’s Day.

**Health and Wellbeing**

As illustrated in the 2019 highlights, Teekay was named the ‘Shipping Company of the Year’ at the International Seafarers Welfare Awards this year. Health and wellbeing continues to be an important focus for Teekay both for our seafarers and for those employed in our offices globally. Our seafarers on the front line make up 90% of Teekay’s employees, so let’s start here!

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**Seafarer Welfare**

Seafarers are faced with a unique set of challenges. They are limited to a confined vessel, exposed to the elements and have less family contact than in most other professions. We are aware of the challenges that our seafarers face, so we do our best to ensure that they have all the possible support that they need.

**Connecting with Family, Friends and the Team on Board**

Connectivity on board is a major factor for morale. Free internet is provided to all crew members so they can keep in touch with their families.

**Conditions on Board**

While basic welfare needs such as food, living conditions and working hours can be taken for granted on Teekay vessels, our seafarers are provided with a balanced diet which not only considers nutrition but also suits the dietary needs of individuals and nationalities. Work and rest hours are closely monitored and adhered to. Recently, to aid seafarers in managing fatigue, facial recognition has been used in the tanker fleet to proactively manage rest hours.

**Mental Health**

We promote various welfare activities and provide awareness articles related to mental health and wellness. In addition to this, we provide 24-hour online counseling for our staff as and when they may need it. We use the E-colours program to identify diversity of personalities as well as their strengths and potential limiters. Since industry research has identified young persons as those at higher risk, a thematic analysis was conducted with a group of cadets to identify and understand the challenges young people face before going to sea for the first time.

**Out of Sight – Not Out of Mind**

The opinions of our seafarers matter therefore we hold frequent Senior and Junior Officer Conferences. Safety Orientation Seminars are also held for ratings, which provides a forum and an opportunity for direct interaction with the senior management ashore.

**Seafarers Terms and Conditions**

Seafarers are intangible assets not listed on any company’s balance sheet. However, we drive economic value from their experience and skills. Assets like education, training, intelligence, skills, health, and our SPIRIT values – although not tangible – are crucial for the company’s success.

Our seafarers terms and conditions of employment are governed by the Maritime Labour Convention, International Labour Organisation, Maritime Unions and national administrations. Under the guidance of the Maritime Labour Convention, we follow the standards set by the International Transport Federation (ITF) and Philippine Overseas Employee Association (POEA). At Teekay, however, we provide industry-leading terms and conditions of employment which are beyond what is mandated.

Some of our industry leading initiatives in place include incremental wage scales, retention bonus, performance bonus, sick leave, pension funds, family medical insurance, spousal carriage and airport lounge access, all of which contributed to Teekay being voted the Shipping company of the year in 2019.
Training is vital. At all levels, it affects the standards of safety, operations, and effectiveness of our seafarers. Training forms an integral part of Teekay’s Safety Management System (SMS) and the foundation of our Competence Management System (SCOPE). All training objectives and programs are determined by national, international, and company requirements, and are subject to continuous review and regular updates.

Teekay training consists of a mix of practical hands-on experience, interaction with peers (coaching and mentoring), and of formal courses ashore. The rank-specific competencies are completed and revalidated every five years.

In Glasgow, we have also established our own training centre, equipped with the latest navigation and cargo simulators. This enables us to provide tailor-made training courses for our seafarers where they can be trained, mentored and assessed by our own professional instructors.

Third party institutes conducting Teekay-specific courses are audited and approved by us. This ensures that trainings are up to date and relevant for our seafarers’ growth and development.

Although our seafarers are not included in the company’s balance sheet, they are assets that we must protect and grow to meet the ever-changing demands of our industry. They are at the forefront of our business. With their reliable efficiency, sound astuteness, and positive attitude, they can easily propel us to new heights. They are the vessel that carries our culture and spirit. To safeguard our SPIRIT means safeguarding our seafarers.

Shore-based Employee Health and Wellbeing

Not to be outdone by the focus on mental health and wellbeing on board, people in the Teekay offices also played their part.

Vancouver Office 9 Week Wellness Passport Challenge

The challenge incorporated four pillars of health: healthy mind, fitness, healthy eating and early detection. Our goal was to get participants to get physically active, take action, create change and have some fun.

Inspired by the original Vancouver trial, other offices, including Perth and Sydney also rolled out similar health and wellness initiatives for their employees.
Singapore – Sedentary Behaviour and the Impact on Wellbeing

Volunteers from our Singapore office participated in a health and wellbeing research project related to the impact of sedentary behaviour and sitting time on wellbeing. Software was installed on the computers of participants which provided a series of prompts during working hours, which were designed to encourage participants to sit less during their work period and to partake in stretching, exercise and increasing healthy behaviours.

Manila Sports Day With Shore Employees and Seafarers

Teekay values the wellbeing of everyone and one way to promote this is through the Annual Sports Day participated by the employees and our seafarers. It was a healthy competition where everyone had a chance to compete on different sports and join some fun games. The event also became a venue to create a stronger bond amongst the shore and sea employees.

Manila Office Mental Health and Nutrition Knowledge Sharing Session

We are honed to always be mindful of our psychological, emotional and social wellbeing. We had a session on promoting a healthy approach to our mental wellness and creating a stigma-free culture. We had another session on sharing good nutrition and diet where we put emphasis on it being an important part in leading a healthy lifestyle.

Corporate Social Responsibility

Our customers, employees, partners, society and the environment are all affected by our operations and activities. We believe that the hallmark of a truly sustainable company is the way we interact with our stakeholders and the community in which we operate. We encourage our employees to utilize their allocated three-day paid Volunteering Leave to lend their support to programs that enrich the quality of life and opportunities for all citizens.

Supporting Seafarers and Marine Based Charities

Our Houston office participated in the Seaman's Church Institute mountain challenge and with it raised money for the institute and it's mariner support services.

Five Glasgow employees accepted the challenge of climbing 24 peaks in 24 hours in the Lake District to raise funds for Seafarers UK.

Teams from our Vancouver office took part in the Day of the Seafarer Annual Peak Challenge held on Grouse Mountain. The event raised money for the International Seafarers Society Canada.

Children’s Charities

The Vancouver office has been involved with Variety – The Children’s Charity since 2010 and has also supported the Children’s Wish Foundation for the past few years.

Employees from the different Teekay offices donated to Save the Children foundation during Christmas.

In the Glasgow office, employees also donated 60 Christmas gifts to deprived children in the local area for ages ranging from baby to 16-year old.

Nature and the Environment

The Nature Trust of British Columbia

The Vancouver office has been involved with The Nature Trust of BC since 2016 and have volunteered at shoreline cleanup of the mudflats of Boundary Bay.

Nurture a Grove

Employees from Teekay Manila participated in Nurture a Grove Project where they contribute in reforestation efforts through hands-on activities such as planting, weeding and mulching to sustain biodiversity.
Integrity at Teekay

Our compass is to be the most trusted shipping company in the world. Trust and integrity are an essential part of who we are at Teekay and how we make business and operational decisions.

Our Governance

Teekay’s Chief Compliance Officer (“CCO”), in coordination with Teekay’s Vice President of Risk & Audit Services, oversees Teekay’s integrity compliance program. Teekay’s CCO reports to the Audit Committee of Teekay’s Board of Directors. Teekay’s CCO also works closely with Teekay’s Senior Leadership Team to reinforce Teekay’s commitments to integrity and doing the right thing.

Our Policies

Teekay’s integrity principles are captured in its Standards of Business Conduct (“Standards”). Teekay also maintains additional policies of importance, which set out Teekay’s rules about data privacy, insider trading, gifts and hospitality, competition law, harassment, and third-party due diligence.

Due Diligence

Teekay recognises that doing the right thing also means ensuring that our business suppliers and partners do the right thing by sharing our commitment to uphold business ethics. Teekay personnel are required to “onboard” new business partners through Teekay’s automated compliance due diligence system. This system, which includes watch list and media monitoring tools, enables Teekay to identify potential business ethics risks (e.g. corruption, sanctions, unlawful misconduct) that may impact Teekay and its personnel. It also enables Teekay to implement appropriate follow-up measures. Entities that present an unacceptable integrity risk are rejected as business partners.

Training

Teekay provides multiple training modules to its personnel. New staff receive induction training that covers Teekay’s integrity expectations. Mandatory biennial “Doing Business with Integrity” training is provided on an in-person basis to all shore-based personnel. They also receive annual online training on business ethics issues and Teekay’s Standards. Seafarers receive compliance training through Teekay’s QATO training program. This training is focused on risk-relevant issues such as port-based corruption.

Risk Assessment & Audit

To properly structure our compliance program and to monitor business ethics risks, Teekay performs regular risk assessments. These risk assessments assist Teekay to identify existing and emerging risks and to prioritise a proportionate response to these risks.

Leadership

Teekay recognises that an effective integrity compliance program requires a healthy corporate culture of active ethics that is supported by a strong tone from the top that resonates throughout the organization. At Teekay, we believe ‘Everyone is a Leader’. This means that doing business with integrity is embraced by everyone as a shared leadership responsibility. Part of this responsibility is speaking up when suspected violations of Teekay’s Standards occur using (if desired) Teekay’s anonymous hotline reporting tool.
OPERATIONAL LEADERSHIP
Operational Leadership: The Journey

In 1987, our founder Torben Karlshoej set us on a journey towards what he referred to as Absolute Excellence. Our Operational Leadership Program keeps our employees focused, aligned and committed to achieving this, which for Teekay means delivering flawless customer service through the quality of our operations and getting our employees home safely.

In 2019, the revised operational leadership booklet was rolled out to the organization. The booklet contains important safety and environmental commitments to protect employees and to minimise our environmental impact. All employees in the organization commit to Operational Leadership.

Everyone is a Leader

Becoming the most trusted shipping company starts with great leadership. At Teekay, leadership is much more than a rank or title. It is a way of being. Everyone plays a part in shaping our culture, from the CEO, to shore staff and to all our crew on board. We are all leaders in our own right and have the opportunity to positively impact the people and results around us everyday.

As we continue to foster the kind of culture we are all proud to be part of, we will be guided by three principles:

• Setting clear expectations for what it means to be a leader at Teekay
• Helping everyone enhance their leadership impact
• Holding ourselves and each other accountable for our leadership behaviour

Leadership development is more likely to excel when employees have opportunities to engage and collaborate on topics together. With this in mind, we will offer a variety of ways for employees to learn, practice, and share new insights in relation to their leadership development goals.

Health

Keeping our seafarers healthy is a priority. All employees are encouraged to maintain a healthy lifestyle which is supported on board through the facilities we have, the social activities provided and balanced nutrition. Prior to boarding vessels, extensive medical examinations are conducted to ensure the seafarers are free from any health concerns which could be detrimental during a long ocean voyage. Our seafarers are provided with dental coverage and insurance and an annual sports day takes place where the seafarers are allowed to compete in physical activities with one other.

Health incidents are monitored and trended, including those leading to medical treatment or to repatriation. The health statistics have shown an improving trend over the past five years with the Health Repatriations Case Frequency (HRCF) reducing from 2.35 cases per million man hours down to our lowest figure to date of 1.8.
Safety

Safety and sustainability form part of our core values and are closely related. Our safety commitments have been in place since 2010 and compliance against these is monitored. Implementation of the commitments has seen consistently low injury rates and a marked decline in the number of total recordable case frequency statistics from 1.94 case per million-man hours in 2015 down to 1.30 for 2019.

Efforts continue to be made not only to improve safety statistics, but importantly, to work closely with the seafarers to improve the tools we have in place and the cultural aspects of HSEQ.

Every ship is encouraged to organise quarterly Safety Dinners with “Getting Home Safe” as the core of the occasion. Teams on board are reminded to watch out for each other and to believe in Teekay’s commitment to return them safely to their families.

This behaviour is reinforced by a strong reporting culture that is also rewarded on a quarterly basis. A total of four winners and four runners up are bestowed with the Hazard Reporting Award based on an internal evaluation methodology.

LTI Free Milestones, often displayed with much creativity, are proudly shared to our networks both internally and externally with a simple group photo as an automatic tangible proof of what healthy and safe teams can achieve together!

The vessel balanced scorecard is a new tool to enable the organization to routinely and effortlessly check the pulse of key ship management performance metrics via a transparent and simple-to-navigate dashboard. This enables those on the ship and ashore to easily measure, monitor, analyze and evaluate performance in line with ISO requirements.

Environment

Teekay has had an Environmental Leadership program since 2005 and our environmental leadership commitments are embedded in the Operational Leadership handbook and signed by all employees. Our vessels undergo environmental audits on an annual basis, and we have an annual environmental program in place in each of the fleets which our vessels comply with.

Statistically, our operational results remain positive with only one reportable incident resulting in a loss of containment over one barrel. This was due to a failed connection coupling on a vessel’s hydraulic line (not a tank vessel).

Quality

We aim to have the best quality assurance program in the industry. In Teekay, the Quality Assurance Training Officers (QATO) team was established...
in 2008 as an independent team for internal audits, third party audits, incident investigations and training. With more than ten years of experience in Quality Assurance-related programs, the QATO team have achieved a high success rate in assisting different entities in Teekay.

The QATO team provides a holistic assessment of vessels’ leadership and performance by conducting a detailed ISM/ISO integrated audits and facilitating fresh learning experiences to seafarers and shore personnel.

Training is tailored to suit fleet needs and to ensure focus is aligned with team goals and strategy. In the last two years, three ISO standards have been updated (ISO9001, ISO14001 and ISO45001) and between the seafarers, fleet teams, QATOs and the HSEQ teams, this was conducted seamlessly. For the first time in history, despite the transitions, Teekay did not have an external non-conformance registered in 2019, which reflects Teekay’s commitment to quality and to the personnel onboard and ashore.

Vetting

Vetting inspections are conducted by oil majors at regular intervals to verify that our ships are of a high operating standard and deemed fit to transport future cargoes. Vetting performance is a differentiator and Teekay takes pride in achieving positive vetting results. In 2019, the number of vetting observations per inspection across the organization remained among the best in the industry with only 0.61 avoidable observations per inspection, down from 0.99 in 2015. The tanker fleet achieved their best results to date; only 26% of observations were avoidable.

In the gas fleet, a new vetting vision, strategy, handbook, training video and monthly publication has been developed which will be rolled-out to the fleet in 2020.

Teekay SPIRIT in Action

Rescues at Sea

On the 18th of October, the gas vessel Catalunya Spirit responded to a yacht in distress. The yacht had been adrift for two days without power. Four persons were rescued from the vessel including one child. The Catalunya Spirit sailed with the rescued party to the island of Martinique where the rescued crew were safely disembarked on the 20th of October.

On the 5th of November, Limerick Spirit watch-keepers sighted a small fishing boat in distress off Cayo Nordeste, Venezuela. The fishing boat was rolling and pitching heavily and no engine movement was observed. After informing the local authorities, Limerick Spirit rendered assistance to the boat crew by supplying them with food, water, and fuel. The boat crew were profoundly thankful to the vessel staff. We came to know that they were stranded for six days and had ran out of all essential supplies prior to our rescue.

Vetting Deficiencies

Average of avoidable deficiencies per inspection

- 2015: 0.99
- 2016: 0.62
- 2017: 0.51
- 2018: 0.62
- 2019: 0.61
Awards

In November this year, Teekay Tankers accepted an award for Innovation and Adoption of Technology at the CrewConnect ceremonies. This is for Teekay Tankers’ development and implementation of the Rest Management System designed to protect and improve one ultimate cause: our seafarers’ welfare. Sea Manager, the fatigue management system initialised in 2018 and is now fully-deployed into the entire tanker fleet, is a sophisticated system developed by Teekay. Its main objective is to ensure accurate, real-time, and authentic Rest Management data that allows flagging of a rest hour violation incident before it takes place.

Environmental Achievement Award

The Chamber of Shipping of America (CSA) has presented Environmental Achievement awards to 97 of our vessels for completing a combined total of 689 vessel operating years in environmental excellence.

Jones F. Devlin Award

The Chamber of Shipping of America (CSA) has presented Jones F. Devlin Awards to 87 of our vessels for completing a combined total of 628 operating years without a lost time injury.

Preparedness, Continuity, Engagement

We maintain a strong emphasis on training and drills to develop effective emergency response capabilities. If an unplanned event occurs, we have plans and processes in place to ensure we can respond swiftly and effectively. Placing great emphasis on having trained and capable personnel to respond to any emergency, we conduct various drills and exercises involving our vessels, our commercial operations, charterers, classification societies and emergency response services, in compliance with company standards and regulatory requirements.

Oil Spill Response Limited (OSRL) provides preparedness, response and intervention services and works closely with other industry organisations such as IMO and IPIECA (International Petroleum Industry Environmental Conservation Association), to share expertise and develop knowledge. Akin to each year, OSRL conducted a training course in Teekay Tankers’ office in February 2019 and engaged an oil spill response exercise with a vessel and office staff.

Teekay Gas recently invited ITOPF and the North of England P&I Club to take part in a ship-to-shore emergency exercise to test internal communications and response to an incident ‘scenario’ involving Methane Spirit.

The entire exercise provided Teekay Gas with an opportunity to learn from ITOPF and the North of England P&I Club how the spill is likely to be managed by Japanese authorities, the response techniques that could be applied to contain the spill, and potential claims arising from the incident.
AMSA’s emergency towage vessel, Coral Knight, manned and managed by Teekay Australia, successfully completed an emergency towing exercise with a bulk carrier south of Cairns. AMSA and the client were onboard to witness the operation that went smoothly. Feedback from AMSA was extremely positive, especially in regards to the attitude and the ethos of the team onboard, as well as the operational aspects of how the tow was deployed and the highly evident teamwork and safety culture throughout, underpinned by Teekay’s risk mitigation tools.

Management System Upgrade

Teekay’s management system is not only compliant with ISM, MLC and STCW but also to additional ISO standards, namely 9001 (Quality), 14001 (Environment) and 45001 (Health and Safety). These standards set the bar high and require certified companies to aim for continual improvement, which is aligned with Teekay’s ethos and our HSSE & QA policy. Our management system has undergone significant positive change which has resulted in a reduction in size and the simplification of procedures using the Lovoy method to make documents shorter and easier to understand.
We are committed to minimizing our environmental impact by implementing environmentally sound initiatives in our vessels and offices.

Climate Change

Climate change is one the of most significant challenges facing society. According to the Third IMO GHG study of 2014, the shipping industry contributes approximately 2.2% of the world’s greenhouse gas emissions, while transporting 90% of the world’s trade.

In 2018, the IMO implemented a long term greenhouse gas reduction strategy requiring the shipping sector to reduce its emissions by at least 50% by 2050 when compared to a baseline set in 2008. The IMO also agreed that focus should be placed on the reduction of carbon intensity of shipping (CO₂ emissions per transport work), with reduction targets set for 40% by 2030, and 70% by 2050, as compared to 2008 data.

Teekay has made significant progress since the 2008 baseline and continue to trend towards the targets set by the IMO.
**CO₂ Emissions**

Across our Aframax, Suezmax and Gas vessels, significant progress has been made towards achieving this target. This has largely been achieved through more efficient engines, fuel optimization initiatives such as hull coatings, propeller boss cap fins, hull cleaning, trim optimization and routing. The reduction ambitions in the graphs below are based on Teekay’s 2008 data. The figures contained in this report are for CO₂ which equates to approximately 99% of our GHG emissions.

**CO₂ Emissions – Aframax Tankers (MT) average per vessel**

- Aframax Tankers
- IMO ambition reduction

<table>
<thead>
<tr>
<th>Year</th>
<th>Emissions</th>
<th>Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>34,133</td>
<td>50%</td>
</tr>
<tr>
<td>2019</td>
<td>23,238</td>
<td>70%</td>
</tr>
<tr>
<td>2050</td>
<td></td>
<td>3.70</td>
</tr>
</tbody>
</table>

**CO₂ Emissions – Suezmax Tankers (MT) average per vessel**

- Suezmax Tankers
- IMO ambition reduction

<table>
<thead>
<tr>
<th>Year</th>
<th>Emissions</th>
<th>Reduction</th>
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</thead>
<tbody>
<tr>
<td>2008</td>
<td>39,392</td>
<td>50%</td>
</tr>
<tr>
<td>2019</td>
<td>33,201</td>
<td>70%</td>
</tr>
<tr>
<td>2050</td>
<td></td>
<td>2.66</td>
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</tbody>
</table>

**CO₂ Emissions – Gas Fleet (MT) average per vessel**

- Gas Fleet
- IMO ambition reduction

<table>
<thead>
<tr>
<th>Year</th>
<th>Emissions</th>
<th>Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>113,893</td>
<td>50%</td>
</tr>
<tr>
<td>2019</td>
<td>87,224</td>
<td>70%</td>
</tr>
<tr>
<td>2050</td>
<td></td>
<td>15.75</td>
</tr>
</tbody>
</table>

**Carbon Intensity**

The carbon intensity graphs highlight the progress made by Teekay over the past 11 years to reduce our Energy Efficiency Operational Indicator (EEOI).

**Annual EEOI – Aframax Tankers**

- Aframax Tankers
- IMO ambition reduction

<table>
<thead>
<tr>
<th>Year</th>
<th>EEOI</th>
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<tbody>
<tr>
<td>2008</td>
<td>12.33</td>
</tr>
<tr>
<td>2019</td>
<td>11.47</td>
</tr>
<tr>
<td>2030</td>
<td>7.40</td>
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<tr>
<td>2050</td>
<td>3.70</td>
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</tbody>
</table>

**Annual EEOI – Suezmax Tankers**

- Suezmax Tankers
- IMO ambition reduction

<table>
<thead>
<tr>
<th>Year</th>
<th>EEOI</th>
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<tbody>
<tr>
<td>2008</td>
<td>8.87</td>
</tr>
<tr>
<td>2019</td>
<td>6.88</td>
</tr>
<tr>
<td>2030</td>
<td>5.32</td>
</tr>
<tr>
<td>2050</td>
<td>2.66</td>
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</tbody>
</table>

**Annual EEOI – Gas Fleet**

- Gas Fleet
- IMO ambition reduction

<table>
<thead>
<tr>
<th>Year</th>
<th>EEOI</th>
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<tbody>
<tr>
<td>2008</td>
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<tr>
<td>2030</td>
<td>31.51</td>
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<tr>
<td>2050</td>
<td>15.75</td>
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Figures exclude third party operated assets.
SOx Emissions

SOx emissions across the industry have reduced as a result of regulations reducing maximum sulphur content in fuels. SOx emissions in the tanker fleet have remained low due to extensive STS operations and vessels operating in Sulphur Emission Control Areas which required the use of lower sulphur fuels than those operating in other areas.

Gas Fleet SOx Emission (MT) average per vessel

NOx Emissions

Our NOx emissions have been broken down into Gas and Tanker fleet trends. Engine design is one of the main factors affecting NOx emissions, with higher combustion pressures and temperatures typical in some of our gas vessels leading to increased NOx production. While newer vessels have been added to the fleet in recent years, these have primarily been NOx tier II engines and our proportion of motor vessels to steam vessels has also increased. The NOx values for our gas fleet are not only based on fuel consumption from main and auxiliary machinery use but also include Gas Combustion Unit (GCU) emissions. We continue to work with manufacturers to establish more accurate factors related to NOx emitted by our GCUs. In 2019, our NOx emissions reduced in both our tanker and gas fleets in comparison to 2018 figures. Subsequent new build tonnage in the industry needs to comply with NOx tier III which will see further reduction in NOx levels by 75% when compared to NOx tier II vessels.

Tanker Fleet NOx Emission (MT) average per vessel

Waste Generated

Garbage generation increased slightly in 2019 due to an increased number of dry docks, where more waste was generated. We expect this number to reduce in 2020 with new internal campaigns to target recycling and reducing single use plastics.

Total Vessel Waste Generated (m3) average per vessel
Compliance and Decisions Around Scrubbers

The use of IMO 2020 compliant fuel meets the full intent of the regulation and is congruent with Teekay’s philosophy of eliminating sulphur at source. While compliant fuel in early 2020 were at a premium due to the sudden increase in demand, studies indicate that this pricing will start to reduce as refineries adapt to produce straight run low sulphur fuels. Hence, the price difference between compliant fuel and high sulphur fuel may not support the capital cost and out of service time required to fit a scrubber.

Although “open loop” scrubbers are a solution to IMO’s 2020 Sulphur Cap, they bring challenges with operation which are prohibited in the territorial waters of some countries. Closed loop scrubbers are expensive, complex and need specialised storage and handling arrangements to hold and support sulphur concentrate. Disposal facilities can also be a long distance from the ports. Scrubbers may also lead to an increased carbon footprint as extra power is required for the scrubber system which can increase the quantity of CO₂. Teekay believes the scrubber in its present form is not an optimal solution to deal with the stringent and growing limitations to sulphur emission.

Ballast Water Treatment System

Teekay is actively engaged in discussion with a number of Ballast Water Treatment System (BWTS) suppliers and have been proactive in this regard by completing numerous retrofits well before the relevant IMO BWTS legislation came into force. There are a number of types of systems available on the market including; mechanical/filtrations systems, UV treatment, de-oxygenation treatment, thermal treatment, electric pulse and acoustic treatment.

Teekay has currently retrofitted ultraviolet light BWTS to five LNG vessels. This comprises of a filter and ultraviolet light reactors, as well as associated pipework and equipment.

Retrofitting a new BWTS into the engine rooms of the first five vessels has proven to be challenging due to the size of the equipment and the associated pipework, but all retrofits have been completed within the dry dock schedule. Lessons learned from the first five vessels are being used on the next three vessels due for a retrofit in 2020.

Looking at the MEGIs, Reductions Achieved by the New Technology

With the expansion in the LNG shipping market, Teekay took the decision to order a series of LNG carriers from DSME and HHI. The first orders were placed with DSME in December 2012.

The MAN slow speed dual fuel engine operates on the conventional diesel cycle with high pressure gas injection. The advantages of the MEGI engine are:

- High efficiency with no unburnt methane in the exhaust gas (methane slip) – reduction in greenhouse gases
- Encompasses the highest thermodynamic efficiency
- Very stable operation in all weather conditions
- Low efficiency loss in high ambient temperatures
- Low specific fuel consumption compared to other propulsion technologies
- Lower operating costs
At the time of build the MEGI vessels were the most efficient solution available and the whole vessel design exceeds the Energy Efficiency Design Index specified for ships to be built in 2025.

Teekay’s newest LNG vessels carry ~20% more cargo compared to our earlier generations of LNG carriers, while also consuming 40% less fuel per day while sailing. As a result, daily fuel consumption per cargo capacity has decreased by more than 50%.

Supply Chain Management

As a company that firmly believes in good ethical practices and doing business with integrity, it is important for Teekay to conduct the necessary due diligence to ensure we work with like-minded companies and in a manner that contributes to society and the environment we work in.

The following are examples of progress made in this important area:

- Procedures relating to Vendor Onboarding and Vendor Evaluation have been updated to incorporate the new automated third party due diligence system (SecurIMATE). In particular this allows us to screen for business ethics compliance risks, such as sanctions, bribery and human rights violations. Since the launch of this system, approximately 6000 third parties have been successfully approved.

- We have begun working with vendors on sustainability. Some of the main areas of focus are around the use of environmentally friendly and recyclable packing materials and reducing the amount of single use plastic being used. Some of our logistics providers are also running a net zero carbon campaign, which includes a carbon offset programme and the introduction of electric vehicles.

- There was a major audit programme carried out in 2019 focusing on dockyards. Working in conjunction with the global HSEQ group, a total of nineteen yards across all regions were successfully audited and due diligence checks carried out. Moving into 2020, we will be putting in place a three year audit plan concentrating initially on critical high value suppliers. The target will be to audit ten suppliers each year with a particular focus on sustainability and the control of supply chain, along with compliance with appropriate legislation.
Supporting Sustainable Ship Recycling

Living Our Core Value of Safety And Sustainability Through All Stages of Our Vessels’ Lifecycle

After decades of sailing the seas, at the end of their life, ships are recycled – the vessel is dismantled, and steel and other valuable materials are recycled. It is the most responsible way of disposing a vessel, since almost every part of the ship is reused.

However, if not done responsibly, the process can be dangerous for people and damaging to the environment. Therefore, in 2009, the IMO adopted the *Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships*, which ensures that health, safety, and environmental risks are minimized as much as possible throughout every part of the recycling process.

Not Only Do We Support the Hong Kong Convention – But We Believe More Can Be Done

We have developed and adopted a stringent process for ship recycling that goes above and beyond the Hong Kong Convention, and by being directly involved on-the-ground we ensure this standard is met when recycling our vessels.

Since 2017, Teekay Offshore has recycled six vessels in India and two vessels in Turkey, all at recycling facilities that have been verified to be in compliance with the Hong Kong Convention. Before selecting these facilities, we audited the yards to ensure they could meet our strict standards. In addition, throughout the recycling process, which typically takes about 6-8 months, our staff continually monitor HSEQ performance and visit regularly to perform inspections and provide skills training to increase the safety and sustainability performance of the yard.

The Next Step is to Increase Transparency and Elevate Standards Throughout the Industry

“The safety and sustainability of the ship recycling process deserves the attention of the marine industry. As an industry, we must drive and support the raising of standards globally by raising the safety and sustainability bar to the same level we have achieved in the other stages of a ship’s lifecycle – shipbuilding and ship operations, which many of us have focused on intensely as responsible shipowners over the past decades. Teekay is committed to be a part of the solution, and we support the SRTI work underway.”

— Kenneth Hvid

Teekay representative conducting safety sessions in a ship recycling yard in Alang, India
More than 70% of the world’s ship recycling occurs in three countries – India, Bangladesh, and Pakistan – and conditions can vary widely from yard to yard.

To drive change, we are now joining with other major maritime players in supporting the Ship Recycling Transparency Initiative (SRTI). The vision of the SRTI is of a world where ships are recycled responsibly – socially, environmentally and economically – going beyond international conventions and setting a new norm for responsible ship recycling.

We are the eighth leading ship owner to join the SRTI. We are committed to be a part of the solution, and we encourage participation from all members of the maritime industry. With proper commitment and engagement, we believe responsible ship recycling is achievable.

From a legislative perspective, Teekay is also well on track in meeting the compliance of European Ship Recycling Regulation (EU SRR) in establishing an Inventory of Hazardous Materials (IHM) and attaining a Statement of Compliance which is required on onboard all vessels by December 2020.

**Partnership and Forums**

Teekay actively participates with non-governmental organisations such as SIGTTO (Society of Gas Tankers and Terminal Operators), INTERTANKO (The International Association of Independent Tanker Owners), ITOPF (International Tanker Owners Pollution Federation Ltd), and P&I insurers, through representation and participation on committees, in working groups and through Board memberships.

Teekay is an active member of INTERTANKO which represents tanker owners views and perspectives with key stakeholders, developing policies and positions, harmonising a united industry voice, and engaging with policy and decision makers on key industry issues.

TNK President and CEO Kevin Mackay is on the executive committee of INTERTANKO while we have representation at all of the various individual committees including the Navigation, Environmental, Vetting, Security, Human Element, Bunker, Safety and Technical committees.

Teekay has representation at various Technical Committees within Classification Societies such as LR, DNV and ABS and works closely with Class on the implementation and impact of changes. With the new legislative changes in fuel coming through, several industry forums and meetings were attended such as Sulphur Cap conferences.

Teekay is actively involved with Pier 71, a group that works with MPA in collaboration with NUS (Singapore), towards digitalization of the shipping industry and addressing the challenges faced by the industry to provide research and development for pragmatic solutions.

The International Chemical and Oil Pollution Conference and Exhibition (ICOPCE) organized by Maritime and Port Authority of Singapore (MPA) invited key speakers to discuss regulatory developments, innovation trends, digitalization and strategy building related to marine initiatives and pollution response. It is the region’s only forum of its kind. TNK Head of Ship Management and Technical, Ray McNamara set the tone and atmosphere for the dialogue that followed as keynote speaker.

Through industry collaboration and engagement, we continue to drive operational excellence, promote standards and shape a more sustainable future for all our stakeholders and society at large.
PERFORMANCE
Digitalization at Teekay

Innovation is at the core of Teekay’s Operational Excellence vision and is an important value at Teekay. At Teekay, we recognize that innovative digital solutions enable the maritime industry to become more open and transparent with customers and partners to leverage data to drive collaboration and provide real-time insights to sustainable business practices. At Teekay we are focusing on three areas:

1. Digitizing core processes

Reviewing each of our core business processes to streamline and consolidate activities by applying digital solutions will make our processes more sustainable in the long term, more efficient by applying automation, and create governance around data. Using our data in real-time enables real-time corrective actions to create a more sustainable operating environment.

2. Real-time vessel and voyage management

Through asset connectivity and sensors via the Internet of Things, we are able to transform data into actionable insights. Where data was previously sent from ship to shore once in a 24-hour period, near real-time connectivity has provided visibility into our vessel and voyage operations that we can now share with our customers and partners to make strong business decisions together. We are also managing risk by combining vessel data together with the human element to ensure the correct crew and vessel mix, using facial recognition technology to ensure compliance onboard, and reduce our carbon footprint by having visibility to weather, currents, and operational data that allows us to optimize decisions to reduce fuel consumption and thereby our CO₂ emissions.

3. Leverage data using machine learning and AI to focus on improving forecast and forward looking information

With connectivity becoming easier to manage, accessing large volumes of data throughout our operations is useful for improving our forecasting and predictive capabilities by applying machine learning and artificial intelligence to areas such as vessel maintenance. Not only do we see trends more clearly and in real-time, but by combining additional data including weather, tides, vibrations etc. we can also perform root cause analysis with reasonable accuracy. This will have an impact on reducing emissions, managing waste efficiently, and reducing our footprint on the environment with real-time decision-making available.

As part of our digital strategy, we are reviewing each emerging and enabling technology to determine how they can be uniquely leveraged to unlock substantial improvements in sustainability. Digital technologies are not only transforming markets and creating new paradigms of doing business, the technologies are also providing solutions for addressing sustainability challenges. The goal is to use digital tools to map our environmental footprint.

Key Initiatives in 2020

Digitization of emissions data

Environmental reporting is a key priority of the organization’s overall sustainability strategy. Environmental reporting is increasingly valued by stakeholders, who are demanding a better understanding of their long-term exposure to “carbon risk” on a ship-by-ship basis.

In 2020, further enhancements will be introduced to bring the benefits of: simplified reporting from vessels; eliminate duplication of shipboard data entry; more agile reporting solution for both internal and external stakeholders; ability to trend data; automation in data verification and improved data reliability; and ability to compare to other relevant operational data.

Risk mapping (by machine learning)

This development will be rolled-out in early 2020 and is the first machine learning model at Teekay Tankers. The objective of this model is to determine the probability of risk/ incidents on board the vessels using input scores related to personal safety, incident frequency, planned maintenance, compliance, and performance evaluations. The mechanism designed establishes the relationship between vessel performance and its mix of personnel and predicts the risk level of a vessel. The information is then used towards proactive risk management.

Automated performance monitoring and optimization

Two thirds of the gas fleet vessels are fitted with remote auto-dataloggers, streaming high frequency data to shore via satellite. The remaining fleet is planned for installation in 2020. To maximize the insights from our data, Teekay subscribed to the Nautilus Labs Platform, a new maritime startup backed by Microsoft, which is bringing modern software development practices to the marine industry.

Time series data from different classes of vessels is combined with manually reported voyage information from the ship’s crew and satellite weather data from NOAA. The Nautilus Platform allows detailed monitoring and analysis of vessel performance, benchmarking vessels and voyages and identifying areas for improvement and optimization. Smart alerts notify the operations teams if specific thresholds are exceeded or anomalies detected.

Auto-logged data is shared directly with third-party vendors for condition-based monitoring and failure prediction on critical equipment, as well as for monitoring hull coating and propeller efficiency. The data also allows for the accurate measurement of the impacts of energy saving modifications and initiatives.
2019 Sustainability Goal Results

**PEOPLE**

**Ambition**
- We have a global leadership standard that is understood and demonstrated across the organization. We believe “Everyone is a Leader”. We’re all responsible for Doing the Right Thing, Creating Connections, and Delivering Results. In doing this, we’re in a better position to amplify our collective success because we know results happen through people.
- Improve the social climate interaction and wellbeing onboard our vessels

**2019 Target / Actions**

- All shore employees are introduced to Teekay’s Leadership Commitments by attending an “Everyone is a Leader” foundational workshop *(Achieved)*
- Employees utilize the Mindmarker digital reinforcement tool to support understanding of the Teekay Leadership Commitments *(Achieved)*
- All employees select at least one of the Teekay Leadership Commitments as a developmental goal on their 2019 performance development plans *(Achieved)*
- Continue to introduce the Teekay Leadership Commitments at Seafarers Conferences *(Achieved)*
- Increase awareness on mental health and wellbeing onboard our vessels focusing on six key areas *(Achieved)*

**SAFETY (PERSONNEL & PROCESS)**

**Ambition – Achieve our HSSE & Q Policy**
- Prevent injury, ill health and harm to people by eliminating hazards, reducing HSSE and QA risks and holding health and safety as our first priority
- Strive for zero spills and minimize emissions that impact the environment

**2019 Target / Actions**

- Aim for TRCF 0.85 or less (Not Achieved – TRCF for 2019 was 1.30)
- Roll out of Operational Leadership to fleets *(Partially Achieved – Booklets on board all vessels. Roll-out still in progress.)*
- Upgrade Cause Analysis Tools and Management System including event recording and trending *(Achieved – New system and tools upgraded. Rolled-out at year end 2019.)*

**EMISSIONS**

**Ambition – Decarbonize our operations. Meet IMO long-term ambition**
- 40% reduction per transport work by 2030 (compared to 2008)
- 70% per transport work by 2050 (compared 2008)

**2019 Target / Actions**

- Prepare fleet for IMO 2020 *(Achieved – In compliance ahead of schedule)*
- Fuel optimization: fit vessels with Propeller Boss Cap Fin (PBCF) and High Performance Coating *(Achieved on planned vessels)*
**SHIP RECYCLING**

**Ambition** – Demonstrate leadership and promote responsible ship recycling practices in the industry. Work to achieve a level of safety and sustainability on the same level as in the other stages of a ship’s lifecycle – shipbuilding and ship operations.

### 2019 Target / Actions
- Work with industry partners to assess and address gaps in Alang noted in EU / DNV inspections  
  *(Achieved – Worked with shipyards and joined other third parties for yard assessments. Provided further training during monthly visits.)*
- Work towards Alang yards being accepted  
  *(Achieved – seven yards approved by Teekay for use, however, only two used for recycling work.)*

**PEOPLE**

- Complete the roll-out of Operational Leadership to all offices and vessels
- All shore employees participate in at least one learning activity for each of the three Teekay Leadership Commitment (TLC) pillars
- Implement new ethics training program within the fleet and influence those we work with to comply

**PERFORMANCE**

- Complete the Digitization project for environmental reporting data
- Improve data accuracy and reporting from systems to minimize manual calculations
- All employees to identify at least one opportunity to simplify and create an efficiency around their daily work

**PLANING**

- Complete the re-baselining of HSE data following the Teekay Offshore transition
- Develop and launch new company-wide sustainability strategy
- Ensure compliance with environmental legislation and customer requirements including EU MRV and IMO 2020

**OPERATIONAL LEADERSHIP**

- Leverage the Operational Leadership commitments to drive improvements in safety performance
- Increase Operational Reliability to achieve a fleet wide availability of 99.70%
- Reduce company TRCF below 1.0

**PLANET**

- Conduct 10 supplier audits in 2020 with a focus on sustainability, supply chain management and compliance
- Implement 2-3 company-wide sustainability initiatives identified by employees
- Continue ballast water treatment implementation process
BRINGING ENERGY TO THE WORLD WITH TEEKAY SPIRIT