

# **TEEKAY CORPORATION** Sustainability Report 2016





# **CONTENTS** Teekay Corporation Sustainability Report 2016

President's Introduction	•	•	.4
Facts and History			.5
About Teekay Corporation			.5
Key Figures 2016		•	.7
Teekay Group Corporate Structure			. 8
Vision and Values			. 7
2016 Highlights	•	•	. g
Sustainability in Teekay		•	10
Triple Bottom Line - People, Planet and Profit .			11
Reporting Basis			11
Contact Us			11
People	•	•	12
Breakdown of Seafarers By Nationality			13
Recruitment and Growth			14
Operational Leadership: The Journey			14

Training and Competence .												15
Health and Safety at Teekay	/ .											16
Awards												17
Diversity												18
Corporate Social Responsibi	ility											19
Teekay Spirit in Action												19
Planet		-					•	•	•	•	•	20
Climate Change												21
Innovation, Technology and	Pro	jeo	cts	5								21
Green Award for Environme	ntal	P	rot	te	cti	or	۱					22
Profit		-				•	•	•	•	•	•	23
Project Management												25
Supply Chain Managemen	nt.					-		•	•		•	26
Ethical Business Conduct						-	•	•	•	•	•	27

# PRESIDENT'S INTRODUCTION

KENNETH HVID President and Chief Executive Officer

## Welcome to the 2016 Teekay Sustainability Report

I have assumed the Teekay CEO role from recently retired Peter Evensen. When I was asked to write the introduction to this year's Sustainability Report, the first thing I did was re-read what Peter wrote last year.

I was happy to see that Peter was repeating eternal Teekay messages about our Safety and Sustainability focus. Consequently, I will also repeat some of these messages. It will show that while leaders may come and go, our unstinting focus on safety and sustainability will not.

So, most importantly, let's remind ourselves of how we define our Safety & Sustainability core value. We put safety first. No compromises. We look after each other and make sure everyone gets home safely. We consider people, planet and profit in all of our decisions and actions.

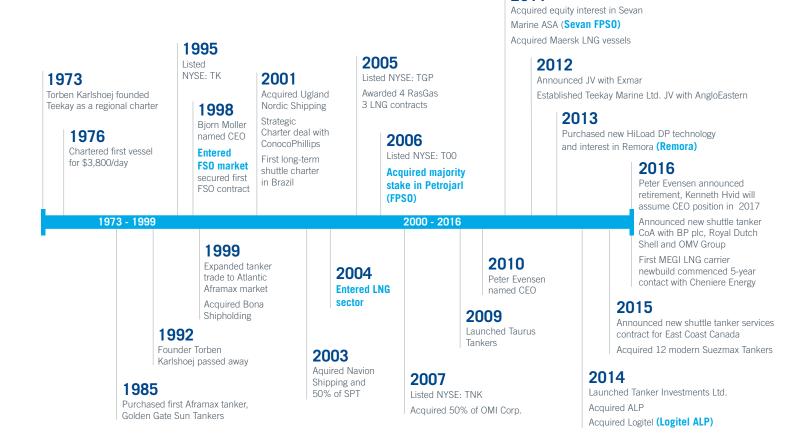
We often share the story with colleagues and stakeholders that every Teekay management meeting begins with the topic of safety. Every Board meeting begins with the topic of safety too. We follow the Teekay standard, but we do not set it. It is our 7000 seafarers and offshore workers who set the Teekay standard. They are the people who support their colleagues so that everyone gets home safely – **People**. They are the people who drive our environmental focus of zero harm – **Planet**. Their focus on delivering a flawless operational performance ensures that Teekay can achieve its financial obligations and goals – **Profit**.

I have my own, personal commitment to Sustainability. I see the need to balance and sustainably manage operations, finance and strategy drivers. Teekay cannot excel in one area and fail in others.

We need to deliver operational excellence, execute our projects, provide exemplary customer service and enable colleagues to grow their talents. At the same time, we need to ensure our capital requirements are delivered and maintain a strong balance sheet; while also considering new markets and focused growth opportunities.

It is a difficult juggling act, but one which the Teekay team is very capable at – as we tirelessly work to be the greatest shipping company in the world. I hope you will find examples in the report of our commitment to this endeavour and our success in achieving it.

# FACTS AND HISTORY



# About Teekay Corporation

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, storage and production companies.

With offices in 14 countries and approximately 7,900 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 decade, 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.

2011

To fund growth, we developed a corporate structure of publicly traded entities including Teekay Corporation (NYSE: TK) and its three daughter subsidiaries: Teekay LNG Partners L.P. (NYSE: TGP), Teekay Offshore Partners L.P. (NYSE: TOO) and Teekay Tankers Ltd. (NYSE: TNK).

The combined Teekay entities manage and operate consolidated assets of approximately \$13 billion, comprised of approximately 220 liquefied gas, offshore, and conventional tanker assets.









liquefied gas, offshore, and conventional tanker assets



# 2016 – Key Figures

PEOPLE	2014	2015	2016
Total Staff <sup>1</sup>	Sea Staff – 5,944 Shore Staff – 923	Sea Staff – 5,711 Shore Staff – 831	Sea Staff – 6,700 Shore Staff – 1,156
Total Recordable Case Frequency <sup>2</sup>	1.44	1.94	1.33
Total Recordable Injury Frequency <sup>3</sup>	0.25	0.19	0.31
Fatalities <sup>4</sup>	0	0	0
Lost Time Injuries	6	5	9
PLANET <sup>5</sup>			
Greenhouse Gas Emission (Metric Tonnes)	4,501,311	4,315,787	4,758,734
Sulphur Oxides Emissions (Metric Tonnes)	398.47	311.37	351.66
Nitrogen Oxides (NOx) and Nitrous Oxide (N <sub>2</sub> O) Emissions (Metric Tonnes)	672.23	697.57	755.08
Number of Oil Spills Overboard (over 1 barrel)	2	0	0
Total Vessel Waste Generated (Cubic Meters)	11,910	13,286	13,357
- Disposed to shore facilities	8,029	9,473	9,803
- Incinerated onboard	3,297	3,169	2,309
PROFIT (USD Thousands)			
Assets	11,779,690	13,061,248	12,814,752
Revenues	1,993,920	2,450,382	2,328,569
Cash Flow from Vessel Operations	1,049,202	1,415,794	1,287,003
Adjusted Net Income <sup>6</sup>	1,473	68,077	43,562
Total Equity	3,388,633	3,701,074	4,089,293
Net Debt (net of cash and restricted cash)	5,789,271	6,588,384	6,227,143

<sup>1</sup> All permanent active seafarers and shore employees, employed by Teekay, not including contractors, riding crew or Teekay Offshore Production (TOP) crew and seafarers

<sup>2</sup> 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.

<sup>3</sup> 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.

<sup>4</sup> Safety related fatality

<sup>5</sup> Figure exclude the third party managed and time chartered vessel, which are not part of environmental reporting

<sup>6</sup> Adjusted net income before non-controlling interests

# TEEKAY VISION & VALUES

## Our Vision BRINGING ENERGY TO THE WORLD WITH TEEKAY SPIRIT

# Our Values

TOGETHER WITH TEEKAY SPIRIT

Safety and

Sustainability

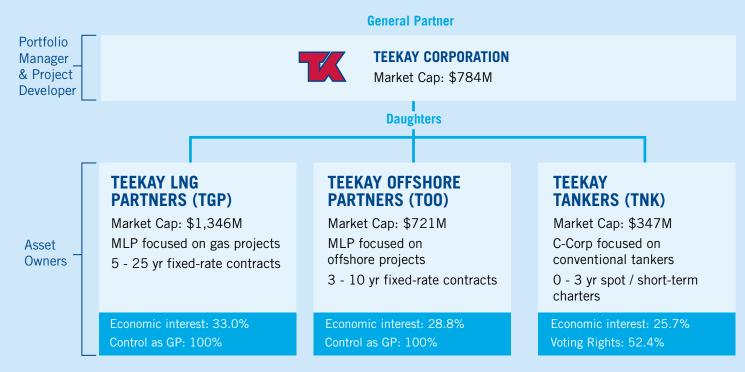
Passion

Integrity

Reliability

Innovation

## Teekay Group Corporate Structure













# **2016 HIGHLIGHTS**

Sustainability is central to our SPIRIT values and means ensuring we are successful in all aspects of our business. This is our journey, to bring energy to the world, to power the global economy and improve people's lives. We give everything we have got to build and maintain our reputation and continue to earn the respect of our customers.

Throughout the year, we note some of our accomplishments; events and actions that capture the essence of what makes us best. This is a snapshot of our ongoing focus and commitment.

#### **1** Teekay Tankers Won Lloyd's List Asia Tanker Operator of the Year 2016

Kevin Mackay, President and CEO of Teekay Tankers, and representatives from our sea and shore staff accepted the trophy for Teekay Tankers as the Tanker Operator of the Year 2016.

# **2** Large New Shuttle Tankers Contract of Affreightment to Operate in the North Sea

Teekay Offshore had secured a new three-year firm shuttle tanker contract of affreightment (CoA) with BP in the North Sea.

#### **6** World's Second MEGI-Type LNG Carrier Delivered

Oak Spirit, the second M-type, Electronically Controlled, Gas Injection (MEGI)-Type LNG carrier in the world was successfully delivered to Cheniere Energy.

#### **4** Commissioning France's Newest LNG Terminal

Madrid Spirit had the honor of being the first vessel to discharge at the brand new Dunkerque LNG Terminal

#### **(5)** KT Maritime wins another major contract

KT Maritime Services Australia Pty Ltd was awarded another Infield Support Vessel contract, for the ConocoPhillips Bayu Undan operation.

# SUSTAINABILITY IN TEEKAY

Sustainability in Teekay means the long-term health and success of our people, our business and the surroundings we work in.

Sustainability is a core tenet of our business approach. We have defined ambitions and strategic plans, striving to provide cost efficient, innovative measures to increase ship operational efficiency and reduce our environmental footprint. Our underlying sustainability culture focuses on People, Planet and Profit.

## Triple Bottom Line – People, Planet and Profit

This report focuses on the key sustainability issues that impact business performance and our key stakeholders. These include profitability, performance, HSEQ, competence, greenhouse gas emissions, workforce participation, supply chain management and transparency with respect to corruption and ethics.

It covers Teekay activities in 2016, both onboard and onshore, not including information on our FPSO fleet which can be found in Teekay Offshore Production separate 2016 Sustainability Report available at http://www.teekay.com/ business/sustainability/Sustainability-Reports. In addition, 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 to understand how Teekay Corporation considers People, Planet and Profit in all of our decisions and actions to ensure our long-term success.

# **Reporting Basis**

This report contains standard disclosures from the Global Reporting Initiative (GRI) G4 'Core' guideline. The GRI guidelines are highly recognized and the most commonly used guidelines for sustainability reporting.

# Contact Us

We appreciate your comments, feedback or queries on this publication. Please send them to Mr. Paras Thukral at paras.thukral@teekay.com or \_TSQSingapore@teekay.com. Remember to mark the email "Sustainability Report 2016". You can visit our website and learn more about us at www.teekay.com.

# PEOPLE

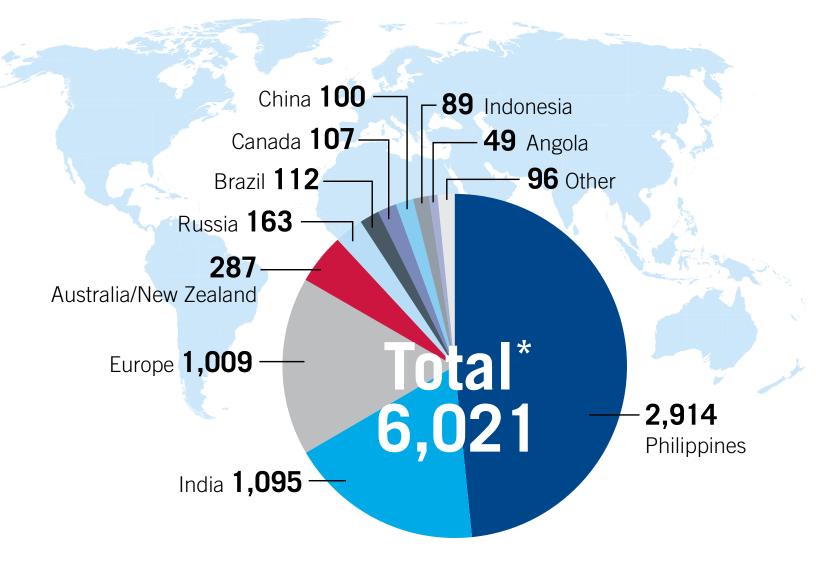
505

At Teekay, we bring energy to the world with Teekay SPIRIT! Our people make this happen. Day and night, 365 days a year, our people ensure seafarers go home safely, the cargo is delivered on time, and provide services that comply to Teekay's standards and seek to exceed industry expectations.

A LANG

8

## Breakdown of Seafarers by Nationality



\* Sea Staff of Teekay, including all permanent, active offshore crew and seafarers, not including contractors or riding crew

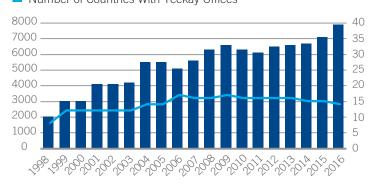


## **Recruitment and Growth**

Teekay's greatest asset is undoubtedly its world class people. Over the years, we have seen a gradual growth of sea and shore staff by 653 and 102 respectively since 2015.

#### Growth in Number of Employees and Teekay Offices

Number of Employees (Shore and Sea)
 Number of Countries With Teekay Offices



#### 5-Year "All Fleet" Seafarer Attrition/Retention

Retention

Attrition

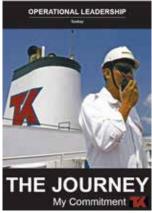


These figures are based on Combined Fleet Officer and Rating Voluntary Attrition. These do not include Teekay FPSO fleet figures from Teekay offshore Production.

Human capital is a vital part for our sustainability focus. A clear career path and opportunities to grow in various roles in the organization delivers a high retention rate compared to industry standards.

# Operational Leadership: The Journey...

'Operational Leadership – The Journey' program is a key process to ensure compliance with safety commitments, HSEQ and Security policy and to fulfil Teekay's core values (SPIRIT) in all areas of our business. It was successfully rolled out to fleet operations a few years ago to ensure compliance with safety. It has proven to be a successful program to enhance safety



culture onboard and was gradually introduced to other business units in our global offices.

Teekay is committed to achieving Operational Excellence and delivering safe, reliable and sustainable services to our customers using an integrated risk-based approach to the management of Health, Safety, Environment, Quality and Security.

Upon joining Teekay, all new hires follow an introduction to, and training for, Operational Leadership and our six safety commitments. Everyone, including the CEO and Leadership team, is required to sign the Operational Leadership handbook as a commitment to being an Operational Leader. This is a personal commitment and accountability.

We also have the Teekay Safety Roadmap to reinforce our focus on having a safe system and culture, ensuring the Human Element is effectively managed. We undertake global initiatives and projects under the safety roadmap to promote Operational Leadership on a regular basis. Examples are the E-Colors, Safe Navigation Handbook, Significant Incident Potential project and Risk Tools Review project.

## Training and Competence

Maintaining and developing the competence of our employees is key to drive safe, efficient and sustainable business. We provide training and competence regime to strengthen our Teekay workforce competency in pursuit to commit to operational excellence, exemplifying Teekay as an employer of choice.

#### Command Assessment Program (CAP) and Engine Room Leadership courses

Teekay Tankers commenced a "Command Assessment Program" to evaluate all our Chief Officers, who have been cleared for promotion to the rank of Master as well as all new hire Masters who are being inducted into the fleet.

The objective of this Command Assessment Program (CAP) is to evaluate leadership competencies such as decisionmaking, management skills, leadership qualities, effective culture-building and emotional stability that are critical for effective performance as a Master.

This program is specifically designed to assist organizations in assessing the suitability of deck officers for assuming the position of Master onboard their vessels. To evaluate prospective Masters, this program uses a psychologist to test the stress management and leadership skills of candidates in a simulated environment of shipboard emergencies.

The duration of each program is three days and at the end of each training session we will be provided with an objective assessment of each candidate's technical abilities as well as their leadership and managerial abilities to effectively command their crew.

Comparably, the main tenets of Engine Room Leadership courses associate with training of senior engineers in an engine room simulator, enhancing their situation awareness and the decision-making skills.

#### **Teekay Marine Solutions: STS Simulator Course**

During 2013, it was recognized a more effective way of training Mooring Masters was required, so work began. Further impetus was added to the project in early 2016, when the brief to create an industry standard setting course was given to a couple of Senior Mooring Masters.

It soon became apparent that the mathematical modeling supplied by simulator manufacturers could not accurately recreate the complex water and airflows around a pair of ships during a Ship to Ship (STS) transfer operation, so a period of development work was undertaken in conjunction with the South Tyneside Marine School.

In parallel with developing the mathematical modeling techniques required to simulate an STS, some very broad based course content was developed. Course development continued apace so that by July the United Kingdom's Merchant Navy Training Board was taking an active interest. The first Ship to Ship Person in Overall Advisory Control (POAC) Phase 1 and 2 Courses were run in October to good reviews.

Thereafter, the UK's MNTB recognized the Phase 1 and 2 STS POAC Courses and shortly afterwards ISO 9001 certification was obtained. Development work continued, with Revision 3 of the STS POAC Phase 2 Course being recognized by the United Kingdom Maritime and Coastguard Agency in June as meeting the requirements laid down in IMO Resolution MEPC. 186 (59) and MARPOL Annex 1, Chapter 8, Regulation 41, Section 3. This is the section of the International Maritime Organization's Marine Pollution Convention that deals with the Qualifications, Training, Knowledge and Expertise of STS POAC's.

It is intended the STS POAC Phase 1 and 2 Courses will be augmented by further courses dealing with specific areas, projects and / or cargo types. This will allow an STS to be simulated, coached and mentored for all STS Team members without exposing them to the hazards of an active STS operation. It will also allow novel / non-standard operations to be simulated for training and assurance purposes.

It is expected that an STS POAC Phase 1 Course for Teekay Captains will have its inaugural running in September. It is hoped this continuing professional development of POAC's and Teekay Captains will allow Teekay to gain a commercial advantage over competitors which do not match this level of externally recognized commitment to Ship to Ship quality assurance.

## Health and Safety at Teekay

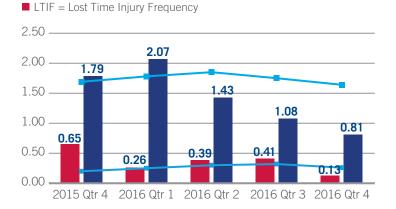
Teekay promotes continuous improvement in the health and safety of our employees. We have stringent policies and practices to manage and minimize the risks.

Our goal is to strive for zero harm to our people, and minimize the impact of our operations on the environment. To achieve this, Teekay takes a proactive approach to implement safety tools and procedures to mitigate the risk of personnel injuries and risk of accidents on sea. In addition to regular inspections, investigation of accidents and HSE reporting, we conducted various campaigns aimed at increasing safety, efficiency and overall well-being of our people.

Lost Time Injuries (LTI) refers to personal injuries where the person could not carry out regular duties, and takes time off for recovery. (Not counting leisure time incidents.)

Teekay observed a moderate drop of Lost Time Injury Frequency (LTIF) from 0.65 in Q4 2015 to 0.13 in Q4 2016. Similarly, there was a progressive decrease of Total Recordable Case Frequency (TRCF) from 2.07 to 0.81 in Year 2016.

#### **All Fleet LTIF/TRCF**



#### **Teekay Gas Prevent Injury Campaign**

■ TRCF = Total Recordable Case Frequency

In 2015 and early 2016 there was a rise in incident severity within the gas fleet which culminated in three LTI in seven months.

Teekay Gas launched the Prevent Injury Campaign to promote safety culture onboard. This initiative raised awareness and to embrace a mindset that all potential injuries can be prevented by increasing our safety focus and knowledge. To help our people understand the fundamental of working in the high-risk environment, we address the common personnel injury incidents' direct causes and root causes, and set focus areas for action to be taken to avoid repetitive occurrence in future.

The vessels were set a challenge to come up with an action plan to increase safety focus and knowledge on board – the primary objective of which was to reduce injuries and promote safe working practices. The Campaign was very successful.

The Work Safe Award, commemorative plaques were presented to two Champion teams AI Khuwair and Meridian Spirit, and these were selected based on the Teekay SPIRIT values as well as positive Key Performance Indicators. This award recognizes the leaders in safety performance and hopefully seek to encourage others to follow good practice examples.

Team AI Khuwair have gone from strength to strength and ran an amazing campaign on board which engaged everyone.

Their Campaign action plan focused on a number of interesting, interactive and fun safety activities. These ranged from an "Electro-Technical Officer's (ETO) guide to ladder safety" presentation, a Safety quiz and a Safety Skit where groups acted out differing scenarios linked to varied hazards and the human element. They also boosted their Near Miss reporting by 100% compared with their 2015 reporting!

Team Meridian Spirit focused their campaign on Operational Leadership, Near Misses and Unsafe Act Reporting and understanding. They formed 'Replay group', acting as an interactive tool which involves the re-evaluation of near misses, hazards and unsafe acts though re-enactment. Additionally, they will re-tell the event to the team and generate discussion.

It has proved to be a better evaluation when we have more 'eyes' involved, instead of a story told by one person.



#### Teekay Tanker Work Rest Hours Campaign

Over time, fatigue has a severe wearing effect on people which could lead to long term mental and physical issues. This problem is addressed in the Maritime Labour Convention (MLC) 2006, in terms of hours of work and 'rest'.

To put the MLC requirements to practice, Teekay Tankers conducted a Work Rest Hours campaign across the fleet. The goal was to ensure crews have sufficient rest to avoid fatigue and accidents; and to encourage seafarers to take ownership of their own hours of rest and raise potential incidences of non-compliance with onboard management.

By June 2016, Teekay Tankers acknowledged that 20 vessels had stopped operations in the last 4 years to comply with rest hour legislation.

#### Effective Management of Work/Rest Hours on Board

- Reinforcement from CEO and senior management
- Continuous focus on Management of Rest Hours
- 20 vessels stopped in the last 4 years to comply with rest hour legislation
- 23 Rest hour workshops, conducted by a ILO certified trainer, for seafarers and office managers in last 12 months
- One campaign conducted in May/June 2016

## Awards

#### KTM, ASL, Shell GOAL ZERO HERO Awards

Teekay JV partner KTM Maritime has achieved the Shell and ASL Goal Zero award for its consistent approach to commissioning safety compliance. The award is given to service provider for achieving no recordable incidents within 180-day period.

A plague in recognition of achievement was presented by Vlado Petric to Mr Wim from ASL commissioning, who received the prestige award during the monthly safety meeting for his consistent approach to ISV commissioning safety compliance. He further supported his commitment to 'getting it right on the ISVs' with a safety theme that he presented to all on the spot after receiving the award.

#### Consecutive AMVER Awards Received for Teekay Tankers

Teekay Tankers contributed to another record breaking year at AMVER. 9,264 vessels achieved at least 128 days 'on plot' contributing to 283 lives saved in 2016.

AMVER (Automated Mutual-Assistance Vessel Rescue System) is sponsored by the United States Coast Guard. It is a unique, voluntary ship reporting system used worldwide by search and rescue authorities to arrange for assistance to persons in distress at sea.

These awards are "Dedicated to the crews, for their commitment to their fellow mariners at sea – that no call for help goes unanswered."



# Diversity

As an international company, Teekay Corporation emphasizes a diverse workforce and inclusion in the global workplace. Diversity is a key driver of innovation and long-term success: a variety of experiences, perspectives, and cultural backgrounds makes us stronger and more resilient. We believe in promoting equal career advancement opportunities for all our employees. Teekay has no tolerance for discrimination and unfair acts in both shore and offshore workplaces.

# Corporate Social Responsibility

Our customers, employees, partners, the environment and local communities are all affected by our operations and activities. We believe that the hallmark of a truly sustainable company is the way we interact with its stakeholders and the community in which we operate.

It's no secret that employees at Teekay spend many hours volunteering with charities and raising funds for great causes. We do this with one goal in mind: to give back to the community and make a difference. Some of our favorite moments this year include

# White Ribbon Campaign – Stop Violence Against Women

On 15 November, Teekay Shipping Australia sponsored the annual White Ribbon Luncheon event held at the Royal Melbourne Yacht Squadron in St Kilda Victoria.

There was an incredible outpouring of support from Teekay Australia and our employees, supporting organizations to respond to and prevent violence against women.

#### **2** Annual Kiltwalk Event

On April 24, 10 volunteers from the Teekay Glasgow office participated in the annual Kiltwalk raising £3,007.96 for children's charities in Scotland. All the funds collected will help take children out of poverty, protect those who need protecting, provide vital services and medicines to children who are facing illness, and support the families who work tirelessly to give the ones they love the lives they deserve. Their Teekay Spirit was evident throughout the 26 miles walked wearing their very own traditional kilts







#### Supporting Variety: Boat for Hope

On June 11, a group from Teekay Vancouver braved the rain to volunteer at the annual Variety event, Boat for Hope. This is Variety's signature outdoor event of the year, allowing children with special needs and their families to come together, act like pirates and have fun – both out on the water and back ashore.

The Teekay volunteers along with an army of others supported in many ways to ensure the day was a massive success. Roles supported by Teekay included serving cotton candy, assisting the children to get on/off the boats and running the Piggy Racing Game. Good fun was had by all and Teekay Spirit shared with the kids to help them enjoy their day.



#### **4** Bishan Home Befrienders

On September 28, volunteers from the Teekay Singapore office visited the Bishan Home for the Intellectually Disabled to take them out on a field trip. Each volunteer was paired up with a buddy with special needs to spend time at Gardens by the Bay, Singapore's unique nature park. It was a great opportunity for volunteers to help their buddies leave their home and get comfortable with others in society. Holding hands throughout the day, everyone got to experience the beautiful scenery of the garden and learn from each other.

Here's what some of the volunteers had to say:

"It was indeed great new experience. The outing made me discover another side of me and I was very delighted to be a little help which bring smiles to society. I felt the connection between us and I was able to understand what the client's needs and wants in short period of time."

"I'm glad that I participated in this activity. I gained some new experience in term of how to take care of the client as well as some insight of their life. I was impressed at how they interact with each other even with the communication barrier that they have. To them, they are happy as long they have each other and it is definitely great to know that we were able to contribute to their happiness. It's truly an eye opener to me."

# The Teekay Spirit in Action

At Teekay, safety of our shore and sea people, and communities are our core priority. All Teekay seafarers abide by, and are committed to, various international conventions that cover safety of life at sea. The basic premise of these legal frameworks is a duty to assist and rescue, whenever they see another people in distress.

#### "M.T. Godavari Spirit " Rescued Fishing Vessel M.V. Baraka in Atlantic Ocean

On October 23, while the vessel was en route to Delaware from Akpo Terminal, Nigeria, the vessel received a call from MRCC Dakar informing us that a nearby fishing vessel, M.V. Baraka, was in distress and required assistance. Godavari Spirit was asked to deviate from our set course to provide assistance.

Since the Gulf of Guinea is a high-risk area for piracy, the captain had verified and authenticated the distress message prior to notifying the shore. Vessel learnt that the captain and his 10 crews in M.V. Baraka had been sailing for three days from Freetown before the engine failed. They had been drifting ever since for 2 two weeks, wearying from shortage of food and water, unfortunately, two other crew members were suffering from Malaria.

As the vessel approached her the following morning, vessel transferred sufficient food and water including other essential items through the messenger lines. Subsequently, our watchkeeper informed us that they had secured the services of a tug boat to tow MV Baraka back to nearest port. After informing the crew of MV Baraka of the good news, Godavari Spirit was cleared by MRCC Dakar to proceed on our voyage. Vessel resumed her voyage after the successful rescue.



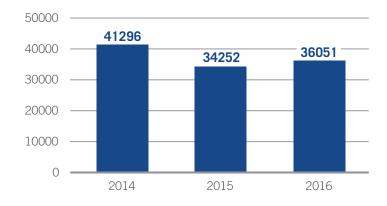
# PLANET

We are committed to minimize our environmental impacts by implementing environmentally sound initiatives in our vessels and offices. All Teekay employees sign a pledge: we commit to protect the environment and comply with environment regulations.

All vessels operated under our Safety Management System, comply with the International Safety Management Code, the International Standards Organization's (ISO) 9001 for Quality Assurance, ISO 14001 for Environment Management Systems, Occupational Health and Safety Management Systems (OHSAS) 18001 and Maritime Labour Convention 2006.

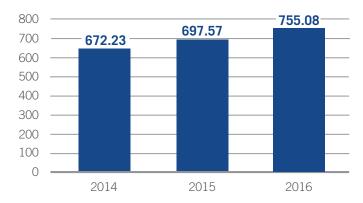
Today, our commitment to environmental responsibility is well integrated into our management systems and operational leadership commitments.

20

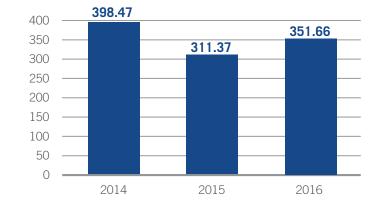


#### Greenhouse Gases (metric tonnes CO<sub>2</sub> - eq.) Average Per Vessel

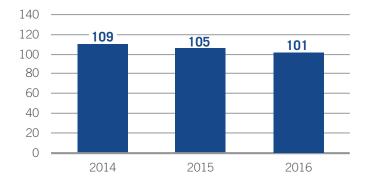
## Nitrogen Oxides NOx & Nitrous Oxides $N_2O$ (metric tonnes) Average Per Vessel



#### Sulphur Oxides (metric tonnes) Average Per Vessel







### Climate change

The effect of climate change is inevitable and has been increasingly felt in recent years, adding to the growing importance of climate risk management. The maritime transport had accounted for estimated 2.5% of annual global CO2 emissions and produced around 1,000 million tonnes of carbon annually. It is foreseeable that there will be an increase of output by 50-250% in period up to 2050, subject to future economic outlook. NOx emissions were reported to be 99,671.12MT in 2016 as compared to 87,893.81MT in the year 2015; which has increased by 13%. As NOx emission is related to fuel consumption, one of the factors for increase in fuel consumption is an increase in the distance travelled by our vessels. Teekay vessels had carried 350,401.51 million Ton-Miles of cargo in 2016 as compared to 308,308.29 million Ton-Miles of cargo in 2015, which is 14% more than last year.

In view to reduce emissions and minimize impact of shipping on climate change, Teekay has developed an environmental strategy (2013-2018). This Environmental Strategy is implemented through our annual Shipboard Environmental Leadership Program where goals are defined and evaluated.

The commitment to reduce our impact on the environment is integrated into our business acting as a driver for innovation and strategies that support long-term sustainability.

# Innovation, Technology and Projects

Innovation is one of the "I"s in our SPIRIT values. 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.

#### SmartBay Marine Transportation Technology Test Bed

Teekay's St. John's, Newfoundland and Labrador office embarked on a collaboration with Fisheries and Marine Institute Memorial University with an initiative called SmartBay (www.smartbay.ca). This targets improving the safety and efficiency of shipping operations in coastal Newfoundland waters, and includes applied research in the area of GHG reduction using the SmartBay infrastructure.

<sup>&</sup>lt;sup>1</sup> IMO. (2014). Third IMO GHG Study 2014. Retrieved from International Maritime Organization: http://www.imo.org/en/OurWork/Environment/PollutionPrevention/ AirPollution/Pages/Greenhouse-Gas-Studies-2014.aspx

We would like to express our appreciation and thanks to Transport Canada for financially supporting the project and welcome our project partner, National Research Council laboratory in St. John's which will be focusing on monitoring vessel performance characteristics.

#### Embracing Technology: Samba Class Goes Paperless Navigation

Embracing the new technology, the full fleet of "Teekay Tankers" have also gone paperless.

It is sometimes said that "less is more" and with this technologically advanced system, the time spent on chart space dramatically reduces.

Officers on watch can focus more on the safety of navigation: technology deployments should never reduce the duties and commitment to enforce safety.

#### **Reduction of Garbage Generation Onboard**

Captain Thirumurthy Kamatchi of the Godavari Spirit noticed that plastic water bottles onboard were increasing day by day. For proper disposal of the waste, bottles are required to be stored onboard until the vessel's next docking.

Captain took the initiative to raise the matter at the regular Health, Safety, Environment and Quality Assurance (HSEQ) meeting and implement a program to address it. With full support of the crew and shore staff, the vessel purchased stainless steel bottles for each crew member. The new bottles can be used for both hot and cold beverages and used in cabins and also carried on deck in a pouch if required.

This is just another example of our seafarer's commitment to the sustainability and Operational Leadership.

Thinking green – one water bottle at a time.





## Green Award for Environmental Protection

#### **2016 Green Environmental Awards**

In celebration of the dedication to environmental excellence of our seafarers and company personnel shore-side, the Chamber of Shipping of America (CSA) has presented the Environmental Achievement Award to 97 Teekay vessels. This award is a great achievement for our sea-going and shore-side staff for reaching great heights in environmental excellence, with at least a two-year period of no reportable spills, no U.S. Coast Guard citations for violations of MARPOL, no port state citations for violations of MARPOL, and no violations of state/local pollution regulations.

This achievement underscores Teekay's commitment as a service provider to clean and green shipping.

# Fleet Qualified for Green Flag Voluntary Vessel Speed Reduction Program

Teekay Shipping Ltd and Taurus Tankers were qualified for Port of Long Beach's 2016 Green Flag Voluntary Vessel Speed Reduction Program at the Tier 1 (20 nautical mile) level. This recognition was earned by meeting or exceeding

the 90% program requirement for compliant vessel calls made to the Port in 2016. Both recipients were awarded 15% and 25% reduction of dockage payable to the Port of Long Beach.



# PROFIT

Teekay Corporation reported consolidated cash flow from vessel operations of \$1.3 billion, compared to \$1.4 billion in 2015. During the year, our diverse portfolio of long-term charter contracts totaling approximately \$20 billion in forward fee-based revenues continued to provide support to Teekay Corporation's consolidated cash flows. Our tanker business results were impacted by lower spot tanker rates in 2016 compared to the highs seen in 2015. On the efficiency front, we have implemented various cost saving initiatives during the past year, resulting in lower run-rate operating and general and administrative expenses. Overall, we continue to focus on delivering on our existing growth projects, optimizing our asset portfolio across the Teekay Group, and strengthening our balance sheets to better position the Teekay Group to take advantage of future opportunities. For Teekay LNG, this means continuing to execute on its existing growth projects, including its current newbuilding financing plan; for Teekay Tankers this means maintaining fixed cover, continuing to deleverage the balance sheet and keeping operating costs low to position the business for the next upcycle.

Looking at the markets that we operate in, over the course of 2016 and into 2017, oil prices have stabilized in the \$45 to \$55 per barrel range, which is overall positive to the offshore industry sentiment. Looking longer-term, the fundamentals in the offshore and deepwater energy sector remains positive, which will benefit Teekay Offshore. In addition, the fundamentals in the shuttle tanker market continue to tighten, particularly the North Sea. The long-term fundamentals for LNG shipping remain strong with an expectation that more LNG carriers will be required to service new projects, which will benefit Teekay LNG. Lastly, we anticipate 2017 will present some headwinds to crude tanker rates due to OPEC production cuts and higher fleet growth. However, we believe this near-term dip in the market cycle to be relatively short-term in nature, as a lack of new tanker ordering in the mid-sized tanker segments and increased scrapping due to regulatory changes, as well as a more balanced oil market, is expected to lead to a renewed market upturn in 2018, which will benefit Teekay Tankers.

Each of Teekay Corporation's publicly-traded Daughter entities has continued to execute on their respective business plans. In 2016, Teekay LNG generated distributable cash flow of \$235.0 million and continued executing on its portfolio of growth projects. Over the course of 2016 and into 2017, Teekay LNG took delivery of the world's first MEGI LNG carrier newbuilds, the Creole Spirit, the Oak Spirit and the Torben Spirit, which commenced their respective charter contracts with Cheniere Energy and a major energy company, and, through its joint venture with Belgium-based Exmar NV, took delivery of its sixth, seventh and eighth of its 12 mid-size LPG carrier newbuild. On the business development side, Teekay LNG secured charter contracts for all its remaining unchartered MEGI LNG carrier newbuilds. On the financing side, in 2016 and into 2017, Teekay LNG has continued to secure long-term financing for its growth projects raising over \$1.6 billion for various projects. With a significant portfolio of growth projects delivering through 2020, we believe Teekay LNG is set to experience significant cash flow growth in the future.

In 2016, Teekay Tankers generated significant free cash flow of \$186.7 million, which, together with the sale of some older tonnage, has allowed Teekay Tankers to further strengthen its balance sheet. On the commercial side, Teekay Tankers continued to focus on increasing its fixedrate time-charter coverage and growing its lightering and other fee-based businesses, which we believe will help to reduce the effect of tanker market volatility in 2017.

In 2016, Teekay Offshore generated distributable cash flow of \$161.3 million, continued to focus on the execution of its portfolio of growth projects, and implemented various cost saving initiatives. In 2016 and into 2017, Teekay Offshore secured five shuttle tanker contract of affreightments in the North Sea at successively higher rates, including the largest North Sea shuttle tanker award in five years.

# Project Management

#### KT Maritime Wins Another Major Contract: Offshore Operations for ConocoPhilips in Australia

Perth-based KT Maritime Services Australia Pty Ltd, a joint venture partnership of KOTUG International B.V and Teekay Shipping Australia Pty Ltd, has been awarded another Infield Support Vessel contract, for the ConocoPhillips Bayu Undan operation.

The contract is for the design, construction and operation of a new Infield Support Vessel (ISV) supporting ConocoPhillips offshore operations, located in the Timor Sea, 500km northwest of Darwin and 250km south of East Timor.

Design works have commenced with construction to begin in the Damen Shipyard in Sharjar during June 2016. Contract has the vessel commencing operations in December 2017 for 5 years plus options.

#### ALP Striker Delivers Huge 310 Ton Bollard Pull

ALP STRIKER is the first of four ultra-long distance towing and anchor handling vessels for ALP Maritime Services, each with a bollard pull of approx. 300 tonnes.

The vessels of the SX157 design are a part of the ALP Future class. Service speed is 13 knots, while their top speed is 19 knots. With a fuel capacity of more than 3,500 t, they can tow at full power for 45 days, sufficient for non-stop Trans-Atlantic/Indian, Pacific Ocean towing operations without fuel calls. The vessels are constructed by Niigata Shipbuilding & Repair, Japan.

Apart from towing oil rigs, or FPSOs, from the building yards to the installation site at the oil field, these vessels are outfitted with DP2 and anchor handling capacity in order to assist during the installation/hook-up phase for the towed objects.

The vessels were developed especially for this project in close collaboration between ship designer Ulstein Design & Solutions AS and ship owner ALP Maritime Services, the latter a subsidiary of Teekay Offshore Partners L.P.



# **SUPPLY CHAIN MANAGEMENT**

Teekay is fully integrated into the global energy supply chain. That supply chain is an ecosystem – and Teekay, as a global industry leader, has hundreds of its own suppliers.

Our key suppliers and service providers are located around the world, transporting parts and goods on a global scale. Teekay's vendors and suppliers were selected with an appropriate level of scrutiny. We aim for continuous improvement, to ensure an ongoing evaluation of vendors which comply with the company's Safety and Quality Management System, and any and all legislative requirements.

# **ETHICAL BUSINESS CONDUCT**

At Teekay we are committed to the highest standards of professional conduct. Our Standards of Business Conduct Policy is a valuable tool helping us to meet this commitment.

In order to ensure that all are familiar with the Policy and specifically anti-corruption legislation, all on shore employees are required to complete an online Anti-Corruption e-Learning course.

In recent years, we have observed that many companies face serious challenges from illegal, unethical and dishonest behavior – behavior that can damage a company's reputation and put its future at risk. At Teekay we ensure that all employees are committed to ethical business practices and preserving our culture of honesty, integrity and trust.

In addition, all Teekay employees can submit confidential concerns regarding accounting, fraud or financial auditing matters through the Business Conduct Reporting Tool, or by contacting an external operated toll-free hotline +1 877 507 8685.





# BRINGING ENERGY TO THE WORLD WITH TEEKAY SPIRIT



www.teekay.com