# **Keppel Corporation**



# To be the Provider of Choice for Solutions to the Offshore & Marine Industries, Sustainable **Environment and Urban Living.**

We will develop and execute our business profitably, with Safety and Innovation, guided by our three key business thrusts of Sustaining Growth, Empowering Lives and Nurturing Communities.

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#### About this Report

This Report focuses on the sustainability strategies and practices of the Keppel Group, highlighting the economic, environmental, and social aspects of the Group's activities and initiatives. It provides an overview of our approach, priorities and targets, as well as a performance review in several key areas.

Through this Report, we demonstrate our commitment to keep our stakeholders, including our employees, customers, investors, business partners and community members abreast of our social and environment developments.

Limited copies of this Report have been printed to minimise the impact on the environment. The PDF copies are available online at www.kepcorp.com.

#### REPORTING PERIOD AND SCOPE

This Report covers the Keppel Group's global operations and initiatives, including its subsidiaries, unless otherwise indicated. The period covered by this Report is the same as the financial year of Keppel Corporation (January to December 2010). Wherever possible, we have shared three-year historical information to provide a meaningful basis for comparison. We aim to publish the Sustainability Report yearly.

#### **GLOBAL REPORTING INITIATIVE**

This Report has been developed in accordance with the Global Reporting Initiative (GRI) G3 guidelines. Through the GRI Application Level Check Statement it has been confirmed that this Report fulfills the requirements of Application Level B. For more information on the guidelines, please visit GRI's website. Standard units of measurements were used in this report and conversion factors, where applicable, are found in their respective sections.

The GRI Content Index on pages 84 to 87 outlines where specific GRI reporting elements and indicators are addressed in the Report. In addition to this Report, stakeholders are advised to read our Annual Report and visit our corporate website www.kepcorp.com for a complete view of the Group's business, strategy, performance and prospects.

To determine the elements and indicators included in this Report, a series of workshops were conducted to determine the issues which are material to the Group's operations and activities as well as issues that are significant to the Group's stakeholders. These workshops were facilitated by independent consultants to provide an external perspective.

#### **FEEDBACK**

Your feedback is valued to help us improve on our future reporting and we welcome your comments and opinions. Please email us at: sustainability@kepcorp.com





#### **DEAR VALUED STAKEHOLDERS,**

I am happy to present Keppel Corporation's first Sustainability Report.

Over four decades, Keppel Corporation has evolved into one of the largest conglomerates listed on the Singapore Exchange, focussing on its key competencies to grow its businesses in Offshore & Marine, Infrastructure and Property. The Keppel Group, spanning more than 30 countries, also leads the Singapore private sector consortium in the Sino-Singapore Tianjin Eco-City, a landmark project between Singapore and China to create a model for sustainable urban living.

In today's business environment, companies are increasingly expected to be more open on issues beyond financial results. The Keppel Group has a longstanding commitment to high quality, environmental, social, ethical and governance standards. We are pleased to be able to report to stakeholders our approach to sustainability and how we manage our efforts and activities in this respect.

Keppel firmly believes that while our businesses are driven by earnings, what we do must also have a positive impact on society, the community, employees and all other stakeholders. In this regard, the Group has constantly strived to contribute to communities

where we operate, from touching lives, protecting the environment, supporting the arts, championing safety to leading best practices in governance.

To consolidate and guide our sustainability initiatives across the Group, we established a crossbusiness unit structure in December 2009, comprising key management in our different businesses.

I chair the Group Sustainability Steering Committee, which oversees strategic direction to develop products and processes that minimise impact to the environment and ensure that our operations and deliveries meet national or international standards in the areas of environmental protection, labour relations, safety and health. This Committee also aims to ensure coherence and consistency in our efforts to build Keppel's reputation as a socially responsible company in sustaining growth, empowering lives and nurturing communities.

Reporting to the Steering Committee is the Group Sustainability Working Committee, led by Wang Look Fung. This committee identifies and initiates measures as well as manages pertinent sustainability aspects, tracks and reports sustainability performance, and recommends and implements strategies to achieve collective goals. The Working Committee is supported

by a Secretariat as well as six Sub-Committees, each looking into the six areas of Economic Performance, Governance and Compliance, Environmental Performance, Product Responsibility and Excellence, Safety, and Human Rights and Labour Practices.

Keppel Corporation plans to report on and account for the Group's sustainability performance annually, in line with our commitment to good governance and transparency to our stakeholders. We have adopted the internationally-accepted Global Reporting Initiative framework for this first Report, and we will continue to refine and improve on our reporting in the years ahead.

With sustainability as an imperative, I hope this Report will serve to further your understanding of our sustainability efforts and facilitate our continuing dialogue with our stakeholders.

Yours sincerely,

Uno Chiantery

**Choo Chiau Beng Chief Executive Officer**25 May 2011

# Growing into the Future

Keppel Corporation is a Singapore-grown conglomerate with key businesses in Offshore & Marine, Infrastructure and Property. With a global footprint in over 30 countries, Keppel Corporation leverages its international network, resources and talents to grow its key businesses.

#### Offshore & Marine

Keppel Offshore & Marine (Keppel O&M) is one of the world's largest offshore and marine groups, and the global leader in offshore rig design, construction and repair, ship repair and conversion and specialised shipbuilding. Its Near Market, Near Customer strategy is underpinned by a global network of 20 yards and offices in the Asia Pacific, Gulf of Mexico, Brazil, the Caspian Sea, the Middle East and the North Sea regions.

#### Infrastructure

Keppel's Infrastructure Division comprises environmental engineering, power generation, logistics and data centre services. In environmental engineering, Keppel Integrated Engineering offers a complete range of water and thermal technologies for municipal and industrial clients. In power generation, Keppel Energy has a track record of developing, owning and operating power plants in Singapore, Asia and Latin America. Keppel Telecommunications & Transportation is a leading service provider of logistics and data centres in Southeast Asia and Europe.

#### **Property**

Keppel Land contributes to vibrant communities across Asia as a choice developer with a sterling portfolio of award-winning residential developments, integrated townships and investment-grade commercial properties. Through its twin core businesses of property development and property fund management, Keppel Land is committed to develop properties that harmonise with the urban and natural landscape for desirable live-work-play environments.

#### **Sustainable Development**

Keppel's Sustainable Development unit leverages synergies in core competencies of property development, environmental engineering and infrastructure to provide integrated solutions that contribute to eco-development in urban planning and solutions.

About Keppel Corporation

#### Managing Sustainability

One of Singapore's largest publicly traded companies, Keppel started building a Group-wide sustainability framework in 2009 to guide the Group's efforts in managing and developing our sustainability priorities.

The Group Sustainability Steering Committee, chaired by Keppel Corporation's Chief Executive Officer, Mr Choo Chiau Beng, leads the Group's sustainability strategy. Mr Choo is joined on the Steering Committee by two other executive directors, Senior Executive Director and Group Finance Director, Mr Teo Soon Hoe and Executive Director, Mr Tong Chong Heong and other Keppel business units' top management.

From the outset, the commitment of senior management was seen as crucial to successfully engage Keppel staff and provide leadership and direction for the Group's performance against sustainability indicators. The Committee sets strategic targets for business units and provides oversight to ensure coherence and consistency in our sustainability efforts.

The management structure sees the Steering Committee supported by the Sustainability Working Committee, which is headed by Ms Wang Look Fung, General Manager of Group Corporate Communications. The Working Committee, made up of six functional sub-committees, oversees, executes and reports

the Group's strategy across the six aspects that were identified as material to Keppel Group: Environmental Performance, Economic Performance, Product Responsibility & Excellence, Governance & Compliance, Human Rights & Labour Practices and Safety.

The Steering and Working Committees are also supported by the Secretariat sited in Group Corporate Communications as well as Group Internal Audit, which facilitates the reporting and advises on performance issues.

We engaged the services of a specialist external consultant to assist in the development of our sustainability framework. They also provided training to the Steering Committee, Working Committee, the Secretariat and Group Internal Audit to ensure that our collective approach and understanding of sustainability were aligned. We will work towards external assurance for future reports.

#### **Materiality Review**

To identify social and environmental challenges and opportunities that are important to our stakeholders, a list of issues that were felt to be significant to the Company were raised at the Report Planning Workshop.

Consequently, Keppel conducted three materiality workshops to assess the significance and impact of social, environmental, governance and economic issues facing the Group, beyond merely financial terms.

Materiality was assessed by determining the relevance and significance of an issue to us and our stakeholders. An issue is considered material if it influences the decisions, actions and performance of an organisation or its stakeholders.

The issues were presented to and approved by the Steering Committee, and formed the basis of the framework for the Working Committee to roll out our sustainability strategy and reporting programme.

A stakeholder mapping exercise was also undertaken and six stakeholder groups were identified as having a high level of interest in sustainability issues, and the potential influence to affect the Group's businesses. These are (not in order of priority): governments (regulators), shareholders, customers, suppliers, employees and communities.

The materiality assessment will be an ongoing process and will be reviewed as part of the annual reporting cycle as the critical material issues may change over time.

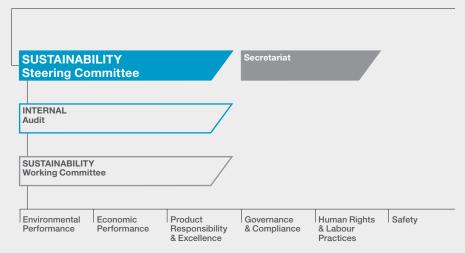
#### Stakeholder engagement

We recognise that business and sustainability goals are best aligned through an active engagement process with our stakeholders. Furthermore, there is increasing stakeholder interest in how we are managing sustainability risks and contributing back to the communities where we operate.

We believe that through open dialogue and other engagement efforts, we can identify and address issues that are significant to our stakeholders and shape our approach. In addition, dialogue with various parties will allow us to better align our activities with the wider priorities of society.

Communication and engagement take many forms, including internal and external communication platforms like one-on-one dialogues, group dialogues, briefings, senior executive speeches, quarterly earnings webcasts, publications, such as our newsletters, annual report, corporate websites and this Report. We welcome feedback from the readers of the Report on areas for improvement and increased transparency. Please see page 1.

#### KEPPEL GROUP'S SUSTAINABILITY MANAGEMENT STRUCTURE



#### Keppel's Stakeholders



#### **Governments**

**Goal:** Collaborate with public policy leaders on issues of mutual interest **Example:** The Sino-Singapore Tianjin Eco-City (Tianjin Eco-City) is a landmark bilateral project between Governments of Singapore and China and is envisioned to be a practical, scalable and replicable model of sustainable development for other cities in China and the rest of the world. Keppel Group leads the Singapore private sector consortium that is working with the Chinese consortium to guide our 50-50 joint venture in its role as master developer of the Tianjin Eco-City.



#### **Shareholders**

**Goal:** Address performance and concerns with institutional and retail shareholders **Example:** In 2010, Keppel has had 160 one-on-one investor meetings and conference calls with Singapore and overseas institutional investors. Top management also went on non-deal roadshows to the US and Hong Kong, and met institutional fund managers. There were also investor visits to Keppel Offshore & Marine's yards and Keppel Seghers Tuas Waste-to-Energy Plant for a better understanding of our operations.



#### **Customers**

**Goal:** Provide value-added and reliable solutions tailored for our customers **Example:** Keppel Offshore & Marine seeks ways to improve its rigs through collaboration with customers to create better value for them. We combine the best of our rigbuilding experience with design and engineering expertise to develop and offer robust solutions. Therefore, our proprietary KFELS B Class jackup rig design launched in 2000 have enjoyed wide market acceptance. For its environmentally friendly features, the KFELS B Class design was also bestowed the Prestigious Engineering Achievement Award from Institution of Engineers Singapore in 2009.



#### Suppliers

Goal: Form lasting win-win partnerships for mutual interest

**Example:** Contractors and suppliers are represented in our unions and councils across the Group to ensure that they are involved in our operational concerns. Keppel Offshore & Marine's contractors and workers take ownership of safety by conducting their own monthly site inspections through the Contractors HSE Watch Group and Workforce Safety Council. This is over and above the daily and weekly walkthroughs by Keppel's safety officers, project managers, yard managers and clients.



#### **Employees**

**Goal:** Engage our workforce to boost retention and promote long-term career development **Example:** An Organisational Climate Survey, first started in 2005, is used to identify employees' concerns and areas for improvement every year. 2010 marks the sixth year in which Keppel conducted the Climate Survey for Keppel Offshore & Marine, and the second year that it conducted the survey group-wide. Using the inputs culled from this annual survey, Keppel reviews and makes improvements to current policies and programmes as we continually build the Group's position as an employer of choice.



#### **Communities**

**Goal:** Develop closer relationships with communities where we operate to enhance trust and goodwill

**Example:** A unit of Keppel Land, Spring City Golf & Lake Resort in Kunming, China continued to support and sponsor foreign volunteer doctors in providing healthcare services to local villagers. Spring City partnered a group of Singaporean doctors and nurses on a voluntary medical mission to perform cataract surgery for villagers who cannot afford or were too weak to travel to the nearest city for treatment. To-date, the resort has contributed more than RMB200,000 and about 150 patients have benefited from the cause.

# **Sustaining Growth**

(pages 10-47)

Our commitment to business excellence is driven by our unwavering focus on strong corporate governance and prudent risk management.

Resource efficiency is not only our responsibility, but also makes good business sense.

Innovation and delivering quality products and services are key in sharpening our competitive edge.



**Empowering** 

(pages 48-75)

People are the cornerstone of our businesses.

As an employer of choice, we are committed to grow and nurture our talent pool through continuous training and development to help our people reach their full potential.

We want to instill a culture of safety so that everyone who comes to work goes home safe.



(pages 76-83)

As a global citizen, we believe that as communities thrive, we thrive. We give back to communities wherever we operate through our multifaceted approach towards sustainability.

We also believe that cultivating a green mindset among our employees will spur them to adopt a sustainable lifestyle.

As leaders in our businesses, we support industry programmes and initiatives, and encourage open dialogue for further growth.



Financial Highlights (pages 10 to 15)



Governance and Compliance (pages 16 to 23)



Environmental Performance (pages 24 to 35)



Product Excellence (pages 36 to 47)



Safety and Health (pages 48 to 59)



People Matters (pages 60 to 75)



Community Engagement (pages 76 to 83)



Governance and Compliance



Environmental Performance

# SINGAPORE CORPORATE AWARDS Keppel Corporation

- → Gold, Best Managed Board (Market cap of \$1 billion and above)
- → Best CEO, Mr Choo Chiau Beng (Market cap of \$1 billion and above)
- → Gold, Best Annual Report (Market cap of \$1 billion and above)

#### K-REIT Asia

→ Gold, Best Annual Report (REITs and Business Trusts)

### **Keppel Telecommunications** & Transportation

→ Gold, Best Annual Report (Market cap of \$300 million to less than \$1 billion)

### GOVERNANCE AND TRANSPARENCY INDEX

Keppel Corporation, Keppel Telecommunications & Transportation, and Keppel Land were ranked 4th, 9th, and 13th respectively among 700 companies assessed.

# SECURITIES INVESTORS ASSOCIATION OF SINGAPORE 11TH INVESTORS' CHOICE AWARDS Keppel Corporation

→ Second, Singapore Corporate Governance Award

#### Keppel Land

→ Runner-up, Most Transparent Company (Property)

#### **FINANCEASIA**

#### **Keppel Corporation**

- → First, Most Committed to a Strong Dividend Policy
- → First, Best Investor Relations
- → Third, Best Managed Company
- → Third, Best Corporate Social Responsibility
- → Fourth, Best Corporate Governance
- → Keppel Towers, GE Tower, Equity Plaza, Prudential Tower and Keppel Bay Tower in Singapore, The Arcadia and La Quinta in China were conferred the Green Mark Gold by Singapore's Building and Construction Authority.
- → Keppel Land's golf courses in China and Indonesia, Spring City Golf & Lake Resort and Ria Bintan Golf Club were designated Classic Sanctuaries by Audubon International for their efforts in protecting wildlife habitats and natural resources.
- → K-REIT Asia's 275 George Street building in Australia attained the prestigious 5 Star Green Star Office As Built v2 rating by the Green Building Council of Australia.
- → In the Singapore Environmental Achievement Awards, Keppel Land won the Merit Award in the Services category for its excellence in corporate environmental leadership.
- → Hotel Sedona clinched the runner-up place in the ASEAN Best Practice Competition for Energy Management in Building and Industry (Small and Medium category).
- → Hotel Sedona was lauded for Best in Green and Environmental Practices by the Government of North Sulawesi, Indonesia.
- → Ocean Financial Centre was conferred the Solar Pioneer Award, an award co-organised by the Singapore Business Federation, Sustainable Energy Association of Singapore, the Economic Development Board and the Energy Market Authority.

Key Awards and Accolades

#### Key Awards and Accolades



- → Keppel Corporation was one of the top five brands in Singapore at the Brand Finance Asia Pacific Forum.
- → Keppel Corporation was ranked 20th out of the top 42 conglomerates in the Forbes Global 2000 Ranking for 2010, up from 21st position in 2009.
- → Keppel FELS edged out four other finalists to win the Offshore Yard Award at the Seatrade Asia Awards.
- → At the Lloyd's List Asia Awards, Keppel Shipyard received the Shiprepair Yard Award for the sixth year.
- → Semisubmersible drilling tender, West Palaut, built to the KFELS SSDT<sup>™</sup> design won the Shell Platform Rig of the Year Award for the third time. The rig was conferred this award in 2004 and 2006.
- → At the 24th Annual Singapore 1000 & Singapore SME 1000 and Singapore International 100 Awards, Keppel Corporation was named the winner of the Singapore International 100: Overseas Sales/Turnover Excellence in Markets (The Americas) while Keppel FELS took home a similar award for the European market.

- → Keppel FELS received the May Day 2010 CBF (Cheaper, Better, Faster) Model Partnership Award from the National Trades Union Congress of Singapore.
- → In China, Keppel Nantong Shipyard was ranked sixth among Nantong's Top 10 Export Enterprises by the Nantong Municipal People's Government.
- → Keppel Logistics clinched for the second consecutive year, the Domestic Logistic Service Provider of the Year (Singapore) at the 2010 Frost and Sullivan ASEAN Transportation & Logistics Awards.
- → Two top welders from Regency Steel Japan won the second and third position at the 51th Fukuoka Prefecture Welding Skill Contest in Japan.
- → At the Euromoney Real Estate Awards 2010, Keppel Land garnered awards comprising:
- Best Developer in Vietnam
- Best Office Developer in Singapore
- → Keppel Land was one of two Singapore companies to be included in the Dow Jones Sustainability Asia Pacific Index.

→ Keppel Land also garnered recognition for its projects as follows:

#### Marina at Keppel Bay

- Marina at Keppel Bay won the coveted award of Best Asian Marina at the 6th Asian Boating Awards.
- Awarded the 5 Gold Anchors rating from the Marina Industries Association of Australia (MIAA) for top excellence in services and facilities.

#### **Jakarta Garden City**

- Runner-up in the Residential (Low Rise) category at the International Real Estate Federation (FIABCI) Prix d'Excellence Awards.
- Best Middle Class Residential Development at the FIABCI Indonesia – BNI Prix d'Excellence 2010 Awards.

#### **Sedona Suites**

 Sedona Suites in Hanoi and Ho Chi Minh City was lauded for "Excellent Performance" in the Guide Awards 2009-2010.

#### **Sedona Hotel Yangon**

 Sedona Hotel Yangon reaffirmed its position as Myanmar's Leading Hotel at the World Travel Awards.





Community Engagement

- → The Keppel Group garnered 12 awards at the Workplace Safety and Health (WSH) Awards 2010 in Singapore.
- → For all-round safety performance, Keppel Singmarine received the WSH Performance Silver Award for the fourth year in a row while Keppel Seghers NEWater Development bagged its first.
- → Keppel FELS won the Achievement in Safety Award at the Lloyd's List Awards.
- → In China, Keppel Nantong Shipyard received a Safety Excellence Award from the Nantong Administration of Work Safety.
- → Keppel's properties at Keppel Bay as part of the HarbourFront Cluster have been conferred one of 10 Safe and Secure Watch Group Awards.

- → In Singapore, Keppel Corporation was named as one of the Top Ten Most Desired Companies to work for in a survey conducted by Boardroom Research, commissioned by PeopleSearch.
- → At the Singapore Human Resources (HR) Awards 2010, Keppel Land received awards in the Corporate Social Responsibility (Leading), Performance Management (Special Mention) and E-HR Management (Special Mention) categories.
- → At the HRM Awards 2011 Singapore, Keppel Corporation emerged as one of the top eight Employers of Choice.

- → Keppel Corporation received the Distinguished Patron of the Arts Award from the Singapore National Arts Council.
- → Keppel Land was recognised as the Most Admired ASEAN Enterprise under the corporate social responsibility category at the ASEAN Business Awards 2010.
- → Keppel Shipyard was conferred the Minister for Defence Award while Keppel Logistics received the Meritorious Defence Partner Award at the annual Total Defence Partner Award in Singapore.
- → Keppel Singmarine won the Pinnacle Award and SHARE Platinum Award for its unwavering support and commitment to Singapore's Community Chest. Keppel FELS also won the SHARE Platinum Award while Keppel Logistics and Keppel Shipyard received the SHARE Gold Awards. Keppel Corporation was bestowed the Corporate Gold Award for its long involvement in charitable causes.

Key Awards and Accolades



#### **Focus Area:**

→ Sustaining value creation.

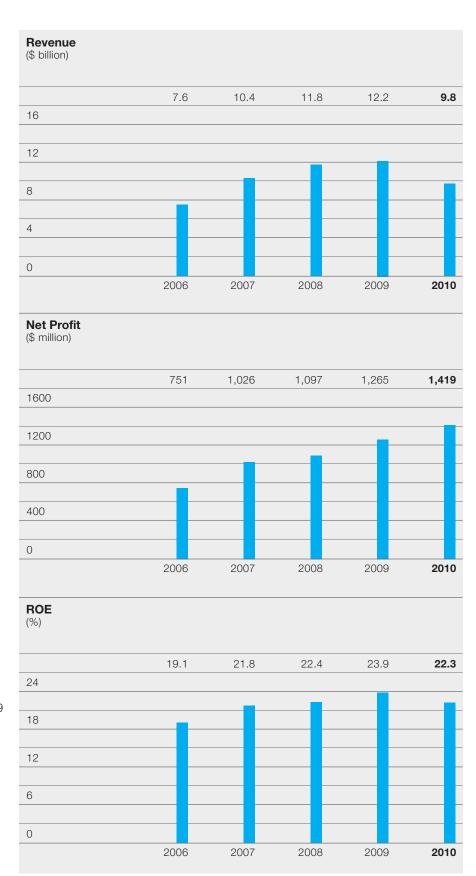
Keppel's drive for excellence has delivered a decade of healthy growth. As we move into the next decade, we remain committed to create sustainable value for our stakeholders. Keppel Group achieved yet another record profit performance, despite the tentative recovery at the start of 2010 as well as the unexpected events in our industries and markets in the course of the year such as the massive oil spill in the Gulf of Mexico and the property market cooling measures introduced by the governments in Singapore and China.

Group revenue of \$9,783 million was 20% lower than last year due to a lower volume of work at Offshore & Marine Division. Revenue from both Infrastructure and Property Divisions were higher than FY09 levels. The Group's net profit before exceptional items grew by 12% from FY09's \$1,265 million to reach a record of \$1,419 million, mainly driven by strong performances from the Offshore & Marine Division and Property Division.

Return on Equity (ROE) exceeded 20% for the fourth consecutive year. Economic Value Added (EVA) before exceptional items, which measures economic profit less the cost of all capital, rose \$9 million to \$1,035 million from FY09's \$1,026 million. Increased EVA was due to higher Net Operating Profit After Tax (NOPAT) before exceptional items, partly offset by higher capital charge.

Growth of earnings per share (EPS) kept pace with the growth of net profit. EPS of 88.7 cents per share increased 12% from FY09's 79.4 cents per share.

Group shareholders' funds increased from \$5.99 billion at 31 December 2009 to \$6.74 billion at 31 December 2010. The increase was mainly attributable to retained profits for the year and fair value gain on available-for-sale assets, partially offset by payment of final dividend of 23 cents per share and special dividend *in specie* of K-Green Trust units of approximately 23 cents per share in respect of financial year 2009, and the interim dividend of



### Financial Highlights

16 cents per share for financial year 2010. Capital employed at the end of 2010 was \$9.72 billion, an increase of \$1.01 billion over 2009.

With the strong performance, shareholders were rewarded with total distribution of 42 cents per share for 2010. This comprised a final dividend of 26 cents per share and an interim dividend of 16 cents per share. The total payout for 2010 amounted to \$677 million.

#### **OFFSHORE & MARINE**

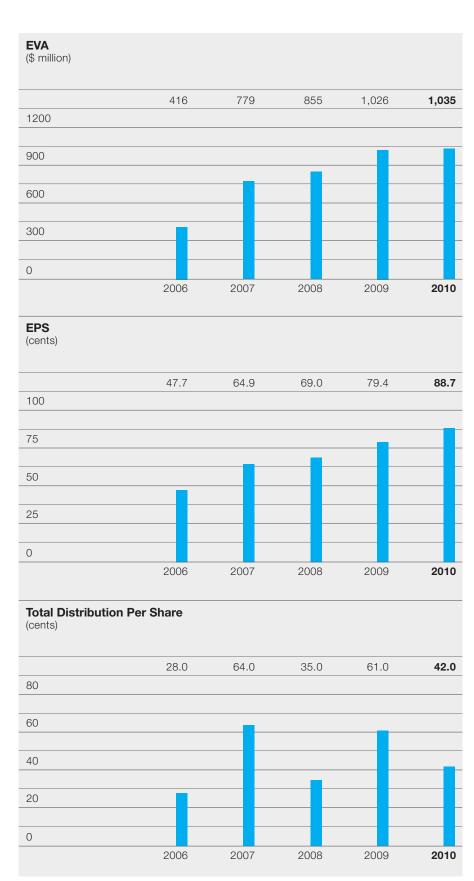
In 2010, the Offshore & Marine Division secured new orders worth a total of \$3.2 billion, with a net orderbook of \$4.6 billion as at year-end with deliveries extending to 2013. Revenue of \$5,577 million was \$2,696 million or 33% lower than 2009 due to lower volume of work. On the other hand, pre-tax earnings increased by 15% to \$1,242 million, owing to improved margins driven by cost efficiencies and higher productivity. Operating profit margins for 2010 reached a high of 20.1%. Net profit of \$987 million was \$177 million or 22% higher than in 2009. The Division remains the largest contributor of net profit to the Group, with 70%.

#### **INFRASTRUCTURE**

Infrastructure Division's revenue increased by \$83 million to \$2,510 million, due largely to higher revenue from Keppel Energy as a result of higher electricity retail prices and higher gas sales. Profit before tax decreased by \$57 million in 2010 owing to losses from the Engineering, Procurement and Construction (EPC) contracts in Qatar. With a net profit of \$57 million, the Division accounts for 4% of the Group's earnings.

#### **PROPERTY**

Revenue of \$1,685 million was \$177 million or 12% above the previous year, due mainly to the sale of homes at Keppel Bay and progressive revenue







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- 1\_Keppel Energy aims to be a power company with innovative fuel solutions in Singapore and beyond.
- 2\_Construction at Keppel Seghers energy-from-waste facility at Runcorn, Greater Manchester in the UK, has been progressing well with the chimney's windshield completed in 17 days.



### Financial Highlights

recognition from Reflections at Keppel Bay. Rental income from investment properties improved because of the acquisitions of investment buildings in Australia in 2010 and the additional floors of Prudential Tower in Singapore in 2009. Pre-tax profit of \$625 million was an increase of 31% over 2009. This was due to higher contribution from several residential projects in Singapore, China and Vietnam, and share of profit of the associated company developing Marina Bay Suites in Singapore. With net profit at \$326 million, the Division contributed 23% to Group's overall earnings.

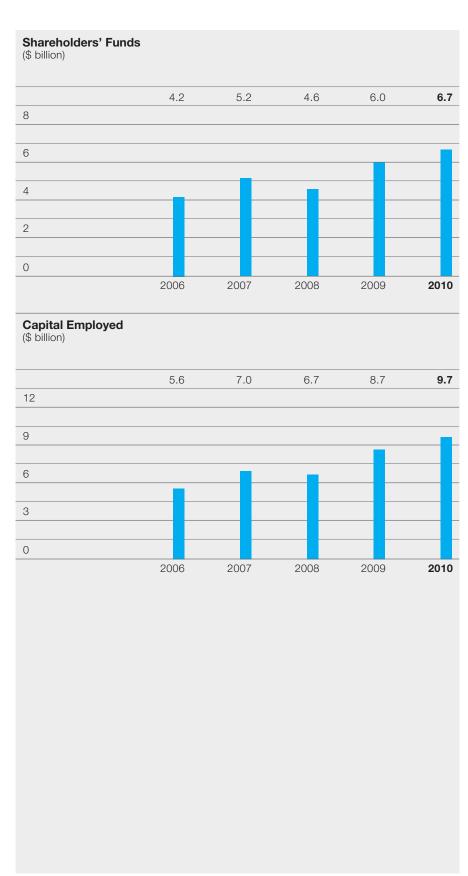
## GOVERNMENT ASSISTANCE AND TAXES PAID

In 2010, the Group received a total of \$6.5 million in financial assistance from governments. This largely consists of jobs credit cash grants, research & development grants and training grants from the Singapore government. The Group also paid a total of \$293.2 million in taxes to the various countries and tax jurisdictions in which it operates.

#### **EMPLOYEE COMPENSATION**

In 2010, staff costs amounted to \$1,367 million in the form of wages and salaries, employer's contribution to Singapore's Central Provident Fund, share options and share plans as well as other staff benefits. The Group's employees in 2010 numbered 31,360.

For more details on the Group's financial performance, please refer to the Operating & Financial Review section of the 2010 Annual Report to Shareholders.







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- 1\_Keppel Land's quality and energy efficient office buildings are some of the most desired business addresses in Singapore.
- 2\_Keppel Logistics is wellpositioned to benefit from the increase in demand for logistics and warehousing services.





#### **Focus Areas:**

- → Committing to good corporate governance with strong and independent board.
- → Upholding highest standards of safety, health and environment, and with focus on technology innovation.
- → Ensuring clear, consistent and regular communication with shareholders.

Our Board and Management act in the best interests of the Company at all times, guided by our core values of Integrity and Accountability. With Passion and Collective Strength, we strive towards excellence in corporate governance and transparency.

### CORPORATE GOVERNANCE REVIEW

The Board and Management of Keppel Corporation firmly believe that a genuine commitment to good corporate governance is essential to the sustainability of its business and performance.

To us, an important aspect of good governance is to have an effective, strong and independent board which actively engages the management.

At Keppel, our Board Directors fully understand that they act in the best interest of the company at all times, are accountable to the shareholders and have the responsibility to safeguard their interests.

To assist the Board in its oversight function, Board Committees were formed to focus on key matters such as internal audit, risk management, board composition, succession planning and talent management, remuneration and safety. Each committee has clearly defined terms of reference and committee members are actively engaged in the guidance and oversight of management.

There is also a strong and independent element on our Board, with the majority of our Board comprising independent directors, and all Board Committees similarly comprise a majority of independent directors with independent chairmen. There are currently 12 Directors on our Board, comprising eight independent directors, one non-executive and non-independent director and three executive directors.

Non-executive directors on our Board are well-supported by accurate, complete and timely information about the Company, to enable them to discharge their fiduciary duties effectively.

Board evaluation is another important element in ensuring board effectiveness.





For business excellence, strong corporate governance and transparency, the Keppel Group of companies received top honours at the 2010 Singapore Corporate Awards. Keppel **Corporation's Board was** named the Best **Managed Board** among the largest Singapore-listed companies.

Our Board has put in place formal evaluation processes and performance criteria, and has appointed an independent third-party to assist in the assessment of the Board's performance as a whole, the performance of the individual Directors as well as that of the Chairman. Such assessments help to improve the overall effectiveness of the Board by providing opportunities for the Directors to give constructive feedback. They also help the Directors focus on their key responsibilities.

The competencies and skill sets of the Directors and the composition of the Board also play a role in the overall effectiveness of the Board. At Keppel, the Nominating Committee ensures that the Board and Board Committees comprise Directors who as a group provide the core competencies required to exercise effective oversight and direction.

In addition, our Directors are continually trained in areas related to their duties and responsibilities. All newly-appointed directors also undergo a comprehensive orientation programme which includes management presentations on the Group's businesses and strategic plans and objectives, and site visits.

#### Governance and Compliance

To ensure proper alignment of corporate interests with those of shareholders, procedures have been put in place to ensure that the development of remuneration policies and fixing of remuneration packages are formal and transparent. To enhance objectivity, the Remuneration Committee comprises six non-executive directors, five of whom (including the chairman) are independent and the sixth is a nominee-director of Keppel's single largest shareholder, Temasek Holdings.

Please refer to pages 96 to 115 of Keppel Corporation's Report to Shareholders 2010 for details on the corporate governance framework and practices.

#### **LEADING SUSTAINABILITY**

The Group Sustainability Steering Committee drives the sustainable development strategy for the Group. It is chaired by Keppel Corporation's Chief Executive Officer, who is also an Executive Director on the Board. The other two Executive Directors, including the Group Finance Director, are also members of the Steering Committee. This Steering Committee is supported by sub-committees comprising heads of business functions and representatives from different business units within the Group. The role of the Committee is to formulate the Group's framework for implementing sustainability initiatives and reporting them.

Within the Group, Keppel Land has achieved good progress in its sustainability efforts. Recognised for its continual efforts in creating sustainable developments and being a socially responsible corporate citizen, Keppel Land was conferred the "Most Admired ASEAN Enterprise" for Corporate Social Responsibility at the ASEAN Business Awards 2010. In addition, Keppel Land garnered awards in the categories of CSR (Leading), Performance Management (Special Mention) and E-HR Management

# Advanced Waste and Water Treatment Technologies

Keppel Environmental Technology Centre (KETC), the R&D arm of Keppel Integrated Engineering (KIE), focuses on innovating water, wastewater treatment and solid waste treatment technologies for commercial applications. Currently, KETC is working on a number of projects, including the treatment of biosolid waste with energy recovery and seawater desalination.

KETC is exploring a new and more effective way to treat and recycle sludge, a by-product of municipal wastewater treatment processes. Known as the REDOXAN® process, it is essentially a two-stage fermentation process whereby the residual biomass, after the second stage of aerobic digestion, is separated and submitted to either mechanical treatment, chemical treatment or both, before being recycled to the first stage of anaerobic digestion.

Through the REDOXAN® process, almost complete digestion of the sludge and maximum biogas production can be achieved, therefore treating sludge more effectively and producing green energy at the same time. Preliminary results have been encouraging and a cost-benefit analysis is currently being conducted.

On wastewater treatment, KIE has identified an emerging clean and sustainable technology. KETC is developing this jointly with KIE's Industrial Solutions team and has won a research grant. This system can treat varying grades (strengths) of wastewater and therefore has wide application especially for upgrading or retrofitting of existing plants. It is also applicable to new industrial wastewater treatment plants, is easy and economical to retrofit, construct and operate due to its compact nature and concise process design. Besides lower energy consumption, this technology contributes to significant nitrogen removal, negligible sludge discharge, and the ability to generate biofuel.

For water treatment, KETC secured a TechPioneer funding for seawater desalination. The team is presently working on a demonstration plant targeted to be ready by end of this year.



Keppel Seghers Tuas Waste-to-Energy (WTE) Plant is the first such plant in Singapore to showcase WTE technology from a local company.





(Special Mention) at the Singapore Human Resources Awards 2010.

In 2010, Keppel Land was one of two companies in Singapore to be included in the Dow Jones Sustainability Index (DJSI) Asia Pacific. This index captures the leading 20% of 600 largest companies in terms of sustainability in developed Asia-Pacific markets. It is one of the foremost indices of its type and is increasingly being used by a widening group of responsible investors seeking to invest in companies who actively manage their corporate sustainability and responsibility.

Keppel Land's journey started in 2007 with the establishment of an Environment Management Committee, which implemented programmes, including the ISO 14001 Environment Management System and Eco-Office programme for its Singapore office, and Green Mark scheme for local and overseas projects. Keppel Land is in the process of converting its Environment Management Committee to a CSR Committee, with the aim of widening its efforts beyond the environment to include community activities, especially in the area of education.

In the area of technology development, which is a core focus of Keppel, the Group augments its knowledge and skills through the Keppel Technology Advisory Panel (KTAP) comprising eminent business leaders, professionals and industry experts to provide guidance to the Group. In addition, KETC was established by KIE in 2007 as a centre of excellence to spearhead innovation in leading-edge environmental technology research and development, and to form strategic alliances with leading academic and industry partners.

#### **COMMITMENT TO STAKEHOLDERS**

Keppel Corporation has a diverse stakeholder group with differing needs and expectations. We are accountable to our shareholders for the enhancement of shareholder value, and, to our employees, we strive to be an employer of choice. As a responsible corporate citizen, we aim to contribute to the well-being of the communities in which we operate. We are also a member of Singapore Compact, which serves as a national platform to foster dialogue and collaboration on CSR.

The Group's mission is to develop and execute our business profitably



**Established** in 2004, the Keppel **Technology Advisory Panel** is envisioned to be a key platform for sustaining **Keppel Group's** technology leadership. The Panel comprises eminent business leaders, professionals and industry experts.

### Governance and Compliance



with safety and innovation, guided by our three key business thrusts of sustaining growth, empowering lives and nurturing communities. This mission has been disseminated Group-wide.

Our commitment to the environment, health and safety and governance and ethics is implemented through various policies, including the Employee Code of Conduct, Whistle-blower Protection and Interested Person Transaction policies.

#### **Environment**

At Keppel Offshore & Marine, its yard in Brazil participates in PROMINP (Programa de Mobilizacão das Indústrias de Petróleo), which aims to advance the Brazilian oil and gas industry. In the Netherlands, Keppel Velrome participates actively in economic, environmental and social issues raised by the Dutch government. Senior employees at Keppel AmFELS in the US participate in the Imagine Brownsville Committee tasked to look into the future direction and growth of Brownsville.

Keppel Land was one of three companies in Singapore to achieve

the Global Reporting Initiative (GRI) accredited Level B+ for its Sustainability Report in 2010, complete with independent third-party assurance of the report. Keppel Land continues to set benchmarks for its new projects in Singapore and overseas to achieve at least the Green Mark Gold rating by the Building and Construction Authority of Singapore or its equivalent overseas. To date, it has achieved 24 Green Mark awards for its buildings in Singapore and overseas. It is a founding and board member of the Singapore Green Building Council, and a member of the Singapore Green Business Alliance.

KIE is a member of the Singapore Business Federation and Singapore Fuel Cell Community, an association of academic and industry partners to promote development and adoption of fuel cell as a clean energy source. KIE is also one of the founding members of Singapore Water Association (SWA). As a leading solutions provider in the water and environmental industries in Singapore, Keppel Group is a founding member and sponsor of the annual Singapore International Water Week organised by the Public Utilities Board since 2008.

KIE is also a member of the Emergency Resource Committee of Singapore which provides technical advice to the buyers of equipment over the SAFE Water Web that will provide drinking water during emergency or quick recovery stage of a disaster. In 2010, KIE also participated in the Singapore Workforce Skills Qualifications (WSQ) system in developing training materials for training of water and wastewater practitioners.

KETC collaborates with statutory bodies in Singapore including the Public Utilities Board, National Environment Agency and the National Research Foundation by submitting research proposals in the areas of environmental research. KETC signed memoranda of understanding with the National University of Singapore and Nanyang Technology University and collaborated with them and other local institutions and industry partners in environmental research. Besides local universities, KETC also collaborates with Keppel Seghers Belgium on advanced water and waste-to-energy technologies.

Keppel Energy measures and monitors the emissions from its





- 1\_Our commercial developments in Singapore such as Marina Bay Financial Centre and Ocean Financial Centre are equipped with environmentally friendly and inpositive operary source feetures. innovative energy saving features.
- 2\_Our Board Directors engage with shareholders after annual general meetings.
- 3\_Mr Choo Chiau Beng, CEO and Mr Tony Chew, Independent Director of Keppel Corporation sharing a light moment after the Company's annual general meeting.



#### Governance and Compliance

power plant in Singapore, and ensures that the emissions comply with the standards set by Singapore's National Environment Agency.

#### Safety and Health

The mission to create an accident-free environment is a challenging but necessary aspect in all of our businesses. Safety is emphasised throughout the Group, with leadership provided by the Board Safety Committee and reinforced by Safety Champions in each business unit. Safety champions address health and safety matters at the workplace on a minimum bi-monthly basis and throughout the Group, all Board meetings of Keppel Group companies begin with a review and discussion on safety matters. Safety performance forms part of each business' key performance indicators. The Annual Safety Convention is held for Group companies to come together to share initiatives and best practices.

Further information on the safety practices of the Group can be found on pages 48 to 59 of this Report.

#### **Business Ethics**

As part of its strategy to prevent and control fraud, corruption and other unethical or illegal conduct, Keppel Group has in place a series of policies to safeguard the Group and its shareholders' interest against possible corporate improprieties. These policies have been communicated to all employees Group-wide.

The Group considers it important that employees understand the rules of conduct for which they are accountable, in accordance with the laws and regulation of Singapore and our own group policies. The Employee Code of Conduct addresses, among other matters, standards of business behaviour pertaining to the offering and receiving of business courtesies as well as issues pertaining to conflicts





The Board Safety Committee goes on regular safety walkabouts to share safety best practices with the various business units in the Group. of interest. Senior management employees are required to declare annually potential relationships and conflict situations.

The Group also has an Interested Person Transaction Policy which requires all business units to report interested person transactions. The Audit Committee, which comprises independent directors, reviews on a quarterly basis all interested person transactions with the internal audit team. Interested person transactions are disclosed in the Company's quarterly and full-year financial results. In addition, being a listed company on Singapore Exchange Securities Trading Limited, a general shareholders' mandate for recurring interested person transactions of a revenue or trading nature or those necessary for the Company's operations will be sought at every annual general meeting. Material interested person transaction will have to be specifically approved by shareholders in a general meeting. Both the mandate and specific shareholders' approval sought will have to undergo strict review and approval procedures required by Singapore Exchange Securities Trading Limited.



The Group's Whistle-blower Protection policy provides for the mechanisms by which employees and other persons may, in confidence, raise concerns about possible improprieties in financial reporting or other matters. It clearly defines the processes through which such reports may be made with confidence that those making the reports are treated fairly and to the extent possible protected from reprisal. All new employees are given a copy of the policy during their orientation into the Group. The chairman of the Company's Board Audit Committee will review and investigate, as appropriate, all issues raised under this policy. For more details on the guidelines assisting the Audit Committee, please refer to page 110 in the Report to Shareholders 2010.

In addition, the Company has also in place Insider Trading Policy, Disclosure of Dealings in Securities Policy and Competition Law Compliance Manual to further strengthen corporate governance in the specific areas. All new employees are also required to acknowledge that they have read and understood the Insider Trading policy, and will comply with the restrictions set out in the policy. Directors and officers are must not deal in listed securities of the Company one month before the release of the full-year results and two weeks before the release of quarterly results, and if they possess unpublished price-sensitive information. For more details, please refer to page 111 in the Report to Shareholders 2010.

Staff from the Group Internal Audit are kept up-to-date on anti-corruption practices through anti-fraud related courses.

Directors of all listed companies within the Group are required to complete a checklist each year, and submit themselves to an early independence review by the nominating committees.

#### SHAREHOLDER ENGAGEMENT

With 2010 a challenging year for the Group, Keppel Corporation's dedicated Investor Relations team worked steadily to address the concerns of the investing community, while stepping up communications with shareholders, investors, analysts, fund managers and the media. The team provided assurance with balanced insights into the Group's performance, key developments and growth strategies. In addition, we are engaging responsible investors and are providing copies of this Report to our institutional investors.

Clear, consistent and regular communication is a hallmark of Keppel's relationships with the local and overseas investing community.

In 2010, we held over 160 one-on-one investor meetings and conference calls with Singapore and overseas institutional investors. Our top management also went on non-deal roadshows to the US and Hong Kong, and met institutional fund managers. Such meetings provide a useful platform for investors and analysts to engage our management and better understand our business dynamics and direction. This also contributes towards the strengthening of our relationships with our long-term shareholders.

During the year, we also arranged meetings with the management of key subsidiaries. Tours of the facilities aided in the better understanding of our businesses and operations.

As a global leader in the Offshore & Marine industry, Keppel's key attraction to investors is our rigbuilding operations and facilities. In 2010, we conducted over 10 yard tours cum management dialogues for institutional investors, including three groups of international investors who were in Singapore to participate in key investor conferences, and one group who visited our yard in Brazil.

With a good number of rigs being delivered in 2010, investors and analysts were invited to key naming and delivery ceremonies in Singapore to understand what it takes to complete a rig or vessel on time, within budget and with no incidents, through mingling with our key management, customers and suppliers.

We also organised visits to facilities in our Infrastructure Division, to enable investors and analysts to have a better understanding of its operations. For example, analysts were given a tour of the Keppel Seghers Tuas Waste-to-Energy Plant in Singapore in conjunction with its opening ceremony in June 2010. In addition, we complemented our outreach efforts with participation in selected investor conferences.

To reach stakeholders in a timely and effective manner, we conduct 'live' webcasts of our quarterly results and presentations. These webcasts allow viewers from around the world to listen to our top management and post questions online for them to respond to in real time.

We are also committed to keep our communication channels accessible and information timely so as to serve the interests of the investing community. Market sensitive news is promptly posted on our website, www.kepcorp.com, at the end or beginning of each market day, in addition to the Singapore Exchange website.

Recognising the importance of providing easy-to-access and up-to-date information round-the-clock to our stakeholders, we revamped our corporate website with better organised business information and an enhanced investor centre, containing key financial highlights, orderbook information and an outline of the Group's most current landmark projects.



#### **Focus Areas:**

- → Improving water and energy efficiency.
- → Reducing waste and emissions.
- → Strengthening reporting frameworks and processes.

Keppel Corporation is committed to operate its businesses in a manner that is environmentally responsible. Beyond supporting and championing green causes, the Keppel Group believes that being environmentally responsible makes good business sense.

Mitigating environmental issues forms the fundamental backbone of many of our businesses. At the operational level, our businesses are continually seeking ways to use less energy, reduce wastage and emissions, and to recycle more. The Group has identified the most material environmental aspects to be Energy, Water, Waste and Emissions & Effluents.

As this is our first Report, we are disclosing only our Singapore operations and using two years of available data. The Group is using this as its starting point to ensure that all reporting structures and processes are in place before rollingout progressively to other countries. This Report includes Keppel Offshore & Marine (and its significant subsidiaries, Keppel FELS, Keppel Shipyard and Keppel Singmarine), Keppel Land, Keppel Integrated Engineering (KIE), Keppel Telecommunications & Transportation (Keppel T&T) and Keppel Energy.

In addition, due to commercial sensitivity, Keppel Energy's direct energy consumption and direct carbon emissions are not included in this Report.

There were no major incidents of non-compliance with environmental regulations in 2010. However, KIE was administered with two fines from Singapore's National Environment Agency (NEA) totalling \$4,000, for lapses in the operations at its waste-to-energy (WTE) plants. Follow-up actions have been taken to prevent recurrences.

Besides mitigation of environmental impact by focusing our efforts on the four aspects, Keppel Group believes that the cultivation of green mindsets is necessary to ensure that resource consciousness, efficiency and conservation is second nature. The Group does this through various training programmes and staff awareness campaigns. For more information, please refer to page 35.

**Key Eco Principles** 

# **Ecollaboration**

Working with stakeholders, policy-makers and decision-makers to build a better future

# Economy

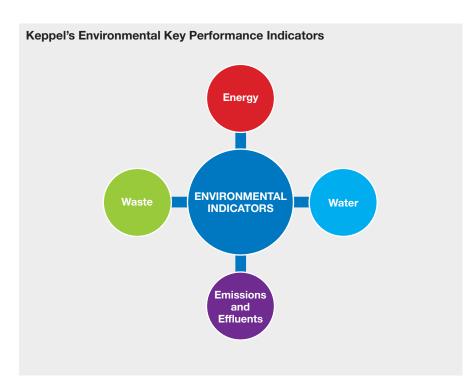
Balancing commercial viability and environmental sustainability

# **Ecommitment**

Promoting environmental awareness and supporting green initiatives

# **Ecommunity**

Creating sustainable developments for future generations



#### **Environmental Performance**

#### 2010 Quick fact

#### **Energy**<sup>3</sup>

→ We saved enough energy to power 115,676 four-room apartments for a month.



# Keppel Group's Direct and Indirect Energy Consumption (G,J)

2010	753,985	1,905,497
2009	1,002,906	1,717,831
2,100,000		
1,800,000		
1,500,000		
1,200,000		
900,000		
600,000		
300,000		
0		
	Direct Energy	Indirect Energy

#### **ENERGY**<sup>1,2,4</sup>

Energy is a vital element in our businesses. As a Group with businesses in Offshore & Marine, Environmental Engineering, Power Generation, Logistics, Data Centres and Property, we depend heavily on both direct and indirect sources of energy to drive our businesses.

Liquid fuels, natural gases, liquefied petroleum gas (LPG) and compressed natural gas (CNG) are the major types of direct energy consumed by the Group. In 2010, the total amount of direct energy consumed by the Group, excluding Keppel Energy, was 753,985 GJ, compared to 1,002,906 GJ in 2009. This represented a 25% reduction due to a lower volume of work at Keppel Offshore & Marine (Keppel O&M) and initiatives to improve energy efficiency. Keppel O&M was the most significant contributor to direct energy consumption after Keppel Energy.

The total amount of indirect energy or electricity consumed increased 11% from 1,717,831 GJ in 2009 to 1,905,497 GJ in 2010. The increase is due mainly to the inclusion of new data from acquisitions.

Despite the increasing demand for energy as a result of expanding operations, the Group recognises the need to improve energy efficiency. The total amount of energy saved by the different business units in the Group in 2010 was 161,160 GJ or 44,766,666 kWh. This was achieved through technical improvements, which includes the replacement of less efficient machines or equipment, and energy conservation initiatives.



#### Improving Energy Efficiency

With sustainability objectives embedded in all our operations, we continuously seek to minimise our environmental impact by enhancing efficiency through sound technologies, optimising products and processes and conserving energy and natural resources.

At our facilities and offices across Keppel T&T, Keppel Energy and KIE, the lighting installations have been replaced by compact fluorescent light bulbs, which use less energy than standard incandescent bulbs to provide the same amount of light, while lasting longer, thus reducing costs.

As part of the concerted effort to improve resource efficiency, Keppel Logistics, a unit of Keppel T&T, rolled out an initiative to replace high bay lights in the Group's warehouses with energy-saving lights during the year. To be installed in several phases, the new lights can offer up to 46% savings in electricity consumption. In addition to the warehousing lights being switched off during lunch hours.

In 2010, Keppel O&M invested some \$8 million in energy-saving equipment and infrastructure, which are estimated to generate energy savings of some \$8.9 million per year. Their efforts to conserve energy include replacing less efficient equipment and encouraging and educating staff through awareness programmes. Keppel O&M retrofitted the yards with energy-efficient lighting, plants and offices, and installed motion sensors along corridors, toilets and areas with less human traffic.

Keppel O&M Technology Centre installed two photovoltaic power plants on its rooftop to convert solar energy into electricity, potentially saving as much as 1.5 million kWh, as well as preventing carbon dioxide emissions of 1,300 tonnes annually.



Keppel Offshore & Marine Technology Centre installed solar panels which potentially save up to 1.5m kWh annually.

#### **Environmental Performance**

#### 2010 Quick fact

#### Water<sup>3</sup>

→ 56,133m³ of water was recycled by Keppel Group, which is equivalent to Singapore's monthly average water consumption for 2,900 four-room apartments.



# Keppel Group's Potable Water and NEWater Used

2009 2,083,658 1,972,627 3,500,000  2,500,000  1,500,000  1,000,000  0  Potable NEWate	2010	1,566	,587	2,905	,055
3,000,000 2,500,000 2,000,000 1,500,000 1,000,000	2009	2,083	,658	1,972	,627
2,500,000 2,000,000 1,500,000 1,000,000	3,500,000				
2,500,000 2,000,000 1,500,000 1,000,000	3 000 000				
2,000,000 1,500,000 1,000,000 500,000	0,000,000				
1,500,000	2,500,000				
1,500,000					
1,000,000	2,000,000				
500,000	1,500,000				
500,000	1,000,000		Н		
0	1,000,000		Н		Н
	500,000				
Potable NFWater	0				
Water				NEV	Vater

#### WATER<sup>1</sup>

Like energy, water is a vital resource for the Group.

The total volume of water used by the Group provides an indication of the risk level associated with water supply disruptions or increased cost of purchasing water. With population growth and rapid urban development, clean freshwater is becoming increasingly scarce. This can impact Keppel Group as our operations and processes require large volumes of both potable and non-potable water. Not only does Keppel O&M require large volumes of potable and non-potable water, other subsidiaries, such as KIE and Keppel Energy, also use water for energy generation.

The Group's water consumption can be segmented into potable water, NEWater, both purchased from Singapore's Public Utilities Board (PUB), and recycled water. NEWater is reclaimed water produced by and purchased from PUB. Specifically, it is treated wastewater that has been purified through advanced technologies such that it is potable and fit for industry use. The Group does not draw any water from ground or surface water directly.

For 2010, the Group used 1,566,587m³ of potable water, 25% less compared to 2,083,658m³ used in 2009. Potable water is used for drinking, general washing and by Keppel O&M, replenishing potable water on vessels. Our Property Division uses potable water for its corporate office and investment properties. These buildings include Keppel Towers, GE Tower, Prudential Tower, Equity Plaza, Ocean Towers and Keppel Bay Tower in Singapore.

The Group used 2,905,055m³ of NEWater compared to 1,972,627m³ used in 2009, registering an increase of 47%. Keppel O&M uses NEWater for cleaning and hydro-jetting of marine vessels and machinery systems and testing. Our Ulu Pandan NEWater plant retains part of its production for the cleaning and flushing of reverse osmosis and micro filtration membranes.

Our Senoko WTE plant is equipped with a wastewater treatment plant that treats the wastewater from the refuse. The treated water is subsequently used for general washing. In 2010, 56,133m³ of water was recycled.



#### An Integral Part of Managing Singapore's Water Resources

#### WHAT IS NEWATER?

NEWater is treated used water that has undergone stringent purification and treatment process using advanced dual-membrane (micro-filtration and reverse osmosis) and ultraviolet technologies.

Since 2003, NEWater in Singapore has been used for wafer fabrication processes, non-potable applications in manufacturing processes as well as air-conditioning cooling towers in commercial buildings.

This has freed up a large amount of potable water for other purposes.

NEWater is currently blended with reservoir water and then undergoes conventional water treatment to produce drinking water.

NEWater has also passed more than 65,000 scientific tests and surpasses World Health Organisation requirements.

NEWater is ultra-clean because it goes through a multi-barrier reclamation process that comprises three stages: (i) Micro/Ultra Filtration (ii) Reverse Osmosis (iii) Ultraviolet Disinfection.

#### KEPPEL SEGHERS ULU PANDAN NEWATER PLANT

KIE, the environmental engineering arm of Keppel Corporation, built and now operates the Keppel Seghers Ulu Pandan NEWater Plant.

Singapore's fourth NEWater plant, it has a capacity to produce 148,000m³ of NEWater per day. The plant is larger than the combined capacities of the first three NEWater

plants in operation at Bedok, Kranji and Seletar.

Awarded by PUB in early 2005 under the Public Private Partnership initiative, Keppel Seghers designed, built and now operates the facility.

The plant is part of the portfolio of K-Green Trust, a business trust with an investment focus on 'green' infrastructure assets in Singapore, as well as Asia, Europe and the Middle East.

The plant is equipped with reverse osmosis inter-stage energy recovery turbine which is a first for NEWater plants in Singapore.

Variable speed drives are also installed at all feed pumps for energy efficiency when handling variable loads.



Part of K-Green Trust's portfolio, the Keppel Seghers Ulu Pandan NEWater Plant features energy saving equipment.

#### **Environmental Performance**

#### 2010 Quick fact

#### **Waste**

→ We recycled 91,598 tonnes of waste.



# Keppel Group's Recycled and Incinerated Waste

2010	91,598	116,712
2009 (estimated	87,000 I)	126,600
140,000		
120,000		
100,000		#
80,000	4	⇉
60,000	坩	#
40,000	#	#
20,000	#	#1
0		
	Recycled Waste	Incinerated Waste

#### **WASTE<sup>2</sup>**

Population growth and urbanisation have resulted in a significant increase in the volume of solid waste being disposed. In the figures released by NEA in 2011, the volume of waste disposed in 2010 was 2,759,500 tonnes. The volume of waste recycled for 2010 was 3,757,500 tonnes which accounts for the 58% recycling rate.

In Singapore, where land is scarce, the Semakau Landfill is only expected to meet our country's solid waste disposal needs up to 2040. Therefore it is important that businesses, communities and individuals practise waste minimisation.

Keppel Group, with its diversified businesses, generates different types of waste. Keppel believes that recycling is a key component of waste management. It is not just a cost-effective measure but it also significantly reduces the amount of solid waste that is being incinerated or buried.

For 2010, a total of 91,598 tonnes of waste was recycled. This was an increase of approximately 5%

compared to an estimated 87,000 tonnes of waste recycled in 2009. The waste recycled includes ferrous scrap metal separated from general waste, plastics, grits, computer parts and papers which are materials used in the Group's operations.

As a responsible company, Keppel Corporation is committed to promote more recycling and reusing efforts to further reduce the amount of waste being disposed of. Please see box story on page 31 for more details.

In Singapore, all solid municipal waste that cannot be recycled is sent for incineration. The incinerated ash and other non-incinerable waste are then sent to Semakau Landfill. For 2010, across the Group, 116,712 tonnes of waste was sent for incineration. This registers an approximate 8% improvement against an estimated 126,600 tonnes of waste that was sent for incineration in 2009.

Chemical, oil and fuel spills are threats to our environment and severely affect the soil, water, air and biodiversity. For 2010, there were no reports of major spillage for the Group.



#### Contributing to Singapore's Waste Management

The KIE group operates Senoko WTE Plant and Keppel Seghers Tuas WTE Plant, and together, they treat close to half of Singapore's incinerable waste. Incineration plants help mitigate greenhouse gas emissions by diverting waste from landfills to incineration, as methane is released during waste decomposition from organic waste in landfills.

During incineration, CO<sub>2</sub> is also being emitted. Studies have shown that by diverting waste from landfill to incineration and/or recycling, we are able to achieve significant savings in greenhouse gases emissions.

By using waste as fuel, incineration plants produce green energy, thereby reducing dependency on fossil fuels.

Through incineration, the volume of waste can be reduced by as much as 90%, thereby reducing the volume of waste sent to landfills. In Singapore, bottom ash from incineration is then sent to an offshore landfill by NEA. The chart shows the average total organic content of the bottom ash of the two WTE plants, with the performance of the two plants exceeding regulatory requirements.

Keppel Seghers Tuas WTE Plant is the first incineration plant in Singapore built under the Public Private Partnership initiative and has the capacity to treat 800 tonnes of municipal waste per day. It is equipped with Keppel Seghers' in-house technologies such as air-cooled grates and flue gas treatment system and it is the first waste incineration plant in Singapore to showcase WTE technology from a Singapore company.

Senoko WTE Plant was the third incineration plant to be built in Singapore. Keppel Seghers provides operation and maintenance services to the plant. The WTE Plant is contracted

to treat 2,100 tonnes of municipal solid waste a day.

#### REDUCE, REUSE, RECYCLE

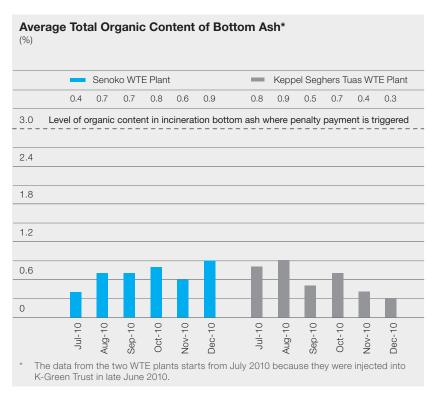
At Keppel, the Group focuses its waste management by reducing, reusing and recycling waste or by-products of our process and production.

During the year, Keppel O&M recycled over 90,000 tonnes of waste comprising ferrous scrap metals and grit, while disposing and incinerating about 100,000 tonnes of non-recyclable ones. At Keppel Shipyard, ferrous scrap metals are separated from general waste and sold to licensed recycling companies.

At Keppel's corporate offices, paper management and recycling initiatives are rolled out to reduce wastage of paper. For example, setting printers to print double-sided by default, encouraging the use of electronic mail, the intranet for publication/storage of documents, having smaller printouts, and switching to electronic greeting cards instead of physical cards. Employees are also encouraged to recycle used paper, with recycling bins placed at convenient locations.

Keppel Land recycled about 16,000kg of waste paper in 2010. Keppel Logistics recycles packaging materials like paper core and pallet guides and other protective materials which reduces waste.

Our commitment to sustainability extends to the production of our marketing and communications publications, including our newsletters, brochures and annual reports, where 90% of the paper used is environmentally friendly.



#### **Environmental Performance**

#### 2010 Quick fact

#### **Emissions**

→ By switching 70% of its power consumption to green electricity, Citadel 100, a unit under Keppel T&T has reduced its greenhouse gas emissions by almost 30,000 tonnes, which is equivalent to taking 5,500 cars off the road.

#### Average Particulate Matter Emissions for Keppel's WTE Plants 2010 (mg/Nm³)

29 43

100 NEA emissions limit

80

60

40

20

Keppel Seghers Tuas WTE plant

KIE's Senoko WTE plant

#### **EMISSIONS AND EFFLUENTS**<sup>1,2,4</sup>

Carbon Dioxide Emissions
The emission of greenhouse gases
(GHG) has a detrimental impact on
the atmosphere. Governments,
businesses, communities and
individuals need to take responsibility
for their own carbon footprint and
minimise their GHG emissions.

Direct emissions occur from the assets that are owned or controlled by the Group. In 2010, the total direct carbon emission of the Group, excluding Keppel Energy, was 123,443 t-CO<sub>2</sub>, which registers an approximate 29% increase from 2009's carbon emission level of 95,619 t-CO<sub>2</sub>. The increase in carbon emissions was due to new data from acquisitions.

Indirect emissions arise from purchased electricity consumed by the Group. Other indirect emissions which occur from staff travel are not included in this report.

In 2010, indirect emissions from the Group stood at 251,477 t-CO $_2$ , registering a 17% increase from 215,011 t-CO $_2$  in 2009. NEA's Electricity Grid Emission Factor of 0.5016 kg CO $_2$ /kWh was used in the calculating of Total Indirect Emissions.

Keppel Group recognises the need to reduce GHG emissions to mitigate climate change and hence takes a proactive role in implementing energy-saving initiatives to reduce its carbon footprint.

In an effort to encourage staff to cultivate eco-friendly habits and to reduce their carbon footprint, Keppel Land has adopted Project Eco-Office initiative by the Singapore Environment Council and City Development Limited at its office headquarters. Keppel Land is also committed to build 'greener' buildings by achieving Building and Construction Authority's Green Mark

Gold Certification when it has new developments. For more details, please refer to page 37 to 40.

Electricity consumption has been identified as one of the major GHG emissions by the Keppel Group. Thus, we have been looking at ways to reduce electricity use.

Keppel Group has introduced various energy-saving initiatives to reduce its electricity consumption by retrofitting existing lightings in the yards, plants and offices with energy-efficient ones such as T5 light tubes and the installation of motion sensors for its corridors, toilets and areas that have lesser human traffic.

#### **Other Emissions**

Keppel Energy and KIE have kept their emissions of oxides of nitrogen and sulphur dioxides well below the emissions limits of 700mg/Nm³ and 500mg/Nm³ as stipulated in the NEA's Code on Pollution Control respectively.

Dust or particulate matter is also emitted from KIE's WTE stacks when refuse is being burnt. For 2010, the emission level was 43mg/Nm³ for KIE's Senoko WTE plant and 29 mg/Nm³ for Keppel Seghers Tuas WTE plant, which is well within NEA emissions limits of 100mg/Nm³.

There were no emissions of oxides of nitrogen, sulphur dioxide and other significant air emissions from our Offshore & Marine and Property Divisions.



#### Pioneering Green Data Centres

Data centres can consume up to 40 times more energy than conventional office buildings due to the high power needed to support IT equipment and cooling mechanisms.

Together with network equipment, they also account for almost 32% of the entire Information and Communication Technology sector's energy and carbon footprint, according to the Organisation for Economic Co-operation and Development.

To balance its customers' needs with environment conservation, Keppel T&T takes a holistic approach in designing its data centres, and engages its stakeholders in implementing the best operating practices.

For its steadfast efforts to provide ecofriendly and energy-efficient services to clients in 2010, Keppel Datahub, a data centre owned and managed by Keppel T&T in Singapore, received a 'green' stamp of approval from the Infocomm Development Authority of Singapore (IDA) and Spring Singapore in April 2011.

Keppel T&T was among seven pioneering data centre operators to successfully achieve the new SS564 certification. The SS564 is a new industry standard that aims to provide a framework for data centres to achieve energy efficiency and continuous improvements.

On top of meeting the SS564 requirements, Keppel T&T looks into further details such as the design of chilled water pipes used in the cooling systems at Keppel Datahub.

By adopting an angular design for its pipes, which promotes better water flow, the overall efficiency of Keppel Datahub's cooling system has been significantly raised.

Such green efforts are also mirrored at Citadel 100, Keppel T&T's data centre in Dublin, Ireland. This data centre had recently collaborated with Dublin City University to jointly research and develop a technology to predict heat build-up and allocate cooling with high accuracy.

Since 2009, Citadel 100 had switched to using green electricity, which now accounts for 70% of its power consumption. This has reduced GHG emissions by almost 30,000 tonnes per annum for the data centre, and is equivalent to taking 5,500 cars off the road.



RADM (NS) Ronnie Tay, CEO of IDA (left), presenting the new Singapore Standard for green data centres, SS564, to Mr Bruno Lopez, CEO of Data Centre Division, Keppel T&T.

#### **Environmental Performance**

#### **OZONE-DEPLETING SUBSTANCES**

Ozone depleting substances (ODS) are controlled as hazardous substances under the Environmental Protection and Management Act. Singapore had signed the Montreal Protocol in 1989 as a form of our country's commitment in reducing ODS emissions in the country.

In 2010, the amount of ODS that some of our business units emitted as a result of usage of refrigerants was insignificant. However as an environmentally friendly corporation, Keppel is looking into phasing out the use of refrigerants that releases Hydrochlorofluorocarbons (HCFC) in the near future. As part of the Montreal Protocol, Singapore will have to phase out the consumption of HCFC by 1 January 2030.

- The increase in indirect energy, NEWater used, direct and indirect carbon emissions were due mainly to the inclusion of new 2010 data from Senoko WTE plant and Keppel Seghers Tuas WTE Plant which were acquired and commenced operations respectively in late 2009.
- For some business units, 2009 data for some aspects was available. For the purposes of comparison, where 2009 data was not available, it was assumed to be the same level as 2010. Those assumptions represented 5% or lower of the consolidated figure at Group level, and are therefore unlikely to cause significant variance and are negligible.
- Based on Singapore's Household Average Electricity and Water Consumption from August 2010 to January 2011, published on SP Services website.
- The conversion factors used for energy are based on the Environmental Indicator Protocols Set Version 3.0. The conversion factors used for direct and indirect emissions are based on DEFRA 2009 and NEA Electricity Grid Emission Factor 2008 respectively.

# Modern Waste-to-Energy Facilities and Air Pollution Control

Typically, a WTE plant uses the following methods to remove pollutants from its emissions:

- → A "Selective Non-Catalytic Reduction" or "SNCR" converts nitrogen oxides to harmless nitrogen by spraying ammonia or urea into the hot furnace.
- → A "scrubber" sprays a mixture of lime and water into the hot exhaust gases. The lime neutralises acid gases.
- → A "carbon injection" system blows powdered carbon into the exhaust gas to absorb mercury. Carbon injection also reduces emissions of trace organics such as dioxins.
- → A "bag house" works like a giant vacuum cleaner with hundreds of fabric filter bags that clean the air of soot, smoke and metals.

Hence, modern WTE facilities that are well-managed and regulated do not pose a significant threat to public health. Most modern WTE facilities are required to monitor emissions to ensure that they comply, as a minimum, with the limits in the EU Waste Incineration Directive (2000/76/EC), which sets strict emission limits for pollutants.

According to research published by the British government-backed Health Protection Agency, incineration of municipal solid waste accounts for less than 1% of UK emissions of dioxins. Therefore, the contribution of WTE emissions to direct respiratory exposure of dioxins is a negligible component of the average human intake.





## **Cultivating Green Mindsets**

To help address sustainability issues, we commit resources to motivate employee action, support community efforts and collaborate with industry and government stakeholders.



### **ENGAGING EMPLOYEES**

In Singapore and overseas, we proactively participate in environmental campaigns to promote awareness of global warming.

Staff across the Group supported the Earth Hour campaign on 27 March 2010 by switching off non-critical lights for an hour at our properties, yards and facilities.

For World Environment Day, Keppel Land screened the documentary film, "Earth" for over 150 tenants, employees and their families on 18 June 2010. Staff also attended a separate screening of "The Story of Cap & Trade' and a talk by the Singapore Environment Council on climate change.

To keep abreast of cutting-edge green building solutions, Keppel Group visited the Building and Construction Authority's Zero Energy Building. Keppel Land's staff and their families also visited the Sungei Buloh Wetland Reserve on 5 June 2010 to gain an appreciation of the importance of ecological diversity.

For its staff and tenants, K-REIT Asia's office buildings featured eco-exhibitions on recycling and distributed NEA's "Waste Minimisation Guidebook".



### **SUPPORTING COMMUNITIES**

We support initiatives and efforts that inspire communities to take action and contribute to the environment.

The Keppel Group contributed \$20,000 towards the NEA-MediaCorp Semakau Run held on 2 October 2010. The Group has been a Platinum Sponsor since the inaugural Run in 2007, which raises funds for charities and environmental groups and promotes concern for the environment.

Understanding the importance of sustainable water solutions to hyperarid Qatar, Keppel Seghers, a unit of KIE, sponsored the publication "Water, Agriculture and Environment in Arid Lands (Water and Agricultural Vision for Qatar by 2020)".

Caribbean at Keppel Bay's gardening community also helped to promote a greener way of life amongst residents. They received the Community in Bloom Silver Award in a nationwide gardening competition organised by the National Parks Board that recognises excellence in gardening efforts by community groups in housing estates, educational institutions and organisations.

Keppel Land held an eco-bazaar on 1 December 2010 where students from the Association for Persons with Special Needs, Keppel's adopted charity, put up products handmade from recycled materials for sale. Employees also donated used leather bags to All Things Green and Beautiful, a company that transforms unwanted items into useful accessories such as hair bands and brooches.



### **PARTNERING THE INDUSTRY**

We work with the industry, governments, partners and organisations to build up momentum towards a sustainable future.

Sharing insights on our waste incineration technology, Keppel Seghers Tuas WTE Plant hosted a visit by grassroots leaders from Singapore's Jurong Group Representation Constituency, led by Mr Tharman Shanmugaratnam, then Minister for Finance and Member of Parliament for the Constituency on 2 October 2010.

Keppel Land was a Platinum Sponsor of the International Skyrise Greenery Conference held on 1 to 3 November 2010 to support industry-wide sharing of green expertise. As part of the programme, the company hosted technical visits to its properties at Keppel Bay, showcasing its green innovations and solutions.

The company also supported Build Eco Xpo (BEX Asia) held on 13 to 15 September 2010 as the Gold Sponsor. Amongst the leading environmentally friendly building technologies and products on display were Keppel's first collection of state-of-the-art eco-homes in the Sino-Singapore Tianjin Eco-City – Seasons Park, and Ocean Financial Centre.

As early adopters of energy productivity improvement projects, Keppel FELS and Keppel Digihub stepped up as Founding Partners to the Energy Efficiency National Partnership programme on 29 April 2010, pledging to drive energy efficiency and help advance Singapore's sustainable development blueprint.



### **Focus Area:**

- → Championing research and development as well as innovation for excellence.
- → Engaging customers for feedback and continuous improvement.
- → Adhering to and implementing best practices.

The Keppel brand has grown to be synonymous with world-class quality, execution excellence and innovation.

The Keppel Group is recognised for high quality products and services, and over the years, we have been commended with numerous awards, testament to our commitment towards excellence. Product and technology excellence as well as innovation are key to our core competencies and new growth drivers development.

A true homegrown multinational company, Keppel has operations in more than 30 countries and its people are committed to provide consistent, high quality products and services worldwide.

Numerous international and national awards won over the years are testament to the Group's commitment towards product excellence. Keppel's key business units are certified to ISO9001, ISO14001 and OHSAS18001 standards, demonstrating our dedication towards product quality, environmental protection and occupational health and safety.

In the offshore and marine sector, Keppel FELS is a world leader with its in-house design and engineering group. It is also the only shipyard group in the world to have its own proprietary deepwater rig designs, such as for semi-submersibles and drillships.

Two of its key products, KFELS B class jackup rig and KFELS Semi-Submersible Drilling Tender (SSDT), were singled out for their contributions to sustainable operations, as well as the safety and well-being of the rig crew. Please see product showcases on pages 42 to 46 for more details.

In 2010, the West Pelaut rig, a KFELS SSDT, won the Shell Platform Rig of the Year Award for the third time, against other Shell contracted rigs worldwide. The award recognises the KFELS SSDT for its consistent operational performance and good safety record.





Keppel FELS continued to share its best practices with other companies in the MAXA circle in 2010.

Keppel FELS also received the Institution of Engineers Singapore (IES) Prestigious Engineering Achievement Awards in 2009 for its environmentally friendly offshore rig designs; and the 'MAXA 2008' Award by the Singapore Economic Development Board, McKinsey & Company and the Singapore-MIT Alliance for its outstanding manufacturing innovation and operational excellence in 2008.

In the Infrastructure Division, Keppel Telecommunications & Transportation (Keppel T&T)'s logistics subsidiary was named Singapore's Domestic Logistics Service Provider of the Year by Frost & Sullivan in 2010. It was also recognised as the "Best Retail & Fast Moving Consumable Goods in Singapore" and "Best Domestic Logistics Service Provider in Singapore" in the annual Frost & Sullivan Asia Pacific Transportation & Logistics Award in 2009.

Property arm, Keppel Land was named "Best Office Developer in Singapore" and "Best Developer in Vietnam" at the Euromoney Real Estate Awards in 2010. To-date, the company has won a total of 22 Building and Construction

# **Product Excellence**

## Awards and Certifications

OFFSHORE & MARINE		
Keppel FELS	Shell Platform Rig of the Year Award	2010
	Offshore Yard Award	2010
	Singapore Quality Class Certification (SQC)	Since 2002
	Singapore Innovation Class Certification (I-Class)	Since 2004
	IES Prestigious Engineering Achievement Awards	2009
	Asean Outstanding Engineering Achievement Award	2009
	MAXA 2008 Award	2008
	ISO 9001 Certification	Since 1994
Keppel Shipyard	The Shiprepair Yard Award at Lloyd's List Asia Awards	Since 2005
	ISO 14001 Certification	Since 2004
	ISO 9001 Certification	Since 1996
INFRASTRUCTURE		
Keppel Seghers Engineering Singapore	ISO 9001, ISO 14001 and OHSAS 18001 Certification	Since 2009
Keppel Telecommunications & Transportation	Singapore Domestic Logistics Service Provider of the Year	2010
	Best Retail & Fast Moving Consumable Goods (Singapore)	2009
	Best Domestic Logistics Service Provider (Singapore)	2009
	ISO 13485 and GDPMDS	Since 2009
	ISO 14001, OHSAS 18001 Certification	Since 2002
	ISO 9001 Certification	Since 1993
PROPERTY		
Keppel Land	4 BCA Green Mark Awards (Total 22 awards to-date)	2010
	Euromoney Real Estate Awards  - Best Office Developer in Singapore	2010 & 2009
	FIABCI Indonesia BNI Prix d'Excellence – Best Middle Class Residential Development (Jakarta Garden City)	2009
	4 FIABCI Prix d'Excellence Awards	Since 2006
	Best Asian Marina Award	2010
	Clean Marina Award	2008
	ISO 14001 Certification	Since 2008

The above list the significant awards and certifications for product excellence and is not exclusive.





The Group's total Grade A office take-up at Marina Bay Financial Centre and Ocean Financial Centre (right) for the year rose strongly to over 1 million sf.



## Product Excellence

Authority of Singapore (BCA) Green Mark awards, including the highest accolade Platinum Green Mark award for office tower Ocean Financial Centre (OFC). OFC was also the first high-rise office building in Southeast Asia to achieve the Platinum level LEED-CS (Leadership in Energy and Environmental Design-Core and Shell) pre-certification in 2009.

At Keppel's flagship waterfront development, Keppel Bay, the Marina at Keppel Bay became the first marina in Asia to win the Clean Marina award in 2008. It was also named the Best Asian Marina Award in 2010.

Internationally, Keppel Land's township in Indonesia, Jakarta Garden City bagged the "Best Middle Class Residential Development" award in 2009 at the International Real Estate Federation (FIABCI) Indonesia – BNI Prix d'Excellence Awards. The company has received five other FIABCI Prix d'Excellence awards since 2006 for excellence in property development and management.

### **RESEARCH AND DEVELOPMENT**

To keep in the forefront of technologies, Keppel Group invests heavily in research and development (R&D). The Keppel Offshore & Marine Technology Centre (KOMtech) and Keppel Environmental Technology Centre (KETC) were established as the research arms of Keppel Offshore and Marine (Keppel O&M) and Keppel Integrated Engineering (KIE), respectively.

Launched in December 2007, KOMtech's mission is to develop competencies, promote innovation, stimulate application research, carry out product and process development, and engage in technology foresight to create strategic advantages for Keppel O&M. Leveraging existing and proprietary technologies, and in collaboration with universities, research institutes and industry

partners worldwide, KOMtech will continue to develop innovative solutions that are commercially viable and adaptable to the needs of the industry.

Ongoing research efforts in KOMtech include ice-resistant rigs for the Arctic. Current areas of focus also include development of a slim drillship and research on self-installing platforms for substations, turbine foundations, wind turbine installation vessels and cable laying vessels.

KETC's research focus is in the area of environmental engineering. It works with government agencies and academic institutions on research projects in advanced water and waste-to-energy technologies.

Customer Health and Safety
The Keppel Group places great
importance on our customers' health
and safety in the provision and use of
Keppel's products and services.

The Group exercises due care in the design, construction, and operation of its products and services to ensure that they are fit for their intended use and do not pose unintended hazards to customers' health and safety.

Customers' health and safety impacts are constantly assessed over the products life cycle stages for improvement. Policies, procedures, guidelines on environment, health and safety are implemented to ensure that customers' health and safety are not compromised.

At Keppel O&M, the KFELS SSDT is designed with larger deck space compared to the available deck space of conventional platform rigs. This significantly improves all aspects of HSE (health, safety and environment) as well as operational performance. For more details, see pages 44 to 46.

Keppel Land adopted the "Design for Safety in Buildings and Structure Guidelines" for all its new projects since 2008. This is an advanced safety management tool that requires design consultants to review the safety and health risks associated with their design. In accordance with these guidelines, three reviews – namely Concept Design Review; Detailed Design, Maintenance and Repair Review; and Pre-Construction Review – are carried out at different stages of the project to influence the design and identify risks as early as possible.

KIE adheres to a set of health and safety policy and procedures that guides the design, construction and operation of plants and facilities.

Environmental and safety features and impacts are assessed from design development to construction and operation, according to the company's environmental and safety management systems which are compliant with ISO 14000 and OHSAS 18000 standards.

For example, proper design, handling, storage and disposal of materials are considered as early as the planning stage. Product operation performance is also constantly reviewed for improvements in relation to customers' health and safety.

Keppel's products, such as offshore rigs, are designed to comply with international laws and regulations. This ensures that environmental impact (e.g. emission levels and hazardous waste discharge) during operations are within acceptable limits, thereby protecting customers' health and safety.

The same guidelines apply to Keppel T&T's logistics services where the distribution of medical devices conforms to the Good Distribution Practice for Medical Devices of



Singapore. This ensures that the product quality is not affected during the delivery process.

Procurement of materials and equipment are made with responsible and reputable vendors, taking into consideration the health and safety impacts during their useful life. Disposal companies certified to ISO14001 are engaged to ensure proper disposal of hazardous waste.

### **Customer Engagement**

The Keppel Group values customer feedback and believes it is essential for sustainable growth and long-term success. 'Customer Focus' is one of Keppel's eight core values.

Mechanisms for customers to provide feedback are in place to assess and maintain customer satisfaction with Keppel's products and services. Surveys are conducted regularly to gather customer feedback and suggestions.

Keppel FELS conducts customer surveys every four months, involving face-to-face interview sessions with customers. Overall average score for the Company in 2010 was 4.45 on a scale of 1 to 6 (1 – very poor, and 6 – excellent).

Feedback and suggestions were generally positive and encouraging, with compliments mainly pertaining to responsiveness of personnel and quality of work done. Similarly, other business units such as Keppel Energy, Keppel Shipyard and Keppel T&T also gather feedback on a regular basis for continuous service improvements.

For the property sector, Keppel Land has a Customer Focus Unit (CFU) in place since 1997 to cultivate a long-term relationship with customers. Keppel Land is a forerunner among developers to establish a dedicated CFU to meet the needs and





Keppel T&T's quality assurance programmes ensure that the quality of goods remains unaffected during the delivery process.

expectations of home-buyers. The CFU plays a key role in the delivery of premium quality residences that homebuyers have come to associate with the Keppel hallmark. Feedback from homeowners are obtained for review and improvement of future developments. Regular events are also organised to build rapport with homeowners and tenants. Service quality surveys are conducted for completed residential projects and most respondents are satisfied with the services provided.

### Compliance

Keppel is committed to subscribe to best practices as well as to comply with applicable legislations and other relevant requirements. In 2010, the Group has not identified any non-compliance with laws, regulations and voluntary codes concerning the provision and use, as well as health and safety, of its products and services.

Moving into the future, we remain focussed on customers' needs and exercise due care to ensure customers' health and safety while providing products and services stamped with our hallmark quality and excellence.

## **Product Showcase**

# KFELS B Class Jackup Rig



The KFELS B Class jackup rig, designed to provide maximum uptime with reduced emissions and discharges, is known to be a highly efficient drilling platform with industry-leading features for safety and environmental friendliness.

The rig is designed in accordance with Marpol (International Convention for the Prevention of Pollution From Ships) which requires the use of better equipment (e.g. pumps, sewerage treatment) to reduce emissions and water discharge.

It was awarded the Prestigious Engineering Achievement Award from IES in 2009. In addition, the KFELS B Class rig and equipment are built and surveyed during construction in accordance with American Bureau of Shipping (ABS) rules and regulations.

The KFELS B Class rig accommodates 150 men and is able to operate in water depths of 400 ft, with a drilling depth of up to 30,000 ft. Readily upgradeable to higher performance capabilities, the KFELS B Class rig is one of the industry's new generation of rigs.

A design feature of the KFELS B Class rig is the leg spacing of 129 ft longitudinally and 142 ft transversely. This is a conscious effort in the KFELS B Class design to allow the rig to revisit sites that were previously operated by the old generation of workhorse rigs with the same leg spacing. The risk of leg sliding in "old hole interaction" situations is significantly reduced compared to competing conventional rig designs.

In addition, the KFELS B Class rig incorporates Keppel's proprietary advanced and fully-automated high capacity rack and pinion elevating system, and self-positioning fixation system. The self-positioning fixation systems do not require manual adjustment for engagement, unlike the holding systems in conventional rig designs. This reduces the installation time of the KFELS B Class rig, thereby allowing operations to begin sooner.

To-date, there are more than 30 KFELS B Class units in operation. This innovative and cost-effective rig has proven itself by consistently providing excellent operational and safety performance in major offshore exploration in many locations around the globe.



## **Completed KFELS B Class Jackup Rigs**

S/No	Rig	Water Depth (feet)	Drilling Depth (feet)	Year of Completion
1	West Juno	400	30,000	2010
2	West Callisto	400	30,000	2010
3	PV Drilling III	400	30,000	2009
4	Greatdrill Chitra	350	30,000	2009
5	PV Drilling II	375	30,000	2009
6	COSLStrike	400	30,000	2009
7	Greatdrill Chetna	350	30,000	2009
8	Deep Driller 8	350	35,000	2009
9	Virtue I	350	30,000	2008
10	Deep Driller 6	350	35,000	2008
11	Discovery I	350	30,000	2008
12	Ocean Scepter	350	35,000	2008
13	West Ariel	400	30,000	2008
14	ENSCO 109	350	35,000	2008
15	COSLBoss	400	30,000	2008
16	Al-Zubarah	300	30,000	2008
17	Deep Driller 5	350	35,000	2007
18	West Prospero	400	30,000	2007
19	ENSCO 108	400	30,000	2007
20	PV Drilling I	300	25,000	2007
21	West Atlas	400	30,000	2007
22	COSLCraft	400	30,000	2006
23	Deep Driller 3	350	35,000	2006
24	Al-Khor	300	30,000	2006
25	Arabdrill 30	300	30,000	2006
26	Deep Driller 2	350	35,000	2006
27	ENSCO 107	400	30,000	2006
28	Al Hail	150	20,000	2005
29	ENSCO 106	400	25,000	2005
30	Tonala	375	30,000	2004
31	Atwood Beacon	400	36,000	2003
32	ENSCO 105	375	30,000	2002
33	ENSCO 104	400	30,000	2002

## **Product Showcase**

# KFELS Semi-Submersible Drilling Tender



Keppel's proprietary semi-submersible drilling tender, the KFELS SSDT, is lauded for its eco-friendly and safety features. It won both the ASEAN Outstanding Engineering Achievement Award and the IES Prestigious Engineering Award in 2009.

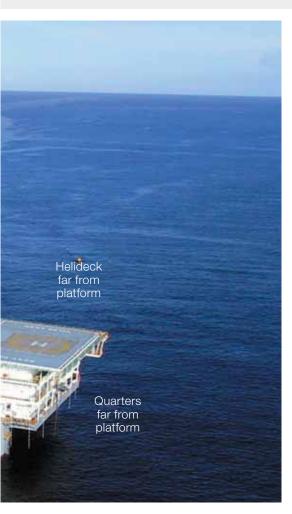
### **CREATING VALUE**

Most traditional production platforms carry a set of permanently installed drilling equipment. The KFELS SSDT provides mobile drilling facilities for wellhead platforms – the vessel has a crane which facilitates transfer of mobile drilling equipment to the

wellhead platform in less than 12 hours. The deployment of mobile drilling facilities, compared with a fixed platform with permanently installed drilling equipment, results in the following noteworthy environmental benefits:

→ Typically, a fixed platform is in operation for only four to six weeks and is left idle for the rest of the year, which is not an efficient use of resources. On the contrary, with the KFELS SSDT, only one set of drilling equipment is used repeatedly over multiple wellhead platforms,





thereby maximising its operational hours during its useful lifespan and minimising disposals, hence environmental impact.

The operating weight of the self-erecting tender is only one quarter that of a platform rig while the size of the deck required for the derrick equipment set is also significantly smaller since mud systems, power, pipe deck, and accommodation are contained on the tender. This reduces the footprint on the seabed, hence causes minimal disruption to the underwater eco-system.

- → The KFELS SSDT is a zero discharge vessel. As part of its waste management system, drilling cuttings which has hydrocarbon contents are separated and stored in containers. Not only does this eliminate adverse impacts on marine life, the reduced frequency of supply boat trips also lessens environmental pollution. Most importantly, the risk of accidental spillage of drilling cuttings is reduced.
- → Environmentally friendly systems in the KFELS SSDT include systems prohibiting dumping of solid waste into the sea, removing contaminated lube and fuel oil from equipment before discharging through the loading stations on the main deck, treating black water using sewage treatment plants, and treating oily water from drains using separator.
- → Main generators onboard meet the stringent Engine International Air Pollution Prevention (EIAPP) requirement. This certificate is issued to an engine, based on meeting marine diesel engine nitrogen oxide and sulphur oxide emissions limits set by the regulators. Non-ozone depleting refrigerant, R417, is also used for the air-conditioning units instead of R22.

### **DEFINING DISTINCTION**

Conventional drilling tenders can only be deployed next to fixed platforms, most of which are located in shallow waters. The KFELS SSDT enables two floating units to operate in close proximity with each other without the risk of major collision, by designing the hawsers to connect the two platforms in such a way as to cancel the relative motions between the two floating bodies.

It is capable of operating economically in moderate to mild environment regions like Southeast Asia, offshore Brazil, West Africa and the Gulf of Mexico. The vessel is designed and constructed in accordance with the latest international rules and regulations such as those of the American Bureau of Shipping and the International Convention for the Safety of Life at Sea.

The KFELS SSDT distinguishes itself in the following ways:

### **Better relative motions**

A semi-submersible has significantly less motions. Studies of pitch motions for the KFELS SSDT showed that these were only one-third or less that of a conventional barge hull, both being about 300 ft in length. The heave motion is also greatly reduced, showing the superior characteristics of the semi submersible hullform in waves. Better motions are particularly important during the rig-up and rig-down of the Drilling Equipment Set (DES or rig package) on the platform and when transferring relatively large loads to and from the platform.

Space utilisation is very efficient on the purpose-designed KFELS SSDT. Spaces for storage of consumables above and below deck are strategically located to provide easy access and for smooth operation.

The KFELS SSDT, with its heavy lift crane located at the bow, can self-erect and operate from a single moored position. Mono-hulls, on the other hand, after erecting the DES, need to be re-positioned before the start of operations. Also, mono-hulls moored at platforms cannot weather vane and are hence very susceptible to beam loading mooring system failures. The KFELS SSDT has a superior mooring system that can withstand higher mooring loads. It also allows easier crane access to very high platform decks due to its higher deck box elevation as compared to mono-hulls.

## **Product Excellence**

## Product Showcase - continued

Beneficial motion properties reduce KFELS SSDT's operational downtime due to weather. For example, the tender, West Pelaut, operating off Brunei has not experienced weather related downtime, even during the monsoon seasons, in nine years of operation.

### Improved HSE

The KFELS SSDT tender operation provides a larger available deck space compared to conventional platform rigs. This significantly improves all aspects of HSE (Health Safety and Environment) as well as operational performance.

Emergency response procedures, including fire fighting and evacuation, are simplified on the KFELS SSDT because of the increased space, fixed equipment pathways and dedicated life-saving equipment.

The KFELS SSDT requires only six to eight men on the platform at any one time, which significantly reduces the risks associated with drilling operations. If an emergency situation occurs, the semi tender can quickly move away from the platform to a safe standby position.

All fluid mixing, handling and maintenance are done on the semi tender. This eliminates the need to transfer drilling mud back and forth to a shore base via supply boat, and significantly decreases the risk of spills as well as saves a considerable amount of drilling fluids expenses.

Heliport operations are not required on the drilling platform, which reduces the risk of conflict with the derricks, cranes and jack up legs. The KFELS SSDT's heliport is more than 300 ft away from

the platform. Equipment conventionally housed on the drilling platform is relocated to the semi tender. This eliminates engine exhausts and significantly reduces hazardous areas on the platform.

The KFELS SSDT's personnel quarters are more than 300 ft away from the platform and are fully pressurised. This ensures the safety of personnel associated with the overall operation.

### **Easier logistics**

The large storage spaces and volumes available for consumables on the KFELS SSDT improve operational logistics management. This means that operations are less dependent on regular supplies and thus operational downtime due to weather is less. Loading and unloading supply boats are also easier and safer.

### Better stability

The KFELS SSDT operations are less susceptible to weather due to the stability of the semi-hull and fewer crane lifts during operations, hence reducing the dependency on boats.

The KFELS SSDT evolved from a design specifically meant for operation in the shallow water region of Brunei to a new model suitable for the deepwater market operating next to a Tension Leg Platform (TLP) or Spar. With this breakthrough, the KFELS SSDT became the first drilling tender in the world to operate in deep waters of 1,000 m in the West Seno field, offshore Indonesia in 2003. The vessel was also deployed against a Spar platform in the Kikeh Deepwater Field, offshore Malaysia in 2008 and was operated in Tombua-Landana in offshore Cabinda, Angola.



### Showcase

# Creating Sustainable Waterfront Lifestyles





1

Waterfront living has always been a lifestyle of choice, epitomising class and prestige. Keppel Bay, comprising two world-class residential developments Caribbean at Keppel Bay and Reflections at Keppel Bay as well as Marina at Keppel Bay, redefines true and sustainable waterfront living in Singapore and the region.

### **MARINA AT KEPPEL BAY**

Complementing Keppel Bay's premier waterfront lifestyle is the Marina at Keppel Bay. Located on Keppel Island, the marina is home to international luxury yachts. Opened in 2008, it has capacity for 168 yachts, including megayachts of up to 280 feet.

Marina at Keppel Bay is the first and only marina in Asia to be awarded the Clean Marina status by the Marina Industries Association of Australia (MIAA). The voluntary accreditation system aims to promote clean environmental practices in the marina industry.

It was also awarded the MIAA 5 Gold Anchors rating, whose evaluation criteria covers 10 key areas including environmental protection practices.

These certifications are testament to Marina at Keppel Bay's efforts to protect the environment and marine life. Taking an active role in minimising hazards that could potentially impact the environment, the marina offers a reticulated vacuum sewer pumpout system to ensure that sewage from vessels are not discharged into the waters. Boat owners are also encouraged to use biodegradable washing liquids and detergents when cleaning their yachts.

Marina at Keppel Bay is home to a kaleidoscope of coral reef life. The marina was constructed based on an 'open concept', which allows water to flow through the entire marina during the change of tides. As a result, currents that flow through the marina bring nutrients and plankton that are essential to stimulate marine life and coral growth.

Efforts are taken to sustain and calibrate the growth of marine life. For instance, fishing is not allowed within the marina, to help sustain a well-balanced eco-system and food chain. Divers regularly help to chart the growth of coral reef, animals, fish and plants through photographic captures. As such, many sea plants and animals like the clown fish, juvenile batfish, tiger tail seahorse and sea turtles have made the marina their home.

In addition, the green wall at the marina's carpark has helped resident flora and fauna flourish. With an area of about 300 sm, the vertical green wall features two types of vines, namely Thunbergia grandiflora and Vernonia ellipta, which were specially selected to reduce the amount of light and heat reflected from the concrete, thereby significantly reducing the amount of heat trapped in the carpark.

1, 2\_Marina at Keppel Bay is home to a kaleidoscope of coral reef life.



### **Focus Areas:**

- → Establishing an integrated framework.
- → Implementing an effective management system.
- → Enhancing ownership.
- → Strengthening partnerships.

Our vision is to ensure that everyone who works in our shipyards, plants, worksites and offices, goes home safely each and every day.



# A SAFE AND HEALTHY WORKPLACE

Safety is a core value of the Keppel Group. Focussed on ensuring a safe and healthy environment for everyone from employees to subcontractors and customers, Keppel aims to uphold our safety standards in all our business activities.

We continually refine our safety management systems so as to improve our safety performance. This Report will cover (i) our Safety Management Framework, which explains the oversight of safety within the Group, (ii) the Group's Safety Vision and Policies, which outlines our philosophy and strategies for improving safety, (iii) our Safety Performance, which looks at our key indicators; and (iv) our Safety Review, which describes the eight focus areas that the Group looks into to improve safety performance.

# SAFETY MANAGEMENT FRAMEWORK

Keppel Corporation established a Board Safety Committee (BSC) in 2006, the first by a public-listed company in Singapore, to review and develop safety policies across its multiple business units. The formation of BSC provides strong and visible leadership as well as commitment from the top.

Through the BSC, five key safety principles were developed to help encourage and drive the right behaviour in our daily operations across the Group.

To appraise the effectiveness of our efforts to improve safety, we have been consolidating and assessing safety and health information from various business units across more than 30 countries.

Due to the size, geography and diversified nature of our businesses, we initially concentrated on the operational and high risk areas. However, we are in the process of extending the coverage to other areas, such as office environments, and will continue to ensure that all our employees are taken into account.

An inter-Business Unit Safety Committee was formed in 2007 to synergise our safety efforts, align best practices and share lessons learnt in the respective business units. One of its first actions



If safety is expensive, disasters cost more

Value everyone's safety

Zero tolerance for incidents

Recognise safe behaviour

Passion for HSE excellence



In 2010, the Keppel Group invested over \$23 million on improving safety.

# Safety and Health

was to ensure that all operational meetings in Keppel started with a review and discussion on safety matters.

To improve their understanding of safety measures in the various operating environments, business unit heads, led by the BSC Chairman, conducted visits to 12 sites in Singapore and two overseas in 2010.

All Keppel business units comply strictly with all applicable laws and regulations in the countries we operate in. Over and above that, we seek to ensure that our high safety standards are enforced across the Group.

Due to the different nature of their respective industries, each business unit has its own safety management system that is externally audited by independent safety consultants. Keppel Offshore & Marine (Keppel O&M) has adopted the International Safety Rating System which has been comprehensively audited by Det Norske Veritas. Keppel Integrated Engineering (KIE) has obtained accreditation for its Integrated Management System covering ISO 14001 for Environmental Management and OHSAS 18001 for Occupational Health and Safety. Keppel Telecommunications & Transportation's (Keppel T&T) business units have also obtained accreditation

for its HSE management system covering ISO 14001 for Environmental Management and OHSAS 18001 for Occupational Health and Safety.

At Keppel Land, all project sites follow Singapore's Workplace Safety and Health Safety Management System for construction sites under code CP79.

Although individually measured against different benchmarks, the various safety management systems are also aligned to Keppel's standards.

Safety is part of each business unit's Key Performance Indicators, with the bonuses of our senior management pegged to their respective business unit's safety performance.

# GROUP'S SAFETY VISION AND POLICIES

Through the Keppel Workplace Safety & Health (WSH) 2018 strategy introduced in October 2010, we are focussing our efforts on four key thrusts to align Group efforts and further improve our safety and health practices. We are committed to:

- Establish an integrated WSH framework
- 2. Implement an effective safety management system
- 3. Enhance safety ownership
- 4. Strengthen safety partnerships

To cultivate best practices across the Group, a cross-pollination programme was introduced where employees with the potential to be safety leaders are identified and seconded to other business units to learn and share knowledge. Through this, it is envisioned that over time, safety practices will be consistent throughout Keppel Group.

In their safety exchange programme, Keppel T&T sent safety leaders to overseas subsidiaries, while overseas employees were invited to Singapore to learn and adopt the Group's best practices.

To gain a better understanding and align the safety culture of its local and overseas projects, Keppel Land's BSC visited The Estella project in Vietnam, and the Ocean Financial Centre and Reflections at Keppel Bay project sites in Singapore.

### **SAFETY PERFORMANCE**

Over the years, we maintained a commendable safety record working in high risk sectors. The cumulative effect of Keppel's safety efforts has seen its Accident Frequency Rate (AFR) improve from 0.49 reportable accidents for every million man-hours worked in 2008 to 0.33 in 2010. Our Accident Severity Rate (ASR) was reduced to 133 man-days lost per million man-hours worked in 2010 from 143 man-days lost in 2008.

## 2010 Quick fact

## **Safety Self Assessment**

→ Keppel took a big step in reviewing its safety culture by engaging safety specialist DuPont to conduct a self assessment programme. An ongoing initiative, a safety self perception survey was conducted Group-wide to gather feedback from Keppel employees and contractors. The next step saw safety champions and selected staff in key positions undergo training to be qualified safety assessors where they will assess the various business units within the Group.





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- 1\_Keppel Logistics Foshan in China practising an emergency drill. Their good safety performance saw them receive the Top 3 Foshan Enterprise Safety Operation Award for 2009.
- 2\_Launch of the Keppel WSH 2018 strategy at the Keppel Group Safety Convention 2010.



# Safety and Health

## Keppel Workplace Safety & Health (WSH) 2018

### Vision

For everyone at all our workplace to go home safely everyday.

### Mission

To strengthen our safety culture by leveraging the Group's resources and expertise.

## Strategic Thrusts

### **Framework**

- → Greater Group alignment and maximising resources
- Establishing integrated WSH framework across businesses worldwide

### **System**

- → Adopting best practices and procedures
- → Implementing an effective safety management system

#### **Ownership**

- → Enhancing empowerment and active involvement
- → Enhancing safety ownership

### **Partnerships**

- → Engaging all stakeholders
- → Strengthening safety partnerships

## Strategic Outcomes

- → Strong WSH culture
- → WSH Integral part of business
- → Reduction in WSH incidents

## Four Thrusts of the Keppel WSH 2018 strategy:

### 1. Establishing an integrated framework

As part of its safety framework, Keppel has introduced a centralised electronic Global Incident Reporting System across the Group. This ensures that senior management and relevant safety personnel are kept abreast of incidents and immediate corrective measures are taken. Through a web portal, sharing of lessons learnt can be done across the Group in a systematic way.

### 2. Implementing an effective management system

To further enhance the safety management system across the Keppel Group, individual business units will undergo a self assessment programme to develop a roadmap and identify the measures needed to improve their performance. Assessors from across the Group will be trained.

### 3. Enhancing ownership

Following the launch of the "Safety Starts with Me, Together We Care" campaign in June 2009 to foster a culture of safety and enhance safety ownership, Keppel opened a safety training centre in June 2010.

A leadership programme was rolled-out where key personnel are attached to the safety department in order to better understand workplace safety management and to enable them to apply what they have learnt when they resume their regular duties.

### 4. Strengthening partnerships

Keppel will continue to support industry, client and national campaigns and conferences. In 2011, it will be hosting the ASEAN Council on Petroleum (ASCOPE) Safety Workshop which will draw participation from national oil companies across ASEAN.



Regardless of geographical presence, our statistics are calculated based on the Singapore Ministry of Manpower's requirements. For cross referencing and to benchmark ourselves on a global scale, we also use the standards of the Occupational Safety and Health Administration (OSHA).

In 2010, we unfortunately suffered four separate fatal cases involving our subcontracted workers. All four incidents involved falling from height. We deeply regret the loss of these lives and have thoroughly investigated the causes. Efforts were stepped up to prevent future incidents and the lessons learnt were shared across the Group.

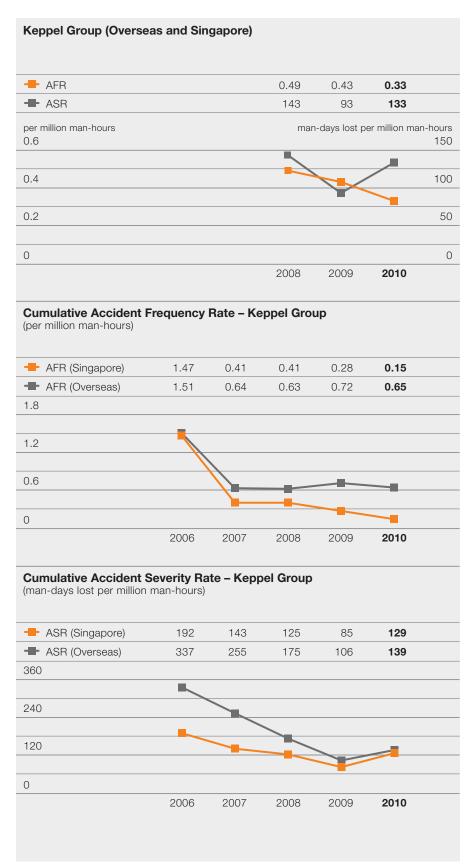
### **SAFETY REVIEW**

Keppel Group's BSC sets the direction and the framework for the business units to manage their safety issues and to improve their safety performance. This section of the Report reviews the various efforts and thrusts in which business units promote an incident-free workplace.

The Group works on eight focus areas to comprehensively manage safety issues, they are:

- 1. Workforce engagement
- 2. Stakeholder and industry partnerships
- 3. Development of workplace processes
- 4. Training
- 5. Cultivation of Safety Mindsets
- 6. Safety Innovation
- 7. Recognition of safety behavior and leadership
- 8. Strengthening occupational health

In 2010, we invested over \$23 million on safety through infrastructure upgrades, improvements in processes, training and promotion of safety culture. We believe that safety is both a collective and individual responsibility. Keppel engages its workforce, contractors and customers. We also partner



# Safety and Health

other stakeholders, such as industry organisations and government agencies to collaboratively address safety issues.

We constantly look for ways to integrate safety considerations into our processes and to improve the workforce's safety consciousness through training and cultivation of safety mindsets.

We also reward and recognise safe behaviour and leadership as an incentive to encourage proactiveness and innovation for safer processes. Finally, we also seek to ensure that our workforce remains healthy and productive. The following details the different initiatives undertaken for each focus area.

### **Workforce Engagement**

Our workforce, comprising employees, contractors and subcontractors, play an important role in our efforts towards zero incidents. As frontliners, their actions and participation impacts the success of our safety goals.

Our employees are represented in unions and workforce safety councils, which comprise representatives from the different trades across the Group. There are regular dialogue sessions between management and unions with strict health and safety standards spelt out in collective agreements.

Policies and practices in our overseas unions may differ from country to country. Nevertheless, we endeavour to ensure all our stakeholders are onboard with the Group's safety practices.

For Keppel O&M, the Workforce Safety Council (WSC), which represents all of our direct workforce in their different trade, meets every month with the company's yard and safety managers. Monthly meetings are also held with the Contractors HSE Watch Group which represents all of our major contractors. Our major contractors have more than 100 workers working in the shipyards.





Keppel management, workers and subcontractors 'hand print' their commitment to safety as part of the National Workplace Safety and Health campaign 2010.

At Keppel FELS, a Subcontractors Executive Council (KSEC) Safety Committee, which consists of representatives from different trade sections, meet up weekly to discuss safety concerns and initiatives.

The same is done at KIE where workers and contractors are represented during the monthly safety meetings.

Our safety steering committees include clients whose presence and commitment help provide additional impetus to our safety efforts. Keppel Shipyard's safety steering committee consists of oil majors who actively contribute to the safety programmes in the yard.

At Keppel Land, all workers are represented in the Site Safety Committee organised by the main contractors where monthly meetings are held to gather workers' opinions and feedback on worksite safety for continuous improvements.

# Stakeholder and Industry Partnerships

As a conglomerate with businesses across different industries worldwide, Keppel is in a unique position to



share its experience on safety given its multinational and multicultural work environments.

In Singapore, we work closely with the Ministry of Manpower and the Workplace Safety and Health Council (WSHC) to implement initiatives that help to raise safety standards within our industries.

Our companies actively participate in national initiatives such as the bizSAFE programme. As bizSAFE partners, we provide incentives to motivate our contractors and vendors to progress through the various levels in the bizSAFE programme. This helps to ensure that Small and Medium Enterprises have the resources to place health and safety as a top priority.

In Singapore, though various training, skills-upgrading programmes and guided facilitation, we have helped all of our contractors develop their own HSE and risk management system to achieve a minimum bizSAFE Level 3 standard and have continued to support them in advancing to Level 5.

The Keppel Group works with more than 600 Singapore-based subcontractors to create an incident-free workplace.

As part of an on-going sharing programme of best safety practices in the marine industry, Keppel Shipyard and Keppel FELS hosted members from the Association of Singapore Marine Industries (ASMI) in a self-regulatory programme known as Marine Industry Safety Engagement Team (MIndSET).

To promote industry partnerships and cooperation, Keppel Group was a major sponsor of the National Workplace Safety and Health Campaign 2010 for the third year in a row, contributing \$100,000. Taking the lead, senior management of Keppel Group came together with workers, union leaders

and clients to pledge their commitment to safety.

We also shared our safety management system with the oil and gas community during the Drilling HSE Asia Pacific Conference and Exhibition held in March 2010, organised by the International Association of Drilling Contractors.

At the inaugural Singapore WSH Conference 2010, Mr Choo Chiau Beng, CEO of Keppel Corporation, spoke on the need for strong safety leadership to ensure a safe work environment.

### **Workplace Processes**

Safety has been systematically integrated into Keppel and its subcontractors' work processes worldwide. In all our operations, daily safety briefings are conducted for our workforce. Other safety sessions include various weekly and monthly meetings for managers, clients and contractors.

For Keppel O&M, at the shipyards, there are daily Vessel Safety Coordination Committee meetings conducted by project managers with representatives from the different trade supervisors and owner representatives.

Regular walkthroughs of the project sites are conducted to ensure full compliance of safety regulations and to identify and rectify any safety hazards.

Keppel O&M's contractors and workers take ownership of safety by conducting their own monthly site inspections through the Contractors HSE Watch Group and Workforce Safety Council. This is over and above the daily and weekly walkthroughs by the safety officers, project managers, yard managers and clients.

Keppel Shipyard also identified six High Impact Risk Activities (HIRA) which required special focus. They are Height Safety, Confined Space Safety, Lifting Safety, Fire Safety, Permit-to-Work and Electrical Safety. Icons were developed and a booklet was made to boost awareness and focus on the risks of such activities at the workplace.

To help workers look out for each other, a buddy system was introduced in 2009 where workers were responsible for each other at the workplace. To complement the buddy system, Keppel Shipyard launched a Buddy Mentor scheme where a manager acts as a mentor to several buddy groups who provide direct feedback on working conditions and safety issues.

At Keppel Land, besides weekly safety walks by the project managers with contractors, they also conduct monthly surprise site visits to ensure site supervisors remain vigilant. Their efforts are reinforced by monthly inspections from external safety consultants.

Keppel Energy's safety audits and site inspections extended to its subsidiary in Ecuador, Termoguayas Generation S.A., when they conducted an internal safety audit and site safety inspection in May 2010.

### **Training**

In order to ensure workers comply with safety rules, they must first be competent in their jobs. As a conglomerate with a workforce hailing from different cultures and countries, safety training is the first step in ensuring alignment with the Group's safety policies.

A safety orientation is compulsory for all newcomers, without exception, and regardless of job description, rank or vocation. Workers are encouraged to constantly improve their skills and clock in hours for safety courses.

In June 2010, Keppel Group launched an integrated safety training centre employing the latest equipment,

# Safety and Health

simulations and methodologies to train and equip employees and subcontractors with relevant safety knowledge, skills and competencies.

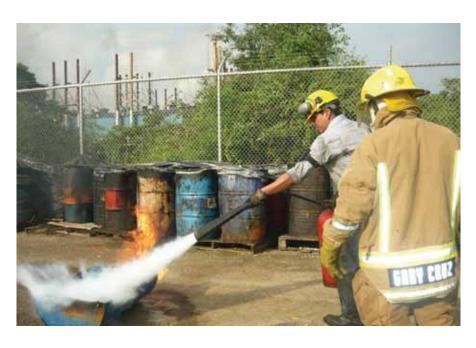
Located at Keppel Shipyard, the Keppel Safety Training Centre offers courses run by qualified instructors, and integrated amenities augmented by multimedia tools to offer a conducive learning environment where workers can be engaged and immersed in the Group's safety culture.

Across the Group, each worker underwent an average of 20 hours of training in 2010. FELT leadership training is one of several courses offered at the Centre where participants are taught how to exercise visible safety leadership to inspire others. Additional courses in safety leadership, confined space safety, fire fighting, height safety, forklift driving and material handling amongst other trade specific programmes were also conducted.

Keppel FELS held a five-day safety training programme for their contractor's supervisors to help enhance their risk management and safety knowledge. About 600 supervisors were trained under this Safety Capability Coaching and Consultancy Programme in 2010.

For Keppel Land's projects, construction workers undergo eight hours of Construction Safety Orientation Course before being allowed to work in a construction site. A further two hours of safety orientation is conducted by the main contractors to familiarise workers with the project site before they are allowed to work onsite.

In Qatar, Keppel Seghers' employees, for the two environmental projects being carried out, went through numerous safety courses, including programmes tailored for high risk activities.



### **Cultivation of Safety Mindsets**

Spreading the safety culture is a key focus of senior management across the Group. Over and above training, reward and recognition of exemplary behaviour, conventions and campaigns as well as a Group HSE newsletter help in promoting and communicating safety as a way of life.

Keppel Group launched the "Safety Starts with Me – Together We Care" campaign in 2009 which empowers our workforce to remove at-risk behaviour and conditions through active observation and intervention. A logo was developed as a constant reminder of this mindset.

Keppel Group also holds an annual Group safety convention to facilitate the sharing of ideas and best practices among staff, contractors and clients from our different business units. The convention was held in October 2010.

Safety promotion campaigns are also tailored to meet the needs of the individual business units.

Keppel FELS launched its height safety campaign with a logo and the

slogan, "Going Up and Returning Down Safely" in June 2010. This was in conjunction with its 14th annual HSE promotion campaign where clients, subcontractors and department managers participated in activities to learn more about safety.

In June 2010, Keppel Shipyard also launched its Safety Excellence 2015 programme with the vision to create an incident free workplace. Managers, engineers, foremen and supervisors underwent courses at the Keppel Safety Training Centre to acquire counselling skills for the Buddy Mentor programme and HIRA.

The yard also launched an eye safety campaign on a conversion project in March 2010 to promote the use of eye protection such as safety goggles while another project focussed on commissioning work safety.

KIE held its Environment, Health and Safety (EHS) seminar in July 2010

Fire safety training at Keppel Energy's subsidiary, Termoguayas Generation S.A. in Ecuador.



## Keppel Safety Training Centre

The Keppel Safety Training Centre is an integrated health, safety and environment (HSE) training hub, designed to offer a wide range of safety training and certification courses.

All Keppel Shipyard's direct and subcontracted workers have to undergo training at the Centre before they can start work.

The courses are designed to inculcate a strong safety mindset and a uniform level of competencies among the staff.

The Centre comprises a threestorey building equipped with classrooms, an e-learning zone, and a hall with multimedia and interactive training stations.

It also features a life-size replica of the mid-section of a tanker with various technical training areas.

Core competency and safety leadership development programmes, as well as Workforce Skills Qualifications (WSQ) courses certified by the Singapore Workforce Development Agency, are some of the key training modules conducted by qualified, full-time instructors at the Centre.

At end-2010, more than 8,000 employees and subcontractors have been trained at the Centre.

### THE MID-SHIP MODULE

The Mid-Ship Module is a six level steel structure complex built to simulate working conditions in the mid-section of a tanker.

It is used to provide hands on and scenario-based training for workers. Some of the main courses conducted there include Confined Space Safety, Hotwork Assessment, Observation and Intervention Skills, and Risk Assessment.



In the Mid-Ship Module, trainees undergo both broad-based and trade-specific safety training.

# Safety and Health

1\_Interactive sessions are used to educate workers on safety knowledge.

2\_Dr Lee Boon Yang (second from right), Chairman of Keppel Corporation, showing then Minister for Manpower, Mr Gan Kim Yong (extreme right) a safety innovation by Keppel Singmarine, which won an industry award for significantly improving the ergonomics of the workplace.



to evaluate its safety performance and develop new ideas for safety excellence. New initiatives launched at the seminar included a hazard reporting programme designed to ensure that prompt and appropriate actions were taken to address safety hazards on the shop floor.

Another initiative encouraged staff to take short breaks in between work to review their work conditions and procedures. In doing so, one can help identify and prevent potential unsafe practices and conditions.

Keppel Energy launched its "This is Why I Work Safe" campaign in January 2010. It took on an emotive approach where photographs of employees' loved ones were printed on the reverse side of their staff passes to remind them of why they should be working safely. This initiative was also implemented for its subsidiary in Ecuador during their annual HSE Day.

Keppel Land introduced the Take 3 programme to its overseas offices which encouraged staff to stop, think and plan before starting any work. To ensure alignment, they also invited

overseas contractors to visit Singapore worksites and the Keppel Safety Training Centre.

Two talks for more than 1,200 workers of the construction teams at both Reflections at Keppel Bay and Ocean Financial Centre were carried out by safety consultants in various languages. Committed to ensure the participation of all its contractors, Keppel Land also helped to co-fund the safety programmes of these contractors.

### Safety Innovation

Beyond attitudes and vigilance, cultivating a safety mindset also meant thinking of ways to make the workplace safer, either through processes or innovations.

At Keppel, safety innovation competitions are held and winners from the respective business units compete at the Group Safety Convention and at the national level.

The Keppel O&M Safety Innovations Convention was held in August 2010 where the best nine teams across the shipyards presented their projects and were assessed by a panel of judges from the Inter-SBU Safety Committee.

The 13th WSH Innovations in the Marine Industry Convention saw four ideas from Keppel recognised at the award ceremony on 2 September 2010. Organised by the Association of Singapore Marine Industries (ASMI), Keppel Singmarine clinched Gold and Bronze Awards for its Smart Arm and Universal Mobile Stool projects respectively, while Keppel Shipyard took the Silver and Bronze Awards for its Baby Turret and Unsafe Usage of Hand Lamp projects.

KIE's Safety Innovation Convention in May 2010 had seven projects from teams from Keppel Seghers, Keppel Sea Scan and Keppel FMO. The innovations include a lifeboat access locking device which secured the door and windows of lifeboats and a mobile safety barrier which prevents workers from falling off the edge of modular cabins tops.

# Recognition of Safe Behaviour and Leadership

While safety is in itself its own reward, recognition of safety efforts





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encourages proactive behaviour, reduces complacency and acts as a powerful incentive. Awards and bonuses are given out to projects and individuals with exemplary records and performances by the business units as well as customers.

The Keppel Group garnered 12 Workplace Safety and Health (WSH) Awards from Singapore's WSH Council and Ministry of Manpower. Keppel O&M was bestowed 10 awards in all, while companies in Keppel's Infrastructure Division received two.

For its all-round safety performance, Keppel Singmarine received the WSH Performance Silver Award for the fourth year in a row while Keppel Seghers, a subsidiary of KIE, bagged its first.

An award for supervisors was also given out to Sima Ram, a foreman at Keppel FELS, who led by example and put in a constant effort to mentor his workers on safety procedures and took appropriate measures to reduce risks.

During the year, Keppel FELS also won its first Lloyd's List Asia Awards for Achievement in Safety.

In China, Keppel Logistics Foshan received the Top 3 Foshan Enterprise Safety Operation Award for 2009 on 26 December 2010. This award was organised by the Foshan Government to rate safety performance of private enterprises and companies there.

Across the Group, awards are regularly given out to employees, contractors and project teams for their safety performances. Bonuses are also presented by customers to projects which achieve significant safety milestones while incentives such as gift vouchers are given out to exemplary workers.

These awards and accolades have come to represent a badge of honour for the recipients, serving to spur them and others around them to reach the same high standards of safety.

Strengthening Occupational Health In addition to a safe environment, we also look to protect and promote the health of our workforce. Before newly hired staff commence work, they have to undergo a health screening. We also

ensure that the work they undertake is suitable for their age.

Before they can take on strenuous work, workers have to be certified fit through regular health checks.
Other occupational health programmes include hearing conservation and respiratory protection system.

At KIE, a hearing conservation programme is in place for workers who are exposed to high noise levels. It includes noise monitoring, noise control, an annual hearing test, with training conducted every three years.

Talks on AIDS awareness, malaria and dengue protection, smoking cessation, cancer symptoms and nutritional diets were also conducted across the business units.

Healthy foods are also frequently distributed through programmes such as Healthy Fruit Day.

Though these many activities and initiatives, the Group endeavours to ensure a safe and healthy work environment for everyone.



### Focus Area:

- → Providing employment and job opportunities.
- → Maintaining harmonious industrial relations.
- → Enhancing education and development.

Our employees are our most valuable asset and are at the core of Keppel's achievements. We invest in the development and welfare of our global workforce to ensure that we attract and retain talented individuals.

Keppel is committed to be an employer of choice. We value our employees and recognise their contributions towards achieving sustainable growth for the Group and creating value for our stakeholders.

We see our employees as the Group's core asset, and actively grow the capabilities of our global workforce and talent pool through leadership development programmes and training opportunities, driving results through rewards and recognition.

We regularly engage our employees and advocate employee wellness by encouraging active participation in social and recreational activities. We continue to build trusting and harmonious working relations with our unions, and enforce fair employment practices that are consistent with applicable laws and regulations of the countries that we operate in.

With a global footprint in over 30 countries and across different industries, Keppel had 36,718\* employees as at 31 December 2010. In order to provide a common goal and language for all Keppel staff, we have a set of Group Core Values that we regularly communicate and encourage our people to embrace. Core Values, forming an integral part of our recruitment process, performance management, rewards and recognition as well as leadership development programme, are communicated during orientations, workshops and team-building exercises.

## **Keppel Group** Our Core Values Strong Values, Strong Results



<sup>\*</sup> The headcount figures in this section include associated companies where Keppel has management control.

## **People Matters**

# FAIR EMPLOYMENT PRACTICES AND EQUAL OPPORTUNITIES

Keppel believes in the importance of basic human rights and gives equal opportunities to all. As such, Keppel firmly upholds fair employment practices and adheres to the principles of fair and merit-based employment as spelt out by The Tripartite Alliance for Fair Employment Practices (TAFEP), which aims to foster fair and inclusive workplaces in Singapore. In addition, Keppel endorses the Employers' Pledge of Fair Employment Practices, which is guided by the following five principles:

- Recruit and select employees on the basis of merit (such as skills, experience or ability to perform the job), and regardless of age, race, gender, religion, family status or disability.
- Treat employees fairly and with respect and implement progressive human resource management systems.
- c. Provide employees with equal opportunity to be considered for training and development based on their strengths and needs, and to help them achieve their full potential.
- d. Reward employees fairly based on their ability, performance, contribution and experience.
- e. Abide by labour laws and adopt Tripartite Guidelines which promote fair employment practices.

Our aim is to provide a fair and conducive work environment that is based on non-discrimination and meritocracy; one which fosters mutual employee respect and promotes harmonious working relationships. In 2010, there were no incidence of discrimination reported to Keppel Corporation's headquarters in Singapore.

In Keppel, our employees have to abide by the Employee Code of Conduct

and are encouraged to report any inappropriate conduct in good faith without fear of reprisals under the Keppel Group's Whistle-Blower Protection Policy. For unionised companies, any grievances will be resolved according to the grievance handling protocol as spelt out in the respective Collective Agreements (CAs). Every reasonable effort will be taken by both the management and the union to resolve an employee's grievance promptly.

A key tenet of Keppel's business ethics is strict respect for and adherence to labour laws within the countries we operate in. For instance, we observe the respective country's statutory employment age and retirement age. Where our operations rely on manpower provided by vendors and subcontractors, we will work closely with them to administer the proper employment practices, guided by applicable labour laws as well as Keppel's policies. Our stringent recruiting process helps ensure that our operations are not exposed to issues such as child or forced labour.

### **Diversity of Workforce**

Keppel is an equal opportunity employer. In Singapore, more of our employees in the corporate office and the property arm are female (please refer to Keppel's respective annual reports for key information and gender mix of our directors).

While there remain sectors of our businesses, such as offshore and marine, which are traditionally male dominated throughout the industry globally, we will ensure that there is equal opportunity given to females across the Group.

Our statistics on pages 63 to 65 demonstrate the current position at Keppel in terms of workforce diversity in Singapore and globally. They are regularly reviewed to ensure that we have a fair and diverse workplace.

#### **REWARDS AND RECOGNITION**

Keppel provides employees with a competitive package of monetary rewards and benefits, which varies according to the legal requirements of different countries and industry norms.

#### **Monetary Rewards**

Keppel believes that a pay-forperformance philosophy would motivate staff to create shareholder value. The key guiding principles in the design of Keppel's pay philosophy are market competitiveness and performance orientation. Monetary rewards include annual salary increments, Annual Performance Incentive (API) and longerterm incentives.

The API includes a mechanism where a portion of the earned API that is tied to the Company's Economic Value Added (EVA) is kept in a EVA bank set aside for qualified employees. The EVA bank defers incentive compensation over time to encourage employees to continue generating sustainable shareholder value.

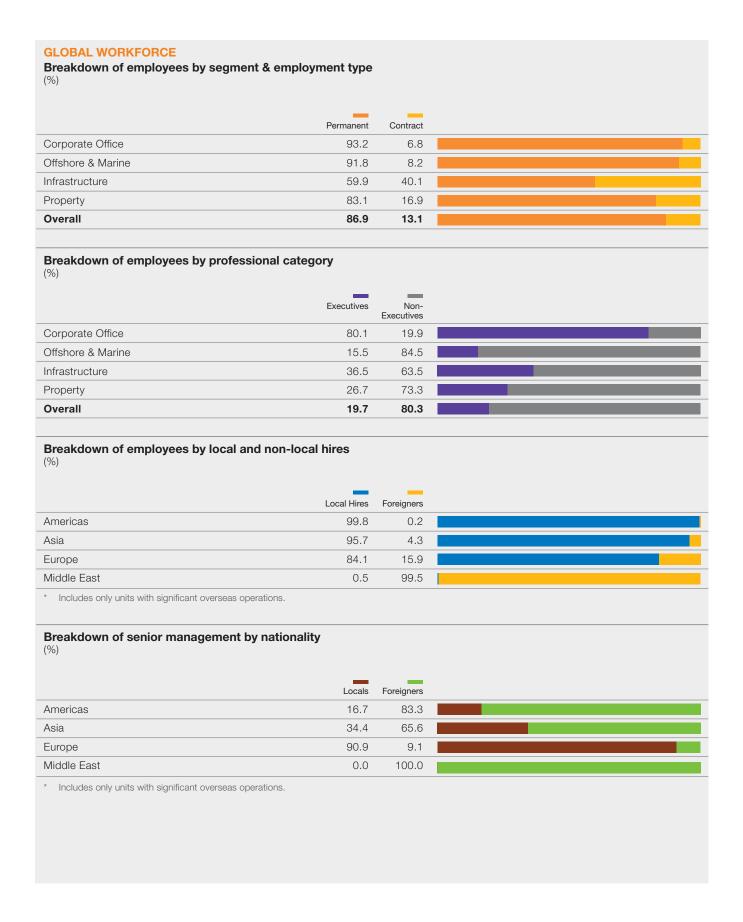
Similarly, share-based incentives are a key component of the remuneration structure to motivate staff to meet longer-term performance objectives. In 2010, the New Share Plans – Restricted Share Plans (RSP) and Performance Share Plans (PSP) – were introduced after a review to replace the Share Options Scheme (SOP).

The objectives of implementing the New Share Plans are to further strengthen the alignment of the longer-term interest of employees with that of shareholders, as well as to attract, retain and motivate high performing key employees. For both RSP and PSP, vesting takes place only upon satisfactory achievement of pre-determined performance conditions. Shares vested will be released over three years for the RSP, and at the end of the performance period of three years for the PSP.



#### SINGAPORE WORKFORCE Breakdown of employees by age (%) 30 to 49 50 years years old old & above < 30 vears old Corporate Office 22.9 55.6 21.5 44.9 Offshore & Marine 44.8 10.3 Infrastructure 27.7 58.2 14.1 Property 12.3 68.7 19.0 Overall 40.7 48.0 11.3 Breakdown of employees by gender (%) Male Female Corporate Office 30.6 69.4 Offshore & Marine 95.2 4.8 Infrastructure 84.3 15.7 Property 49.7 50.3 Overall 91.3 8.7 Breakdown of employees by educational qualifications Primary & below Post-Bachelor's Post-Secondary Secondary/ Pre-U/ graduate (Masters/PhD) Degree Vocational Corporate Office 11.1 63.2 13.2 12.5 0 Offshore & Marine 1.6 11.2 29.7 30.8 26.7 Infrastructure 4.0 18.2 38.9 33.8 5.1 Property 19.7 50.1 19.5 10.2 0.4 Overall 2.7 14.1 30.8 30.5 21.9 Breakdown of employees by ethnic groups Others Chinese Malay Indian Corporate Office 97.2 2.8 0 0 Offshore & Marine 7.9 28.7 40.2 23.3 Infrastructure 42.1 13.2 23.3 21.5 Property 90.9 4.4 1.5 3.2 Overall 29.3 26.6 35.5 8.6

# People Matters





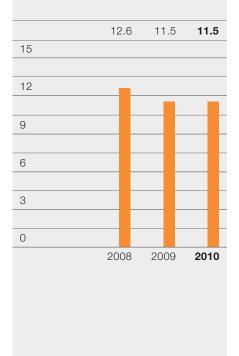
# Breakdown of employees by regions

(%)

No.	No. of employees		
Americas	8,951	24	
Rest of Asia	9,145	25	
Europe	705	2	
Middle East	1,652	5	
Singapore	16,265	44	
Total	36,718	100	



# Annual employee turnover rate (%)



#### **Benefits Provisions**

Keppel provides comprehensive benefits to employees such as leave entitlement, medical benefits and group insurance plans, taking into consideration industry practices and market norms.

Retirement and Saving Schemes
First introduced in 1955 by the
Singapore Government to enforce
savings by salaried workers, the
Central Provident Fund (CPF) is a
comprehensive social security savings
plan to help CPF members work
towards a secure retirement.

Over the years, the CPF has evolved to encompass retirement, healthcare, home ownership, family protection and asset enhancement. Under the CPF scheme, Keppel and its employees make monthly contributions to the employees' CPF account in accordance with the prevailing regulations.

### **Bursaries**

Every year, Keppel contributes to its co-operative and unions to help deserving employees to defray the costs of their children's education.

Under the Keppel FELS Co-operative Bursary & Education Grant, the Keppel Offshore & Marine (Keppel O&M) group awarded 43 Bursary Awards and 16 Education Grants in 2010 totalling \$12,800.

Keppel FELS contributed \$75,000 towards Keppel FELS Employees Union (KFEU) Bursary Awards for 128 deserving member employees in 2010. A total of 231 "Back to School" vouchers worth \$125 each were also given to member employees' schooling children, as well as employees who were pursuing part-time studies. As a supporter of the National Trade Union Congress' initiatives, Keppel FELS contributed U-Stretch vouchers worth \$30 each to 2,559 low-income union members to lessen their financial burden.

Other members of the Keppel Group such as Keppel Shipyard, Keppel Singmarine and Keppel Integrated Engineering (KIE) did their part by providing monetary aid to 12 recipients under the Keppel Employees Union (KEU) Scholarship/Bursary Awards. Keppel Merlimau Cogen (KMC), a unit under Keppel Energy, contributed \$3,000 to the Union of Power and Gas Employees (UPAGE) Bursary Award.

### Free/Subsidised Lodging and Transportation for Yard Workers Depending on the yard location, highly subsidised or free transportation is provided to Keppel O&M employees.

provided to Keppel O&M employees.
As part of employee welfare,
Keppel O&M also provides highly
subsidised lodging to yard workers.

### **Employee Recognition Awards**

At Keppel, we recognise and applaud employees who are exemplary role models, or have contributed long services to the Group. A total of 394 Keppelites from across the Keppel Group in Singapore received their long service awards in 2010.

Keppel Shipyard gives out three types of awards to deserving employees every year – 'Best Supervisor Award', 'Best Worker Award' and 'Best Support Staff Award'. Staff members who win the 'Best Employee Award' for three consecutive years are given the 'Excellent Employee Award'.

Keppel Telecommunications & Transportation (Keppel T&T) gives out 'Employee of the Month' Award to recognise employees who either excel in their performance; provide outstanding service to customers, visitors or tenants; or make exceptional contributions towards the operations of the department.

### **Volunteerism Leave**

Employees who join the activities of Keppel Volunteers are granted two days of volunteerism leave yearly

# **People Matters**

in recognition of their participation in community and charity work. Volunteerism leave is also extended to employees who are not part of the Keppel Volunteers network but wish to volunteer and participate in any of the corporate volunteerism activities or events on an ad-hoc basis.

#### **EMPLOYEE ENGAGEMENT**

Keppel believes in facilitating employee communication and engagement. An Organisational Climate Survey, first started in 2005, is used to identify employees' concerns and areas for improvement every year. 2010 marks the sixth year in which Keppel conducted the Climate Survey for Keppel O&M, and the second year that it conducted the survey Group-wide.

A sound response of about 94.5% was obtained out of 3586 randomly picked employees. There are a total of 62 items being assessed based on 13 main aspects. The overall score for the 13 aspects was 4.62 out of a maximum of 6.0. The three best-scoring categories of 2010 include Attitude, Motivation and Morale, Employee Engagement and Organisation Culture and Values.

Using the inputs culled from this annual survey, Keppel reviews and makes improvements to current policies and programmes as we continually build the Group's position as an employer of choice.

# MANAGEMENT – UNION ENGAGEMENT

Keppel enjoys excellent labour relations with its employees, which have been built over the years. The management sees the unions as a strategic partner in reaching out to employees, and places great emphasis on maintaining cordial working relationships with them. Almost 50% of the Singapore workforce are bargainable employees, and are covered by their respective CAs.





A firm partnership marked the Collective **Agreements** signing ceremony on 26 November 2010 between Keppel Shipyard, Keppel Singmarine, Keppel **Employees' Union** and Shipbuilding and Marine **Engineering** Employees' Union. Regular management-union meetings or dialogues are held so that Keppel's management can have an additional channel to learn about employees' sentiments and needs, and to update the unions on new company policies and work arrangements.

Keppel Shipyard, Keppel Singmarine, Keppel Logistics, Keppel Land, and Keppel Merlimau Cogen (KMC) are members of the Keppel Group which are unionised. Except for KMC, which signed its first CA with UPAGE on 14 January 2010, the rest renewed theirs in 2010.

The CAs establish good industrial relations practices with clear provisions on issues such as general terms and conditions of employment, terms and benefits on termination of employment, salary, benefits provisions, and recognition and grievance procedures. Some of the notable changes made include adjustments to salary ranges and expansion of medical coverage for the employees. The smooth process of renewing the CAs reflects the mutual trust and understanding that exists between the companies and their unions.





Through close collaboration with the unions, Keppel introduced several initiatives in 2010, such as the re-employment of older workers, skills and competencies identification for career progression, job re-designing and job matching. Keppel invites union delegates to sit in regularly during the meetings held by taskforce groups and committees so that the voices of their members could be represented.

**NURTURING HUMAN CAPITAL** 

Keppel recognises people as a core asset and actively grows the capabilities and capacities of its global workforce and talent pool. New hires undergo the required probationary period while full-time permanent employees undergo annual performance management and development review.

### **Training New Hires**

Training and development programmes are specially planned for new hires. Three Keppel Group Orientations were held in 2010 for 217 new members. The Group Orientations held during the year were enhanced by having the new hires go on site visits at the various business units to gain a better understanding of the Group's diverse

businesses. Trained mentors were also assigned to help new hires assimilate quickly into the Group's culture.

To-date, Keppel has a total number of 540 trained mentors.

For new graduate hires, they undergo comprehensive development and training programmes which provide on-the-job training and fast-track the career paths of capable new graduates.

In Keppel O&M, new graduate engineers undergo a Management Traineeship Scheme (MTS) which is accredited by internationally recognised professional membership body, the Institute of Marine Engineering, Science and Technology (IMarEST).

The MTS is a two-year programme to fast-track the career paths of capable new graduates. Outstanding performers under the MTS will be given further leadership and management development opportunities, and international assignments and special projects.

Upon completing the MTS, participants with relevant academic qualifications and working experience can register as

As part of the Group Orientation programme, participants visited the Keppel Safety Training Centre to understand more about safety, which is one of Keppel's core values.

# **People Matters**



an incorporated engineer or chartered engineer with IMarEST. In 2010, Keppel O&M recruited 81 graduates, bringing its total MTS participants to 659 since its inception in 1986. Keppel Energy and KIE also have similar MTS for new hires.

Keppel Land re-launched its Management Associate programme in 2010 to attract bright graduates. Three Management Associates were recruited and placed in a 12-month rotation programme for exposure to different functional roles.

### **Investment in Training**

Keppel provides regular training opportunities to help employees upgrade or hone their technical and functional skills, and strengthen their leadership competencies. The training opportunities provided help our employees stay relevant, keep up-to-date with changes in industry legislations and regulatory requirements, improve their business knowledge, and keep abreast of market trends and developments.

In 2010, we invested a total of \$18.3 million in the training and

development of our employees globally. The overall training hours per employee in Singapore are approximately 60 hours, while training hours per employee globally are approximately 31 hours.

Each member of staff receive relevant training at different stages of their careers. Competency assessment is carried out at the annual learning needs analysis, whereby employees discuss their learning needs and development areas with their supervisors.

Apart from getting external agencies to provide training courses, we also conduct our training programme inhouse. The Keppel O&M Group Training Centre, for instance, is a one-stop training facility that draws from the wealth of experience and expertise of Keppel O&M's global network of 20 yards and 10 engineering and technology units to provide industry-relevant technical training for our workers and subcontractors.

At the training centre, employees and subcontractors can register for courses, undergo training, receive certification and apply for relevant trade licences.

The Keppel O&M Apprenticeship Scheme is one key programme under the centre which has provided industry skills training to thousands of Keppel O&M's employees worldwide since the 1970s. Courses provided by the training centre are either developed fully in-house, or with strategic partners such as government agencies, technical education institutes, customers, classification societies and industry-related associations.

Apart from Keppel O&M, other business units also regularly provide industry-related training for their employees. KIE, for instance, collaborated with PUB, Singapore's national water agency, on an attachment programme. In November 2010, four employees from Keppel Seghers Belgium, a subsidiary under KIE, participated in this attachment programme.

In Keppel Land, a cross-functional training workshop was held for managers to let them gain a broad overview and understanding of the various functions within the company, while a people management workshop was organised to enhance their interpersonal and management skills.





2

In 2010, Keppel continued to adopt government initiatives such as the Skills Programme for Upgrading and Resilience (SPUR). During the year, four in-house Keppel-SPUR courses were organised for a total of 68 participants. Besides skills development, bringing together Keppelites from various business units under the SPUR courses helps in building bonds.

### **Further studies**

Since 2004, as part of our Employee Development Scheme, we have sponsored close to 269 employees from all levels to pursue further studies. In 2010, 38 employees received this sponsorship. In Singapore, Keppel provides seven days of study/examination leave annually to encourage staff to pursue further studies.

## **All Round Development**

Keppel supported the Clipper Round the World Yacht Race in 2010 again as the main sponsor of the yacht representing Singapore. One of the most anticipated yachting events, the Clipper Race is the only round-theworld yacht race for non-professional

sailors. Keppel provides exposure and self-development opportunities to four of its employees by sponsoring them to participate in the 09-10 Race as Keppel Ambassadors. This brings the total number of Keppel Ambassadors to 12 since 2005.

### **Scholarships**

In 2010, we continued our efforts to attract the best and brightest into the Group through scholarships and internships among other initiatives and recruitment exercises. Nine new scholars were inducted into the Keppel family at the Keppel Group Scholarship Awards Ceremony in July 2010. They will be groomed for roles in the business units according to their aspirations and qualifications. To-date, we have awarded 176 Keppel Group Scholarships, and have 96 working scholars in various business units within the Group.

# Talent Management and Succession Planning

To manage talent in a systematic and structured way, a framework has been put in place that focuses on the topmost tier of the high potential and high performing employees. Training

- 1\_Adrian Tan (second row extreme left), one of the three Keppel Ambassadors who participated in the 09-10 Clipper Race, enjoying an ecstatic moment with the Uniquely Singapore crew when they came in first place in Race 10.
- 2\_Warm welcome to the Group Keppel Group scholars (front row) with senior management.

# **People Matters**

programmes planned for these talents include overseas assignments, special projects and job rotations. Keppel's senior management frequently meet and exchange views with identified employees at regular dialogue sessions.

We recognise succession planning as a vital business imperative and have put in place a rigorous internal process for that purpose. This succession planning process is closely interlinked with talent management to provide a dynamic closed-loop process. The synergy between the two frameworks helps to build our pipeline of high calibre successors over the mid to long term.

At the Board and top management levels, we track a set of key performance indicators for both talent management and succession planning. We closely analyse, monitor and take actions based on relevant lead and lag indicators, including but not limited to benchstrength, readiness and retention. We also take into account our talents' mobility and posting preferences so as to be able to match our employees' career preferences to the organisation's needs.

### Keppel College

Keppel College centralises the Group's programmes for leadership and executive development. It seeks to inculcate in future leaders Keppel's core values, mission and vision, and equip them with networking skills. To-date, Keppel College has some 1,000 alumni.

Keppel College aims to Educate,
Empower and Energise our talents
so that they can Learn, Lead and
Leapfrog to the next level of success.
A suite of courses such as the Keppel
Group Young Leaders Programme,
General Management Programme and
Keppel Global Advanced Management
Programme are customised for staff in
collaboration with reputable business
schools and professional training
institutions. Signature programmes
are also extended to employees

from the overseas units, drawing the participation of Keppelites worldwide from as far as Brazil, the Netherlands, Bulgaria, Azerbaijan and Norway.

Keppel College also partners with Outward Bound Singapore to customise and organise experiential leadership programme at Pulau Ubin to hone the leadership skills, teamwork and management skill-sets of selected employees. Since the pilot programme in 2007, 194 talents have successfully completed the programme. Two runs were organised in 2010 and attended by 40 employees across the Group.

### **Keppel Young Leaders**

Keppel Young Leaders (Keppel YL) was inaugurated in July 2010 to serve as a central platform to cultivate global mindsets, innovativeness and entrepreneurship amongst high-potential employees.

As an offshoot of Keppel's talent and succession management framework, Keppel YL aims to ensure a continuous stream of future leaders for Keppel. Members are given opportunities to champion and participate in high-impact projects and cross-border assignments beyond their regular job scope.

### **Re-employment Schemes**

Keppel recognises retirees and older employees as a valuable asset, and supports re-employment beyond the statutory retirement age.

Retirees are offered post-retirement employment opportunities in Keppel in line with the Singapore Tripartite Guidelines on the Re-employment of Older Employees.

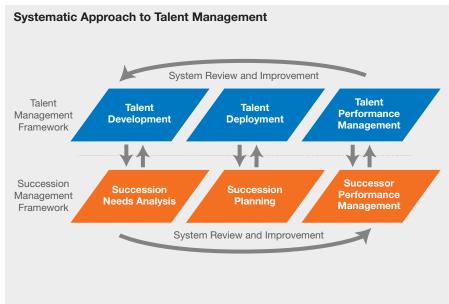
Keppel believes that re-employment of older employees provides them with income to prepare them for retirement. Just as importantly, it allows them to pass on their expertise and wealth of experience, and coach the younger

"Keppel College is a key initiative to educate. empower and energise talents across the Group. We are committed to aroom our talents and unleash their fullest potential. They are instrumental in bringing success to the organisation."

Mr Choo Chiau Beng Chief Executive Officer, Keppel Corporation







<sup>1</sup>\_Staff participating in the Keppel-Outward Bound Singapore leadership development programme banded together to overcome obstacles.

<sup>2</sup>\_Keppel Group's approach to talent management and succession planning.

## **People Matters**

generation of employees. In 2010, 232 retirees were re-employed in Singapore across the Group.

To ease eligible employees into retirement planning and the re-employment process, Keppel O&M holds briefings on re-employment a year prior to the statutory retirement of these employees.

During the briefings, employees are given a run-through of the general re-employment guidelines and the four re-employment options, which involve either mentoring, instruction of skills, job re-designing or a new job scope.

Depending on their choices, employees will be sent for relevant courses to prepare them for their new job duties. At the briefing held in 2010, employees were also briefed on Singapore's upcoming re-employment legislation that will come into effect in 2012.

# EMPLOYEE HEALTH AND WELLNESS PROGRAMME

Keppel believes in enhancing the wellbeing of our employees and promoting healthy lifestyles to keep its workforce happy and productive.

Keppel Corporation has a framework that promotes healthy lifestyle and employee well-being through monthly activities or welfare programme such as wellness workshops and free basic health check-ups.

During the year, Keppel Corporation organised the first Keppel "Walk-n-Fun" Day at HortPark, which saw more than 200 management and employees from across the Group enjoying a walk in nature with their families.

To help employees in Singapore achieve work-life balance, Keppel Group supported the nationwide annual Eat With Your Family Day. Early release was granted to employees on 27 May 2010 to encourage employees to spend

quality family time and have a meal with their loved ones.

Individual business units of the Keppel Group also held their own events to encourage their staff to lead a healthy lifestyle during the year. Keppel FELS adopted an initiative by Singapore's Ministry of Health by organising ACTIVE Day, which stands for 'All Companies Together In Various Exercises'.

During the event, more than 3,000 employees took part in an energetic workout led by professional fitness instructors.

In November, KIE moved to its new premise which has a gym that allows employees to take up regular exercises. Jogging and brisk walking sessions are also organised weekly for employees who want to take their exercises outdoors.

Apart from such activities, healthy snacks and fruits are regularly distributed to all employees to promote healthy dietary habits.

Activities that strengthen familial ties were also planned for our employees. Keppel Energy organised its Family Day at the Universal Studio at Resorts World Sentosa, while Keppel T&T allowed staff members to bring their children to work for a day during which the children got to understand their parents' work environment and have a fun-filled day packed with activities.





- 1\_More than 3,000 Keppel O&M management and yard workers moved to the same beat at the mass workout on Keppel FELS ACTIVE Day.
- 2\_CEO of Keppel Corporation Mr Choo Chiau Beng (middle) flagging off the Keppel "Walk-n-Fun" Day at HortPark.



## The People Quotient

Keppel College was set up to provide development courses for Keppel's talents Group-wide.

The Keppel Global Advanced Management Programme (GAMP), Keppel Group Young Leaders Programme (GYLP) and Improving People Quotient for Leaders workshops were some of the programmes that were organised in 2010.

## SHARPENING MANAGEMENT SKILLS

The second run of the GAMP, an executive development flagship programme, was held for 34 participants from 22 to 29 March 2010 in Singapore while the fourth run of GYLP had 36 participants during its run from 18 to 28 October 2010 in Singapore.

The GAMP and GYLP are conducted for Keppel's management staff and high-potentials across the Group in collaboration with the Nanyang Business School. The potentials customised programmes aim to sharpen the participants' business and

management skills so that they can effectively lead and create high performing teams.

Participants of GAMP and GYLP comprised a diverse global mix – from regional countries such as the Philippines, China and India, to Belgium, the Netherlands, the US, Brazil and Kazakhstan.

Over the course of the programme, participants brainstormed on business issues and strategies using management concepts learnt during lectures. They also visited the facilities of the various Keppel business units to gain insights of their operations.

The projects presentation and graduation ceremony held at the end of the programmes were attended by top management across Keppel Group, including Mr Choo Chiau Beng, CEO of Keppel Corporation.

### **IMPROVING PEOPLE QUOTIENT**

Also in March 2010, Keppel College conducted the third run of its in-house Improving People Quotient for Leaders workshop, which is designed to impart essential human resources (HR) and people management skills.

During the two-day workshop, 22 newly promoted line managers from the various business units engaged in rigorous discussions on HR topics which include talent selection, people motivation and employees retention and development.

The workshop culminated in a presentation session in which the participants shared their learning points, insights and recommendations with Keppel Corporation's top management as well as HR management from the various business units.

1\_Exchanging ideas and views with Keppel's top management formed part of an invaluable learning experience for the GAMP participants.

2\_Mr Choo Chiau Beng, CEO of Keppel Corporation, encouraging staff to seek continuous improvement.







## Keppel Games

The Keppel Games, held in 2010 from November to December, was convened by Keppelite Recreation Club with support from the various business units. Organised for the eighth year, the 2010 Keppel Games continued to provide a platform that underscores the element of sportsmanship and brings interaction amongst staff to another level.

The culmination of the event took place at the grand finale - the Keppel Sports Meet - after two months of excitement and challenges which had participants competing in sports such as table tennis, basketball and golf. The first-ever athletes' parade and cheerleading competition were introduced at the sports meet to roars of delight from the spectators and participants. Keppel also gave back to the community at the Games when Keppel Volunteers teamed up with students from Keppel's adopted charity, the Association for Persons with Special Needs (APSN), in a number of games to raise funds. Their efforts raised a record \$41,800 in pledges and sponsorships from the various business units.

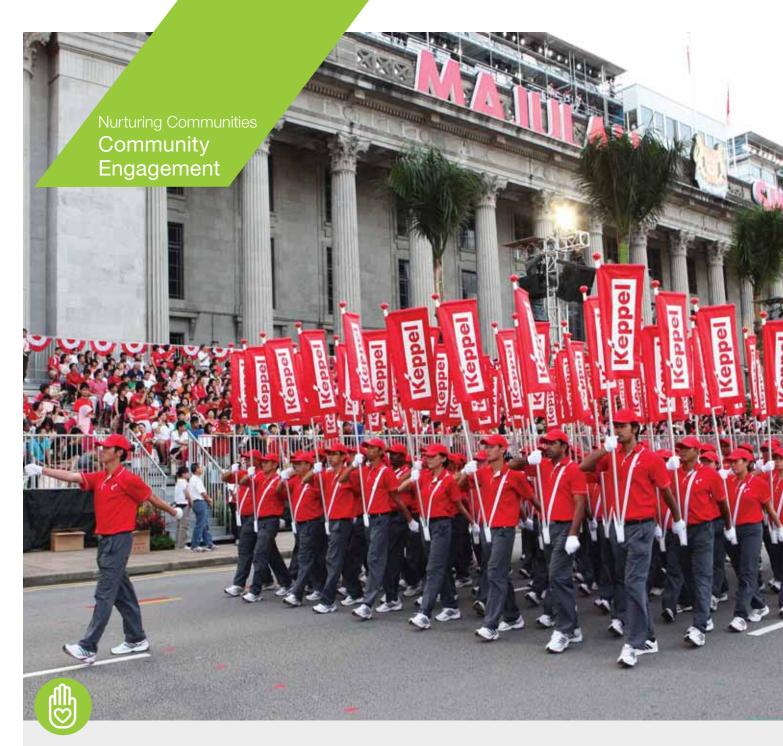
Medals aside, the annual Keppel Games once again injected colour into the work-life of employees across the Group, instilling in them a sense of belonging and forging bonds that would lead to a united, synergistic and effective team.

- 1\_Teamwork and coordination skills were key to winning the Keppel-Pillar telematch.
- 2\_Intense focus and determination during the pool tournament.
- 3\_Team mates sharing victorious high-fives after winning the table tennis challenge trophy.









#### Focus Area:

- → Fostering corporate volunteerism.
- → Supporting industry advancement.
- → Promoting green endeavours.
- → Supporting worthwhile causes.
- → Nurturing the arts and promoting healthy lifestyle.

Keppel is committed to contribute meaningfully to sustainability of our businesses and the well-being of communities, wherever we operate. As a world citizen, Keppel believes that as communities thrive, we thrive. This is why we engage and nurture communities wherever we stamp the Keppel hallmark and support them towards a sustainable future. In 2010, the Group contributed a total of \$6.3 million to various worthwhile causes including education, the under-privileged, the environment, arts and culture, and sports.

#### **CORPORATE VOLUNTEERISM**

Keppel encourages our employees to become responsible stewards with a genuine concern for the community. Since its inception in 2000, Keppel Volunteers has been spearheading regular activities that make meaningful impact on local communities, social institutions and non-profit organisations. On a monthly basis, Keppel Volunteers also runs activities in collaboration with Keppel's adopted charity, the Association for Persons with Special Needs (APSN) in Singapore.

In 2010, the activities included bringing APSN students to the supermarket to equip them with life skills and educate them on making healthy food choices; visiting the Singapore Science Centre; the Singapore Airshow and watching the National Day Parade Preview.

Keppel Volunteers also organised the annual Keppel Group Blood Donation Drive which was held for four days at three venues across the Group. A record 485 packets of blood were collected over the Christmas season when the Singapore blood bank usually experiences shortage supply.

To contribute to a larger group of beneficiaries and attract more volunteers, Keppel Volunteers conducted a survey to understand volunteerism preferences within the Group. Since then, it has expanded its activities to include other programmes such as a monthly home maintenance





Spending a fruitful morning with Keppel Volunteers, APSN beneficiaries were guided to make healthy food choices and eat a balanced diet.

programme with the Moral Senior Activity Centre in Singapore. Keppel Volunteers also reached out to animal care by participating in Singapore's Society for the Prevention of Cruelty to Animals' flag day and Fun Run.

Corporate volunteerism is also encouraged in operations overseas. In Brazil, Keppel FELS Brasil mobilised a workboat and barge to help in the search and rescue operations in the 1 January 2010 landslide on Ilha Grande Island. Employees also donated basic necessities as well as helped in the distribution of the relief supplies. Volunteers from Batangas Shipyard in the Philippines participated in the Alay Lakad project, an annual nationwide walk-for-a-cause event to raise scholarship funds for out-of-school youths.

## **INDUSTRY ADVANCEMENT**

As a leading conglomerate with deep roots in Singapore, Keppel plays an active role in promoting the country and contributing to various national strategies and initiatives. Through our involvement in knowledge-building platforms and international conventions, we also support and advance our

## Community Engagement

## Keppel Volunteers



Mr Choo Chiau Beng, CEO of Keppel Corporation, toured the refurbished CFA facility where trainees develop skills towards gaining open employment.

Keppel encourages its employees to become responsible citizens with greater concern for the well-being of others, especially the less fortunate in society. As such, employee volunteerism is a key feature of the Group's community relations programme

Since its inception in 2000, Keppel Volunteers has been spearheading regular activities that make meaningful contributions to local communities, social institutions and non-profit organisations. Keppel Volunteer activities have strong support from the Company, as employees can apply for volunteer leave should the event fall within office hours.

On a monthly basis, Keppel Volunteers runs activities in collaboration with Keppel's adopted charity, the Association for Persons with Special Needs (APSN), which comprises five learning institutes, namely Chaoyang School, Katong School, Tanglin

School, Delta Senior School and the Centre for Adults (CFA).

Beyond financial support from fundraising activities, Keppel believes in playing an active role in the development of the beneficiaries. In line with this philosophy, activities are tailored to encourage learning and develop the beneficiaries' social and life skills, so as to help APSN students assimilate into society. In 2010, these activities include visiting the Singapore Science Centre; the Singapore Airshow and watching the National Day Parade Preview as well as other venues of educational benefit.

In addition to the monthly activities, Keppel Volunteers also supports APSN on a number of longer term projects. To address the need to increase the employability of APSN's senior students, Keppel Volunteers embarked on a hydroponics pilot project at the CFA since early 2008. The Keppel Group sponsored the

construction of five greenhouses, which have served as a sheltered workshop. The training provided by this ongoing project aims to enable trainees to learn and develop skills in hydroponics farming, with the goal of placing them in open employment.

Since 2007, Keppel Volunteers have also collaborated with APSN on a recycling project, supporting CFA's clients as they collect unwanted materials, recycle them and eventually sell the items at the Centre's thrift shop. This project aims to enhance the participants' interaction skills with the public, teamwork ethics as well as their awareness of the need for sustainable living. Keppel Volunteers encourages employees to be proactive in the collection of used items, as well as to assist in raising awareness of the thrift shop.

Supporting the efforts of the Singapore Red Cross Society, Keppel Volunteers organises Group-wide blood donation drives. A regular feature in the Keppel Volunteers event calendar, the initiative is timed to coincide with the Christmas festive season when Singapore's national country's blood bank faces shortages. Corporate efforts are especially crucial during that time of the year to help meet the blood bank's needs. In 2010, the response from employees was overwhelming with a total of 485 packets of blood collected in the four days of the blood donation drive.

In 2010, Keppel Volunteers has begun to reach out to several other segments of the community in Singapore. It started a monthly home maintenance programme with the Moral Senior Activity Centre and also participated in the Society for the Prevention of Cruelty to Animals' flag day and Fun Run.





Mr Teo Chee Hean. Singapore's Deputy **Prime Minister** and then Minister for **Defence (third from** left) was briefed on the Group's broad portfolio of projects in environmental engineering and sustainable development by Dr Lee Boon Yang, Chairman of **Keppel Corporation** (second from left), as Dr Yaacob Ibrahim, then Minister for the **Environment and Water Resources** (first from left), looked on.



chosen industries and catalyse the exchange of ideas as well as potential collaborations.

In 2010, the Keppel Group supported several major events and initiatives that promote the development of our industries and showcase our strengths and Singapore to the world.

A key highlight was the Singapore International Water Week (SIWW), which serves as a platform to discuss the challenges of rapid urbanisation and the increasing demand for water. At the SIWW in June 2010, Keppel Integrated Engineering (KIE) presented a showcase of their waste and water treatment technologies as well as district heating and cooling systems capabilities.

The inaugural Lee Kuan Yew World City Prize was presented during the World Cities Summit (WCS) which was held alongside SIWW in 2010. Keppel sponsored the cash prize of \$300,000 and a gold medallion for this prestigious biennial award which recognises individuals and organisations who have made

outstanding contributions to the creation of vibrant, liveable and sustainable urban communities around the world. Keppel Land also highlighted its eco-township developments throughout the region at the WCS exhibition.

Keppel Offshore & Marine (Keppel O&M) supported various academic events to develop study and research in its industry and create platforms to share insights and ideas. The Chua Chor Teck Memorial Lecture. in tribute of the former MD of Keppel Shipyard and a pioneer of Singapore's maritime industry, is a key highlight in 2010 which saw two runs of the Lecture. In January, Mr Sven Ullring, Board Director of Keppel Corporation and Chairman of the third Maritime Research & Development Advisory Panel for the Maritime & Port Authority of Singapore, shared his views on the Singapore maritime sector's unique competitive edge. In December, Professor Sir Eric Ash, former Rector of Imperial College (UK) and member of Keppel Technology Advisory Panel, spoke on the issues surrounding the use of nuclear energy in the maritime industry.

## Community Engagement

## Lee Kuan Yew World City Prize

#### KEPPEL CONTRIBUTES TO ADDRESS GLOBAL URBANISATION NEEDS

Keppel Corporation is the sole sponsor of the prestigious Lee Kuan Yew World City Prize. Under then Minister Mentor Lee's leadership, the adoption of strategic land use, transport and environmental programmes have helped transform Singapore into a city with a high quality living environment in tandem with vibrant economic growth.

The Lee Kuan Yew World City Prize is a biennial international award which recognises individuals and organisations that have made outstanding contributions to the creation of vibrant, liveable and sustainable urban communities.

It commends urban initiatives that display foresight, good governance or innovation in tackling the many urban challenges faced by cities.

The thrust of the Lee Kuan Yew World City Prize is in keeping with Keppel's commitment and contribution to creation of sustainable developments through its businesses in environmental engineering, property and sustainable development. The Prize is jointly organised by the Urban Redevelopment Authority (URA), Singapore's land-use planning and conservation authority, and the Centre for Liveable Cities.

Bilbao City Hall was the inaugural Lee Kuan Yew World City Prize Laureate in recognition of its integrated and holistic approach in urban transformation. Mayor of Bilbao, Dr Iñaki Azkuna was presented the Prize by then Minister Mentor Lee on 29 June 2010 during the World Cities Summit (WCS) in Singapore. The Prize comprises \$300,000, a gold medallion and an award certificate, fully sponsored by Keppel Corporation.

Bringing together ministers, governors, mayors, senior officials, business leaders, industry professionals and other policy experts, the WCS is a premier international event focussed on issues of urban leadership and governance, the building of sustainable and eco-friendly cities, and the fostering of harmonious and sustainable communities.



Then Minister Mentor Lee Kuan Yew (left) congratulating Bilbao Mayor, Dr Inaki Azkuna, on Bilbao's winning the inaugural Lee Kuan Yew World City Prize.



Keppel Corporation played host to the ASEAN Council on Petroleum Games 2010, which saw the participation of teams from national oil companies across the region. The Games aims to foster friendship and strengthen ties among industry players.

To deepen relations between Asia and Latin America, Keppel O&M was the strategic sponsor for the Latin Asia Business Forum 2010. Helmed by a set of distinguished panellists, the Forum addressed issues such as investment and partnership opportunities as well as best business practices and strategies.

The Keppel Group was a major sponsor for the inaugural China (Binhai Tianjin) International Eco-City Forum, which highlighted the achievements in eco-city construction and the development of a low-carbon economy in China. Dr Lee Boon Yang, Chairman of Keppel Corporation, spoke on the challenges of eco-urbanisation at the Forum while KIE and Keppel Land showcased their offerings in sustainable development at the Forum's Eco Expo.

Together with the National University of Singapore, Keppel Corporation jointly launched the book "Why am I Here?", authored by Singapore's President, HE S R Nathan. President had served as Seamen's Welfare Officer in the mid-1950s and the story of his experience provides a glimpse into the struggles of Asian merchant seamen and their contributions to Singapore's development as a maritime nation.

#### SINGAPORE SHOWCASE

Our 80-strong contingent marched in Singapore's National Day Parade on 9 August 2010, stepping out as a leading home-grown conglomerate in the country. Keppel's employees from across the Group underwent rigorous





Dr Lee Boon
Yang, Chairman
of Keppel
Corporation,
sharing his
views on the
challenges of
eco-urbanisation
at China
(Binhai Tianjin)
International
Eco-City Forum
in late September
2010.

training over four months for the event. Please see picture on page 76.

Keppel once again supported the Singapore yacht in the 2009/2010 Clipper Round the World Yacht Race together with the Singapore Tourism Board and was host port sponsor for the Singapore stopover.

# PROMOTING GREEN ENDEAVOURS

Whether at work or at play, Keppel encourages our employees and the community to embrace a green lifestyle.

Sustaining efforts since 2007,
Keppel Volunteers divers continued
to support the coral nursery project
located in Pulau Semakau, Singapore.
The divers carefully moved coral
fragments from the nursery to a
breakwater area and cleaned the
corals to help them to "breathe".
Keppel Land was a Platinum Sponsor
of the inaugural International Skyrise
Greenery Conference, which was the
first of its kind in the Asia-Pacific region,
organised by the National Parks Board.
Over 30 internationally renowned
industry leaders from 10 countries

## Community Engagement



shared their insights. As part of the conference, a tour to Reflections at Keppel Bay was included to feature the residential towers linked by lush sky bridges. Delegates also visited the Marina at Keppel Bay, the first and only marina in Asia to be awarded the "Clean Marina" status by the Marina Industries Association in 2008 as the waters of the Marina support a thriving coral community and marine ecosystem.

The Keppel Group rallied efforts both in Singapore and overseas to support Earth Hour on 27 March 2010. For one hour from 8.30pm to 9.30pm, it was lights out across our seven shipyards in Singapore, the Marina at Keppel Bay and the Ulu Pandan NEWater Plant. 32 of Keppel Land's developments across Asia also turned off non-essential lights and appliances, achieving estimated energy savings equivalent to what is needed to power a five-room flat for 7.7 months.

In the Netherlands, 100 Keppel Verolme employees became scooter commuters in an initiative to reduce traffic congestion on the highway to the Port of Rotterdam by at least 20%.

# SUPPORTING WORTHWHILE CAUSES

Keppel Group contributes back to communities through raising funds for worthwhile causes. Since 2005, the annual Keppel AmFELS charity golf tournament has been raising funds for charities and community projects. In 2010, the event raised over US\$80,000.

Spring City Golf & Lake Resort in Kunming, China continued to partner a group of Singaporean doctors and nurses in a voluntary medical mission to perform cataract surgery on villagers who cannot afford medical treatment or are too weak to travel to the nearest town or city. To-date, the Resort has sponsored more than RMB200,000 with about 150 patients benefitting from this initiative.

In Shanghai, Keppel Land donated RMB500,000 to a relief fund rendering support to families affected by a local fire that set a 28-storey tower ablazed. The tower had been home to some 440 people in 156 households.

Nurturing the Arts and promoting healthy lifestyle A recognised Patron of the Arts in Singapore, Keppel Corporation unveiled an enhanced Keppel Nights scheme in 2010, together with the Ministry of Information, Communications and the Arts.

The scheme opens up more opportunities for first-time goers and those who cannot afford full-price tickets to enjoy arts shows. Introduced in 2008, Keppel Nights is Singapore's first ticket subsidy scheme to benefit and cultivate audiences for the arts. Please see box story on page 83 for more details.

Keppel O&M continued its support as the title sponsor for the third SAFRA Keppel Quadthlon. The Quadthlon encourages participants to push beyond their physical and mental limits.

Supporting the Earth Hour were Keppel employees and their families holding candles from ChaCha Cottage, an organisation which supports women in need.



## Keppel Nights

A long-time patron of the arts, Keppel Corporation extended its sponsorship of Keppel Nights, Singapore's first ticket subsidy scheme to benefit and cultivate audiences for the arts in 2010.

Keppel has been building up Keppel Nights since 2008 when it launched the innovative arts scheme in celebration of its 40th anniversary. The enhanced scheme is administered by the Arts and Culture Development Office in the Ministry of Information, Communications and the Arts.

Since its launch, Keppel Nights has supported 158 shows, offering 15,200 subsidised tickets and benefitting more than 12,600 people. The extended scheme includes interesting enhancements that will not only benefit those who qualify for the half-price tickets,

but will also encourage people doing voluntary work to use the arts for outreach to beneficiaries. The target audience of Keppel Nights are people who either lack the financial means to enjoy the arts, have never attended a ticketed show or are from the young and elderly age groups.

Celebrating the launch of the enhanced Keppel Nights, Keppel hosted a group of 50 beneficiaries from APSN to the opening night of popular local musical Fried Rice Paradise on 20 August 2010.

## THE ENHANCED KEPPEL NIGHTS SCHEME:

 Greater choice – beyond performing arts
 To cater to increasingly diverse arts and cultural preferences, Keppel Nights will now also include ticketed exhibitions at museums and to visual arts exhibitions.

#### - Arts Kakis

Individuals passionate about arts and volunteerism are invited to be Arts Kakis to reach out to beneficiaries to attend performances and share the benefits under the Keppel Nights scheme.

#### MadAboutArts

Those who have experienced the Keppel Nights scheme twice will be issued with a MadAboutArts card which entitles the bearer to a 10% discount on future ticket purchases of any show staged by promoters and museums under the Keppel Nights scheme.



Keppel Nights, a ticket subsidy scheme, contributes towards the promotion of the arts to all levels of the community in Singapore.

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References to Keppel Corporation's Annual Report 2010 are expressed as "AR page number". The Annual Report is available on www.kepcorp.com.

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# Statement GRI Application Level Check

GRI hereby states that **Keppel Corporation Limited** has presented its report "Building Strengths, Defining Distinction" to GRI's Report Services which have concluded that the report fulfills the requirement of Application Level B.

GRI Application Levels communicate the extent to which the content of the G3.1 Guidelines has been used in the submitted sustainability reporting. The Check confirms that the required set and number of disclosures for that Application Level have been addressed in the reporting and that the GRI Content Index demonstrates a valid representation of the required disclosures, as described in the GRI G3.1 Guidelines.

Application Levels do not provide an opinion on the sustainability performance of the reporter nor the quality of the information in the report.

Amsterdam, 14 June 2011



Nelmara Arbex
Deputy Chief Executive
Global Reporting Initiative



The Global Reporting Initiative (GRI) is a network-based organization that has pioneered the development of the world's most widely used sustainability reporting framework and is committed to its continuous improvement and application worldwide. The GRI Guidelines set out the principles and indicators that organizations can use to measure and report their economic, environmental, and social performance. www.globalreporting.org

Disclaimer: Where the relevant sustainability reporting includes external links, including to audio visual material, this statement only concerns material submitted to GRI at the time of the Check on 31 May 2011. GRI explicitly excludes the statement being applied to any later changes to such material.



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## **Edited and Compiled by**

Group Sustainability Working Committee, Keppel Group

## **Designed by**

greymatter williams and phoa (asia)

Keppel Corporation Limited (Incorporated in the Republic of Singapore)

1 HarbourFront Avenue #18-01 Keppel Bay Tower Singapore 098632 Tel: (65) 6270 6666 Fax: (65) 6413 6391 Email: keppelgroup@kepcorp.com www.kepcorp.com

Co Reg No: 196800351N