

# **Sustainability** Report 2011



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(Source: U.S. Environmental Protection Agency)

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# STATEMENT FROM THE CHIEF EXECUTIVE OFFICER



For Qatargas, corporate social responsibility applies to almost every facet of our activities, corporate and personal performance. It is one of the cornerstones of the company's Direction Statement, which reflects our hopes for the future and provides for us, a reliable roadmap that guides us towards achieving the company's stated vision of becoming the world's premier LNG Company, contributing towards a sustainable future for Qatargas and Qatar. In 2011, we continued to commit ourselves to reaching this objective, focusing our efforts on the five pillars of our Direction Statement: High Calibre and Diverse Workforce - Safety, Health and Environment - Efficient and Reliable Operations - Customer Satisfaction and Financial Performance.

Qatargas achieved a historic milestone in April 2011, following the start-up of LNG Train 7, reaching its full production capacity of 42 million tonnes per annum (MTA) from a total of its seven Trains. This placed Qatargas on top of the world's LNG producing companies, contributing significantly towards realising the State of Qatar's vision of achieving a production capacity of 77 MTA, making

the State of Qatar, the largest LNG producer in the world. This accomplishment also supports the vision of His Highness the Emir, Sheikh Hamad Bin Khalifa Al-Thani, that Qatar's energy resources would fuel the country's long-term development in line with the Qatar National Vision 2030.

For Qatargas, our spirit of innovation, determination and commitment for excellence has enabled us to become leaders in the global Liquefied Natural Gas industry under the guidance of His Excellency Dr. Mohammed Bin Saleh Al-Sada, the State of Qatar's Minister of Energy & Industry and Chairman of Qatargas.

Through the hard work and dedication of our work force and with the support of Qatar Petroleum and our international shareholders, we have been able to create steady growth, advance operational excellence and establish the highest levels of safety and environmental performance. Whilst proudly acknowledging the strides we have made, one thing that we at Qatargas place at the very heart of our priorities is our corporate social responsibility.

It gives me great pleasure to introduce our Sustainability Report for the year 2011. This report underlines the firm commitment we have made towards living our values built on respect for people, trust, integrity and open communications and our endeavours to create partnerships that contribute to the long-term economic and social wellbeing of the communities in which we operate. It also highlights our drive towards demonstrating the highest standards of environmental practice.

Through this report we demonstrate how we continue to safely, efficiently and reliably manage and operate all of our resources, including our people, our facilities and our environment, while fostering a culture of learning, innovation, excellence and compliance, and play our part in making a positive and enduring contribution towards sustainable growth and development for future generations.

Khalid Bin Khalifa Al Thani Chief Executive Officer

# **ABOUT THIS REPORT**

Welcome to Qatargas' second annual Sustainability Report, covering our activities in the State of Qatar. This report focuses specifically on achievements and performance of the 2011 calendar year, but also includes key historical events in addition to looking ahead to our future activities.

The content of this report is based on the Global Reporting Initiative (GRI) 3rd Generation (G3.1) Sustainability Reporting Guidelines 2011 and the International Petroleum Industry Environmental Conservation Association / American Petroleum Institute (IPIECA/API) Oil and Gas Industry Guidance on Voluntary Sustainability Reporting 2010. GRI G3.1 is a globally recognised framework for reporting on an organisation's economic, social, and environmental performance whereas IPIECA/API guidance is considered as a reference in the oil and gas industry. A GRI and IPIECA/API content index is included at the end of this report.

This report intends to cover all core and additional indicators of these two guidelines. However, only sustainability topics that are material to our activities and deemed critical by our stakeholders are thoroughly addressed in the report. Non-material issues are mentioned but not addressed in details.

The report covers all our operations in Qatar - Qatargas 1 (QG1); Qatargas 2 (QG2); Qatargas 3 (QG3); and Qatargas 4 (QG4) - offshore platforms and onshore LNG Trains 1 to 7; the Laffan Refinery; Ras Laffan Terminal Operations (RLTO - the storage and loading facilities located at Ras Laffan port) -, as well as transportation activities from and to Qatar by our LNG ships. Qatargas activities and facilities outside Qatar are excluded from the scope of this report.

The following limitations apply with regard to the scope of this report:

- contractors, suppliers and clients' data are not included in this report unless otherwise mentioned;
- environmental data disclosed in this report cover production facilities, namely QG1, QG2, QG3, QG4, the Laffan Refinery and RLTO. Non-production facilities (i.e. offices and workers camps) are excluded as their environmental impact is negligible compared to production facilities;
- labour practices data cover all Qatargas' employees based in Qatar as registered in the payroll.

Quantitative data disclosed in this report originate from various sources:

- economic data are extracted from our finance IT system;
- production data originate from our production database;
- labour practices data are extracted from our human resources IT tools;
- environmental data is determined through direct measurement, calculation on the basis of specific or standard conversion factors and estimates depending on parameters.

Environmental data is currently consolidated and processed manually from a number of source systems, and Excel / Word spread sheets are used to support calculations and reporting. We are however envisioning the implementation of a secure centralised environmental data management system (EDMS) with data feeds from existing systems and highly visual and intuitive interfaces, such as dashboards and Geographic Information Systems (GIS).

The content of this report has been reviewed by the HSE Regulations and Enforcement Directorate (DG) of our major shareholder, Qatar Petroleum (QP).

This second Qatargas Sustainability Report has not been subject to external verification by a third party auditor leading to a formal assurance report. Obtaining external assurance on the report content is one of our mid-term goals for subsequent Sustainability Reports.

Based on our own assessment of this report content against the GRI criteria, we have self-declared our second Sustainability Report as Application Level 'A'.

We welcome your feedback on this Sustainability Report. Please direct any questions or comments regarding the report to: infos@gatargas.com.ga.

# **ABOUT QATARGAS**

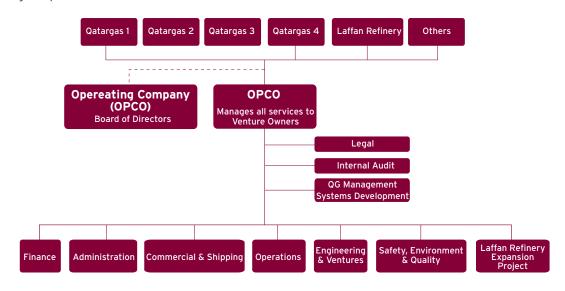
#### Who we are

Established in 1984, Qatargas pioneered the Liquefied Natural Gas (LNG) industry in Qatar. Today, Qatargas is the largest LNG producing company in the world, realising its vision to deliver LNG to customers around the globe from its world-class facilities in Qatar.

#### **Operational Structure**

The operational structure of Qatargas and the ownership of each Qatargas company are summarised below.

#### **Qatargas Operational Structure**



#### Ownership of Qatargas' Companies

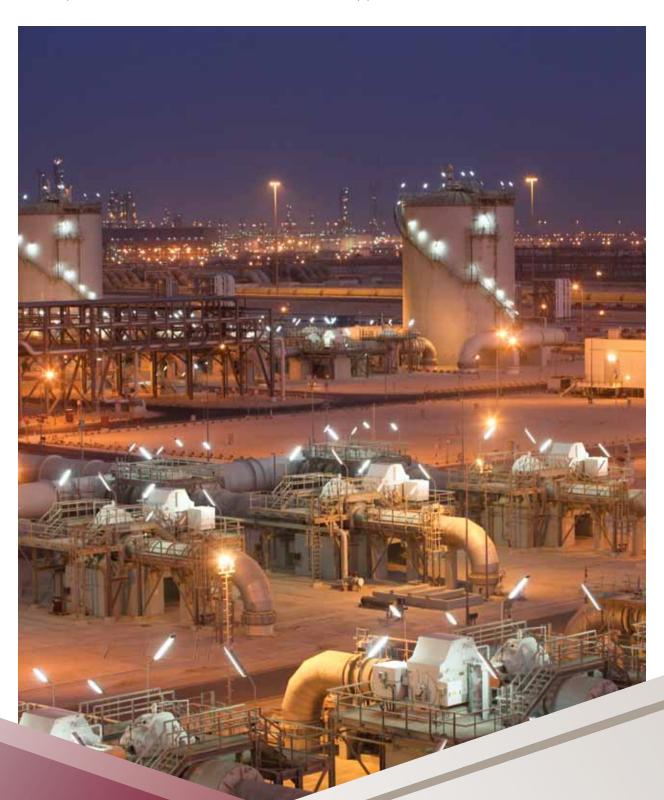
|                           |                   | Percentage of ownership |                |                |                |                |                    |
|---------------------------|-------------------|-------------------------|----------------|----------------|----------------|----------------|--------------------|
| Shareholders'<br>Identity | QG1<br>Downstream | QG1<br>Upstream         | QG2<br>Train 4 | QG2<br>Train 5 | QG3<br>Train 6 | QG4<br>Train 7 | Laffan<br>Refinery |
| Qatar<br>Petroleum        | 65%               | 65%                     | 70%            | 65%            | 68.5%          | 70%            | 51%                |
| ExxonMobil                | 10%               | 10%                     | 30%            | 18.3%          | -              | -              | 10%                |
| Total                     | 10%               | 20%                     | -              | 16.7%          | -              | -              | 10%                |
| Mitsui                    | 7.5%              | 2.5%                    | -              | -              | 1.5%           | -              | 4.5%               |
| Marubeni                  | 7.5%              | 2.5%                    | -              | -              | -              | -              | 4.5%               |
| ConocoPhillips            | -                 | -                       | -              | -              | 30%            | -              | -                  |
| Royal Dutch<br>Shell      | -                 | -                       | -              | -              | -              | 30%            | -                  |
| Idemitsu                  | -                 | -                       | -              | -              | -              | -              | 10%                |
| Cosmo                     | -                 | -                       | -              | -              | -              | -              | 10%                |

Qatargas' headquarters are located in Doha and all our production operations (offshore platforms, onshore LNG Trains, refinery) are located in Qatar. Liaison offices are located in the United States, Japan and China.

#### **Our LNG Facilities**

We are the world's largest LNG producer after the successful completion of all our expansion projects. Qatargas currently operates four LNG facilities - namely Qatargas 1 (QG1); Qatargas 2 (QG2); Qatargas 3 (QG3); and Qatargas 4 (QG4) - consisting of both offshore and onshore operations.

The North Field Bravo offshore complex, located approximately 80 kilometres northeast of Qatar's mainland, is the heart of the Qatargas offshore operation. Commissioned in 1996 for QG1, the main facilities in this complex include living quarters, two production facilities platforms, three wellhead platforms and one remote platform located about five kilometres away. The three platforms installed for QG2 are remotely operated from the North Field Bravo, while further three platforms, which are shared between QG3 and QG4, are operated remotely from the onshore control room. A total of 85 production wells have been drilled and supply 7,300 million standard cubic feet (MMScf) from the nine offshore platforms to the seven onshore LNG trains via subsea pipelines.



Qatargas' onshore operations occupy a site within Ras Laffan Industrial City on a plot of land 3.9 square kilometres in area. QG1 consists of three trains with a capacity of 10 million tonnes per annum (MTA) of LNG.

In 2009, Trains 4 and 5 Qatargas 2, each with a capacity of 7.8 MTA started operating bringing the combined production capacity of Qatargas to 26 MTA. QG2 was the world's first fully integrated value chain LNG venture as it includes the South Hook LNG Terminal in Milford Haven, Europe's largest LNG re-gasification Terminal.

In late 2010, Train 6 (QG3) started producing LNG followed by Train 7 (QG4) in early 2011. Qatargas' Trains 6 and 7 each have a capacity of 7.8 MTA. The overall production capacity is now 42 MTA of LNG, making Qatargas the largest LNG producing company in the world.



QG2, QG3 and QG4 all utilise the same Air Products proprietary (APX) process technology, which allowed Qatargas to achieve a fundamental milestone for the LNG industry by increasing the size of the Trains to a record new level of 7.8 MTA for each Train. This also helps to achieve economies of scale and integration which puts Qatargas ahead of its competitors.

The Qatargas expansion projects also led to the construction of facilities for expanded LNG storage and loading, including five 145,000 cubic metre tanks and three LNG berths, a 12,000 tonnes per day common sulphur system serving all Ras Laffan ventures and an export pipeline and mooring buoy for loading condensate ships some 55 kilometres offshore.

#### Qatargas LNG Facilities - Fast Facts

| Parameter                    | Qatargas 1   | Qatargas 2           | Qatargas 3  | Qatargas 4        |
|------------------------------|--------------|----------------------|-------------|-------------------|
| Number of offshore platforms | 3            | 3                    | :           | 3                 |
| Number of production wells   | 22           | 30                   | 3           | 3                 |
| Raw natural gas daily supply | 1,600 MMScf  | 2,900 MMScf          | 1,400 MMScf | 1,400 MMScf       |
| Number of pipelines          | 1 (at 32")   | 2 (at 34")           | 2 (at 38")  |                   |
| Number of LNG trains         | 3            | 2                    | 1           | 1                 |
| Capacity of each train       | 3.3 MTA      | 7.8 MTA              | 7.8 MTA     | 7.8 MTA           |
| Number of ships              | 11           | 14                   | 10          | 9                 |
| Capacity of each ship        | 137,500 m³   | 210,000 - 266,000 m³ |             |                   |
| Date of first cargo shipped  | 1996         | 2009                 | 2010        | 2011              |
| Main markets                 | Japan, Spain | UK, Europe, Asia     | USA         | USA, Asia, Europe |

There are also a number of synergies that have been put in across QG2, QG3 and QG4 assets as well as flare minimisation built into operational philosophy across all assets.

#### Laffan Refinery

Laffan Refinery is Qatar's first condensate refinery and started production in September 2009. The refinery has a nameplate processing capacity of 146,000 bpsd and processes field condensate produced from the Qatargas and RasGas facilities. It is one of the largest condensate refineries in the world.

The Laffan Refinery helps to capture synergies and opportunities from the development of the North Field, Qatargas, RasGas and other Ras Laffan City ventures. It consists of process units including utility systems, distillation units, naphtha and kerosene hydrotreaters, a hydrogen unit and a saturated gas plant producing naphtha, kerojet, gasoil and LPG. The refinery's production capacity is 61,000 bpsd of naphtha, 52,000 bpsd of kerojet, 24,000 bpsd of gasoil, and 9,000 bpsd of LPG.

Plans to expand the condensate refining capacity are currently ongoing. A second refinery, known as Laffan Refinery 2, is expected to be fully operational by 2016 and will be able to process an additional 146,000 bpsd.



#### **Qatargas Fleet**

Qatargas has the largest chartered fleet of liquefied natural gas carriers in the world. The majority of the fleet, including all of the Q-Flex and Q-Max ships, are on long-term charters to the QG ventures.

QG1 has a fleet of 11 purpose-built ships, each with a capacity of 137,500 cubic metres, and an additional short-term chartered vessel with a capacity of 126,300 cubic metres currently in operation for the transportation of LNG from Qatargas to its Japanese and Spanish buyers. Qatargas pioneered the development of two new classes of LNG ships. Referred to as Q-Flex and Q-Max, each ship has a cargo capacity of between 210,000 and 266,000 cubic metres and is 80% larger than the standard LNG ships. By the end of 2011, Qatargas had 19 Q-Flex and 13 Q-Max ships in operation for QG2, QG3 and QG4 to deliver LNG to its customers in all corners of the world.



LNG receiving Terminals are the point of arrival of the LNG ships in our customer markets where the LNG is unloaded, stored in its liquid state, re-gasified and fed to the customer countries' respective natural gas pipeline system as needed.



# Other Key Information

Other key company information is provided in the table below.

#### Scale of Qatargas

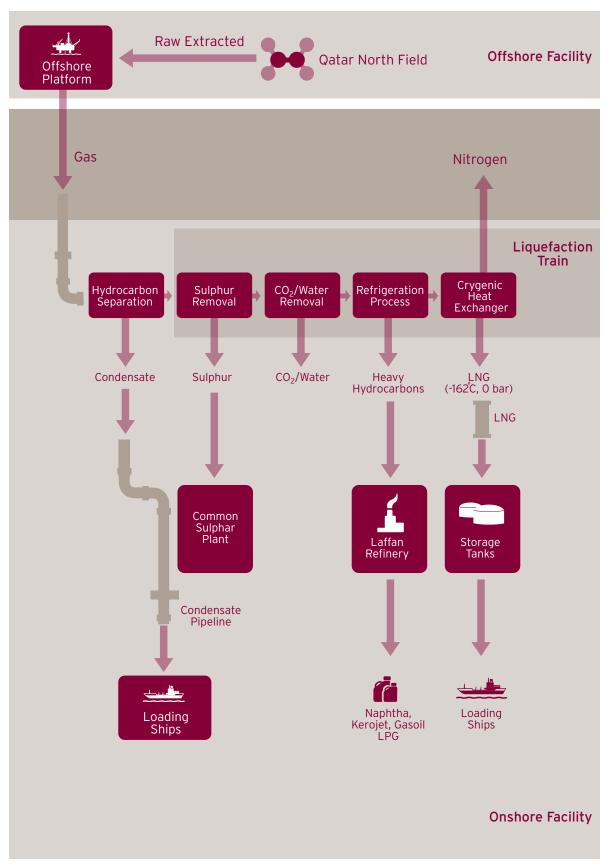
| Company information                | Unit           | 2010  | 2011  |
|------------------------------------|----------------|-------|-------|
| Number of employees by end of year | #              | 2,758 | 2,755 |
| Net revenues                       | USD Billion    | 20.0  | 37.2  |
| Production                         | -              | -     | -     |
| Plant condensate                   | Million bbls   | 5.0   | 9.0   |
| Field condensate                   | Million bbls   | 55.0  | 84.8  |
| Sulphur                            | Million tonnes | 0.5   | 1.0   |
| Helium                             | MMScf          | 220   | 211   |
| Propane                            | Million tonnes | 0.9   | 1.8   |
| Butane                             | Million tonnes | 0.6   | 1.3   |
| Naphtha                            | Million bbls   | 24.0  | 25.7  |
| Kerojet                            | Million bbls   | 18.0  | 19.0  |
| Gasoil                             | Million bbls   | 9.0   | 6.8   |
| LNG                                | Million tonnes | 24.3  | 40.1  |
| Total assets value                 | USD Billion    | 31.2  | 30.6  |

#### What we do

We produce, market, and ship LNG and other gas derived products (condensate, propane, butane, sulphur, helium, naphtha, kerojet, gasoil) to our global customers in a timely manner.

#### **Our Production Process**

The production process is summarised in the chart below.

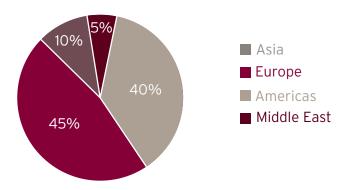


#### **Our Markets**

We deliver LNG and other products to our customers, which are mainly power and gas utility companies, all over the world. Countries served include Japan, Spain, United Kingdom, France, USA, Canada, Mexico, United Arab Emirates, China, Greece, Netherlands, and Thailand.

The graph below provides the geographic breakdown of markets served in 2011.

#### Geographic Breakdown of Markets Served



### Significant Changes in 2011

Qatargas maintained a high level of excellence and continued to grow its operations in the past year. Significant changes and achievements in 2011 included:

- The start-up of Qatargas 4 in February and the first cargo delivered from the facility to India in March;
- The completion of the Common Sulphur Project (CSP) and accomplishment of significant works on the Jetty Boil Off Gas (JBOG) project, the Helium II Project, and the onshore engineering, procurement and construction (EPC) works for the Plateau Maintenance Project (PMP);
- The delivery of LNG to new markets such as the Netherlands, Greece and Thailand;
- Signing of a Sales and Purchase Agreement with Centrica plc in April to supply up to 2.4 MTA of LNG to the UK for the next three years;
- Signing of a Heads of Agreement for the long term supply of 5 MTA of LNG to ENARSA in Argentina from 2014. This first long-term LNG agreement into the South American market is expected to meet nearly 16 % of Argentina's total annual natural gas consumption;
- Award of the Front End Engineering Design (FEED) Contract for the Laffan Refinery's Phase 2 expansion to Technip in August;
- Completion of eight years of operations without a Lost Time Injury (LTI), while the JBOG project and the PMP exceeded respectively five and seven million man-hours worked without a LTI.



Other milestones for Qatargas in 2011 include:

- In April, arrival of the first Q-Max LNG Carrier to the Isle of Grain LNG Receiving Terminal in the UK;
- In May, the first delivery of LNG to PetroChina's first LNG receiving terminal at Rudong, Jiangsu Province, and in November, the first Q-Max cargo delivered to China;
- In June, the 5,000<sup>th</sup> LNG tanker loading at Ras Laffan port since the start of operations in 1996 and in December, the 1,000<sup>th</sup> LNG tanker loading for year 2011 only (see Case Study);
- In June, the handing over of the Receiving and Loading Facility (RALF) Project from the EPC Contractor Qatar Kentz to the Laffan Refinery Company;
- In July, signing of a Heads of Agreement to supply 1.5 MTA of LNG to PETRONAS LNG Ltd in Malaysia from 2013;
- In December, signing of a Tripartite Sales and Purchase Agreement to supply LNG to Chubu Electric Power Company and Shizuoka Gas Company in Japan.



# Case Study: 1000th LNG tanker loads at Ras Laffan Port in 2011

A record number of LNG tankers have loaded in the year 2011 in Ras Laffan Port and on 28<sup>th</sup> December 2011, the RasGas chartered vessel "Simaisma" became the 1000<sup>th</sup> LNG tanker to arrive in the Port. The 1,000<sup>th</sup> tanker bound for Europe was being loaded simultaneously with the 999<sup>th</sup>, 1001<sup>st</sup> and 1002<sup>nd</sup> LNG tankers and they took in total on board approximately half million cubic meters of LNG. To mark the occasion, a ceremony was held in Ras Laffan Port with senior representatives from Qatargas, RasGas, Nakilat and Qatar Petroleum.

Speaking at the event, Capt. Feisal Saad, Ras Laffan Industrial City (RLIC) Acting Director, said, "Just in June this year, the Port celebrated the 5,000<sup>th</sup> LNG loading since the start of operations in 1996. Now with full production of 77 MTA from Qatargas and RasGas, various other milestones are being achieved very quickly. Designed as a world-class facility, RLIC industries and the Port have so far demonstrated exceptional efficiency. The lifting of the 1,000<sup>th</sup> LNG tanker is a remarkable milestone that winds up an outstanding year of steady and efficient operations of RLIC".

With the start-up of Train 7 (belonging to the QG4 project) Qatargas achieved in April 2011 a historic milestone, reaching its full production capacity of 42 MTA from a total of its seven Trains.

With this, Qatargas is now the largest LNG producing company in the world and fully contributing its significant

With this, Qatargas is now the largest LNG producing company in the world and fully contributing its significant share to the State of Qatar's vision of producing 77 MTA, thereby making the State of Qatar the largest LNG producer in the world.

#### **Awards and Conferences**

Qatargas received several awards in 2011, which are summarised in the table below.

#### Awards Received by Qatargas in 2011

| Awarding Entity                                                           | Achievement                                                                                                                                                                                                                                                                                                                         |
|---------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ministry of Energy<br>& Industry                                          | For the second consecutive year, Qatargas has won the prestigious Qatarisation Award, given during the Energy and Industry Sector's 11th Annual Award Ceremony, for the Company's contribution towards the category of "Support for Training and Development" as a part of the Qatar National Vision 2030.                          |
| Green Award<br>Foundation                                                 | Four vessels in Qatargas' fleet of chartered LNG carriers received the certification from the Green Award Foundation for our vessel compliance with global environment regulations and safety standards – a world first.                                                                                                            |
| European Gas<br>Conference Awards<br>Panel                                | Qatargas CEO Khalid Bin Khalifa Al-Thani has been presented with the coveted title 'European Gas Conference - Executive of the Year' during an awards ceremony on the sidelines of the 2012 European Gas Conference, for his passion in leading a world class company, with a vision to be the world's premier LNG Company by 2015. |
| Qatar Petroleum<br>HSE Regulations<br>and Enforcement<br>Directorate (DG) | Qatargas received a certificate of appreciation for effectively contributing to the Sustainable Development Industry (SDI) Initiative launched by Qatar Petroleum requiring energy industry operators to publish Annual Industry Sustainability Report commencing with the first report for the year 2010.                          |



In 2011, Qatargas participated in several key national and international conferences and exhibitions as summarised in the table below.

# Participation in Conferences and Exhibitions in 2011

| Event                                                                     | Dates           | Location     | Key outcomes                                                                                                                                                                                                                                                                                                                                                  |
|---------------------------------------------------------------------------|-----------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 20 <sup>th</sup> World<br>Petroleum Congress<br>(WPC)                     | 4-8 December    | Doha, Qatar  | Presentation by Qatargas CEO of a paper on "Supporting the objective of creation of a stable source of income for the State of Qatar". Presentation by Qatargas Offshore Operations Manager of a paper titled "Successful Start-up of Qatargas Mega LNG Trains".  As a national sponsor of the 20th WPC, Qatargas also supported the Arabian Night programme. |
| LNG Technology<br>World Summit 2011                                       | 29-30 November  | Doha, Qatar  | Presentation on 'Safe transportation of LNG by sea'.                                                                                                                                                                                                                                                                                                          |
| 8 <sup>th</sup> Annual<br>Engineering Forum                               | 26 October      | Doha, Qatar  | Forums hosted by Qatargas and RasGas<br>to share technical expertise, discuss latest<br>developments, highlight best practice activities,<br>and provide networking opportunities.<br>Total of 21 presentations on Automation and<br>Control, Reliability and Integrity, and Projects.                                                                        |
| North American<br>LNG Export<br>Conference                                | 25-27 October   | Houston, USA | Conference attendees were made aware of<br>the Qatargas story and how the company is<br>focused on being the premier LNG company in<br>the world.                                                                                                                                                                                                             |
| Sponsorship &<br>Internship Day -<br>Qatar University<br>Career Fair 2011 | 24-27 October   | Doha, Qatar  | Received internship and sponsorship<br>applications from Qatari National Students.                                                                                                                                                                                                                                                                            |
| 7 <sup>th</sup> HSE Forum in<br>Energy                                    | 10-12 October   | Doha, Qatar  | Participation of Qatargas Chief Safety,<br>Environment and Quality Officer as an expert<br>panel member.<br>Presentation of a paper on Social and<br>Environmental Risks & Stakeholder<br>Management.                                                                                                                                                         |
| 3 <sup>rd</sup> Annual Managing<br>Local Talent 2011                      | 19-20 September | Doha, Qatar  | Provided insights into the latest trends on attracting National talent, drivers to National Talent Retention, key factors to National Coaching and Mentoring, and networking opportunities with leading Industry experts.                                                                                                                                     |

| Event                                                                           | Dates       | Location                  | Key outcomes                                                                                                                                                                                                                                                  |
|---------------------------------------------------------------------------------|-------------|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| International Marine<br>Organization MEPC<br>62                                 | 11-15 July  | London, UK                | Best practices interactions on prevention and control of pollution from ships.                                                                                                                                                                                |
| Modern Enterprise<br>Risk Management<br>(ERM): Risk<br>Intelligence<br>Paradigm | 8-9 June    | Kuala Lumpur,<br>Malaysia | Presentation by Qatargas' Head of Risk<br>Management on trends in enterprise risk<br>management and participation in a panel<br>discussion.                                                                                                                   |
| 17 <sup>th</sup> FLAME<br>conference                                            | 9-13 May    | Amsterdam,<br>Netherlands | Presentation by Qatargas' Assistant Director<br>for LNG Marketing Europe on "42 Million<br>tonnes of LNG per annum – Celebrating<br>Qatargas' Newly Completed & Unrivalled<br>Export Capacity & Understanding where the<br>diversions will enter the market". |
| 1 <sup>st</sup> Enterprise Risk<br>Management<br>Conference MENA                | 17-20 April | Dubai, UAE                | Presentation by Qatargas' Head of Risk<br>Management on risk management in the oil<br>& gas industry and participation in a panel<br>discussion on ERM.                                                                                                       |
| 4 <sup>th</sup> Annual Qatar<br>Career Fair                                     | 10-14 April | Doha, Qatar               | Showcase to aspiring Qatari graduates and job seekers the outstanding employment and career development opportunities offered by Qatargas.                                                                                                                    |
| 4 <sup>th</sup> Qatar Petroleum<br>(QP) Environment<br>Fair (see case study)    | 1-3 April   | Doha, Qatar               | Showcase proactive Qatargas environmental programs and provide visitors with useful tips on water conservation and use at home (see Case Study).                                                                                                              |
| 25 <sup>th</sup> GASTECH<br>Conference and<br>Exhibition                        | 21-25 March | Amsterdam,<br>Netherlands | Presentation of several papers on "The Role<br>of Gas in the Future Energy Mix", "Success<br>and challenges of operation of the AP-X®<br>Liquefaction Unit", and "Managing & Marketing<br>42 MTA of LNG in a Global LNG Market".                              |
| 27 <sup>th</sup> Gulf Traffic<br>Week                                           | 13-19 March | Doha, Qatar               | Pavilion featuring a roll-over simulator and a<br>seat-belt convincer to explain to the public the<br>benefits of adherence to safety measures while<br>driving.                                                                                              |
| 2 <sup>nd</sup> 'Made in Qatar'<br>Exhibition                                   | 4-7 January | Doha, Qatar               | Qatargas was the Gold Sponsor of this four-day<br>event that showcased high quality products<br>made in Qatar to support local industry.                                                                                                                      |



# Case Study: Qatargas at QP Environmental Fair 2011

"Be Water Wise - Every Drop of Water Counts" is the message Qatargas has been driving home as a part of its water conservation campaign at the 4th QP Environment Fair held in Doha International Exhibition Centre. The Environmental Affairs Division has been representing Qatargas at the Fair providing visitors with useful tips on the water conservation and use at home, and featured a water demonstration filtration system which highlighted the need for responsible management of water resources. In addition the three "water-powered" cars on display have highlighted the role water can have in the use of renewable energy. The Qatargas pavilion has been offering a variety of educational and fun activities for children focusing on the theme of water management and conservation. From the Fair, James Baldwin, Qatargas' Environmental Manager stated that: "The message we have been communicating through our participation this year is that "we all play an important role in water conservation even at our homes and to be water wise as every drop counts". To support this concept we have had a number of water conservation-related activities at our stand designed to demonstrate the importance of using water responsibly and conserving it."



# MANAGING SUSTAINABILITY

#### Our Vision and Commitment to Sustainability

Qatargas' commitment to sustainability development is embedded in the company's Direction Statement. Qatargas' focus continues to spotlight sustainability, while at the same time concentrating on producing wealth for the State of Qatar and the company's shareholders and helping to meet the world's growing energy needs in an economically, environmentally and socially responsible way.

### Case Study: Our Direction Statement

Qatargas' Vision 2015 is to be the world's premier LNG company, known for our people, innovation, operating excellence and corporate social responsibility. We will set the standard for safety, health and environmental performance, customer satisfaction, a high calibre and diverse workforce, efficient and reliable operations and financial performance.

Our Mission is to safely, efficiently and reliably manage and operate all of our resources, including people, reserves, facilities and the environment. To achieve this we will maintain the highest safety, health, quality and environmental standards. We will efficiently produce and deliver LNG and gas-derived products to our customers around the world, and flawlessly execute projects and capture synergies by effectively integrating new projects into existing

operations. We will positively contribute to social and community development, and continuously improve business, governance and operating performance. In addition, we will attract, develop, motivate and retain a high calibre and diverse workforce, including qualified Nationals to reach our Qatarisation targets. We will leverage the knowledge and expertise of our workforce and shareholders, maximising value and creating opportunities for our shareholders.

Our Covenants are to respect and value our people and their families, our shareholders, customers, suppliers, communities and the environment. To support this we will conduct our business with integrity and in an ethical manner, create an Incident and Injury Free workplace, demonstrate the highest standards of social and environmental practice, use our diversity as a source of strength, develop our people and foster a culture of learning, innovation, excellence and compliance.

As a company we trust and empower each other, encourage initiative and assume responsibility. We recognise, acknowledge and reward accomplishments, work in and promote a spirit of active mutual support, and openly communicate and share information across the company.



In 2011 Qatargas continued to commit itself to reach its objective to become the Premier LNG producer in the world by 2015. Qatargas focuses its efforts on the five pillars of its Direction Statement.

#### Risks and Opportunities Arising from Sustainability Trends

Qatargas is the world's largest supplier of LNG and the Company transports its products around the globe. In 2011, Qatargas delivered all cargoes on time and, as such, Qatargas' reputation as one of the most reliable LNG exporters could be damaged by any incidents, operational or otherwise, that could impair this performance.

Qatargas, while focusing to limit its greenhouse gas (GHG) footprint, is exposed to local and international environmental legislation in terms of GHG emissions. Any change in the environmental legislation could lead to an increase of the operational costs. In recognition of the potential risks and opportunities presented by the issue of GHG emissions management Qatargas is developing a GHG management strategy to responsibly manage the issue.

Opportunities arise from the fact that natural gas is the most environmentally friendly hydrocarbon fuel. As the world becomes more aware of GHG emissions and the harm these cause to the environment, natural gas will become the preferable form of energy, and demand will increase as a result.

#### Our Organisation and Mechanisms to Manage Sustainability

#### Qatargas Management System for Continuous Improvement (QMSI)

Quality and sustainability at Qatargas are managed as part of an integrated management system, through the Qatargas Management System for Continuous Improvement or QMSI which is directly linked to our Direction Statement. Our QMSI is a tool which helps to coordinate business plans for the whole company and to align objectives across the organisation. It has been widely accepted in the region as leading best practice and has enabled a positive environment for continual improvement to develop.

A Corporate Initiative formally launched in 2011 saw a Management Systems Development Department created that reports directly to the CEO. Their role is a comprehensive review of our existing Management system.

Qatargas 1, Qatargas 2 and the Laffan Refinery are all currently certified to:

- ISO 9001:2008 Quality Management System;
- ISO 14001:2004 Environmental Management System Qatargas was the first company in Qatar to be certified in 2000;
- OHSAS 18001:2007- Occupational Health and Safety Management System.

The Certifications also include those common facilities of Storage and Loading that are fully managed by Qatargas OPCO.

Qatargas 3 and Qatargas 4 are on their way to tri-certification, which will begin with QG3 during 2012.

Moreover, we were awarded in 2011 the ISO 17025 certification for our state-of-the-art laboratory in Ras Laffan (see Case Study).



# Case Study: Qatargas' Laboratory receives ISO 17025 Accreditation

Qatargas state-of-the-art Laboratory was awarded in December 2011 with a major international quality accreditation. The ISO-17025:2005 certification from one of the most reputable accreditation bodies in the world, the Netherlands based RvA, came after years of hard work during which the Laboratory, based at its Ras Laffan Industrial City site, has implemented a Quality Management system specifically designed for Laboratories and considered "Best Practice" in this field.

Commenting on this accomplishment, Toufik Benmosbah, Chief Safety, Environment and Quality (SEQ) Officer, Qatargas, said: "This is yet another feather in the cap of achievements for Qatargas. We are committed to providing a high quality service in everything we do. Our Laboratory includes state-of-the-art analytical equipment which meets the highest standards of safety and quality. This accreditation will ensure that the outcome of analytical tests performed by Qatargas Laboratory on our products is accurate and precise and they meet the toughest international standards."

The Laboratory, which opened in December 2008, incorporates five specific individual sections, namely a Gas, Petroleum, Analytical, Water, and Sulphur Laboratory, which conduct in the region of 45,000 tests per month.



#### Corporate Social Responsibility Initiative

For Qatargas, Corporate Social Responsibility (CSR) is about our way of doing business. We want to continue to be a profitable company, while at the same time a company conducting our business in an ethical way and responsible manner, caring for our people, their families, the environment and the communities around us.

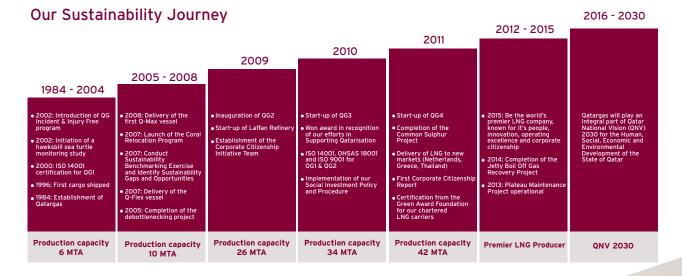
The Corporate Social Responsibility Initiative Team (CSRIT) was established in January 2009 under mandate from Qatargas' Chief Executive Officer with the objectives to review, assist and guide the CSR framework development and implementation at Qatargas.

The CSRIT based its work on a benchmarking exercise undertaken in 2007 - 2008 and focused on 48 identified CSR performance elements distributed among the four pillars of CSR: Governance and Conduct, Financial and Economics, Social, and Environment.



For each element, performance sheets were developed to identify what this element means to Qatargas, where we are in terms of management of this element, what are the areas of improvement, which metrics to measure performance, and responsibilities for implementation of further actions. These performance element sheets thus provided key planning and guidance documents for CSR implementation across the company.

As a result of this work, the CSRIT proposed several key recommendations which have been completed or are currently under implementation, such as establishing a CSR Leadership Committee, appointing a CSR Coordinator, or developing and integrating a CSR Implementation Plan.



#### Sustainability Targets and Performance

Each year, Qatargas analyses its operations in order to participate in a study comparing multiple companies that produce LNG and other gas derived products. This study allows Qatargas to compare its activity in mass balance, manpower, costs, asset management, environment, safety and health to that of its competitors, thus enabling Qatargas to better understand which sections of the business can be utilized for superior efficiency. Qatargas has also expanded its benchmarking efforts to other areas of the business in 2011, such as offshore, refinery and terminal operations. This enhanced knowledge of the company's operations, as well as its performance compared to its competitors, enables Qatargas to maintain its position as a world class institution.

Our sustainability targets and performance for 2011, along with vision 2015 targets, are summarised below.

#### Sustainability Targets and Performance 2011

| Key Performance<br>Indicator                                              | Performance<br>2011               | Target<br>2011        | Benchmark<br>2010¹ | Vision<br>2015 |  |  |  |
|---------------------------------------------------------------------------|-----------------------------------|-----------------------|--------------------|----------------|--|--|--|
|                                                                           | Efficient and reliable operations |                       |                    |                |  |  |  |
| Reliability² (%)                                                          | 96.2                              | 94.5                  | 95.8               | 98.5           |  |  |  |
| Availability³ (%)                                                         | 92.7                              | 93.3                  | 92.9               | 96.8           |  |  |  |
| Utilization⁴ (%)                                                          | 91.4                              | 90.2                  | 86.2               | 94.8           |  |  |  |
|                                                                           | Safety, health ar                 | nd environmental perf | formance           |                |  |  |  |
| Total Recordable Injury<br>Frequency⁵ (-)                                 | 1.14                              | 0                     | 1.31               | 0              |  |  |  |
| Loss of Primary<br>Containment (#)                                        | 1                                 | 0                     | NA                 | 0              |  |  |  |
| GHG <sup>6</sup> emission intensity (t<br>GHG / t products <sup>7</sup> ) | 0.33                              | 0.30                  | 0.34               | 0.408          |  |  |  |
|                                                                           | Cus                               | tomer satisfaction    |                    |                |  |  |  |
| Late Deliveries (#)                                                       | 0                                 | 0                     | NA                 | 0              |  |  |  |
| Off-specification Deliveries<br>(#)                                       | 0                                 | 0                     | NA                 | 0              |  |  |  |
| Financial performance                                                     |                                   |                       |                    |                |  |  |  |
| Sales Volume (million<br>tonnes of all products)                          | 58.0                              | 57.4                  | NA                 | 57.1           |  |  |  |
| Net Income (billion USD)                                                  | 16.6                              | 9.7                   | NA                 | 11.4           |  |  |  |

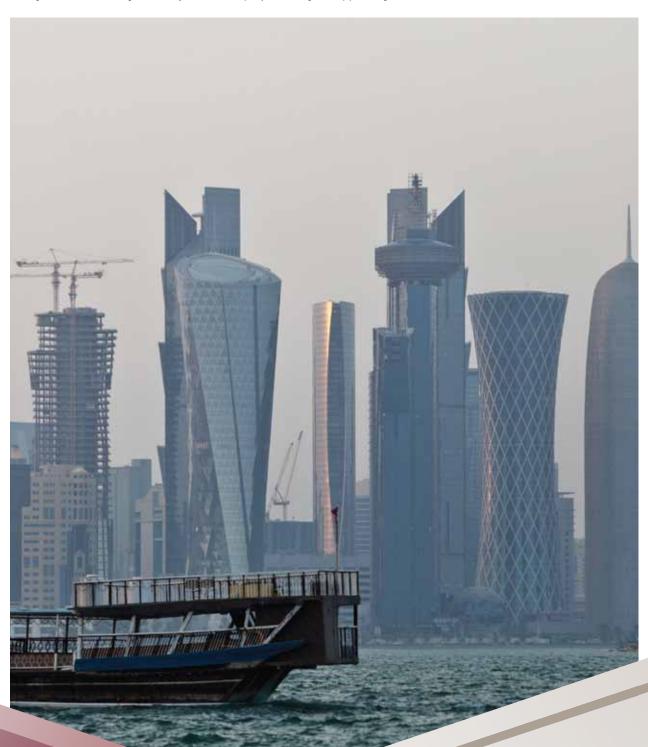
- Average performance of LNG plants participating in an annual study conducted by Philip Townsend Associates
- Maximum sustainable capacity less unplanned losses 2.
- Reliability less planned losses
- Availability less economic/scheduling and other losses
- Total count of fatalities, permanent/total disabilities, lost workday, restricted workday, and medical treatment cases per million man-hours; Includes contractors
- Greenhouse Gas
- LNG for trains, other gas related products for Laffan Refinery
- The GHG emissions intensity will be redefined from tonne product, to tonne LNG. The Ambition 2015 target is adjusted accordingly.

On average in 2011, while the company was striving to stabilize LNG production from the first three mega trains and was starting operations of its fourth mega train, Qatargas succeeded in having higher utilization and reliability rates than its peers.

Our mid-term sustainability targets are defined within Qatargas' vision 2015 to be the world's premier LNG company. The vision and targets are in line with Qatar National Vision (QNV) 2030, a holistic approach to the development of the State of Qatar through its four pillars - Human, Social, Economic and Environmental Development - and that defines the long-term outcomes for the country.

Capitalising on its abundant natural resources and with energy continuing to propel Qatar forward, QNV 2030 aims at building a diversified knowledge-based economy that uses new technologies with high human development and inter-generational equity.

Qatargas' near and long-term objective is to play an integral supporting role in the success of the QNV 2030.



# **GOVERNANCE**

#### **Governance Structure**

The governance structure differs for each Qatargas company and is organised as follows:

- Qatargas Operating Company Limited (QG OPCO): Board of Directors, Services Coordination Forum, Audit Committee, Chief Operating Officers (Engineering & Ventures, Administration, Finance, Operations and Commercial & Shipping);
- QG1, QG2, QG3, QG4: Board of Directors, Executive Committees, Chief Operating Officers;
- Laffan Refinery: Board of Directors, Executive Committee, Finance Committee, Chief Operating Officer.

The highest governance body of each Qatargas company is the Board of Directors. Members of the Board are nominated by the shareholders as per the relevant Joint Venture Agreement (JVA). Shareholders determine the qualifications and expertise of the individual nominees. The number of independent Board members for each Company is summarised in the below table.

#### Independent Board Members for each Company

| Qatargas company | No. of independent Board members |
|------------------|----------------------------------|
| QG OPCO          | 10                               |
| QG1              | 10                               |
| QG2              | 10                               |
| QG3              | 10                               |
| QG4              | 9                                |
| Laffan Refinery  | 8                                |

Independent Board members refer to members who do not form part of the executive management team. The Chairman of the Board of Directors in particular is not an executive officer of the Company.

Committees which form part of the Qatargas governance structure are detailed below.

#### **Description of Qatargas Committees**

| Committee name                            | No. of members | Independent members                                                    | Mandate                                                                                              | Responsibility                                                                        |
|-------------------------------------------|----------------|------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| QG1 Executive<br>Committee                | 7              |                                                                        |                                                                                                      |                                                                                       |
| QG2 Executive<br>Committee                | 9              | Except for the CEO, all<br>members are Shareholders<br>representatives | Delegated<br>by the Board<br>to exercise<br>the powers<br>specified in<br>the Executive<br>Committee | Share with the Board<br>the responsibility                                            |
| QG3 Executive<br>Committee                | 8              |                                                                        |                                                                                                      | for reviewing and approving company's financial, social and environmental performance |
| QG4 Executive<br>Committee                | 7              |                                                                        |                                                                                                      |                                                                                       |
| Laffan Refinery<br>Executive<br>Committee | 9              |                                                                        | procedures                                                                                           |                                                                                       |

| Committee name                                  | No. of members | Independent members                                | Mandate                                                                                                                                                            | Responsibility                                                                |
|-------------------------------------------------|----------------|----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| Laffan Refinery<br>Finance<br>Committee         | 8              | All members are<br>Shareholders<br>representatives | Recommends<br>to the Board in<br>certain financial<br>and accounting<br>matters                                                                                    | Assists the Board in<br>handling economic<br>and financial issues             |
| QG OPCO Audit<br>Committee                      | 4              | All members are<br>Shareholders<br>representatives | Assist the Board in fulfilling its oversight responsibilities on financial reporting process, internal controls, audit process and monitoring compliance with laws | Provides support in<br>implementation of<br>appropriate financial<br>controls |
| Ethics and<br>Conflict of Interest<br>Committee | 6              | All members are Company<br>employees               | Assess and investigate suspected violations related to ethics and conflicts of interest                                                                            | Ensure application<br>and respect of Ethics<br>Policy                         |

Qatargas management is guided by strategies, plans and working programmes approved by shareholders through shareholders meetings, resolutions and shareholders working teams. Qatargas financial, social and environmental performance is presented to and discussed with the Board quarterly.

There is no linkage between compensation for board members, senior managers and executives and Qatargas' performance (including social and environmental performance), as remuneration is fixed. There is currently no formal process in place for evaluating the board members' own sustainability performance.

#### **Conflict of Interest**

Qatargas' Code of Business Ethics Policy establishes clear rules of conduct in order to avoid conflicts of interest. As a general rule, employees or their immediate families shall not have direct or indirect interest in any entity or business enterprise that has current or prospective dealings with the Company.

All employees have to complete and submit annually by 31 January of each year the annual certification statement to certify they have read and understood the principles of the Code of Business Ethics Policy and that they will comply with these. In addition, employees occupying section head positions and above, and all other employees involved in procurement, tendering, bids, contract negotiations and contract administration, shall complete an annual conflict of interest declaration by 31 January of each year for the preceding year.

Qatargas' Ethics and Conflict of Interest Committee is responsible for ensuring application and respect of the Ethics Policy, and for reporting and investigating any case of violation with regard to conflicts of interest.

#### Internal Audit

The Qatargas Internal Audit Function (IA) has been established by the Board of Directors (BOD), with the purpose of assisting the BOD and Management in the accomplishment of their objectives.

The IA govern themselves by adherence to the Institute of Internal Auditors' "Code of Ethics" and conduct their work in accordance with the 'Standards for the Professional Practice of Internal Auditing' established by the Institute of Internal Auditors. The IA is authorised by the BOD to carry out a broad programme of operational, financial, compliance, fraud and systems audits covering all activities of the company, its subsidiaries and ventures.

All activities within Qatargas and its ventures are subject to an internal audit review at least every four years. A risk based 4-year rolling audit plan is accordingly prepared by the IA, reviewed by the Management Leadership Team and approved by the Board Audit Committee (BAC).

Special reviews / investigations / consultancy are also conducted by the IA as required by the management or BAC. The Audit reports are communicated to the management, BAC and the BOD.



#### Internal Statements and Codes

Internally developed statements of mission or values, codes of conduct, and policies relevant to sustainability performance include:

- Qatargas Direction Statement, which describes our Vision, Mission and Covenants;
- Code of Business Ethics Policy;
- Internal Audit Charter:
- Employee Relations Policy;
- Social Investment Policy;
- Safety, Health and Environment Committee Charter;
- Enterprise Risk Management Process.

These documents are fully implemented and cover all employees and activities within Qatargas.

# **COMMITMENTS AND ENGAGEMENTS**

#### Commitments to Internal / External Initiatives

Qatargas subscribes to following charters, initiatives and programmes:

| Charter / initiatives<br>/ programmes                                         | Date of<br>adoption | Countries /<br>operations of<br>application | Stakeholders involved                                                                                                                                   | Voluntary /<br>mandatory |
|-------------------------------------------------------------------------------|---------------------|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| Qatar's Energy &<br>Industry Sector<br>'Women in the<br>Workforce' Initiative | 2010                | Qatar                                       | Professional National females<br>in Qatargas and other<br>companies in the Energy and<br>Industry Sector                                                | Voluntary                |
| The Chartered<br>Institution of Chemical<br>Engineers (IChemE)                | 2011                | International                               | Engineering community<br>under Engineering & Ventures                                                                                                   | Voluntary                |
| The Institution of<br>Engineering and<br>Technology (IET)                     |                     | International                               | division at Ras Laffan                                                                                                                                  | ,                        |
| Laffan Environmental<br>Society (LES) Charter                                 | 1999                | Qatar                                       | All Ras Laffan Industrial City<br>based end users, Ministry of<br>Environment, QP                                                                       | Mandatory                |
| Ras Laffan Industrial<br>City Community<br>Outreach Programme<br>(RLIC COP)   | 2010                | Qatar                                       | Northern Communities of<br>Qatar, All Ras Laffan Industrial<br>City based end users, Ministry<br>of Environment, QP, Qatar<br>Social Development Centre | Mandatory                |
| Ras Laffan Industrial<br>City Risk Management<br>Forum                        | 2011                | Qatar                                       | All Ras Laffan Industrial City<br>based end users                                                                                                       | Mandatory                |

Qatargas is a member of the Training and Development Liaison Committee (TDLC) which promotes best practice in training and development in the Qatar energy and industry sector.

Qatargas' Head of Qatarisation and National Development has continued, from 2010, and throughout 2011, to sit on the Board of Trustees at the Qatar Independent Technical School (QITS), being re-elected as Vice Chairman during 2011, to provide support and direction to this important part of the Education Sector. Measures were taken to formulate internal committees to support and improve the school in different areas.

Qatargas is a member of the International Petroleum Industry Environmental Conservation Association (IPIECA) and a sustaining member of the American Society for Quality.

Qatargas also sits as the Vice Chair on the International Gas Union Taskforce that looks after Human Capital Development in the Gas Industry.

# Case Study: Qatargas receives top international accreditation for engineers development programme - a first for Qatar

Qatargas has become the first company in Qatar to secure accreditation from the UK-based Institution of Chemical Engineers (IChemE) and Institution of Engineering and Technology (IET) for successfully implementing a development programme for Qatari engineers and graduates.

Commenting on this achievement, Sheikh Khalid Bin Abdulla, Qatargas Operating Officer - Engineering and Ventures, said: "These accreditations underline Qatargas' commitment to maintaining the highest international standards, while ensuring that we will have qualified and competent national engineers to manage our operations and contribute towards the continued success of Qatargas and the State of Qatar. It is also a clear indication that Qatargas provides the right environment and opportunities for young engineering graduates to develop their skills and excel in their profession."

The accreditations were recommended and approved by the IChemE and IET following a detailed and thorough evaluation of Qatargas as a suitable training organisation. It indicates that Qatargas' training and development programme meets the highest standards and that the company has committed qualified staff and resources to the professional development of engineers.



#### Stakeholder Engagement

Shareholders are identified and agreed by Qatar Petroleum (QP) and based on selection criteria set out by QP. Identification of other stakeholders (e.g., employees, contractors, suppliers) is undertaken by relevant groups within the company and based on standards set out in company's policies and procedures such as contracting procedures, marketing policies, human resources policies, etc.

Where appropriate, Qatargas liaises with RasGas regarding operational excellence and improvement opportunities.

Stakeholder groups with whom Qatargas engages and means of engagement are summarised in the table below. The Qatargas website, the Qatargas Pioneer magazine, strategic global media communications and advertising strategy (print, broadcast & local) serve as a means of engagement across all stakeholder groups.

#### Stakeholder Engagement

| Stakeholder Engagement |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Stakeholder group      | Means of engagement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |
| Shareholders           | <ul> <li>QG respective Board meetings</li> <li>Discussions</li> <li>Official engagements - e.g. signings</li> <li>Shareholder meetings, agreements and relations</li> <li>Coordinated crisis communications</li> <li>Sponsorship collaborations (e.g. QMA, Exhibitions etc.,)</li> <li>QG Contribution towards QP Annual Report</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |
| Employees              | <ul> <li>Internal communications strategy including the QG intranet and internal magazine</li> <li>Specific QATARGAS ALL email</li> <li>Employee communications - news updates</li> <li>Employee Opinion Survey</li> <li>Town Hall meetings</li> <li>CEO Forum for National trainees and graduates</li> <li>Long Service Awards and Spot Awards</li> <li>Premier Leadership Event (PLE) meetings</li> <li>Quarterly Performance Review group meetings</li> <li>Objective Management System</li> <li>CEO Address to new joiners on the QG intranet</li> <li>Policies &amp; Procedures</li> <li>Monthly key messaging pack (for senior management)</li> <li>Training, HR Induction presentation</li> <li>Learning &amp; Development programmes, Souq, Website and Helpdesk</li> <li>Interactive security announcements and safety exercises</li> <li>'Ask the CEO' on the QG website</li> <li>Departmental away-days / team building</li> <li>Employee Self Service (ESS)</li> <li>Qatarisation Forum for National trainees and graduates</li> <li>Lunch and Learn Sessions</li> <li>Bite size sessions for National graduates</li> <li>Social platforms - gala dinner; family days; sport day; social clubs</li> </ul> |  |  |
| The Energy Industry    | <ul> <li>Conferences and exhibitions</li> <li>Key note address global opportunities</li> <li>Strategy advertising communications in industry related platforms</li> <li>Energy related &amp; general publications, Delivery of technical papers</li> <li>Sponsorship collaborations (e.g. SIGTTO etc.,)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |

| Suppliers / Contractors           | <ul> <li>Contractual arrangements &amp; tender process</li> <li>Third party endorsement</li> <li>Safety communications and related initiatives and programmes (e.g., IIF; STOP; Hydration)</li> </ul>                                                                                                                                                                                                                                                                                                            |  |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Customers                         | <ul> <li>Global customer relations</li> <li>Conferences and exhibitions</li> <li>Site visits</li> <li>Contractual arrangements</li> <li>Customer Meetings / Presentations (e.g Japan etc.,)</li> <li>Signing ceremonies</li> <li>Generic Publications</li> <li>Periodic safety alerts</li> </ul>                                                                                                                                                                                                                 |  |
| Government / Authorities          | <ul> <li>Strategic government affairs/relations in conjunction with QP and the State of Qatar</li> <li>Through appointed embassies in Qatar and around the world in conjunction with QP and the State of Qatar</li> <li>Site visits</li> <li>Coordinated crisis communications planning</li> <li>Participation in the Qatar National Vision (QNV) 2030</li> <li>Projects in collaboration with Qatari Government</li> <li>Contribution to the development of the State's new environmental guidelines</li> </ul> |  |
| Local Communities                 | <ul> <li>As a member of the RLIC Community Outreach Programme (COP)</li> <li>Site visits</li> <li>Continual community needs assessment</li> <li>Annual events (e.g., Career Fair, Environment Fair)</li> <li>Sponsorships</li> <li>Educational programmes</li> </ul>                                                                                                                                                                                                                                             |  |
| General Public                    | Social investment programmes: sports and cultural event sponsorships, school donations, generic health and safety campaigns                                                                                                                                                                                                                                                                                                                                                                                      |  |
| Media                             | <ul> <li>Site visits</li> <li>Media communications (press releases; holding statements; interviews)</li> <li>Publications, Fast fact sheets</li> <li>Press conferences, Briefings</li> <li>Communication plans</li> </ul>                                                                                                                                                                                                                                                                                        |  |
| Non-Governmental<br>Organisations | <ul> <li>Where appropriate approved relations</li> <li>Contributions to local NGO's</li> <li>Presentations - educational programmes</li> </ul>                                                                                                                                                                                                                                                                                                                                                                   |  |
| Students / Pupils                 | <ul> <li>Events (e.g. Career Fair)</li> <li>Educational initiatives (e.g., scholarships, internships, outreach programme)</li> <li>Introductions to QG</li> <li>Recruitment drives</li> <li>Donations and sponsorships to the education sector (schools and universities)</li> </ul>                                                                                                                                                                                                                             |  |



Key topics raised by stakeholders in 2011 include:

- Our major stakeholder Qatar Petroleum and its HSE Regulations and Enforcement Directorate (DG) has requested Qatargas to produce this second annual sustainability report for the year 2011, with a focus on climate change and energy, and personal and process safety;
- The Al-Khor community raised issues with regard to flaring and air quality, waste management, job opportunities and capacity building of the local community in northern Qatar, which Qatargas addressed accordingly;
- Our customers and the general public increasingly enquire about sustainability initiatives at Qatargas, in particular with regard to environment protection and social investments;
- Our employees raised their opinions and issues through the 2011 Employee Opinion Survey run in March. It was our third bi-annual survey and was administered by a third party. With over 73% employee response rate, the wealth of data provided our senior management team with a strong bedrock for focus on key corporate people initiatives. Issues raised by employees were related to work organization, communication and performance management, and action steps were taken by Qatargas management to address these issues (refer to the 'People' section for more details).



# **ECONOMICS**

#### **Direct Economic Performance**

#### Direct Economic Value Generated and Distributed

Qatargas, as a non-publicly traded company, with Qatar Petroleum as a major shareholder, is not required to publicly disclose its financial data as per Qatar Law and other pertinent regulations. Qatargas does not participate in revenue transparency initiatives, and is not a member of the Extractive Industries Transparency Initiative (EITI).

However, Qatargas has committed itself to transparency in sustainability disclosures and has therefore elected to publish key economic data that are summarised in the below table.

#### Qatargas Key Economic Data

| Direct economic aspect<br>(in million QAR) | 2011    | 2010   |
|--------------------------------------------|---------|--------|
| Revenues                                   | 138,400 | 73,000 |
| Operating costs                            | 3,400   | 2,000  |
| Manpower costs                             | 1,600   | 1,700  |
| Payments to providers of capital           | 18,700  | 12,000 |
| Payments to governments                    | 83,900  | 25,000 |
| Community investments                      | 6.9     | 6.2    |

Qatargas consistently provides above budget revenues to the State of Qatar and Qatargas shareholders. Qatargas' profits have contributed approximately 20% of the state of Qatar's gross domestic product. The added value generated by Qatargas is contributing to the achievement of Qatar National Vision 2030.

#### Risks, Opportunities and Financial Implications of Climate Change

Qatargas has conducted a thorough and extensive review of potential climate change and greenhouse gas (GHG) risks, opportunities and financial implications, which form part of our GHG management strategy.

The three main risks associated with climate change and greenhouse gas emissions are regulatory, financial/ business and physical risks.

The regulatory risk originates from the potential for national, regional, sectorial and international regulation of GHG emissions. Currently the State of Qatar has sophisticated and stringent GHG Accounting and Reporting (A&R) requirements. Qatargas' GHG A&R report has been verified by an international external GHG accounting and reporting verification organisation.

Kyoto Protocol signatories are required to limit their greenhouse gas emissions. Since the State of Qatar is a signatory of the Kyoto Protocol, it is assumed that it will implement regulations to reduce national greenhouse gas emissions at some point in the future.

The business risk component includes reputational, legal, competitive, technological, political and supply chain risks for companies that show a lack of concern for excessive carbon emissions and associated climate change issues.

Qatargas reviewed the available literature regarding potential climate change impacts for the Arabian Gulf region and concluded that the physical risks for the Qatargas facilities, assets and operations are low within their operating lifetimes.

Qatargas also analysed the potential business opportunities arising from climate change.

There is potential to invest in schemes such as Clean Development Mechanisms (CDM) projects and the purchase of CDM Certified Emission Reductions (CERs), because of their credibility in the market place and the reputational benefits of such an investment. Where possible, development and investment in regional sustainability projects around the Middle East will be investigated.

We are in the process of evaluating the potential financial implications of climate change and anticipate sharing some of this work in future reports.

#### Market Presence

#### Local Content and Procurement

Qatargas primary policy for procurement of materials and services are through open tender in local newspapers to encourage local suppliers and contractors. The advertisements are published in both English and Arabic newspapers. We provide Qatari suppliers and contractors with price preference in accordance with the local law and the same terms are applied to subcontractors as a condition of the contracts executed. Whenever a local contractor can provide a requested service, Qatargas endeavours to source the work locally. For technology upgrade and specialised services, international service providers are also approached.

In 2011, 56% of our procurement budget (including service contracts and purchase of materials) was spent on local suppliers and contractors based in Qatar.

All sourcing is subject to thorough evaluation before award of any contract, based on pre-determined criteria (financial performance, safety, health and environmental records, experience, etc.) for transparency and to provide equal chance to all the participating contractors, while assuring the quality of the products and services.

Qatargas also came out in strong support of the nation's drive to encourage local production. We have partnered the Qatar's Chamber of Commerce and Industry (QCCI) who work in collaboration with the Ministry of Energy and Industry to support the 'Made in Qatar' exhibition, in Doha.



#### Local Hiring

Our policy for Qatarisation is to give priority in recruitment to qualified Qatari Nationals. In particular, trainee or development positions are to be filled by Qatari Nationals only.

Targeting National graduates through career fairs provide both female and male graduates equal opportunities to engage with Qatargas. Ongoing training support provides contracted graduates with a level of sensitivity to their own development requirements.

47% of Qatargas management positions (i.e., Chief Executive Officers, Chief Operating Officers, Venture Managers, Departmental and Division Managers) are currently filled by Qatari employees.



There is currently no local minimum wage in Qatar. However, Qatargas has developed its own internal standard wage grid for all positions within the company to ensure that a fair remuneration system is in place.

#### **Indirect Economic Impact**

The indirect economic effects of Qatargas activities at local and national levels are not formally measured, but a joint survey is currently in progress at Ras Laffan under the umbrella of the RLIC Community Outreach Programme, of which Qatargas is a member.

Examples of indirect beneficial effects include:

- The development and creation of jobs in the Ras Laffan area;
- The provision of high level employment work opportunities for Qatari Nationals as part of the Qatarisation programme;
- The creation of contracting service opportunities for projects and on-going operations support;
- The long-term job creation, market development and stability creation for Qatargas suppliers.

Due to Qatargas' size, indirect economic benefits also go beyond the State of Qatar, as Qatargas delivers to its global clients.

# RISK MANAGEMENT AND PROCESS SAFETY

## Enterprise Risk Management

An Enterprise-wide Risk Management (ERM) programme is currently being implemented at Qatargas according to the ISO31000:2009 on Risk Management.

This ERM programme uses risk management tools and principles (such as risk assessment, risk registers, risk matrices, etc.) as a basis to address:

- Business continuity;
- Crisis and Emergency Response Management;
- Operations and Supply Chain continuity;
- Information Technology (IT) disaster recovery;
- Talent pool management and succession planning.

The Management Leadership Team (MLT) provides overall direction and oversight to the ERM process. The heads of the various groups / assets / projects / departments are the Risk Champions for their business units and take ownership of their risk registers. They assign Risk Management Coordinators (RMC) who facilitate, maintain and update their risk registers.

The ERM Working Group put together the different elements of the programme and developed a training and awareness plan to roll out the programme to all groups / departments across Qatargas. Several workshops have been held as part of this, covering until now over 80% of the target audience. In parallel, the programme was formalised by developing policies and procedures for ERM in Qatargas.

Going forward, the establishment of an ERM portal on the intranet site is under development, and an automated ERM database system is currently being tendered for. An RMC conference / workshop is moreover being planned for all RMCs.

# **Emergency Response**

Qatargas has a dedicated Emergency Management Services (EMS) division whose responsibility is to develop and ensure Crisis and Emergency Response Management.

Since the Qatargas facility is expanding in size and complexity, it is more important than ever that staff are fully prepared, trained and able to respond when emergencies do occur. Significant work has been undertaken to ensure that the EMS could continue to protect Qatargas assets and its interest in the event of a major incident affecting the reliability of the plant. Self-assessment process is undertaken on every part of our emergency response and associated activities in the bid for excellence in the area of emergency response management services.

In 2011, the EMS division organised an "Emergency Response & Evacuation Challenges in High-Rise Buildings" seminar at the new Qatargas Headquarters Doha. The objective of the event was to enhance the knowledge of the Qatargas Floor Wardens and the Qatargas Initial Response Team in the area of emergency response, which will, in turn, enable them to provide a safe and effective emergency response in case of an incident in the Qatargas Headquarters Doha occupied by in excess of 1,000 people.



The EMS division participated in delivering Fire Safety education sessions at various schools in Qatar (see Case Study). EMS also participated in the Fire-fighter fit worldwide program organized by Qatar Civil Defence, which is based on competition among emergency services provider across the state of Qatar and mainly designed to assess the fire-fighters fitness and skills to fight fire and save lives. Qatargas EMS division has achieved remarkable score and has the intention to participate in any forthcoming program.

# Case Study: Delivering Fire Safety Education Sessions at Schools in Qatar

The EMS division has participated in delivering fire safety education sessions at various schools in Al-Khor community and across the State of Qatar to enhance the fire safety concept among society, as part of Ras Laffan Industrial City's Community Outreach Program (RLIC COP) and in line with our wider CSR initiative.

The sessions focused on basic fire fighting topics such as the fire triangle, classes of fires, principles and methods of extinguishing fires, tips for home fire safety and organizing emergency evacuation drills. The program included detailed demonstration and practical use of fire equipment in particular fire extinguishers.

This initiative highlighted the fact that Qatargas considers fire safety a very important area and that people of all ages must be made aware of.



Within the Qatargas Community, this proactive work by the EMS division clubbed with other initiative by the Community management has seen a continuing fall in the number of kitchen fires. In Qatargas premises a recent benchmarking study showed a downward trend in the numbers of fires, which coincided with the high volume of fire inspection and fire awareness training program the division carried out within the company.

Our objective to deploy the initial response within 5 minutes of travel time to 90 percent of the incidents was a success in 2011. This was the first time a scientific method of evaluation of emergency response time was established in Qatargas.

### **Process Safety and Asset Integrity**

Process safety focuses on managing the integrity of operating systems and processes by applying good design principles, engineering and operating practices.

Process safety deals with the prevention and control of incidents that have the potential to release energy or hazardous materials. Such incidents can cause toxic effects, fire or explosion and could ultimately result in serious injuries, property damage, lost production and environmental impacts.

Tier 1 and 2 process safety events as defined at Qatargas, in line with API Recommended Practice 754 (API RP 754), are summarised in the table below:

Tier 1 & 2 Process Safety Events in 2011

| Type of event               | No. of events |
|-----------------------------|---------------|
| Tier 1 Process Safety Event | 1             |
| Tier 2 Process Safety Event | 0             |

- A Tier 1 process safety event is an unplanned or uncontrolled loss of primary containment (LOPC) release of any material, including non-toxic and non-flammable materials, from a process that results in severe consequences, i.e. fatality, lost-time injury, community evacuation, costs greater than 50,000 USD, or release in one hour period of more than 5 kg of toxic material, 500 kg of flammable gas / vapour, 1000 kg of flammable liquids, or 2000 kg of combustible liquids;
- A Tier 2 process safety event is broadly defined as an order of magnitude less severe than the Tier 1 criteria above.

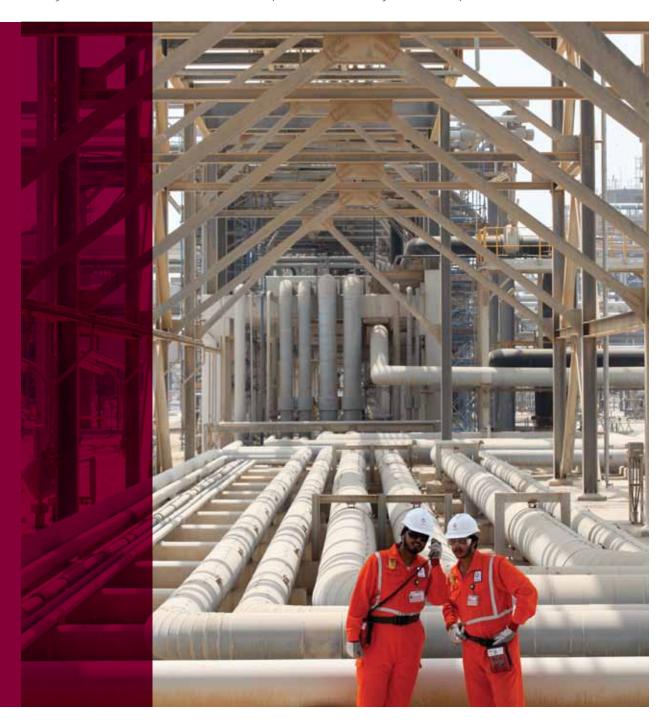
We experienced one Tier 1 process safety event in 2011 when a medium pressure steam hammer in QG2 resulted in partial damage to the header. There was no Tier 2 process safety event during both normal operations and start-up of new facilities in 2011.



Qatargas has a robust mechanism to monitor, report, and analyse a set of carefully chosen leading and lagging safety performance indicators (SPI), used to assess the status of key risk control systems (RCS), to provide ongoing assurance that risks are being adequately controlled, and to provide an early warning should there be any deterioration of controls.

There are three broad categories of RCS functioning in Qatargas, covering operational integrity (e.g. operating procedures, plant design and modification, emergency preparedness, permit to work), mechanical integrity (e.g. inspection and maintenance, ignition source prevention, instrument and alarm) and personnel integrity (e.g. competence, training, management commitment, incident reporting).

Both leading and lagging SPIs are set in a structured and systematic way for each critical RCS within the whole process safety management system. In tandem they act as system guardians providing dual assurance to confirm that the RCS is operating as intended or providing a warning that problems are starting to develop. Leading SPIs used at Qatargas are inspired by Tier 3 (Challenges to Safety System) and Tier 4 (Management System Performance) leading metrics from API RP 754 and were adapted to match Qatargas risks and specificities.



# ENVIRONMENT

# Management of Environmental Aspects

Our corporate vision is to be the world's premier LNG company. Being premier goes hand-in-hand with a commitment to the responsible development of natural gas and concurrently to achieving excellence in environmental performance.

Environmental aspects at Qatargas are currently managed using a dynamic Aspects and Impacts Register in accordance with ISO 140001. This segregates environmental aspects into operational areas and categorises aspects according to media, activity, products and services, and risk, taking into account impact severity and probability of occurrence. We are developing an Aspects Management System (AMS) tool that will facilitate the input of aspect data and allow for the management of all Qatargas environmental aspects and impacts through an enhanced workflow system using a relational database. Once fully implemented the AMS will improve Qatargas operational performance through the effective management and tracking of environmental mitigation and monitoring, and further support the achievement of our business goals. The AMS became live for QG1 in 2011 as a pilot test run. Final tests will continue in 2012 and the AMS will be fully implemented and become accessible to all QG assets.

Qatargas 1, Qatargas 2 and the Laffan Refinery already achieved the dual ISO certification of its quality (ISO 9001:2008) and environmental management systems (ISO 14001:2004). Compliance to these international standards guarantees that policies and procedures are in place to control all aspects of Qatargas activities and effectively manage their environmental effects. Qatargas 3 and Qatargas 4 will also be certified in forthcoming audits.

# Compliance with Environmental Laws

Compliance with applicable State of Qatar environmental legislation and international conventions ratified by the country is an essential part of Qatargas vision.

All operational assets of Qatargas submit Consent to Operate (CTO) applications to the Ministry of Environment (MoE) annually and operate under requirements approved in these CTOs. Our Environmental Affairs Division provides support and guidance on all issues related to environmental legislation including preparation and submission of CTOs. Once approved CTOs become legal documents which ensure that Qatargas assets perform and report in compliance with environmental regulations.

As per CTO requirements Qatargas assets provide quarterly environmental monitoring reports to the MoE, which include performance status on air emissions, discharges to land and water, and waste management as well as providing updates on voluntary environmental improvement initiatives. MoE carries out periodic inspection visits to our facilities to verify these reports.



Qatargas is also involved in a number of State of Qatar environmental initiatives including long term engagement in climate change strategies and flaring reduction objectives.

We take the initiative to comply with evolving flaring, water treatment and cooling water discharge requirements and are involved in a number of best available technology implementation projects such as introduction of pulsechlorination, a membrane bio-reactor wastewater treatment system and studies on flare reduction possibilities. The long-term cooperation with MoE helps to ensure better understanding and compliance with Qatar environmental legislation.

### Energy

Qatargas' primary energy consumption relates to internal fuel gas combustion. Fuel gas is burned to produce the necessary electricity, heat and steam for the production process. Gasoil is only used for on-site mobile sources (company vehicles, forklift trucks) and emergency generators, and its consumption is negligible compared to fuel gas. There is no primary energy consumption from renewable sources at Qatargas.

Electricity and steam used at QG1, QG2, QG3, QG4, the Laffan Refinery and Ras Laffan Terminal Operations (RLTO) are mainly generated internally from fuel gas combustion and are therefore accounted for in the primary energy consumption. The Laffan Refinery and RLTO however purchase some electricity from the grid for internal use.

Direct and indirect energy consumption at Qatargas facilities in 2011 are summarised in the below table.

### Energy Consumption for Qatargas Facilities in 2011

| Energy type                              | Unit | Qatargas 1 | Qatargas 2 | Qatargas<br>3&4 | Laffan<br>Refinery | RLTO   | Total       |
|------------------------------------------|------|------------|------------|-----------------|--------------------|--------|-------------|
| Internal fuel gas<br>(excluding flaring) | GJ   | 76,919,649 | 81,182,995 | 72,303,608      | 6,383,186          | -      | 236,789,438 |
| Purchased<br>electricity                 | MWh  | -          | -          | -               | 111,551            | 60,078 | 171,629     |

Currently, there are no formalised company research, plans or initiatives related to alternative or renewable energy sources.

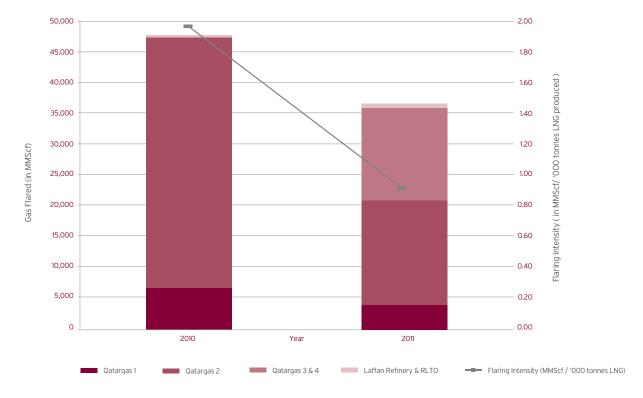
In addition to the above energy use, fuel gas is flared as part of the production process. Gas can be flared for routine causes (such as purge) or for non-routine causes (such as necessary safety releases, emergency depressurisation, off-plot jetty and tankage flaring). Quantities of flared gas under routine and non-routine causes are summarised in the table below. In 2011, 78% of the gas was flared under non-routine conditions, compared to 87% in 2010.

### Gas Flared at Qatargas Facilities in 2011

| Facility                 | Routine causes (MMScf) | Non-routine causes (MMScf) |
|--------------------------|------------------------|----------------------------|
| Qatargas 1               | 1,290                  | 2,532                      |
| Qatargas 2               | 4,822                  | 11,777                     |
| Qatargas 3&4             | 1,692                  | 13,699                     |
| Laffan Refinery and RLTO | 344                    | 307                        |
| Total                    | 8,148                  | 28,315                     |

The flaring trend between 2010 and 2011 is shown in the graph below.

#### Flaring Trend 2010 - 2011 at Qatargas Facilities



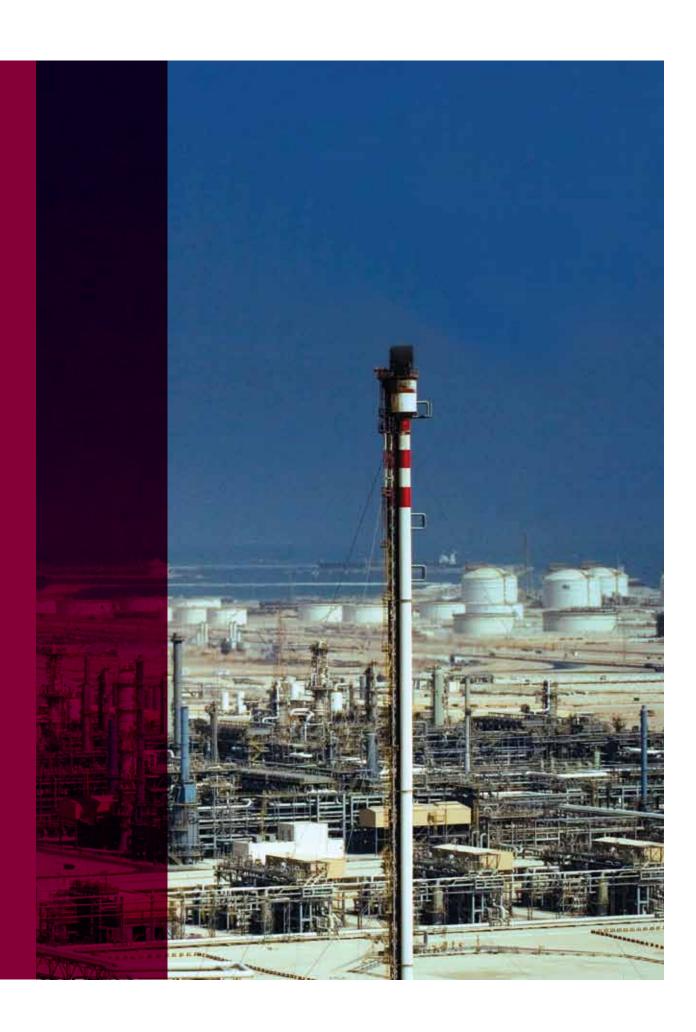
The total quantity of gas flared at Qatargas facilities was reduced by 24% between 2010 and 2011 even though the LNG production increased by 65% during the same period with QG3 and QG4 coming online. This tremendous performance was achieved thanks to the efficiency of our continuous efforts to reduce flaring: QG1 reduced its flaring by 41% and QG2 by 59% between 2010 and 2011. Our flaring intensity (MMScf gas flared per thousand tonnes of LNG produced) was consequently reduced by 54%.

There is no venting at Qatargas facilities.

# Case Study: Qatargas Flare Management Strategy

Qatargas has developed a Flare Management Strategy to minimise flaring associated with its LNG processing facilities. The Flare Management Strategy is a tool which supports Qatargas in determining how best to minimise flaring while considering the needs for asset integrity and operational safety, operating flexibility, and the potential future opportunities to monetise carbon emissions in an evolving global carbon trading market. The Flare Management Strategy is led by a multidisciplinary Flare Management Team comprising key disciplines.

Source reduction and plant reliability plans are presently being progressed to reduce the flaring at our LNG trains. As part of its overall flare minimisation strategy, Qatargas is also progressing flare gas recovery studies, which are expected to eventually realise major recovery of otherwise flared gas. The on-going Jetty Boil Off Gas (JBOG) Recovery Project engineered and pioneered by Qatargas and scheduled for completion in 2014 is expected to reduce JBOG flaring by over 90%, and will recover gas for reuse in process facilities. These initiatives are expected to reduce and maintain total flaring at regulatory target levels in the long term to protect the environment. A prelude to tracking performance and initiating flare reduction programmes is the accurate estimation of flared volumes from flaring sources involved. A series of measuring devices based on ultrasonic measurement principles are provided for measuring flared gas and undergo a robust preventive maintenance and calibration programme, ensuring the measurements are as accurate as possible.



## Climate Change

#### Our Greenhouse Gas Emissions

The Qatargas GHG emissions inventory was developed based on the European Union (EU) Monitoring and Reporting Guidelines (MRG) 2007. Reference was also made to the internationally recognised World Resources Institute and World Business Council for Sustainable Development (WRI/WBCSD) GHG Inventory Protocol. The inventory includes Scope 1, 2 and 3 GHG emissions. Scope 1 and 2 emissions are determined directly from production and consumption data related to offshore gas production and onshore processing to produce LNG, related by-products including sulphur, propane, butane, LPG and condensate and refined products including naphtha, kerojet, LPG and gas oil. Additional Scope 3 emissions are determined based on plant vehicle and bus usage, administration reports pertaining to office buildings and travel reports related to business air travel.

The GHG inventory includes all operating assets, namely QG1, QG2, QG3, QG4, the Laffan Refinery, and the common lean LNG storage and loading facility in Ras Laffan Port (RLTO).

Carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O) are the most relevant GHGs related to production activities of LNG. These gases occur from the production and consumption of energy. Total CO<sub>2</sub> emissions include inherent or formation CO<sub>2</sub> (that is naturally present in the North Field gas), CO<sub>2</sub> generated from fuel combustion and flaring, CO<sub>2</sub> resulting from chemical process operations and CO<sub>2</sub> resulting from fugitive emissions. Total CH<sub>4</sub> emissions include unburned CH<sub>4</sub> contained in combustion emissions and CH<sub>4</sub> resulting from fugitive emissions. All N<sub>2</sub>O emissions are generated in combustion activities. The inventory does not include sulphur hexafluoride (SF<sub>c</sub>), perchlofluorocarbons (PFCs) and hydrofluorocarbons (HFCs). SF<sub>6</sub> is used in some electrical equipment, and its use is carefully controlled. There are no significant PFCs or HFCs emissions in LNG production.



Direct scope 1 GHG is summarised in the below table in tCO<sub>2</sub>eq, taking into account the Global Warming Potential (GWP) of each considered GHG. These include all GHG emissions released on-site from sources controlled by Qatargas, and specifically include those related to gas-fired equipment, process flares and inherent CO<sub>2</sub> removed from the inlet feed gas. Transport of product (shipping) is accounted in scope 3 emissions as it is not operated by Qatargas.

Direct Scope 1 GHG Emissions from Qatargas Facilities in 2011

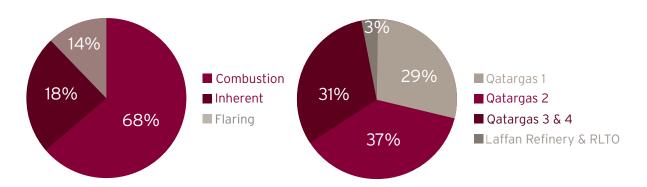
| Facility        | Unit                | CO <sub>2</sub> | CH <sub>4</sub> | N <sub>2</sub> O | Total      |
|-----------------|---------------------|-----------------|-----------------|------------------|------------|
| Qatargas 1      | tCO <sub>2</sub> eq | 5,099,631       | 78,364          | 22,313           | 5,200,308  |
| Qatargas 2      | tCO₂eq              | 6,612,555       | 118,338         | 25,054           | 6,755,947  |
| Qatargas 3&4    | tCO₂eq              | 5,511,419       | 107,651         | 22,879           | 5,641,949  |
| Laffan Refinery | tCO₂eq              | 401,898         | 907             | 1,979            | 404,784    |
| RLTO            | tCO₂eq              | 50,452          | 272             | 0                | 50,724     |
| Total           | tCO₂eq              | 17,675,955      | 305,532         | 72,225           | 18,053,712 |

 $CO_2$  represents almost 98% of our direct GHG emissions, while  $CH_4$  accounts for 1.7% and  $N_2O$  for the remaining 0.4%.

The distribution of our Scope 1 GHG emissions per source and facility is provided in the graph below.

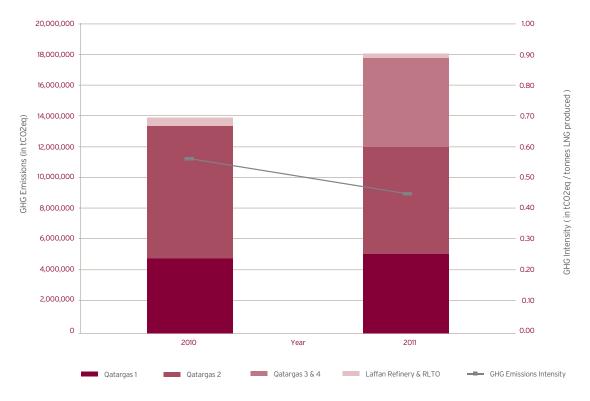
Scope 1 GHG Emissions per Source

Scope 1 GHG Emissions per Facility



The Scope 1 GHG emissions trend between 2010 and 2011 is shown in the graph below.

### Scope 1 GHG Emissions Trend 2010 - 2011 at Qatargas Facilities



The total Scope 1 GHG emissions at Qatargas facilities increased by 32% between 2010 and 2011, while the LNG production increased by 65% during the same period with the start-up of QG3 and QG4. QG1 GHG emissions stabilised between 2010 and 2011, while QG2 GHG emissions were reduced by 17%. Our total Scope 1 GHG intensity (tCO2eq per tonne of LNG produced) was consequently reduced by 20%, primarily as a result of our flaring reduction. Electricity and steam used at QG1, QG2, QG3, QG4 and the Laffan Refinery are mainly generated internally from fuel combustion and are therefore accounted for in scope 1.

The Laffan Refinery and RLTO however purchase some electricity from the grid. 171,629 MWh were purchased and consumed in 2011, leading to emissions of 189,479 tCO2eq. In addition, 116,525 tCO2eq were related to cooling water imported from RLIC Common Cooling Water System and to desalinated water. These scope 2 indirect GHG emissions amount to 306,004 tCO2eq and represent 1.7% of the total scope 1 GHG emissions.

Scope 3 GHG emissions are released from sources not directly controlled by Qatargas and include GHG emissions from products transportation, air business travel and employee commuting with rented buses. Scope 3 GHG emissions are summarised in the table below.

#### Indirect Scope 3 GHG Emissions

| Source                  | GHG emissions (tCO <sub>2</sub> eq) | Calculation methodology                                         |
|-------------------------|-------------------------------------|-----------------------------------------------------------------|
| Products transportation | 6,051,923                           | Marine Environment Protection Committee,<br>Circular 684        |
| Air business travels    | 2,799*                              | DEFRA, Methodology Paper for Transport<br>Emission Factors 2008 |
| Bus employee commuting  | 2,528*                              | American Petroleum Institute 2009                               |

<sup>\*</sup> Based on 2010 study

Business travels and employee commuting appear to be negligible compared to products transportation (less than

More information is provided in the section on environmental impact of transportation.

### Our GHG Management Strategy

Qatargas has pioneered the Greenhouse Gas Management strategy within the industrial sector in Qatar. The Company recognises that the proactive preparation for potential future carbon management and regulations is better achieved by understanding and managing GHG emissions profile. To achieve this we have embarked on a long term GHG management strategy, which has been divided into 3 phases, as detailed in the Case Study below.

# Case Study: Qatargas Greenhouse Gas Management (GHG) Framework and Strategy

Phase 1 involved understanding the GHG issue, preparing an action plan, and focused on internal capacity building through the discussion of trends and development in GHG policies, projects and markets. It also analysed the impact of climate change on Qatargas operations, and reviewed potential opportunities to reduce GHG emissions and participate in the global carbon market.

Phase 2 involved preparing a detailed and thorough annual reporting plan, quality manual, and a GHG measurement manual based on Qatar Petroleum and European Union guidelines. In fulfilment of this plan, emissions inventory for all Qatargas facilities (LNG Trains, Laffan Refinery, RLTO) - covering Scope 1, 2 and 3 emissions were prepared. These reports and the emissions inventory were subject to rigorous audit process in 2010 and 2011 by Qatar Petroleum and their third party auditors. Qatargas has received certification for years 2010 and 2011 reporting. Qatargas also conducted LNG benchmarking and has set applicable KPI's for our greenhouse emissions with respect to production. Qatargas has on-board now a GHG Specialist to oversee GHG related issues.

Phase 3 is being currently initiated and will assess carbon reduction opportunities and abatement techniques via sustainability assessment and engineering studies and also look at Life Cycle Assessment. Plans are also in place to have a wider outreach and be in alignment with the existing greenhouse gas management global platform.

#### Air Emissions

Qatargas strives to manage air emissions through the use of advanced emissions management and abatement techniques. Reducing emissions is among our highest priorities, and we are actively working with our partners and industrial neighbours to achieve this goal.

Non-GHG emissions relevant to Qatargas operations are:

- Sulphur dioxide (SO<sub>2</sub>) which originate primarily from the gas treatment (sulphur extraction process);
- Nitrogen oxides (NO<sub>x</sub>) which originate primarily from fuel gas combustion and flaring; and
- Volatile organic compounds (VOC) which originate primarily from fugitive emissions (from valves, flanges, seals, and emissions incurred during loading and unloading activities).



Air emissions from Qatargas facilities in Ras Laffan in 2011 are summarised in the table and graph below. Air emissions from ships for transportation of products are provided in the section on environmental impact of transportation.

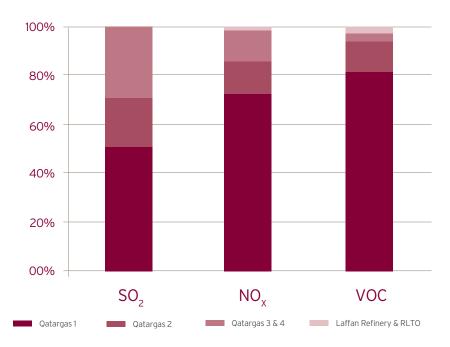
### Air Emissions from Qatargas Facilities in 2011

| Air pollutant                       | Unit   | Qatargas 1 | Qatargas 2 | Qatargas<br>3&4 | Laffan<br>Refinery<br>and RLTO | Total  |
|-------------------------------------|--------|------------|------------|-----------------|--------------------------------|--------|
| Sulphur dioxide (SO <sub>2</sub> )  | tonnes | 4,455      | 1,729      | 2,491           | 4                              | 8,679  |
| Nitrogen oxides (NO <sub>x</sub> )  | tonnes | 9,630      | 1,734      | 1,749           | 159                            | 13,272 |
| Volatile organic<br>compounds (VOC) | tonnes | 730        | 111        | 33.5            | 19.5                           | 894    |

The SO<sub>2</sub>, NO<sub>x</sub> and VOC emissions from QG2 and QG3 & 4 are lower than those from QG1, primarily due to the use of more efficient technologies and burners. The  $SO_2$  emissions from QG3 & 4 are higher than those from QG2 as a result of the gas composition, where QG3 and QG4 have a higher H<sub>2</sub>S content of inlet gas.

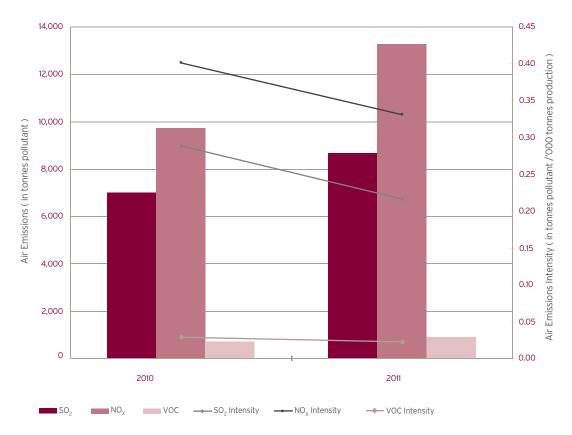
The SO,, NO, and VOC emissions are expected to decrease in the future as the QG2, QG3 and QG4 trains operate under increasingly more stable and optimal conditions.

### Distribution of Air Emissions per Facility



The air emissions trend between 2010 and 2011 is shown in the graph below.

## Air Emissions Trend 2010 - 2011 at Qatargas Facilities



Air emissions at Qatargas facilities increased by respectively 24% for  $SO_{21}$  36% for  $NO_x$  and 27% for VOC between 2010 and 2011 while the LNG production increased by 65% during the same period with the start-up of QG3 and QG4. As a result, air emissions intensities (tonnes pollutant per thousand tonnes of LNG produced) improved by respectively 25% for SO<sub>2</sub>, 17% for NO<sub>x</sub> and 23% for VOC.

Installation of the lean head end liners on the Qatargas 1 (Trains 1 - 3) process turbines has contributed to a reduction of  $NO_x$  emissions by 30% for Qatargas 1. Other initiatives to reduce air emissions in 2011 include the Qatargas Leak Detection & Repair (LDAR) Program (see Case Study).

## Case Study: Qatargas Leak Detection & Repair (LDAR) Program

At Qatargas around 55,000 components are in continuous surveillance as part of a robust Leak Detection and Repair (LDAR) program established at all facilities, which include the LNG trains, the Laffan Refinery and offsite Ras Laffan Terminal Operations product storage tank farms. The components are monitored to reduce fugitive leaks of VOCs

The Qatargas LDAR program has been established in compliance with the permitting requirements of the Ministry of Environment. The program is consistent with programs implemented globally in natural gas processing plants and refineries and is based on United States Environmental Protection Agency (USEPA) standards.

At Qatargas, in line with best industry and regulatory practices, the equipment and components that are subjected to LDAR include process and piping equipment associated with fugitive VOC emissions. VOC leaks monitored and identified are populated on a software interface that allows fast and efficient uploading of data into a LDAR database. Each item of equipment found to be leaking in excess of the leak threshold is repaired and re-monitored for effectiveness. Qatargas LDAR programs have successfully ensured very low VOC leak rates of 0.2% and lower which are among the lowest in the Oil & Gas industry. LDAR audits and LDAR re-monitoring programs in place at Qatargas facilities ensure the fugitive VOC reduction achieved is sustained.

Qatargas does not use Halon or Chloroflurocarbons (CFC) in its installations. Qatargas uses R-22 (Hydrochlorofluorocarbon - HCFC) in some HVAC units which will be progressively phased out. Most of other areas use only hydrofluorocarbons (HFC such as R-134a) for which currently there is no restriction. HCFC and HFC emissions are limited and result primarily from the routine maintenance of air-conditioning systems (leak reparation and top-up of HVAC equipment).

Qatargas was the first company in Qatar to establish an ambient air quality monitoring programme. The results have provided important information to help set the agenda for future controls on air emissions for all Ras Laffan industries.

### Materials

Direct input materials used in our products are limited to the gas we extract at our offshore platforms. In 2011, we extracted raw gas from the Qatar North Field that, once treated, led to the production of 40.1 million tonnes of LNG, and various other by-products (condensate, sulphur, propane, butane, naphtha, etc.).

Indirect purchased materials include chemicals and a variety of process equipment and components.

None of the direct and indirect materials used are recycled input materials.

#### Waste

We produce hazardous and non-hazardous waste as a result of our operations at the Ras Laffan facilities, including our LNG Trains, the Laffan Refinery and RLTO. Smaller waste quantities also arise from our offshore production platforms. Wastes are produced during the construction, start-up, commissioning, operation and maintenance of our facilities.

Hazardous wastes include used oil, spent process filters, dry sludge, methanol, spent mercury filters, and molecular sieves. Non-hazardous wastes include scrap metal, office and canteen waste, paper and cardboard, anthracite and sand, cooking oil, and concrete. Quantities of hazardous and non-hazardous wastes produced at Qatargas facilities in 2011 compared to 2010 are summarised in the below table. Waste quantities from ships for transportation of products are provided in the section on environmental impact of transportation.

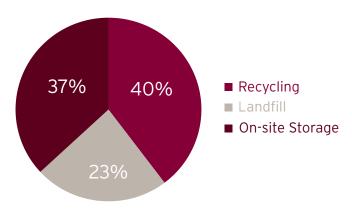
#### Waste Quantities from Qatargas Facilities

| Category of waste   | Quantity in tonnes |       |  |
|---------------------|--------------------|-------|--|
|                     | 2011               | 2010  |  |
| Hazardous waste     | 1,172              | 521   |  |
| Non-hazardous waste | 2,626              | 2,610 |  |
| Total               | 3,798              | 3,131 |  |

In 2011, we were able to collect the hazardous waste data for our Q3 and Q4 facilities (which were not captured in 2010); this largely explains the increase in hazardous waste reported in 2011 compared to 2010. Furthermore, in 2011 we adopted better data collection practices to improve the accuracy of our waste data.

We regularly review our waste management practices based on the 'reduce - reuse - recycle' principles. In 2011 we achieved a recycling rate of 40% of all waste produced. Recycled wastes include scrap metal, used oil, office waste paper and cardboard, empty drums and broken concrete. Wastes that cannot be recycled are temporarily stored onsite and/or landfilled in compliance with State of Qatar regulations. The distribution of disposal processes for wastes produced by our facilities in 2011 is presented in the below figure.

#### Distribution of Waste Disposal Processes



We temporarily stored on-site a significant share of waste produced in 2011 (37%), resulting in a lower apparent recycling rate compared to 2010 (40% against 60%).

Efforts undertaken by Qatargas in 2011 to improve waste management include the campaign on e-waste launched with Ras Laffan Industrial City (see Case Study).

# Case Study: Qatargas and Ras Laffan Industrial City (RLIC) launch campaign on e-waste

Qatargas and the RLIC Environment Department organised a summer awareness campaign at RLIC to educate employees within the industrial city on the need to properly handle electronic waste.

The campaign, which carried the slogan "Trash is not the right place, Understand your e-waste" urges all users of electronic equipment to stick to the three Rs - Reduce, Reuse and Recycle - in handling e-waste.

During the campaign, printed literature in multiple languages listing safe practices for handling of e-waste were handed over to thousands of employees in Ras Laffan. In addition, banners and billboards were erected along the streets of RLIC reminding all to act responsibly in understanding e-waste and handling it properly. The users were also reminded that e-waste contains toxic materials such as heavy metals and carcinogens agents, and that if not properly disposed, it could lead to air, ground water and soil contamination and also be harmful to those who come into contact with it.

## **Spills**

No reportable spills were recorded for any Qatargas activity in 2011. Spill management and recovery are part of Qatargas emergency response plans.

### Water Withdrawal and Discharge

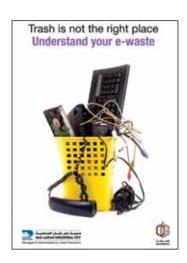
All water abstracted and discharged by our production facilities in Ras Laffan and offshore originates from and is routed to the Arabian Gulf. In 2011 we were supplied with 3.25 million m<sup>3</sup> of desalinated seawater for use mainly as process water and also for sanitary purposes in a lesser extent. We also abstracted 3,300 million m³ of seawater to serve as non-contact cooling water, all of which was subsequently returned to the sea.

In 2011, 167,940 m³ of wastewater (predominantly clean process streams) was re-used for irrigation. Apart from this, water is discharged to the Arabian Gulf either directly for non-contact cooling water and clean storm and process water streams, or after treatment for process and sanitary wastewater. Qatargas also utilises deep injection well as a means of disposing of process wastewater. Volumes of water discharged by Qatargas onshore and offshore facilities in 2011 compared to 2010 are summarised in the below table by type of discharge.

### Water Discharge from Qatargas Facilities

| T. v. o. f. die als aven                                                                          | Volume in m <sup>3</sup> |               |  |  |
|---------------------------------------------------------------------------------------------------|--------------------------|---------------|--|--|
| Type of discharge                                                                                 | 2011                     | 2010          |  |  |
| Produced water (discharged offshore)                                                              | 91,344                   | 86,925        |  |  |
| Process wastewater (deep injection wells)                                                         | 1,242,659                | 932,934       |  |  |
| Non-contact cooling water (to sea)                                                                | 3,301,622,029            | 2,432,821,231 |  |  |
| Sanitary wastewater (to sea after treatment*)                                                     | 57,284                   | 13,586        |  |  |
| Clean process (e.g. boiler blowdowns,<br>condensate regenerate water) and storm<br>water (to sea) | 813,436                  | Not reported  |  |  |
| Total                                                                                             | 3,303,826,752            | 2,433,854,676 |  |  |

<sup>\*</sup> Sanitary wastewater from all QG facilities (QG1, QG2, QG3&4, LR and RLTO) is sent to the QG1 Sanitary Wastewater Treatment Plant for treatment and subsequently discharged to sea as it does not meet the MoE irrigation water quality standards. The effluent treatment plant is currently being upgraded to a Membrane Bioreactor as part of a Compliance Action Plan agreed with the MoE in order to meet irrigation standards.



More than 99.9% of water abstracted and discharged relate to non-contact cooling seawater, the remaining part being treated sanitary and process water.

The two main water discharge streams, non-contact cooling water and process wastewater volumes increased respectively by 36% and 33% between 2010 and 2011 while LNG production increased by 65% with QG3 and QG4. As a result, water discharge intensities (m³ water discharge per tonne LNG produced) improved by 18% for both process wastewater and cooling water.

Both non-contact cooling water and process wastewater are monitored for quality before discharge or deep well injection to ensure compliance with State of Qatar regulations specified in respective asset CTOs.

### **Biodiversity**

Qatargas recognises that through our operations we are in continuous interaction with the environment and that our onshore facilities in Ras Laffan and offshore platforms may affect the marine and terrestrial biodiversity present in the vicinity of our activities, unless responsible environmental management practices are implemented. We operate in or near ecologically-sensitive environments including:

- the Arabian Gulf which is home to coral reef habitats, seagrass and various wildlife species including endangered species - such as the hawksbill sea turtle, sea snakes, whale sharks and endangered cetaceans (whales and dolphins);
- the Khor Al Udaid (Inland Sea) region, which is a unique, biologically and topographically diverse area of Qatar:
- the Al Thakirah Nature Park in northern Qatar.



Qatargas has been a pioneer in biodiversity and the protection of wildlife and their habitats in Qatar since its inauguration in 1996.

To protect wildlife and their habitats, Qatargas adopts international best practices when planning and implementing projects and in the management of our normal operations. This includes conducting surveys and assessments of plant and animal populations, ecosystem structures and other biodiversity issues such as preservation and habitat effects management as part of our assessments for environmental and other regulatory and financial approvals. Qatargas is a member of the International Petroleum Industry Environmental Conservation Association (IPIECA), and it's Biodiversity Working Group, and we maintain contact with this working group to ensure that we are using best practice in this area at all times.

Qatargas maintains a close focus on all biodiversity projects that we are involved with, including measuring the methodology and success of our involvement in biodiversity projects using a range of methods and key performance indicators.

# Case Study: Qatargas extends successful Coral Monitoring Programme

In October 2006, Qatargas, with the Ministry of Environment (MoE), started implementing a unique environmental programme to save more than 4,500 coral colonies in Qatar's waters close to where the underwater pipeline laying activities related to Qatargas' expansion projects - Qatargas 2, Qatargas 3 and Qatargas 4 have taken place.

The programme involved moving the corals from their existing location to a more suitable area south east of Al Khor. In an operation that lasted over five months, scientists carefully detached the coral colonies from the seafloor, transported them safely to the new location and re-attached them to the seafloor. The corals were then numbered and tagged for future monitoring.

Qatargas has been conducting regular environmental monitoring surveys to determine the success of the relocation programme and establish a baseline for the monitoring of the reef health and viability. The corals are currently monitored every six months, and two successive recent surveys have highlighted that the transplanted corals are beginning to reproduce successfully.

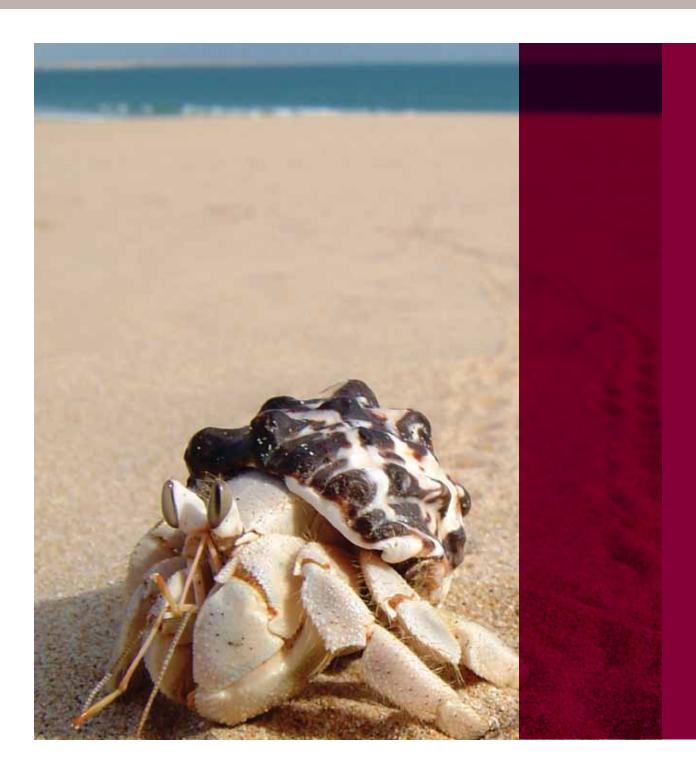
In partnership with the MoE, Qatargas has voluntarily extended this monitoring period for a further three years (starting in 2012) as new and valuable scientific information is gathered at each monitoring session. This extension will provide an on-going assessment of one of the only permanently marked and routinely monitored coral community in Qatar.



# Case Study: Qatargas Team cleans up beach on World Environment Day

On the occasion of the World Environment Day in June, Qatargas' Jetty Boil-off Gas (JBOG) Recovery Project Team organised a beach clean-up drive along a stretch of the Ras Laffan beach. A group of 50 JBOG Project Team members and contractors volunteered to participate in the two-hour long clean-up drive which was supported by the Health, Safety and Environment (HSE) Division of the Ras Laffan Industrial City (RLIC) and some 30 employees from the RLIC branch of Larsen & Toubro, a well-known engineering firm.

The location for the clean-up was behind the Qatargas tank farm area of the northern beach of RLIC. The rationale for undertaking this activity at this location was that it is the nesting season for the hawksbill marine turtles. The Qatargas team chose the low tide period to ensure that there was no possibility of disturbing the turtles coming on the beach to lay eggs. To ensure complete protection for the marked turtle nests along the beach, the clean-up team avoided those areas during the exercise.



For more information about previous protection and conservation programmes undertaken by Qatargas since 1996, please visit www.gatargas.com.ga.

### **Environmental Impact of Transportation**

Transportation for Qatargas activities includes products transportation, air business travel and employee commuting using a fleet of leased buses. As shown in the climate change section, business travel and employee commuting is negligible compared to products transportation. Focus is therefore put on marine transportation of LNG in this section although efforts to improve efficiency in all transportation requirements are constantly evaluated and where opportunities exist they are adopted.

Qatargas shipping department is part of the Commercial and Shipping Group. Under the responsibility of the Shipping Manager, Qatargas Shipping Organisation comprises a Fleet Operation Division Manager (assisted by two Heads of Fleet, one Head of Fleet Coordination, and one Head of Marine Terminals & Fleet Compatibility), a Fleet Planning & Analysis Division Manager, a Head of Ship Contracts, a Head of Marine Risk & Quality, and a Post Construction Division Manager.

Qatargas 1 has a fleet of 11 purpose-built vessels with a capacity of about 137,500 cubic metres, and an additional short-term chartered vessel with a capacity of 126,300 cubic meters. As Qatargas expanded its production capacity, we also looked for opportunities to deliver this new production in a more efficient and environmentally sensitive manner. As a result, Qatargas pioneered the development of two new classes of LNG tankers and built 19 Q-Flex and 13 Q-Max vessels. Each vessel has a 'membrane' type cargo containment system with a capacity of between 210,000 and 266,000 cubic meters. The Q-Max is 80% larger than the Q-Fleet ships and leads to 40% less energy consumption and air emissions per cargo-ton mile compared to the conventional ships.



These new ships have many innovative features to maximise cargo deliveries and to ensure the highest levels of safety, reliability and environmental performance. Among them are:

- Twin engines and shafts to ensure maximum propulsion safety and reliability;
- Slow speed diesel engines which are more thermally efficient than steam turbines and therefore burn
- Cargo re-liquefaction plants return boil-off to the cargo tanks and therefore maximise the cargo outturn at the discharge port;
- Underwater coatings using the latest technology silicon anti-fouling system, which not only enhances the speed and performance of the vessel, but is also "friendly" to the marine environment since it does not release any biocides into the sea to prevent marine growth on the hull.

Additionally, during 2011 Qatargas in-chartered six short term conventional vessels, one of which was upgraded (as part of a joint study between Qatargas and the operator) to install software and flow meters that would enable the vessel to burn gas at port, instead of heavy fuel oil (HFO) and/or marine diesel oil (MDO).

The Qatargas fleet (2011) is summarised in the table below.

#### Qatargas Fleet

| Туре             | Vessels # | Delivery years | Ventures  | Gross capacity<br>(m³) |
|------------------|-----------|----------------|-----------|------------------------|
| Standard Q-Fleet | 11+1      | 1996-2004      | QG1       | 126,300 - 137,500      |
| Q-Flex           | 19        | 2007-2009      | QG2, 3, 4 | 210,000 - 216,000      |
| Q-Max            | 13        | 2008-2010      | QG2, 3, 4 | 263,000 - 266,000      |
| In-Charter       | 6         | 2011-2012      | QG2, 3, 4 | 138,100 - 165,700      |

The environmental effects of Qatargas shipping fleet are summarised in the below table. Data are presented separately for Qatargas chartered vessels (Q-Fleet and In-Charter) and for leased vessels owned by Nakilat (Q-Flex and Q-Max). It should be noted that the data for Nakilat owned vessels are also reported by Nakilat in their own Sustainability Report.

### **Environmental Impact of Transportation**

| Impact                    | Unit | Nakilat owned | Qatargas<br>chartered | Total     |
|---------------------------|------|---------------|-----------------------|-----------|
| Vessels                   | #    | 32            | 17                    | 49        |
| Distance travelled        | Km   | 3,396,289     | 1,890,879             | 5,287,168 |
| Energy use                | Т    | 1,283,751     | 719,208               | 2,002,959 |
| NO <sub>x</sub> emissions | Т    | 111,003       | 22,459                | 133,462   |
| SO <sub>2</sub> emissions | Т    | 86,677        | 14,365                | 101,042   |
| CO <sub>2</sub> emissions | Т    | 3,991,640     | 2,060,283             | 6,051,923 |

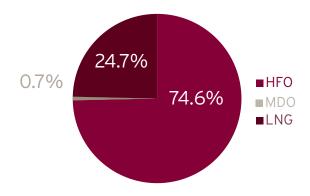
| Impact                                           | Unit | Nakilat owned | Qatargas<br>chartered | Total      |
|--------------------------------------------------|------|---------------|-----------------------|------------|
| CAT2 to CAT6 waste<br>discharged to sea          | m³   | 951           | 264                   | 1,215      |
| CAT1 and other waste incinerated                 | m³   | 343           | 118                   | 461        |
| CAT1 and other waste<br>disposed of ashore       | m³   | 2,482         | 319                   | 2,801      |
| Special waste disposed ashore                    | kg   | 4,334         | 1,008                 | 5,342      |
| Ballast water exchanged<br>and discharged to sea | Т    | 19,162,247    | 9,096,741             | 28,258,988 |
| Refrigerant gas replaced in fridges and HVAC     | kg   | 4,514         | 1,146                 | 5,660      |

The CAT2 to CAT6 wastes include paper products, rags, glass, metal, bottles, crockery, food residues, and certain types of incinerator ash, and are disposed of outside the designated Special Sea Areas and as far as practicable from the nearest land but not less than 25 nautical miles. CAT1 wastes (plastics) and other non-hazardous waste are either incinerated or disposed of ashore. Special wastes include aerosols, batteries, medical, chemical, test gas cylinders, fire hose, and other harmful substances, and are disposed of ashore.

Refrigerant gas includes R404A for fridges and R407C for HVAC. These are not ozone depleting substances covered by the Montreal protocol but are greenhouse gases (hydro fluorocarbons) covered by the Kyoto Protocol.

Energy used includes heavy fuel oil (HFO), marine diesel oil (MDO) and LNG. Distribution of energy use by type is presented in the below graph. The new Q-Flex and Q-Max tankers do not use LNG as internal fuel, accounting for the overall high share of heavy fuel oil.

### Distribution of Energy Use for the Shipping Fleet



Initiatives explored by Qatargas to reduce environmental impact of our LNG transportation include:

- Investigating the feasibility of converting the main engines on the large LNG carriers to use LNG as their main source of propulsive fuel, that would dramatically reduce NO<sub>2</sub>, SO<sub>2</sub> and CO<sub>2</sub> emissions from these vessels;
- Participation into a Joint Industry Project looking into the feasibility of LNG as marine fuel beyond the LNG Shipping Industry;
- Installation of treatment system of ballast water to prevent the spread of invasive aquatic species world-wide as per IMO regulations;
- Investigating options such as dynamic measuring technology, lost energy capture by propeller boss, hull coatings - to improve the overall speed and hull performance of our chartered vessels and thus a reduction in fuel consumption and associated emissions.

# Case Study: Four Qatargas-chartered Vessels receive Green Award

In 2011, Qatargas completed its pioneering environmental initiative of partnering with the Green Award Foundation to develop and launch the Green Award certification of LNG carriers.

Qatargas took the first initiative and supported the Green Award Foundation in launching the LNG certification, and was a key player in developing the actual requirements as well as setting the standards to ascertain the quality level of LNG ships.

In October 2011, the Qatargas chartered LNG vessel "Dukhan" received the world's first ever Green Award Certificate of Recognition for a specific LNG vessel, acknowledging the vessel's compliance with the highest global environment regulations and safety standards for shipping. It was the first time in the Foundation's 18 year history that an LNG vessel had received this Award. This was followed in December 2011 with three more vessels which also received the Green Award.

Green Award certification demonstrates proactive implementation of industry best practices and internationally accepted current and developing legislation with respect to safety in operations, quality management, ship arrangements and protection of the environment. All over the world the Green Award certifies ships, ship managers and oil companies that prove their dedication to the highest quality, safety and environmental standards. Qatargas is proud to be included among that group.



## **Environmental Impact of Products and Services**

Initiatives undertaken by Qatargas to reduce our environmental impacts during production of LNG are described in the previous sections.

No formal initiatives have been undertaken to mitigate the environmental impacts of LNG during use by the final client. However, natural gas offers a number of environmental benefits over other sources of energy, particularly other fossil fuels.

Natural gas is in particular the cleanest of all the fossil fuels, emitting significantly less  $CO_2$ ,  $SO_2$  and  $NO_X$  emissions than oil and coal. Through the production and distribution of LNG, Qatargas is thus participating in the global transition to a less carbon intensive economy.

# **Environmental Expenditures**

In 2011, Qatargas devoted more than 5.5 million USD to environmental related expenditures, as detailed in the below table.

### Environmental Expenditures in 2011

| Category                 | Expenditures in USD |
|--------------------------|---------------------|
| Environmental management | 425,000             |
| Energy Efficiency        | 12,000              |
| Greenhouse Gas Emissions | 295,000             |
| Other Air Emissions      | 1,087,000           |
| Wastewater Treatment     | 160,000             |
| Waste Management         | 3,460,000           |
| Biodiversity Protection  | 148,000             |
| Total                    | 5,587,000           |

# **PEOPLE**

# Management of Labour Practices Aspects

Qatargas has always recognised that its primary strength is the excellence and diversity of its workforce. To that end our management team is tasked with nurturing a corporate culture that both attracts and retains the right calibre of people needed to ensure continued success.

Labour practices at Qatargas are supported by a series of human resources policies and procedures, and are managed by:

- Our Human Resources (HR) Department, directed by the HR Manager and five direct functional Division Heads of Division;
- Our Learning and Development (L&D) Department, directed by the L&D Manager and four direct functional Division Heads;
- Our Medical Department for health aspects, directed by the Chief Medical Officer;
- Our Safety Team within the SEQ Department, directed by the Chief SEQ Officer;
- Our Office of Legal Counsel for legal issues.

In 2011, a key focus on labour practices was put on occupational health and safety, the Qatarisation programme and recruitment strategies.

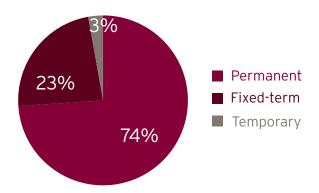
## **Employment Conditions**

Qatargas employed a workforce of 2,755 employees by the end of 2011. In addition, Qatargas used resources from 2,205 supervised workers by the end of 2011.



All Qatargas workforce are full-time employees and 74% of them have permanent contracts. The distribution of the workforce per contract type is summarised in the graph below.

### Our Workforce by Contract Type (as of end 2011)



Turnover remained at comparable levels to previous years, with an overall turnover rate of 3.3% in 2011. This relatively low rate reflects employee satisfaction with regard to their job and work conditions and highlights the company's efforts to ensure retention of skilled and experienced employees. The number and rate of employees leaving the company in 2011 by gender and age group is provided below.

#### Turnover in 2011

| Category        | Number of employees who left in 2011 | Turnover rate |  |
|-----------------|--------------------------------------|---------------|--|
| Male            | 79                                   | 3.1%          |  |
| Female          | 13                                   | 5.4%          |  |
| <30 years old   | 13                                   | 3.6%          |  |
| 30-50 years old | 66                                   | 3.3%          |  |
| >50 years old   | 13                                   | 3.2%          |  |

Qatargas provides its employees with competitive employment packages. Standard benefits provided to our employees include:

- Life insurance (under Qatargas insurance scheme);
- Health care (medical and dental coverage);
- Disability/invalidity (under Qatargas insurance scheme);
- Leave policies (which include annual, sick, compassionate, maternity and paternity leaves);
- Retirement provisions (pension for Nationals and end of service benefits for non-Nationals);
- Education assistance (for primary and secondary school, but currently not for university):
- Accommodation (monthly allowance or residence leased by Qatargas).

Qatargas employees, both male and female, are entitled to parental leave upon birth of a child as per Company policy. In 2011, all female employees entitled to parental leave took maternity leave, and 90% returned to work

afterwards. The one-year return to work rate after parental leave (i.e., the ratio of number of female employees that were still employed twelve months after their return to work divided by the number of female employees that returned to work after maternity leave) was 83% in 2011. Similar statistics are not formally recorded yet for male employees.

Qatargas has no formal retirement plan policy. We have a pension scheme for Qatari Nationals, to which they contribute 5% of the basic monthly salaries.

For non-Nationals, an End of Service Benefit is in place in accordance with Company Policies and Procedures.

### Occupational Health and Safety

At Qatargas, health and safety are core values that lie at the top of our priorities. We are committed to the health and safety of our employees, our contractors and our local communities.

Health and safety dialogues are conducted at different levels of Qatargas:

- At company level, the SHE committee solicits employee feedback through surveys, questionnaires and plant tours. It is composed of management representatives and meets on a monthly basis;
- At inter-department level, the monthly department safety meetings group together representatives of all departments;
- At facility level, the Qatargas 1 asset leadership team meets on a monthly basis and regroups all asset owners.

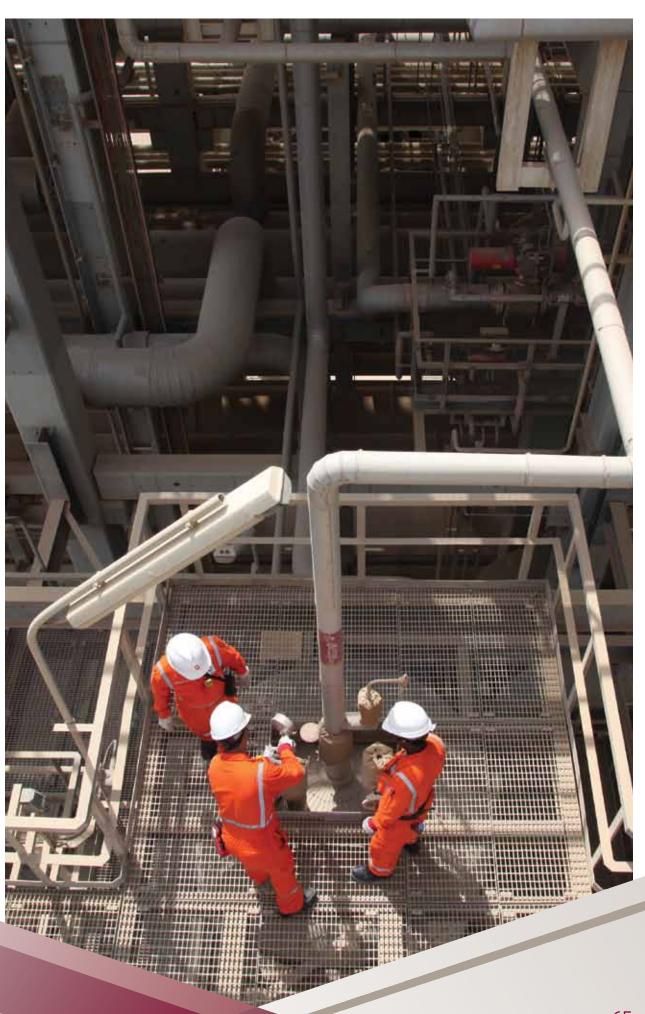
# Safety

The company's Incident & Injury Free (IIF) programme introduced in 2002 has seen over 60,000 employees and contractors both in Doha and in downstream projects around the world, trained in safety principles and practices that firmly state 'everyone has a right and responsibility to speak up to correct an unsafe situation.' The programme is endorsed and supported by the company's management team and is designed to encourage positive safety behaviour both in and outside of worksites.

The programme has driven and continues to drive a change in people's attitude and behaviour towards safety in all aspects of their work. This change is also reflected in our safety statistics for the existing operations which have achieved over eight years without a Lost Time Injury (LTI) onshore and nine years without a LTI in our offshore operations. Overall, both Qatargas employees and contractors have worked a total of more than 51 million manhours since the last LTI. Qatargas employees have worked since 1st July 2002 over 29 million man-hours without any LTI whereas our contractors have worked over 22 million man-hours without any LTI since 26th April 2003.

In 2011 again, no fatalities and no LTIs were recorded for Qatargas employees and contractors for the existing operations within a total of more than 13 million hours worked. In addition, our major projects also reached key safety milestones, with the Plateau Maintenance Project (PMP), the Jetty Boil Off Gas (JBOG), and the Laffan Refinery's Receiving and Loading Facility Project (RALF) exceeding respectively seven, five and three million man hours without a LTI in 2011.

A total number of 15 work related recordable injuries (including cases requiring medical treatment or more and excluding first aid cases) were recorded for Qatargas employees and contractors, leading to a total recordable injury frequency (TRIF) of 1.14, a significant improvement compared to the TRIF of 2.48 achieved in 2010. Our 2011 performance is in addition exceeding that of peer LNG companies which achieved an average TRIF of 1.31 in 2010 based on the Philip Townsend Associates annual benchmark study.



# Case Study: Plateau Maintenance Project achieves Safety Milestone

Qatargas' Plateau Maintenance Project (PMP) has achieved a significant safety milestone as the project's 2000-strong workforce completed three million man hours without any lost time injury (LTI) in August 2011. This LTI milestone was enabled by the project's behavioural based safety observation program which exceeded a 40,000

Mr James Ierubino, PMP Project Manager, commenting on this achievement said: "Keeping our people safe is a continuous and relentless effort. In order to mitigate risks, the team uses 'STOP' observation cards to document safe and unsafe behaviours and conditions. This data is studied thoroughly each week, and mitigating measures are continuously applied based on this analysis and trends. From day one since the Engineering, Procurement and Construction (EPC) contract was signed for the project, the team has focused on applying the Incident and Injury Free (IIF) initiative of Qatargas and the STOP card mechanism, which is a typical proactive activity and leading indicator for a safe workplace.".

# Case Study: Jetty Boil-Off Gas Project celebrates Safety Day

The Qatargas Jetty Boil-Off Gas (JBOG) Project team celebrated in July 2011 its first Safety Day in Ras Laffan Industrial City (RLIC) under the banner "We take care of each other".

Activities of the day were aimed at promoting a safe working environment and the Incident and Injury Free (IIF) culture, and were designed to motivate the workers to work safely.

The event was organized by the JBOG Project Management Team with support from its contractors.

During the safety day the JBOG project management team attended tool box talks and Safety Task Assessments at the project site. Ammico and STFA, contractors for the project, took the opportunity to reward outstanding behaviours of their workers. Senior management from Qatargas, Fluor and RLIC were present on this occasion, and encouraged the workers to remain vigilant and work safely. The management representatives then walked the various project sites to observe for themselves how the safe working message was being delivered. In addition to this a safety exhibition at the site, organised by JBOG project team and contractors, showcased important safety topics with the focus being on hand safety, electrical equipment and fittings, basic first-aid, manmachine interface and conservation of scarce natural resources.

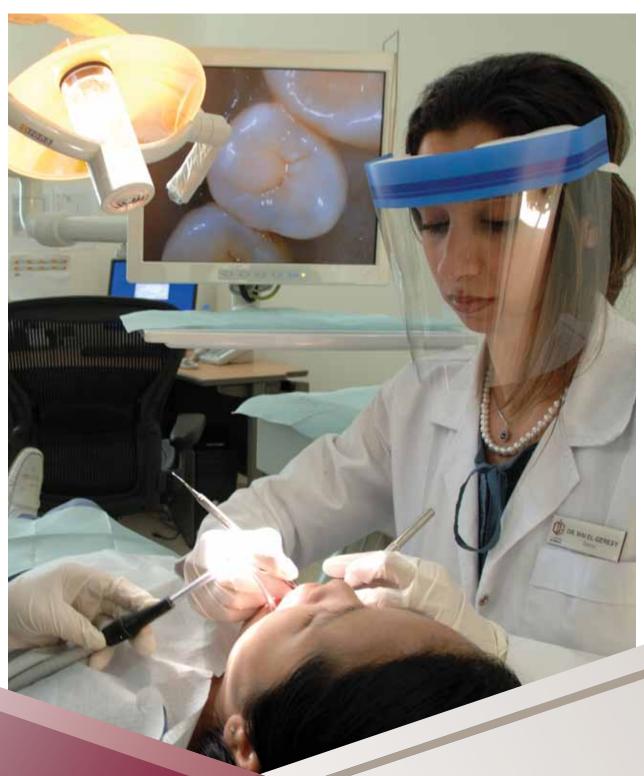


### Health

The health and well-being of our employees is also one of our top priorities. No case of lost time occupational illnesses has been recorded for Qatargas employees or contractors in 2011. Two recordable occupational illness cases were recorded in 2011, primarily related to heat stress.

The total number of sickness absence days for our employees amounted to 3,295 days, representing an average of just over one sick leave day per employee in 2011. This also represents an average of only 275 sickness absence days per month, widely exceeding our target of 688 sick leave days or less per month.

Qatargas' Medical Department aims to maintain and promote the physical, mental, and social well-being of its employees and their dependents by providing a range of quality medical services covering occupational, emergency and primary health care through the efficient and cost-effective management of Qatargas clinics in Ras Laffan, offshore and in Doha.



Contractors working for Qatargas adhere to our high standard of medical, food and camp services for contractors, including in particular mass screenings for our contractor workforce. In 2011, 7,458 medical mass screenings were undertaken for Qatargas project contractors.

Health management at Qatargas is guided by the Occupational Health Protection Policy, Supporting procedures include the Qatargas Industrial Hygiene Procedure, Periodic Medical Examination Procedure and Pre-employment Procedure. The process covers exposure monitoring, hazard recognition, hazard evaluation, health risk assessment and prioritisation, hazard control and medical surveillance.

Health activities conducted at Qatargas include:

- Respiratory protection: indoor air quality, exposure to VOC and sulphur dust, use of breathing apparatus sets;
- Camps, food safety and hygiene: monitoring of food handlers, camp inspection (50 plant, offshore and Al Khor kitchen inspections in 2011), potable water quality check, provision of medical and recreation facilities for the workforce:
- Ergonomics: office/workstation ergonomics assessment, stress/fatigue assessment:
- Hearing conservation: personal monitoring on noise exposure, hearing protection equipment evaluation, boundary noise survey and mapping:
- Heat stress: daily alerts, temperature monitoring, training, monitoring of fitness to work in hot environment:
- Chemicals management: periodic laboratory and warehouse inspection, update of Material Safety Data Sheets database, training in handling of hazardous materials;
- Occupational health screening: annual or bi-annual periodic medical examination (1,800 examinations conducted in 2011), counselling on obese or diabetic employees, pre-placement or return to work from medical condition.

Employees and contractors satisfaction with regard to health services is measured through surveys (such as daily pulse survey for medical and dental services in Doha). Complaints related to health issues are addressed within three working days.

The three priority health challenges identified at Qatargas are heat stress management (see Case Study), respiratory protection and noise hearing conservation. During the first Ras Laffan Occupational Health Forum held on 28 November 2011, Qatargas' Senior Industrial Hygienist made a presentation on the implementation of hearing conservation program, highlighting the importance of this issue for the company. This forum was organized in collaboration with QP Medical Services, QP HSE, Rasgas, Qatargas, Qatar Shell with the theme "Practices and Challenges in Moving Forward Worker's Health and Wellness".

# Case Study: Heat Stress Campaign launched by Qatargas & RLIC

Qatargas and Ras Laffan Industrial City (RLIC) Directorate launched in May 2011 a month-long awareness campaign at RLIC to educate thousands of contractors, employees and visitors, who go through the gates every day, on the dangers of heat stress and dehydration.

The campaign, which carried the slogan "Don't get dehydrated; Drink at least 8 cups of water every day," urged employees, contractors and visitors to RLIC, especially those who are exposed to direct sunlight, to take appropriate precautionary measures to avoid getting dehydrated.

During the campaign, printed literature in multiple languages listing safe practices for preventing heat stress was handed over to those coming through the gates in Ras Laffan, and banners and billboards were erected along the streets of RLIC reminding all to drink water.

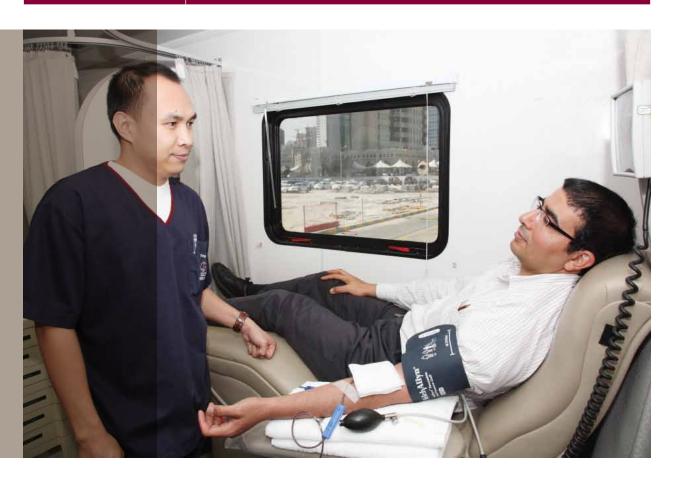
In addition, an in-house weather station has been installed at the Qatargas Plant Medical Centre and provides real-time continuous monitoring on the outdoor dry bulb temperature, relative humidity, heat index, wind speed and direction. This information is uploaded live on the intranet and available to the employees in order to facilitate planning critical work activities such as working at height, in confined spaces or in the open area.



Programmes conducted by our Medical Department to assist workforce members and their families regarding serious diseases are presented in the below table.

# **Health Programmes**

| Type of programmes        | Programme description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |  |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Education and training    | <ul> <li>Heat Stress / First aid / CPR training: 140 sessions with 1,300 participants in 2011;</li> <li>Toolbox talks;</li> <li>Road shows;</li> <li>Email advisory sent to all Qatargas employees;</li> <li>Health awareness workshops and campaigns: 24 workshops, 4 blood donations, one healthy heart campaign to identify cholesterol, hypertension and diabetes with 100 employees and contractors participants in 2011;</li> <li>30 Emergency and Pandemic preparedness drills in 2011;</li> <li>Promotion and set up health food corner in Plant Cafeteria;</li> <li>Medical lectures and health hand-outs distributed to employees and dependents: 9 industrial hygiene educational lectures and 29 hand-outs in 2011.</li> </ul> |  |  |
| Counselling               | One-on-one counselling during primary health care visits and annual periodic medical examination.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |
| Prevention / Risk Control | <ul> <li>Pandemic planning taskforce chaired by HSE Regulations and Enforcement<br/>Directorate (DG) to address potential pandemic risks (e.g., flu H5N1, H1N1).</li> <li>Promotion of healthy lifestyle and eating.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |
| Treatment                 | Primary health services at the plant site and community (Doha and Al Khor Community).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |  |



Qatargas Doha Medical Centre (QDMC) is focusing to continuously raise quality to higher levels and has embarked in earning the coveted Joint Commission International (JCI) accreditation for Primary Care Centres. JCI is the most recognized international accrediting body for quality of health care and achieving the JCI Accreditation Gold Seal of Approval<sup>TM</sup> represents the apex of patient safety and quality care. The QDMC has been preparing intensively in 2011 with the objective to obtain accreditation from the first audit that will be undertaken by the JCI team in 2012.

### **Labour Practices**

Collective bargaining is not allowed by Qatar law. As a consequence, no Qatargas employees are covered by collective bargaining agreements. However we do have systems in place to report and respond to employees' opinions and grievances (see 'Workforce Engagement' section).

In case of significant operational changes that could substantially affect employees, such as restructuring, outsourcing of operations, closures, expansions, new openings, takeovers, sale of all or part of the organisation, or mergers, notice is provided to impacted employees at least one month prior to the change, as stipulated in employment contracts, the Employee Relations Policy and the End of Service Benefits Policy.

### **Diversity and Equal Opportunity**

Diversity, discrimination and harassment are covered by the Qatargas' Employee Relations policy.

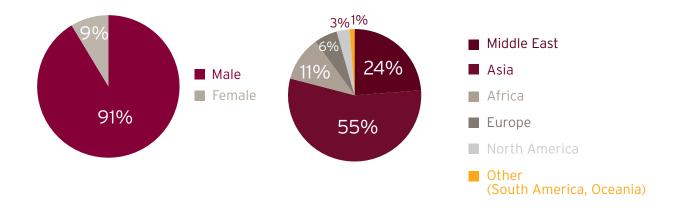
Qatargas employees are a diverse group of individuals representing more than 55 countries from all continents. As we continue to grow, one of our goals is to ensure that we are doing the best job possible in integrating new employees into the Qatargas culture. We want to take full advantage of the diverse set of experiences and ideas these people bring to us.



The distribution of the total workforce and of governance bodies members per gender, age and region of origin is provided in the below table and graphs.

### Our Workforce by Indicators of Diversity

| Category        | Employees # | Percentage | Governance Bodies<br>Members # | Percentage |
|-----------------|-------------|------------|--------------------------------|------------|
| Male            | 2,515       | 91.3%      | 28                             | 100%       |
| Female          | 240         | 8.7%       | 0                              | 0%         |
| <30 years old   | 362         | 13.1%      | 0                              | 0%         |
| 30-50 years old | 1,985       | 72.1%      | 14                             | 50%        |
| >50 years old   | 408         | 14.8%      | 14                             | 50%        |
| Middle East     | 659         | 23.9%      | 9                              | 32%        |
| Asia            | 1,521       | 55.2%      | 8                              | 29%        |
| Europe          | 154         | 5.6%       | 5                              | 18%        |
| North America   | 95          | 3.5%       | 6                              | 21%        |
| South America   | 16          | 0.6%       | 0                              | 0%         |
| Africa          | 296         | 10.7%      | 0                              | 0%         |
| Oceania         | 14          | 0.5%       | 0                              | 0%         |



Equal opportunity is ensured for all Qatargas employees, and no difference is applied on the basis of gender, age or origin. As an example, salary grades and basic salaries, including minimum amount paid, are the same for male and female employees.

# Case Study: Qatargas launches 2011 'Women In The Workforce' Initiative

Qatargas launched in March its 2011 'Women in the Workplace' Initiative programme for female Nationals in Qatar. Hosted in its Headquarters in Doha, Qatargas invited female Nationals, from sectors of local business, to join Qatargas female employees, for the opportunity to be guided through 'what works well' in the corporate world, in a three day program delivered by women for women.

Nicky Rudge, Qatargas' Learning & Development Manager and programme facilitator was delighted by the support shown for the first 2011 session and she added: "This Initiative unlocks the mysteries of organisational politics, and helps women build the many different skills they need, and the confidence to work effectively, in the world of business. The feedback was extremely encouraging and very positive."

To support one of the State of Qatar's National Pillar's, 'Human Development', as a part of the Qatar National Vision 2030 and as a member of the Training & Development Liaison Committee (TDLC), Qatargas has developed this specific program to support the Energy & Industry Sector's 'Women In the Workforce' initiative where participants have the chance to understand the business case, learn how to tackle the 'glass ceiling effect', get the right work life balance and have the ability to plan their professional and business goals.

Three workshops were held in March, June and October 2011, during which Qatargas participants were joined by female Nationals from other companies in the Energy & Industry (E&I) sector including Qatar Petroleum, RasGas, Maersk, Qatalum, Qatar Electricity, Conoco Philips, Dolphin and Q-Chem.



Discrimination is addressed in the Code of Business Ethics Policy and the Employee Relations Policy. Qatargas is committed to providing an environment that enables all employees to pursue their careers free from any form of discrimination.

Qatargas recruits its personnel solely on the basis of its requirements and the qualities of individual candidates relevant to the company's needs. Neither Qatargas, nor any employee, nor any person acting on behalf of Qatargas shall discriminate against any person with regard to employment or because of the race, religious beliefs, creed, colour, sexual orientation, physical disability, mental disability, marital status, age, ancestry or place of origin. Discrimination is not tolerated and Qatargas takes necessary actions to avoid discrimination in the work place. No incident of discrimination was reported in 2011.

## Training and Development

## Training

Qatargas has a Learning & Development Policy that sets out procedures to follow, selection criteria for embarking on training, and fees, allowances, etc. associated with attendance. Qatargas offers training based on assessed competence gaps, at all levels of the organisation.

Training programmes include soft skills courses to address the competence gaps to build core competences (mapped to our core values) and job generic competences. These courses are brought in-house on an annual basis by the L&D Department.

For technical / discipline specific training, line supervisors assess technical competence gaps and recommend training for individuals who have technical development needs. Training is then procured by the L&D Department Skillsoft e-learning courses (technical and soft skills related) were made available to employees in 2011. They are competence based learning packages allowing staff to learn at their own pace with assessment towards the end of each e-learning course.

Lunch and Learn sessions (short one hour sessions conducted during lunch time) were also delivered by members from various departments in Qatargas and coordinated by L&D Department. These sessions helped employees in Qatargas to learn about the various activities and gain awareness of the main processes performed by each department enabling employees to understand how the different groups within Qatargas function and interact to deliver business results.



Training hours provided to Qatargas employees in 2011 and related costs per employee category are presented in the table below. More than 62,900 hours of training were provided in 2011, a 25% increase compared to 2010. The average number of training hours per employee trained amounted 40 hours (compared to 23 hours in 2010), representing five days per person, per year.



Total cost for training provision was approximately 10.9 million Qatar Riyals in 2011.

#### Training Hours and Costs in 2011

| Employee category  | Number of<br>employees<br>trained in 2011 | Number of<br>training hours | Average training<br>hours per<br>employee | Cost of training<br>in QAR |
|--------------------|-------------------------------------------|-----------------------------|-------------------------------------------|----------------------------|
| Senior Management  | 37                                        | 1,166                       | 31.5                                      | 185,500                    |
| Middle Management  | 89                                        | 3,384                       | 38.0                                      | 607,250                    |
| Professional       | 735                                       | 26,269                      | 35.7                                      | 5,585,500                  |
| National Graduates | 74                                        | 5,868                       | 79.3                                      | 1,336,000                  |
| Trainees           | 14                                        | 3,048                       | 217.7                                     | 506,000                    |
| Technical          | 466                                       | 14,981                      | 32.1                                      | 1,735,500                  |
| Clerical           | 168                                       | 8,232                       | 49.0                                      | 976,000                    |
| Total              | 1,583                                     | 62,948                      | 39.8                                      | 10,931,750                 |

Qatargas is a young company, in growth mode, and therefore has not yet had to deal with transition assistance programmes to support career endings. Specifically, there is to date no outplacement programme/policy, including retirement planning. However, there is a retirement bonus, of 3 months' final basic salary, for expatriate employees on indefinite contracts who reach retirement age (60 years).

# Performance and Career Development

Qatargas' performance review process is undertaken as follows:

- At the beginning of each year, our Leadership Team adjust the Business Plan and create Corporate Key Performance Indicators (KPIs) that will drive delivery of the required results. Each COO creates their personal KPIs / objectives from the Corporate KPIs, which are then cascaded down, through the Department Managers, translating them into personal objectives for every employee;
- The Leadership Team and Department Managers submit progress updates to our Corporate Planning Department on a quarterly basis;
- At mid-year, a directive is issued that requires every employee to have a mid-year review against their
- At the end of the year, everyone is required to hold an end of year appraisal discussion with their line supervisor, discussing completion of their objectives, and demonstration of the Qatargas core and job generic competences;
- For people who do not achieve their objectives, or demonstrate core and job generic competences, there is a mandatory Performance Improvement Plan (PIP) process, governed by our Employee Performance Management Procedure.

Regarding career development review, Qatargas has a talent management and corporate succession plan process consisting of the following elements:

Assessment of consistent strong performers against three key indicators of potential (thinking,

- delivering and influencing skills). Those assessed with potential to progress to higher levels in the organisation become part of the Qatargas Talent Pool;
- Within the corporate succession planning process, each Group's Leadership Team identify their key / critical roles and map potential successors, from the Talent Pool;
- Career development plans are created for members of the Talent Pool to help them accelerate their leadership and technical skills so they can be ready to progress to a number of roles in the corporate succession plan;
- The status of the career development plans for members of the Talent Pool and the risks and mitigating activity associated with key/critical roles are reviewed and discussed by the Leadership Team bi-annually.

In 2011, 2,319 employees (out of 2,755) were required to have an appraisal - secondees, National graduates, trainees, and some employees on special assignment being exempted. 98% of the concerned employees received a formal appraisal and review per above scheme in 2011, representing 83% of all Qatargas employees.

# Case Study: Learning & Development Soug

A total of 416 Qatargas' employees attended the two Learning & Development Sougs organised in Doha on 28 - 29 March and in Ras Laffan on 1 - 2 November 2011.

During these sougs, employees were able to:

- explore why strategy, Vision 2015 and tracking our progress is key for each part of Qatargas;
- understand how corporate strategy drives the business performance plan and how those plans are translated into objectives;
- understand objectives lifecycle and the importance attached to the way those objectives are delivered;
- have a clear idea on QG competence management tool and how each piece fits into the puzzle;
- understand the importance of their development as an employee in Qatargas and what competences they need to build;
- discover what is available to help them be part of our organisation's journey to success.



#### **Development of Qatari Nationals**

We are committed to building a competent and successful National workforce within Qatargas reflective of the skills and talents required to meet our business objectives.



To this end, a Qatargas Competency-based Development Programme has been implemented which focuses on progressing National graduates to become fully qualified professionals by following an Individual Development Plan (IDP) and National trainees to follow an Individual Training Plan (ITP) before they move into an established position. We have also developed a system for rewarding and recognising Nationals for special contributions, with awards such as 'Best National under Development' and 'Best National under Training'.

Qatargas has initiated several other programmes to support the development of Qatari National workforce, including:

- A high quality National Development Programme in order to meet its business objectives in this area;
- Continuing Professional Development Qatargas supports all ambitious National graduates seeking international recognition by registering them with specific international professional institutions;
- Scholarships and sponsorships at leading international universities and colleges in Qatar and abroad, in specialized disciplines which are critical for Qatargas' business success;
- Development opportunities offered through a TAFE programme for operators and technicians, and the clerical preparatory programmes for non-technical National candidates;
- Summer internship at various departments in Qatargas for local school and university students in a bid to acquaint young Nationals with practical work experience as a prelude to embarking on a lifetime career.

Qatargas also proactively participates in the country's annual Qatar Petroleum (QP) Career Fair, and our engagement continues to draw a large number of aspiring Qatari graduates from a variety of professional and technical disciplines who display a keen interest in the LNG sector.

Targets have been specifically developed at departmental level consistent with planned staffing through to 2017.

# Case Study: Qatargas CEO Forum 2011 helps Nationals to Develop

The annual Qatargas CEO Forum 2011 for National Graduates and Trainees organised by the Learning & Development Department was held in June and focused on the development of Qatargas' Qatari National employees, and their contribution towards achieving the company's Vision 2015.

During this Forum the Qatargas CEO Khalid Bin Khalifa Al Thani stated that: "Today, here in Qatargas there are many unique opportunities for our employees, whether Nationals or expatriates, not only here in Qatar, but also overseas, to realise their potential. For our Qatari young professionals they are encouraged to take this responsibility towards our company Vision 2015 and in turn, play their role in the wider Qatar National Vision 2030."

Commenting on the event, Ghanim Al Kuwari, Qatargas Chief Operating Officer - Administration, said: "The Forum seeks to increase understanding and awareness of company issues among the National graduates, and to encourage graduates and trainees to contribute to addressing the needs of the company. The Forum is also designed to encourage young Nationals communicate issues and suggestions that will enhance the process of National training and development in the company."



## Workforce Engagement

# **Employee Engagement Strategy**

Components of our employee engagement strategy include:

- Town Hall Meetings (annual): The CEO and leadership team hold an open event, where all employees are invited to hear the leadership team talk of the progress against the business plan and then answer any questions from the floor;
- Gala Dinner (annual): The CEO and the leadership team invite every employee and their spouse to attend a prestigious event where they thank everyone for their efforts in the preceding year, present recognition awards and provide entertainment to celebrate the company's success;
- CEO Forum for National Trainees and Graduates (annual): The L&D Department invites all National Graduates and National Trainees to a Forum to meet and interact with the Leadership Team;
- Qatarisation Forum for National Trainees and Graduates (quarterly): The L&D Department invites all National Graduates and National Trainees to quarterly Qatarisation Forums to meet and interact with **Qatarisation Team members:**
- Employee Opinion Survey (every two years): Our third Employee Opinion Survey was undertaken by a third party in 2011. Key themes identified facilitated senior management sponsorship of a programmatic approach to address concerns;
- 'Ask the CEO' website: On the company intranet, every employee has the opportunity to submit their questions to the CEO and receive a response;
- Premier Leadership Events PLE (quarterly): Events planned and facilitated by the Corporate Planning Department, for the leadership team and their department managers;
- Group Performance Reviews (quarterly): Each COO holds a day, after each PLE, for their employees, to further the cascade of company progress, specific Group issues and for team-building initiatives;
- Departmental Away-Days (quarterly): Most department managers hold away-days for their Groups to focus on departmental KPIs and internal issues;
- Translating Words into Action Vision 2015: A special series of events are held, hosted by the CEO and the COOs of each Group, to engage with employees on the Corporate Business Plan and the journey to achieve our 2015 Vision.

Moreover, every year Qatargas recognizes its long-serving employees at a special ceremony (see Case Study).

# Case Study: Qatargas recognises 247 Long-Serving Employees

Qatargas has recognised some of its long-serving employees at a special ceremony in which certificates of appreciation and gifts were presented to 247 staff members who have completed fifteen, ten or five years of service with the company.

Khalid Bin Khalifa Al Thani, Chief Executive Officer, Qatargas, who awarded the certificates and gifts to the employees in the ceremony, said: "Reaching the milestone of Long Service is testament to the commitment of our employees to Qatargas and to their invaluable contribution towards our company's achievements. In giving this award, I, along with my Management Leadership Team, recognise the contribution that our long serving employees made to our journey to become the premier LNG Company."

He urged the long serving employees to carry on the knowledge, to pass on their valuable expertise to all new joiners of Qatargas, and use their wealth of knowledge to assist them in their early years of working.





# Employee Opinion and Grievance

During the induction process, all new hires are acquainted with the Qatargas policies relating to employee rights and privileges and channels to address grievances and concerns.

Employees are encouraged to speak out without fear of retaliation on any issue concerning them as a preface to Town Hall meetings, quarterly performance review meetings, employee surveys, and other channels of communication. Women's Forums, annual Trainee and Graduate Forums encourage active and honest feedback on issues of concern to the parties involved.

Employees are also provided with an anonymous "hot line" to the CEO through the intranet portal enabling them to raise any issue or concern to the highest level with a defined and guaranteed response time. Employees have the right to appeal against disciplinary action for dismissal and to escalate grievances to higher authority within Qatargas.

This non-retaliation and grievance system covers all Qatargas employees. Approximately 100 issues were raised through this system in 2011. Common issues related to salary, accommodation, work organisation, communication, and performance management. Key issues raised and action steps taken to address them are summarised in the table below.

#### Key Issues Raised by Employees in 2011

| Key issues raised by employees | Actions steps taken to address these issues                                                                                                                                                                                              |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Salary Management              | Ongoing benchmarking of Qatargas position in Qatar and regional markets.                                                                                                                                                                 |
| Accommodation Issues           | Consideration through the Housing Committee.                                                                                                                                                                                             |
| Work organization              | Benchmarking studies; managing ineffectiveness of some processes<br>through implementing a Management Systems Initiative driven by a<br>full time taskforce; upgrading certain systems and technologies.                                 |
| Communication                  | Established communication values; creating annual communication plans; developing communication training; strengthened communication procedures; creating internal key messaging package to ensure internal communication is consistent. |
| Performance Management         | Awareness campaigns to all Supervisors on the issue of Performance<br>Managing and how ranking is given to employees; Ranking sessions<br>run with the various groups to ensure ranking is done in a fair<br>manner.                     |

Most issues were resolved through facilitated face-to-face negotiations with the parties concerned by Personnel Administration. Other more complex cases required additional involvement by medical, audit, legal, and other internal resources with special and relevant expertise. Certain cases requiring sanctions against the employee are conducted in confidence with all due process and a series of scaled sanctions are applied.

# Case Study: Qatargas holds Town Hall Meetings to discuss Employee Concerns

Qatargas has held recently its annual Town Hall meetings that provided an open forum for the staff to discuss with senior officials of the company the challenges facing them both at work and away.

Welcoming the staff to the meetings, Khalid Bin Khalifa Al Thani, Chief Executive Officer, Qatargas, said the annual event is aimed at reinforcing the open communications policy adopted by Qatargas at every level: "Through this forum, we seek to address any issues concerning our employees who are the cornerstone of our success. This is very crucial for us as we move ahead with our vision to become the world's Premier LNG Company by 2015," During the meetings, employees from all departments have put forward their suggestions, asked questions and openly communicated on a wide range of issues.



# SOCIETY

## Management of Society Aspects

Society aspects at Qatargas are covered by the:

- Social Investment Policy and Procedure for social and community investment activities;
- Code of Business Ethics Policy and other company procurement, contracting and financial policies for corruption, anti-competitive behaviour and legal compliance aspects.

Social investments are managed by the Public Relations Department, and the Code of Business Ethics Policy is managed by the Chief Operating Officer - Administration.

## Local Community Impacts and Engagement

Qatargas is committed to the development and capacity building of northern communities of Qatar, and to managing any impact of its activities on the community. Qatargas has established a partnership with Ras Laffan Industrial City (RLIC) and Qatargas' peer RLIC-based producing companies to support the northern communities through the Ras Laffan Industrial City Community Outreach Programme (RLIC COP).

The Ras Laffan City Community Working Group was established to work with the RLIC fence line communities to implement and conduct the RLIC COP. The mandate for the group's work is outlined in the RLIC COP charter. The working group consists of members from the end-user companies within RLIC: Qatargas, RasGas, Qatar Petroleum, ExxonMobil, Qatar Shell GTL, Dolphin Energy, and ORYX GTL.

The purpose of RLIC COP is to coordinate and align the community engagements of RLIC and the RLIC COP member end-users with the Al-Khor, Al Thakira and other Northern Qatar communities. RLIC COP vision and objectives are to create a respectful, trust based partnership between industry and the community.

The community outreach office serves as the link between the industry and the community. It is an information centre that provides the community with regular updates about the latest activities of the RLIC, it offers development and capacity building opportunities and holds educational and social events that bring together all community members.

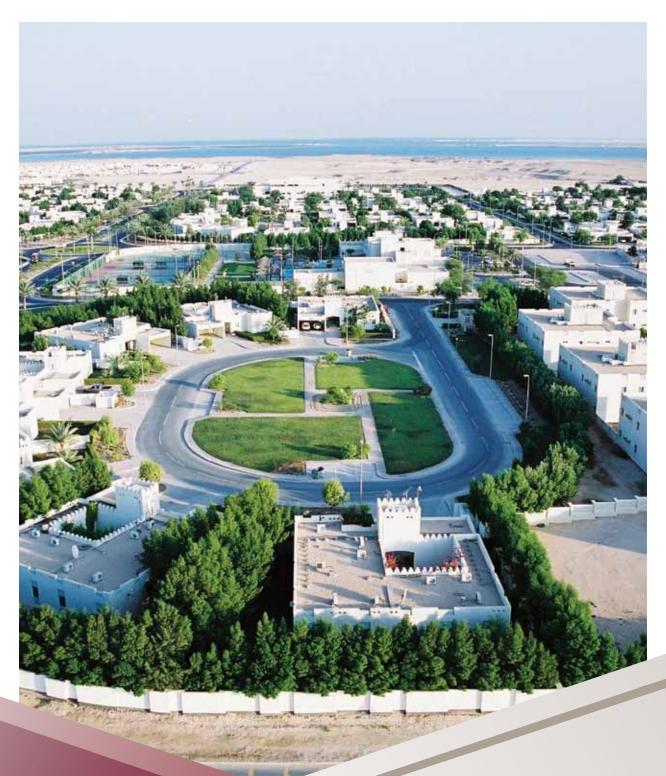
In order to achieve a better understanding of various perspectives of the community and reach some form of consensus, the RLIC COP has partnered with the Living Earth Foundation (LEF) - an international non-profit organisation, specialised in working with people to resolve their environmental and social concerns - to conduct a community needs assessment to help identify community issues and development opportunities.

This assessment has helped Qatargas develop strategies and policies to address the issues expressed by the local community at large, and the northern community specifically, as shown in the below table.

#### Community Issues and Related Solutions

| Community issues identified                                        | Solution implemented                                                                                                                                                                       |
|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Air quality and impact on respiratory health                       | Flare reduction and the Common VOC project as well as the development of the GHG Management Strategy.                                                                                      |
| Waste management in the northern area of Qatar                     | Development and implementation of waste management policy and procedures.                                                                                                                  |
| Influx of expatriate labour force in the northern<br>area of Qatar | Careful and sensitive management of access by large<br>numbers of construction workforce to local towns and<br>the provision of buses for employees and contractors for<br>transportation. |
| Business opportunities, local content and job opportunities        | Annual career fair for the public and specific fairs held in<br>all the universities in Qatar.<br>Prioritising local companies in the supply procedures and<br>policies.                   |

| Community issues identified                                              | Solution implemented                                                                                                                                                                                                                                                                                                                               |
|--------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Lack of communication and transparency<br>between community and industry | Increased communication in local publications. Increased close interaction with the local community through events such as career fairs and environment fair, as well as regular face to face meeting with local community representatives with the RLIC COP. The RLIC COP office also serves as the link between RLIC and the northern community. |
| Capacity building of local community                                     | Development of Social Investments Programme and Policy.                                                                                                                                                                                                                                                                                            |



## Indigenous People and Involuntary Resettlement

No incidents of violations involving rights of indigenous people were reported in 2011.

Qatargas has no formal policies, programmes and/or procedures with regard to involuntary resettlement. No case of involuntary resettlement was required by the company's activities in 2011 and there is no future plan involving involuntary resettlement.

#### Social Investment

Qatargas developed and implemented in 2010 its Social Investment Policy with the objective to outline the reasons for Qatargas social investment programme and describe the operation and delivery of this programme including attracting, reviewing, developing, awarding and monitoring of the social investment projects and corporate sponsorships undertaken by the company.

This policy governs all of Qatargas operations both in Qatar and internationally and will help Qatargas to be recognised and accepted as a conscientious, responsible and responsive corporate citizen.

Focus themes and areas of the social investment programme for the period 2010 - 2012 include education, community (especially Ras Laffan Industrial City and northern communities) and environment. Evaluation criteria have been developed to ensure that the best possible projects are supported by the company. Qatargas is supporting QNV 2030 through these strategic corporate social responsibility programmes.

In 2011, sponsorships and donations as part of our social investment programme - including school donations, road safety campaigns, sports and events sponsorships, and donations to local NGO's - exceeded 6.9 million Qatar Rivals.

# **Health and Safety Support**

Ensuring the health and wellness of our own employees is an on-going priority for Qatargas.

Our commitment to a healthy and safe living extends to the community around us as well. We contribute to both major and minor programmes and events that benefit the community, including the Qatar Diabetes Association, the Al Noor Institute, Hamad Medical Corporation and the Supreme Council for Family Affairs.

Qatargas has also extended in 2011 its support to the US-based Children's Brain Tumour Foundation (CBTF) and participated in its annual benefit dinner organised by the charity in New York City. The CBTF is a non-profit organisation, founded in 1988 to improve the treatment, quality of life and the long term outlook for children with brain and spinal cord tumours. The CBTF will offer various kinds of support to Qatar National Cancer Society (QNCS) including educational support to families. The QNCS will also benefit from the 'Children's Brain Tumour Tissue Consortium' which is a new multi-institutional research project, initiated by CBTF.



In February 2011, Qatargas made a financial contribution to the Qatar Cultural Social Centre for the Deaf as a gesture of support for the Center's activities which focus on caring for people with hearing challenges.

For the past several years, Qatargas has been organising blood donation campaigns for its employees and contractors in cooperation with Hamad Medical Corporation. Four such campaigns were held in 2011 at Ras Laffan and in Doha.

As in the past few years, Qatargas also continued its sponsorship of the road safety campaign organised by the Ministry of Interior, Traffic Department in 2011 (see Case Study) and of the 27th GCC Traffic Week, which is a continuation of the company's efforts in this area.

Qatargas also participated in the road safety awareness drive organised by the Doha English Speaking School (DESS) as part of the annual DESS safety event whose theme this year was road safety. Some 600 students in the agegroup of 6 - 12 years took part in the drive during which they were made aware by a team of safety experts from Qatargas of how using seat-belts can save lives in the event of a vehicle's roll-over, using our road safety roll-over simulator.

Also in March-April, Qatargas participated in the Ras Laffan Industrial City Road Safety Campaign targeted at the schools in the North of Qatar. Over 23 schools from the North participated in this event.

Qatargas has also conducted road safety awareness drives in various cultural and sports events such as the Qatar Ladies Open Tennis Championship and the Commercial Bank Qatar Masters' Golf Tournament.

# Case Study: Qatargas sponsors Road Safety Campaign

For the fifth consecutive year, Qatargas partnered with the Ministry of Interior's Traffic Department to raise road safety awareness, on a national level, in a bid to significantly reduce the number of accidents and casualties on Qatar's roads.

The campaign which kicked off on the first day of Ramadan included many activities spread throughout the holy month of Ramadan and beyond, targeting a wide audience, with special focus on children and families. In order to minimise the likelihood of accidents happening at sunset time when drivers hurry to get home to break their fast, the traffic police personnel distributed gift packs containing dates and water to motorists at several locations in and around Doha, so they could avoid the 'last minute' rush. Information booklets about safe driving were also included as part of the pack.

Mid-way through Ramadan, Qatargas supported a "Karangawu" night celebration, organised by the Traffic Department at a shopping mall in Doha. The event included theatre plays, traditional Karangawu songs, and games that focused on children's safety on the road. The participants received bags of sweets and gifts. Karangawu goodies and children's toys were also distributed to children at the Hamad hospital.

In a bid to educate motorists on the need to buckle up their newborns, the Traffic Department distributed infant car seats to parents of new-born babies at Hamad Hospital in Doha.

Also as part of the campaign, a TV commercial produced by Qatargas entitled 'Speed Kills' was played in cinemas at several malls in Doha.



## **Education Support**

Qatargas is promoting engineering in Qatar through supporting educational programmes and platforms that focus on the development of the engineering field in Qatar. We are supporting education in Qatar as a major employer and contributor to the country's economy.

Since 2004, Qatargas has been the proud sponsor of the Chair of College of Engineering at Qatar University. Qatargas is also one of the founding members of the Gas Processing Centre established in 2007 to address the problems, challenges and opportunities facing the State of Qatar's gas processing industry.

Donations and sponsorships for a number of education institutions were made through 2011, including Carnegie Mellon University, Texas A&M University, the Supreme Education Council, the Higher Education Institute, Al-Noor Institute and Qatar University.

# Case Study: Qatargas supports Special Needs School

Qatargas kicked off 2011 with a financial contribution to the 'Audio Education Complex', a special needs school in Doha, in support of the school's activities and programmes for this year.

The donation forms part of Qatargas' Corporate Social Responsibility values to support education, especially that of individuals with special needs.

Commenting on the initiative, Mr. Ghanim Al Kuwari, Chief Operating Officer - Administration, Qatargas, said: "Social investment is one of the core priorities at Qatargas and we are happy to support this prime educational institution which caters to the needs of a very significant segment of our society - children with special needs." Qatargas also extends support to a number of special needs centres across Qatar. Our investment empowers rehabilitation programmes and enables a variety of skill-based trainings to be conducted for people with special needs.

We believe in the power of education and are passionate about investing in the future. Qatargas' Process Engineering and Environmental Affairs Division regularly carry out educational seminars for students on energy and environmental related themes. Qatargas' Learning & Development team regularly visit local schools to offer training and internship opportunities to promote Qatargas as the employer of choice amongst young Nationals.



# **Events Sponsorship**

Qatargas organised and sponsored several sports and cultural events in 2011 including:

- the 13th Qatargas open Golf Tournament;
- the Women's Tennis Association championship;
- the Sony Ericsson Tennis Open;
- the Commercial Bank Qatar Masters Golf Tournament (see Case Study);
- the Doha Oilmen's Golf Tournament;
- the Eid carnival organised by Qatar Sports Club;
- the National Day Celebration in Al Khor (see Case Study).



Qatargas is also a proud supporter of Qatar's Paralympics Committee. We made financial contributions to the Committee, to help prepare a multi-purpose sports hall for the athletes who will compete in various games at regional and international levels.

# Case Study: Qatargas supports Commercialbank Qatar Masters

Qatargas marked its sixth straight year as a sponsor of the Commercialbank Qatar Masters which was staged at Doha Golf Club in February 2011. Qatargas saw the \$2.5 million European Tour event coming again to Qatar as continued recognition for the State being acknowledged as a major player in the global sporting world. Sheikh Khalid Bin Khalifa Al-Thani, Chief Executive Officer of Qatargas said: "For the sixth consecutive year Qatargas is pleased to be associated with this prestigious tournament hosted by Commercialbank. Our continued support to this particular event stems from our company's social responsibility strategy 2011 of which a part seeks to encourage, through our support, the holding of sports and cultural events in Qatar, adding value to our State's successful efforts in turning Qatar into a major sporting and cultural destination."



# Case Study: Qatargas supports National Day Celebrations in Al Khor

Qatargas has extended support to Qatar's National Day celebrations in Al Khor, organised by the Al Khor and Al Dhakhira Municipality, which organised a series of cultural activities and contests for children and community members on this auspicious occasion on 17th and 18th December 2011.

Expressing the gratitude of Al Khor and Al Dhakhira Municipality to Qatargas, Hamad Ali Al Muraikhi, Director of Public Affairs at Al Khor and Al Dhakhira Municipality, said: "We are thankful to Qatargas for their whole-hearted support and cooperation with the Municipality in organising this celebration, which we all cherish as a matter of national pride. We are holding several festivities to mark this occasion including children's contests, workshops, cultural shows, theatre plays, competitions for women, exhibition and many other events that promote patriotism. Qatargas' support will go a long way in making this celebration very enjoyable and appealing to the community members."



#### Relief Assistance

Qatargas employees have made a financial contribution in support of the Qatar Red Crescent's (QRC) campaign to deliver aid to the victims of the drought and famine in Somalia. According to the United Nations, nearly 12 million people across the region needed food aid. The drought, which is said to be East Africa's worst for 60 years, has claimed tens of thousands of lives. Mr. Mansour Rashid Al-Naimi, Qatargas Public Relations Manager handed over the cheque to Mr. Adel Ali Al-Baker, Director of QRC Secretary General Office during a brief ceremony held at Qatargas' Doha headquarters in early October.

In December 2011, Qatargas itself made a donation to Qatar Charity in support of the famine victims in Somalia, which included funds raised at the 13th Qatargas Golf Open, apart from an additional Qatargas contribution. A cheque to this effect was handed over by Mansour Rashid Al Naimi to Ghanim Jaber Al Kubaisi, Public Relations and Fund Raising Director at Qatar Charity.



## Corruption

Qatargas has operations primarily in Qatar and in other countries where the risks associated with bribery and corruption are deemed limited. Qatargas implements appropriate policies and controls with regard to bribery and corruption. However, no Qatargas operations have been formally analysed for risks related to corruption so far.

The Code of Business Ethics Policy provides general rules and requirements to ensure fiscal integrity. The Ethics Policy also states that employees shall neither offer nor accept any bribe in the form of either money or anything else of value for the purpose of improperly obtaining or receiving favourable treatment.

The Ethics and Conflict of Interest Committee (ECIC) is mandated to assess and investigate actual or potential situations of bribery or corruption. ECIC reporting process provides mechanisms for reporting and following up violations. Violations of the Code of Business Ethics Policy or any other company policies can lead to criminal or civil proceedings and/or disciplinary actions including termination of employment.

No formal anti-corruption training and awareness programmes are in place at Qatargas to date. However, ECIC has conducted training sessions on ethics policy and an online ethics training program was developed by ECIC and the Learning & Development Department and posted in Qatargas intranet end of 2011. In addition, various course materials and resources on 'Anti-corruption' are now available to Qatargas employees via skillsoft e-learning.

Company contractors and suppliers are expected to adhere to a code of conduct equivalent to Qatargas' Ethics Policy. Company contract employees are required to complete the annual Conflict of Interest Declaration and annual Certification Statement. Business ethics provisions are incorporated in all significant company contracts.

No employees were dismissed or disciplined for incidents of corruption in 2011, and no contracts with business partners were terminated or not renewed due to violations related to corruption. No legal cases regarding corrupt practices were brought against Qatargas or its employees in 2011.

# **Public Policy**

Qatargas is liaising with appropriate authorities and consultants when exploring new products markets especially when associated with terminal construction. Qatargas was not involved in significant public policy development and lobbying activities in 2011.

Contribution to political parties is not allowed as per Qatargas' Ethics Policy.

#### **Anti-Competitive Behaviour**

Qatargas has implemented a firewall rule and procedure and performs regular monitoring and audit to ensure avoidance of anti-competitive behaviour.

No legal actions regarding anti-competitive behaviour and violations of anti-trust and monopoly legislation were brought against Qatargas in 2011.

#### Compliance with Laws and Regulations

Qatargas' Ethics Policy states that it is the company's policy to conduct its business in compliance with all laws, regulations and other legal requirements applicable to the company in whatever world jurisdiction we are doing business.

Employees are requested to take reasonable care to acquaint themselves with and to comply with all applicable laws, regulations and Company Policies and Procedures. Each Employee is charged with the responsibility of acquiring sufficient knowledge of the laws involved in each area relating to his or her particular duties in order to recognize potential dangers and to know when to seek the advice of in-house legal counsel.

Under Qatari Law, Qatargas is obligated to report to the appropriate State authority any breach of a Qatari law or regulation associated with any wrong doing such as employee fraud, theft, and disclosure of confidential information as part of the larger investigative process.

Qatargas has not identified any non-compliance with international or national laws and regulations in 2011.

# **HUMAN RIGHTS**

# Management of Human Rights Aspects

There is currently no separate human rights policy, goals and objectives at Qatargas, but human right issues are addressed as part of the Code of Business Ethics Policy. Qatargas' operations have not undergone formal human rights reviews or impact assessments to date.

Qatargas has not reported any internal or external grievances related to human rights in 2011.

#### **Investment and Procurement Practices**

All contracts with significant contractors and suppliers include general clauses on human rights with regard to lien and employees payment. Qatargas performs regular audits of its contractors and suppliers to ensure compliance with these clauses. No contracts were either declined or subject to other corrective actions as a result of human rights screening in 2011.

There is currently no training on human rights issues at Qatargas.

# Child, Forced and Compulsory Labour

In accordance with the requirements of Qatari Laws, Qatargas recognises, and will maintain compliance with the laws prohibiting child and forced labour, and undertakes to suppress the use of child, forced or compulsory labour in all its forms.

Qatargas will ensure that no concession granted to private individuals or organisations with which it conducts business shall involve any form of child, forced or compulsory labour for the production or the collection of products which such private individuals or organisations utilise or in which they trade.

# Security and Human Rights

Qatargas is not a participant in the Voluntary Principles on Security and Human Rights (VPSHR). However, our Security department has an overall system management document that includes organisational structure, philosophy and formats for dealing with security risks and specific procedures related to security risks identified.

Qatargas has developed a series of Security policies and procedures covering employees and visitors, Doha and Ras Laffan locations, operations and projects, etc.

By end of 2011, Qatargas security personnel included 28 permanent staff and 250 contractors who ensure security controls at gates of Qatargas facilities in Ras Laffan and Doha, deliver gate passes to employees, visitors and contractors, manage the security card access control system and address all accident, incidents and emergency calls received on a twenty four hour basis.



Qatargas is currently implementing a supply chain security risk management strategy for all its operations, using the following approach:

- Recognition of various operational and corporate key processes within Qatargas;
- Security risk management philosophy governing threats, risk identification, risk analysis, prevention
- Integration of security risk management into Qatargas Enterprise Risk Management programme through common approach to risk management principles (risk matrix, risk identification, risk
- Objective to achieve certification of ISO 28001:2007 Security Management System for the Supply Chain.

No specific issue has been encountered by Qatargas in terms of security and human rights in 2011.



# PRODUCT RESPONSIBILITY

#### Management of Product Responsibility

There are currently no formal product responsibility policies, goals and objectives at Qatargas.

Health and safety aspects of product responsibility are addressed by the Safety Department, whereas marketing communication and customer satisfaction are managed by the Commercial and Shipping Group.

#### **Products Health and Safety**

No formal health and safety impact assessments are undertaken on our products. However we consider possible health and safety impacts of our products along the lifecycle, from gas extraction to use of the products.

Qatargas maintains a database of Material Safety Data Sheets (MSDS) for all its products produced and used at the site so that effective risk assessment and controls are in place to manage all materials safely. The MSDS database is a live document and is continually updated to ensure that it is current and accurate. Qatargas also subscribes to Chemwatch for reference to other chemicals.

Qatargas has a total of 195 MSDS', 15 of which were newly approved with COSHH sheet of liquid product loading by RLTO in 2011, 58% of all MSDS were newly developed or updated during the last two years.

Qatargas has not identified any non-compliance with regulations and voluntary codes concerning the health and safety of products and services in 2011.

## **Marketing Communication**

No codes or voluntary standards relating to marketing communications are applied across Qatargas. Qatargas does not sell products banned in certain markets or that are the subject of stakeholder questions or public debate.

Qatargas has not identified any non-compliance with regulations concerning marketing communications, including advertising, promotion, and sponsorship, in 2011.

### **Customer Satisfaction and Privacy**

Qatargas has developed key performance indicators related to late and off-specifications deliveries and handling of complaints to measure and follow-up customer satisfaction. No late or off-specifications deliveries were reported and Qatargas has not received any customer complaints in 2011.

No customer surveys are undertaken by Qatargas.

Protecting customer data and privacy are crucial in the way we conduct our business. Qatargas' Ethics Policy describes rules and requirements to be applied by all employees with regard to information confidentiality and disclosure. To preserve confidentiality, disclosure and discussion of confidential information is limited to those employees who need access to the information in the course of their work. Firewalls rules and procedures are in place to ensure safeguarding of commercially competitive sensitive or confidential information. Qatargas moreover has advanced IT systems to protect data from external unauthorised access.

Qatargas has not received any complaints or notification of any breaches of customer privacy during 2011.

## Compliance with Laws and Regulations Regarding Company's Products

Qatargas has not received any complaints or notification of non-compliance with laws and regulations concerning the provision and use of the company's products and services during 2011.

# **GRI & IPIECA/API COMPLIANCE VERIFICATION INDEX**

| GRI G3<br>Ref.                | Page(s) of<br>the report | GRI G3<br>Ref. | Page(s) of<br>the report | GRI G3<br>Ref.                 | Page(s) of the report | GRI G3<br>Ref.                | Page(s) of<br>the report |
|-------------------------------|--------------------------|----------------|--------------------------|--------------------------------|-----------------------|-------------------------------|--------------------------|
| Strategy and Analysis 4.12 29 |                          | EN19           | 51 Collective Bargai     |                                | Bargaining            |                               |                          |
| 1.1                           | 6                        | 4.13           | 29                       | EN20                           | 48-51                 | HR5                           | 71                       |
| 1.2                           | 21 - 25                  | Stakeholde     | r Engagement             | EN21                           | 53-54                 | Child Labo                    | ır                       |
| Organisatio                   | onal Profile             | 4.14           | 31 - 33                  | EN22                           | 51-52                 | HR6                           | 93                       |
| 2.1                           | 8                        | 4.15           | 31 - 33                  | EN23                           | 53                    | Forced and<br>Labour          | Compulsory               |
| 2.2                           | 13 - 14                  | 4.16           | 31 - 33                  | EN24                           | Not applicable        | HR7                           | 93                       |
| 2.3                           | 8                        | 4.17           | 31 - 33                  | EN25                           | 53                    | Security Pr                   | actices                  |
| 2.4                           | 8                        | Economic       |                          | Products ar                    | nd Services           | HR8                           | 93-94                    |
| 2.5                           | 8                        | DMA            | 21                       | EN26                           | 61                    | Indigenous                    | Rights                   |
| 2.6                           | 8                        | Economic F     | Performance              | EN27                           | Not applicable        | HR9                           | 86                       |
| 2.7                           | 15                       | EC1            | 34                       | Compliance                     |                       | Assessment and<br>Remediation |                          |
| 2.8                           | 13                       | EC2            | 34 - 35                  | EN28                           | 41-42                 | HR10                          | 93                       |
| 2.9                           | 15 - 16                  | EC3            | 64                       | Transport                      |                       | HR11                          | 93                       |
| 2.10                          | 17                       | EC4            | Not applicable           | EN29                           | 57-60                 | Society                       |                          |
| Report Pai                    | ameters                  | Market Pre     | sence                    | Overall                        |                       | DMA                           | 54                       |
| Report Pro                    | file                     | EC5            | Not applicable           | EN30 <b>61</b> Community       |                       | ,                             |                          |
| 3.1                           | 7                        | EC6            | 35                       | Labour Practices               |                       | S01                           | 84-85                    |
| 3.2                           | 7                        | EC7            | 36                       | DMA                            | 62                    | S09                           | 84-85                    |
| 3.3                           | 7                        | Indirect Eco   | onomic Impacts           | Employment                     |                       | S010                          | 84-85                    |
| 3.4                           | 7                        | EC8            | 84 - 91                  | LA1                            | 62-63                 | Corruption                    |                          |
| Report Sco<br>Boundary        | pe and                   | EC9            | 36                       | LA2                            | 63                    | S02                           | 92                       |
| 3.5                           | 7                        | Environmental  |                          | LA3                            | 63                    | S03                           | 92                       |
| 3.6                           | 7                        | DMA            | 41                       | LA15                           | 63-64                 | S04                           | 92                       |
| 3.7                           | 7                        | Materials      |                          | Labour/Management<br>Relations |                       | Public Policy                 |                          |
| 3.8                           | Not applicable           | EN1            | 51                       | LA4                            | 71                    | S05                           | 92                       |
| 3.9                           | 7                        | EN2            | 51                       | LA5                            | 71                    | S06                           | 92                       |

| GRI G3<br>Ref.                                                                 | Page(s) of<br>the report | GRI G3<br>Ref.      | Page(s) of<br>the report | GRI G3<br>Ref.                     | Page(s) of the report | GRI G3<br>Ref.                   | Page(s) of<br>the report |
|--------------------------------------------------------------------------------|--------------------------|---------------------|--------------------------|------------------------------------|-----------------------|----------------------------------|--------------------------|
| 3.10                                                                           | Not applicable           | Energy              |                          | Occupational Health and<br>Safety  |                       | Anti-Competitive<br>Behaviour    |                          |
| 3.11                                                                           | 7                        | EN3                 | 42-43                    | LA6                                | 64                    | S07                              | 92                       |
| GRI Conten                                                                     | t Index                  | EN4                 | 42-43                    | LA7                                | 64-66                 | Compliance                       |                          |
| 3.12                                                                           | 96-97                    | EN5                 | 42-43                    | LA8                                | 67-70                 | S08                              | 92                       |
| Assurance                                                                      |                          | EN6                 | 42-43                    | LA9                                | Not applicable        | Product R                        | esponsibility            |
| 3.13                                                                           | 7                        | EN7                 | 42-43                    | Training an                        | d Education           | DMA                              | 95                       |
| Governanc<br>Commitme                                                          |                          | Water               |                          |                                    |                       | Customer Health and<br>Safety    |                          |
| Governance                                                                     | 9                        | EN8                 | 53-54                    | LA11                               | 74-76                 | PR1                              | 95                       |
| 4.1                                                                            | 26-27                    | EN9                 | 53-54                    | LA12                               | 76-77                 | PR2                              | 95                       |
| 4.2                                                                            | 26                       | EN10                | 53-54                    | Diversity and Equal<br>Opportunity |                       | Product and Service<br>Labelling |                          |
| 4.3                                                                            | 26                       | Biodiversity        | /                        | LA13                               | 71-72                 | PR3                              | Not<br>applicable        |
| 4.4                                                                            | 27                       | EN11                | 54-56                    | LA14                               | 72                    | PR4                              | Not<br>applicable        |
| 4.5                                                                            | 27                       | EN12                | 54-56                    | Human Ric                          | jhts                  | PR5                              | 95                       |
| 4.6                                                                            | 27                       | EN13                | 54-56                    | DMA                                | 93                    | Marketing<br>Communica           | ation                    |
| 4.7                                                                            | 26                       | EN14                | 54-56                    | Investment                         | and Procurement       | PR6                              | 95                       |
| 4.8                                                                            | 28                       | EN15                | 54-56                    | HR1                                | 93                    | PR7                              | 95                       |
| 4.9                                                                            | 27                       | Emissions,<br>Waste | Effluents and            | HR2 93                             |                       | Customer Privacy                 |                          |
| 4.10                                                                           | 27                       | EN16                | 45-48                    | HR3                                | 93                    | PR8                              | 95                       |
| Commitme<br>Initiatives                                                        | nts to Ext.              | EN17                | 45-48                    | Non-Discrimination Compliance      |                       | <b>3</b>                         |                          |
| 4.11                                                                           | 37-38                    | EN18                | 45-48                    | HR4                                | 74                    | PR9                              | 95                       |
| Core indicators are identified in bold; DMA: Disclosure on Management Approach |                          |                     |                          |                                    |                       |                                  |                          |

Based on our own assessment of this report content against the GRI criteria, we have self-declared our Corporate Social Responsibility Report as Application Level 'A'.

| IPIECA/API Ref.                         | Page(s) of the report | IPIECA/API Ref.                                         | Page(s) of<br>the report |  |
|-----------------------------------------|-----------------------|---------------------------------------------------------|--------------------------|--|
| Environmental Indicators                |                       | Social and economic indicators                          |                          |  |
| Climate change and energy               |                       | Community and society                                   |                          |  |
| E1: Greenhouse gas (GHG)<br>emissions   | 45-48                 | SE1: Local community impacts                            | 84-85                    |  |
| E2: Energy use                          | 42-43                 | SE2: Indigenous peoples                                 | 86                       |  |
| E3: Alternative energy sources          | 42-43                 | SE3: Involuntary resettlement                           | 86                       |  |
| E4: Flared gas                          | 42-43                 | SE4: Social investment                                  | 86-91                    |  |
| Ecosystem services                      |                       | Local content                                           |                          |  |
| E5: Biodiversity and ecosystem services | 54-56                 | SE5: Local content practices                            | 35                       |  |
| E6: Fresh water                         | 53-54                 | SE6: Local hiring practices                             | 36                       |  |
| Local environmental impact              |                       | SE7: Local procurement and supplier 35                  |                          |  |
| E7: Other air emissions                 | 48-51                 | Human Rights                                            |                          |  |
| E8: Spills to the environment           | 53                    | SE8: Human rights due diligence                         | 93                       |  |
| E9: Discharges to water                 | 53-54                 | SE9: Human rights and suppliers                         | 93                       |  |
| E10: Waste                              | 51-52                 | SE10: Security and human rights                         | 93                       |  |
| Health and safety indicators            |                       | Business ethics and transparency                        |                          |  |
| Workforce protection                    |                       | SE11: Preventing corruption                             | 92                       |  |
| HS1: Workforce participation            | 64                    | SE12: Preventing corruption involving business partners | 92                       |  |
| HS2: Workforce health                   | 67-71                 | SE13: Transparency of payments to host governments      | 34                       |  |
| HS3: Occupational injury and illness    | 64-67                 | SE14: Public advocacy and lobbying                      | 92                       |  |
| Product health, safety and envir        | onmental risks        | Labour practices                                        |                          |  |
| HS4: Product stewardship                | 95                    | SE15: Workforce diversity & inclusion                   | 71-74                    |  |
| Process safety and asset integri        | ty                    | SE16: Workforce engagement                              | 80                       |  |
| HS5: Process safety                     | 39-40                 | SE17: Workforce training & development                  | 74-79                    |  |
|                                         |                       | SE18: Non-retaliation & grievance system                | 81-82                    |  |

# **GLOSSARY OF TERMS**

|                 |                                                               | KPI                      | Koy Borformanco Indicator                             |
|-----------------|---------------------------------------------------------------|--------------------------|-------------------------------------------------------|
| A&R             | Accounting and Reporting                                      | L&D                      | Key Performance Indicator<br>Learning and Development |
| AMS             | Aspects Management System                                     | LEF                      | Living Earth Foundation                               |
| API             | American Petroleum Institute                                  | LES                      | Laffan Environmental Society                          |
| BAC             | Board Audit Committee                                         | LNG                      | Liquefied Natural Gas                                 |
| BAT             | Best Available Technique                                      | LOPC                     | Loss Of Primary Containment                           |
| Bbls            | Barrels                                                       | LPG                      | Liquefied Petroleum Gas                               |
| BOD             | Board of Directors                                            | LTI                      | Lost Time Injury                                      |
| Bpsd            | Barrels Per Stream Day                                        |                          |                                                       |
| CBTF            | Children Brain Tumour Foundation                              | MDO<br>MEPC              | Marine Diesel Oil                                     |
| CCIT            | Corporate Citizenship Initiative Team                         |                          | Marine Environment Protection Committee               |
| CDM             | Clean Development Mechanism                                   | MLT<br>MM                | Management Leadership Team<br>Million                 |
| CEO             | Chief Executive Officer                                       | MMScf                    | Million Standard Cubic Foot                           |
| CER             | Certified Emission Reductions                                 |                          |                                                       |
| CFC             | Chlorofluorocarbon                                            | MoE<br>Mol               | Ministry of Environment Ministry of Interior          |
| CH <sub>4</sub> | Methane<br>Carbon Diavida                                     | MRG                      | Monitoring and Reporting Guidelines                   |
| CO <sub>2</sub> | Carbon Dioxide                                                | MSDS                     | Material Safety Data Sheet                            |
| COO             | Chief Operating Officer                                       | MT                       | Metric Tonnes                                         |
| COP             | Community Outreach Programme                                  | MTA                      | Million Tonnes Per Annum                              |
| CSP             | Common Sulphur Project                                        | N <sub>2</sub> O         | Nitrous Oxide                                         |
| CSR             | Corporate Social Responsibility                               | NGO                      | Non-Governmental Organisation                         |
| CTO<br>DEEDA    | Consent To Operate                                            |                          |                                                       |
| DEFRA           | UK Department for Environment,                                | NO <sub>x</sub><br>OHSAS | Nitrogen Oxide                                        |
|                 | Food and Rural Affairs                                        | ОПЗАЗ                    | Occupational Health and Safety                        |
| DESS            | Doha English Speaking School                                  | 0000                     | Assessment Series                                     |
| DG              | HSE Regulations and Enforcement                               | OPCO                     | Operating Company                                     |
|                 | Directorate                                                   | PFC                      | Perfluorocarbon                                       |
| E&I             | Energy and Industry                                           | PIP                      | Performance Improvement Plan                          |
| ECIC            | Ethics and Conflict of Interest Committee                     | PLE                      | Premier Leadership Event                              |
| EDMS            | Environmental Data Management System                          | PMP                      | Plateau Maintenance Project                           |
| EHSIA           | Environmental, Health and Social Impact                       | QAR                      | Qatar Riyal                                           |
|                 | Assessment                                                    | QDMC                     | Qatargas Doha Medical Centre                          |
| EMS             | Emergency Management Services                                 | QG                       | Qatargas                                              |
| EPC             | Engineering, Procurement and Construction                     | QITS                     | Qatar Independent Technical School                    |
| ERM             | Enterprise Risk Management                                    | QMSI                     | Qatargas Management System for                        |
| ESS             | Employee Self Service                                         |                          | Continuous Improvement                                |
| EU              | European Union                                                | QNCS                     | Qatar National Cancer Society                         |
| FEED            | Front -End Engineering Design                                 | QNV                      | Qatar National Vision                                 |
| FMP             | Flare Management Plan                                         | QP                       | Qatar Petroleum                                       |
| FSC             | Forest Stewardship Council                                    | QRC                      | Qatar Red Crescent                                    |
| GHG             | Greenhouse Gas                                                | RALF                     | Receiving And Loading Facility                        |
| GIS             | Geographic Information System                                 | RCS                      | Risk Control System                                   |
| GRI             | Global Reporting Initiative                                   | RLIC                     | Ras Laffan Industrial City                            |
| GWP             | Global Warming Potential                                      | RLTO                     | Ras Laffan Terminal Operations                        |
| HCFC            | Hydrochlorofluorocarbon                                       | RMC                      | Risk Management Coordinator                           |
| HFC             | Hydrofluorocarbon                                             | ROPME                    | Regional Organisation for the Protection              |
| HFO             | Heavy Fuel Oil                                                |                          | of the Marine Environment                             |
| HR              | Human Resources                                               | RP                       | Recommended Practice                                  |
| HSE             | Health, Safety and Environment                                | SDI                      | Sustainable Development Industry                      |
| HVAC            | Heating, Ventilation and Air Conditioning                     | SEQ                      | Safety, Environment and Quality                       |
| IA<br>IChemE    | Internal Audit Function The Chartered Institution of Chemical | SF <sub>6</sub>          | Sulphur Hexafluoride                                  |
| ICHEIHE         |                                                               | SO <sub>2</sub>          | Sulphur Dioxide                                       |
|                 | Engineers                                                     | SPI                      | Safety Performance Indicator                          |
| IDP             | Individual Development Plan                                   | tCO₂eq                   | Tonnes Carbon Dioxide Equivalent                      |
| IET             | The Institution of Engineering and                            | TAFE                     | Technical And Further Education                       |
|                 | Technology                                                    | TDLC                     | Training and Development Liaison                      |
| IIF             | Incident & Injury Free                                        |                          | Committee                                             |
| IPCC            | International Panel on Climate Change                         | TRIF                     | Total Recordable Injury Frequency                     |
| IPIECA          | International Petroleum Industry                              | UK <sub>.</sub>          | United Kingdom                                        |
|                 | Environmental Conservation Association                        | US/USA                   | United States of America                              |
| ISO             | International Organisation for standardisation                | USD                      | United States Dollar                                  |
| İT              | Information Technology                                        | VOC                      | Volatile Organic Compounds                            |
| ITP             | Individual Training Plan                                      | WBCSD                    | World Business Council for Sustainable                |
| JBOG            | Jetty Boil-Off Gas                                            |                          | Development                                           |
| JCI             | Joint Commission International                                | WPC                      | World Petroleum Congress                              |
| JVA             | Joint Venture Agreement                                       | WRI                      | World Resources Institute                             |
|                 |                                                               |                          |                                                       |

#### **Butane**

Either of two isomers of a gaseous hydrocarbon, C4H10, produced synthetically from petroleum and used as a household fuel, refrigerant, and aerosol propellant and in the manufacture of synthetic rubber.

#### **Carbone Dioxide**

CO2 is a colourless gas and the main greenhouse gas of concern as per the Kyoto Protocol. In oil and gas activities, CO2 is mainly associated with fuel combustion and flaring.

#### Chlorofluorocarbon

Any of various halocarbon compounds consisting of carbon, chlorine, and fluorine, once used widely as refrigerants in cooling systems. CFCs are listed in Annex A or B of the Montreal Protocol on Substances that Deplete the Ozone Layer.

#### Condensate

A straw-coloured or colourless liquid hydrocarbon mixture of over approx. 500 API gravity, which may be recovered at the surface from some non-associated gas reservoirs.

#### Corporate Social Responsibility

Continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large.

#### Flaring

A process of safe disposal of waste or unused/unusable gases required to ensure the safety and integrity of the facility.

#### **Global Warming Potential**

Total contribution to global warming resulting from the emission of one unit of a given gas relative to one unit of the reference gas, carbon dioxide, which is assigned a value of 1.

#### **Greenhouse Gas**

A gas that contributes to the greenhouse effect by absorbing infrared radiation. Atmospheric emissions of GHGs from oil and gas operations include CO2, CH4 and N2O emissions from combustion sources, gas flaring, or fugitive emissions.

#### Hydrochlorofluorocarbon

A compound composed of hydrogen, chlorine, fluorine, and carbon atoms; used as replacement for CFCs as refrigerants because of its lower ozone depletion potential.

#### Hydrofluorocarbon

Compound consisting of hydrogen, fluorine, and carbon; it is a fluorocarbon emitted as a by-product of industrial manufacturing that contributes to the greenhouse effect.

#### LNG

Natural Gas can be liquefied, e.g., at atmospheric pressure by cooling to about - 160 °C (-256 °F). It consists of liquefied methane (C1) and ethane (C2) and sometimes includes propane (C3) and butane (C4).

Mixture of hydrocarbon gases (propane and butane) used as a fuel in heating appliances and vehicles. It is increasingly replacing chlorofluorocarbons as an aerosol propellant and a refrigerant to reduce damage to the ozone laver.

#### Methane

An odourless, flammable greenhouse gas, which is the major constituent of natural gas. In the oil and gas industry, CH4 is mainly associated with fuel combustion, flaring, venting and fugitive emissions.

#### Naphtha

Any of several highly volatile, flammable liquid mixtures of hydrocarbons distilled from petroleum, coal tar, and natural gas and used as fuel, as solvents, and in making various chemicals.

#### Nitrogen Oxides

Chemical compounds of nitrogen and oxygen. NOx are produced primarily from the combustion of fossil fuels and contribute to the formation of ground level ozone.

#### Nitrous Oxide

A colourless greenhouse gas which is emitted as a combustion process by-product.

# Ozone Depleting Substance

A compound that contributes to stratospheric ozone layer depletion.

#### **Propane**

A colourless gas, C3H8, found in natural gas and petroleum and widely used as a fuel.

#### Sulphur Dioxide

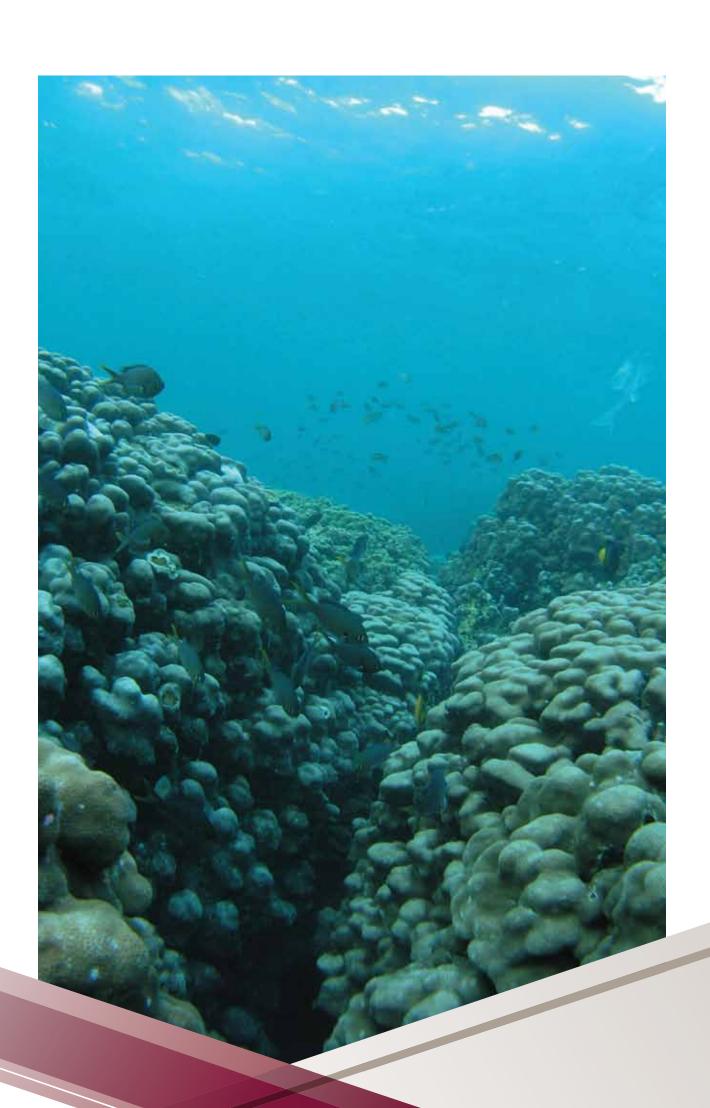
A colourless, extremely irritating gas produced by fuel combustion and by many industrial processes. In oil and gas activities, SO2 results primarily from sulphur removal processes and the flaring of sour gas.

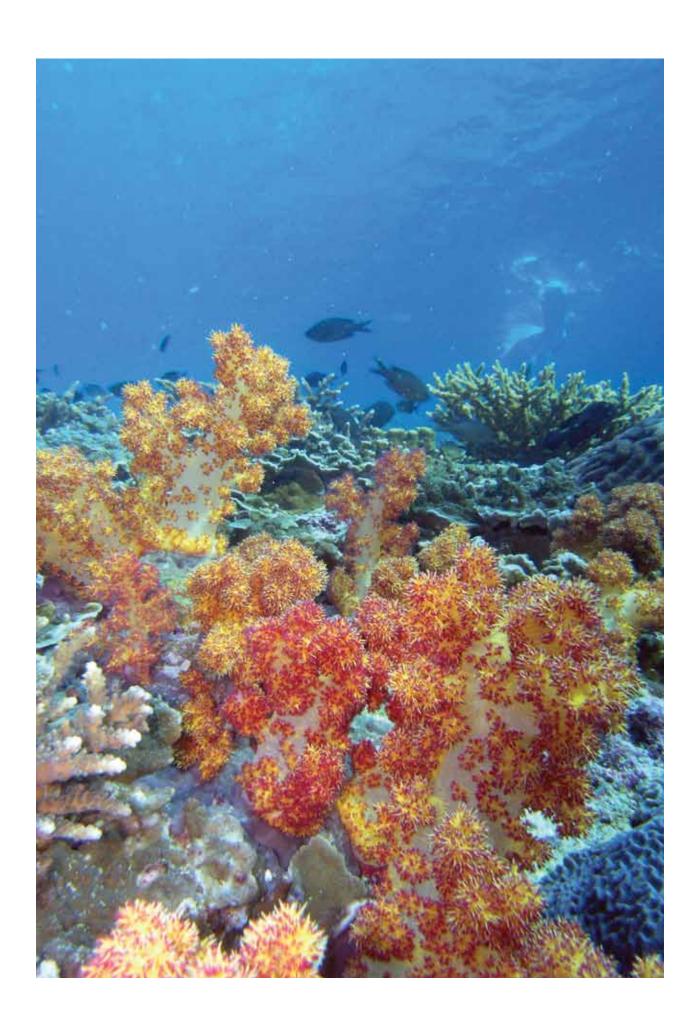
Process by which gas is released to atmosphere from an open pipe without combustion.

#### **Volatile Organic Compound**

Any organic compound with a vapour pressure of 0.01 kPa or greater, a temperature of 293.15 Kelvin or a corresponding volatility under specific conditions of use.

For more definitions, please consult our online glossary at: http://www.qatargas.com.qa





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