

# THE PIONEER

ISSUE 145 / FALL 2014

## JETTY BOIL-OFF GAS RECOVERY PROJECT

RECOVERING  
90% OF TOTAL  
FLARED GASES  
AT LNG BERTHS

## THE PLATEAU MAINTENANCE PROJECT

**SUCCESS STORY:**  
AN EXEMPLARY CASE IN  
OPERATIONAL EXCELLENCE

# IN THIS ISSUE



## PIONEER

THE MAGAZINE OF QATARGAS OPERATING COMPANY LIMITED

### Editorial Team

Editorial Director: **Heba Sedky**  
 Associate Editor: **Nizar Ahmed**  
 Associate Editor CSR: **Thajudeen V. Aliar**  
 Arabic Editor: **Eiman Fakhroo**

### Published by

The Public Relations Department  
 Qatargas Operating Company Limited


### Qatargas Operating Company

P.O. Box 22666  
 Doha  
 Qatar  
 Tel: +974 4452 3228  
 Fax: +974 4473 6628

### Firefly Communications

P.O. Box 11596  
 Doha  
 Qatar  
 Tel: +974 4434 0360  
 Fax: +974 4434 0359

*All Rights Reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying or otherwise without the prior permission of the Public Relations Department, Qatargas Operating Company.*

 Printed on recycled paper



Scan QR CODE  
 TO VISIT OUR WEBSITE

Qatargas is now present on social media via Facebook, Twitter and Instagram.

We look forward to seeing your involvement and support on these official media:

**Facebook:** [www.facebook.com/qatargasmedia](http://www.facebook.com/qatargasmedia)  
**Twitter:** @QatargasMedia  
**Instagram:** Qatargaspr

### OPERATING EXCELLENCE

- 2** **Introducing Eng. Saad Sherida Al Kaabi,** Chairman, Qatargas Board of Directors.
- 4** **Jetty Boil-Off Gas Recovery Project** - recovering 90% of total flared gases.
- 8** **Plateau Maintenance Project** - an exemplary success story.



- 11** **China's Hainan Terminal** receives first LNG delivery.
- 11** **Qatargas launches** new office in Thailand.
- 12** **The journey to 5000.** Qatargas celebrates its 5000<sup>th</sup> loading by Ras Laffan Terminal Operations.
- 15** **Over 20 million hours** worked without a lost time incident.

### INNOVATION

- 16** **Raising the bar** on well integrity assurance. Qatargas leads the way.



### PEOPLE

- 18** **Diversity** at Qatargas is a source of strength.
- 19** **Supervising the Qatargas Way.** Workshops drive premier performance and coaching.
- 19** **Learning Olympics: Gold Edition.** The importance of performance feedback at Qatargas.



### CORPORATE SOCIAL RESPONSIBILITY

- 21** **Sustaining our environment for future generations.** Qatargas' wastewater management initiatives.
- 22** **Reduce, Reuse, Recycle - Respect.** An overview of waste management at Qatargas.
- 23** New season for the **Qatargas Football League.**
- 24** Qatargas provides financial contribution to **support Arshedny Centre's programmes.**
- 24** Qatargas participation at the **7th SPE Middle East Health, Safety, Environment and Sustainable Development Exhibition and Conference.**



# QATARGAS CORPORATE SCORECARD

YEAR TO DATE SEPTEMBER 2014



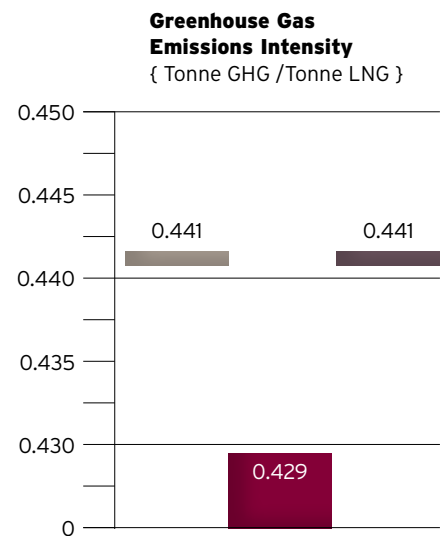
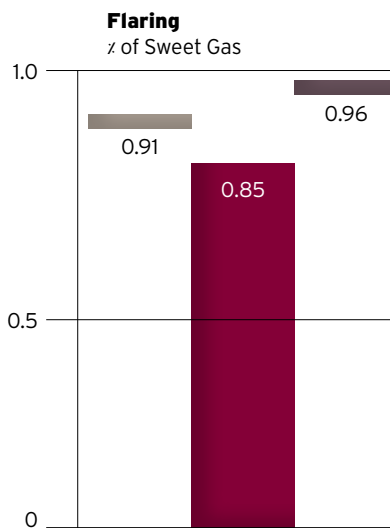
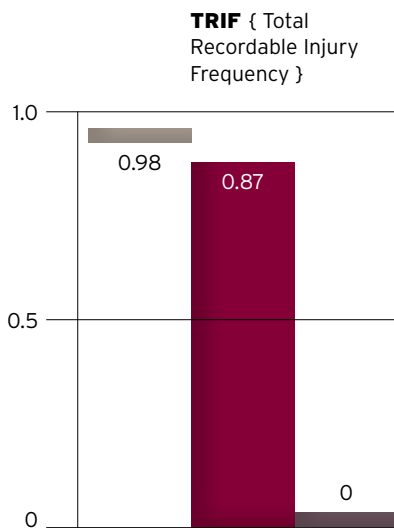
# QATARGAS CORPORATE SCORECARD

YEAR TO DATE SEPTEMBER 2014



## SHE PERFORMANCE

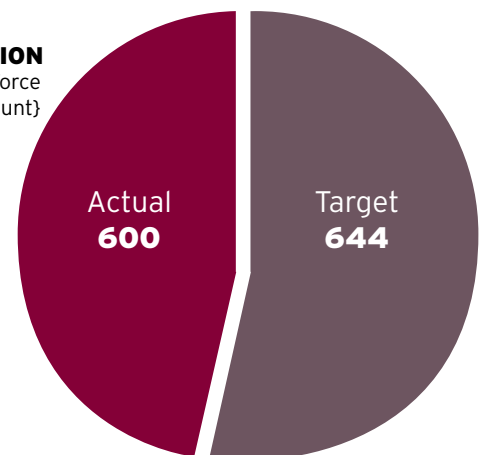
Qatargas outperforming industry



Industry Average  
Actual  
Target

## QATARIZATION

A High Calibre and Diverse Work Force  
{Total Headcount}



## EFFICIENT AND RELIABLE OPERATIONS

	Industry Average	Actual	Target
LNG Reliability	96.5%	98.4%	97.2%
LR Reliability	98.5%	99%	98.6%
Expenditure VS Target	N/A	89%	N/A

## CUSTOMER SATISFACTION

	Actual	Target
Reliable Deliveries	100%	100%
Positive Responses to Customer Change Requests	85%	85%

## FINANCIAL PERFORMANCE

	Actual	Target
Sales Volume VS Target	99%	N/A



# LOOKING FORWARD WITH CONFIDENCE

**O**ur Qatargas vision is to be “the world’s premier LNG company,” known throughout the LNG industry for its high quality, diverse workforce and setting the industry standard with respect to operational excellence, and corporate, social and environmental responsibility. It means being the best in terms of global reach, technical expertise, reliability of supply, customer service, and consistent growth.

We are constantly reaching new heights and achieving milestones in operational excellence. We have launched many long-term projects that all help in delivering our clean-burning LNG fuel safely and reliably around the world. While we must continue to challenge ourselves to reach new inspirational horizons in order to fuel our company’s drive to achieve long-term sustainable success, it is also important to celebrate our momentous achievements along that journey to being premier.

The successful launch of the Jetty Boil-Off Gas Recovery (JBOG) Project was yet another defining moment on this journey. We have succeeded in delivering one of the world’s largest environmental projects, converting challenges to opportunities and developing new technological innovations, all the while maintaining safety and sustainability as a top priority. The USD 1 billion project will save a cumulative windfall of one trillion cubic feet of gas over 30 years, underscoring our unwavering commitment to environmental sustainability and to delivering on Qatar’s National Vision to produce and supply clean energy to the world.

Simultaneously, we have witnessed the successful start-up of the Plateau Maintenance Project (PMP), which was achieved through the sustained efforts of many departments and third party contractors working seamlessly together to deliver a common compelling purpose - ensuring the production capacity of Qatargas 1 is maintained at 10 million tonnes per annum (MTA) of LNG and therefore maintaining our reliability of supply.

Delivering high levels of service to all our customers and stakeholders is a driving force behind our mission. It is following that guiding principle that we recently delivered our 5000<sup>th</sup> loading through Ras Laffan Terminal Operations (RLTO), another momentous celebration for the Qatargas team. The achievement also marked the first cargo of ultra-low sulphur diesel produced by Laffan Refinery’s Diesel Hydrotreater.

It is our underlining teamwork philosophy that means these major milestones are being celebrated with exemplary health and safety records. To reach more than 20 million hours worked

without a lost time incident is an achievement to be proud of. This milestone could not have been achieved alone. It is inherent in the hard work, dedication and constant focus of our entire workforce, operating across all Qatargas assets and projects.

At Qatargas, each and every task completed is intertwined. Working as a unit, our talented and engaged workforce and world-class partners perform at an exceptional level of proficiency, driving us towards our goal of becoming the world’s premier LNG Company.



**Khalid Bin Khalifa Al Thani**  
Chief Executive Officer

## ENG. SAAD SHERIDA AL KAABI, CHAIRMAN, QATARGAS BOARD OF DIRECTORS

Eng. Saad Sherida Al Kaabi was appointed as Qatar Petroleum's (QP) new Managing Director in September 2014. At the same time, he was also appointed as Chairman of the Qatargas Board of Directors.

Eng. Al Kaabi joined Qatar Petroleum in 1986 as a student of Petroleum and Natural Gas Engineering at Pennsylvania State University in the USA and graduated with a Bachelor of Science (BSc) degree in 1991. Immediately after graduation he joined QP as a full-time employee where he held various petroleum engineer, technical, commercial and supervisory positions as he progressed through his career.

Al Kaabi has been an instrumental figure in Qatar's rapid rise to becoming the LNG and GTL capital of the world. Since 2006 he has overseen all of Qatar's oil and gas fields' developments as well as all the exploration activities in Qatar.



**Qatargas is a true Qatari success story defined by all the men and women whose commitment and dedication shape its accomplishments. This is why Qatargas values its human capital, and spares no effort for its development on the road to more successes." - Eng. Saad Sherida Al Kaabi, Chairman, Qatargas Board of Directors.**

# FUEL OF CHOICE

## FOREWORD FROM ENG. SAAD SHERIDA AL KAABI, CHAIRMAN, QATARGAS BOARD OF DIRECTORS



**Eng. Saad Sherida Al Kaabi**  
Chairman, Qatargas Board of  
Directors

I am honoured and privileged to chair the Qatargas Board of Directors, and to be associated with the world's number one liquefied natural gas (LNG) supplier, and its board that includes distinguished international partners.

Qatargas is the world's largest supplier of LNG with an annual production capacity of 42 million tonnes, delivering cleaner energy to more than twenty countries around the world. With its environmental qualities and economic benefits, LNG is increasingly becoming the fuel of choice in the energy mix of more and more countries, particularly in Asia, which has the world's fastest-growing economies and burgeoning populations.

As global energy consumption rises, the demand for gas is also on the rise. In fact, gas is the fastest growing energy source among all fossil fuels, and is the only source that grows more rapidly than the total energy growth. This gives a producer like Qatargas long lasting prospects for the future.

Through the tireless efforts of its diverse and talented workforce, the company has demonstrated a long history of consistent growth. It has cemented its reputation on the international stage as a technologically capable, secure, and reliable provider with the flexibility to respond quickly and effectively to changing market conditions; thus enabling it to meet the needs of its global customers for many years to come.

It is gratifying to see how Qatargas has developed to become a strategic component within a much grander endeavour enshrined in the Vision of His Highness the Emir, Sheikh Tamim bin Hamad Al Thani, for the State of Qatar to become a knowledge-based economy, on the cutting edge of global technological and social progress.

Qatargas is a true Qatari success story defined by all the men and women whose commitment and dedication shape its accomplishments. This is why Qatargas values its human capital, and spares no effort for its development on the road to more successes.



# JETTY BOIL-OFF GAS RECOVERY PROJECT LAUNCHES

In its successful launch of the new Jetty Boil-Off Gas Recovery (JBOG) project, the State of Qatar has reaffirmed its commitment to the safest, most sustainable and technologically innovative production of liquefied natural gas (LNG) in the world.

**P**roducing 77 million tonnes per year, Qatar is the largest provider of LNG in the world. During the loading of LNG, a portion of the -160°C liquid boils off as it comes in contact with the warmer ship tank. Previously, this boiled-off gas would be flared at the berth because there was no outlet for the low-pressure gas.

However, in-line with Qatar's National Vision to produce and supply clean energy to the world, Qatar Petroleum (QP) and the Ministry of Environment introduced the Jetty Boil-off Gas Recovery Project (JBOG) to recover the flared gas at the country's LNG berths.

Initiated by Qatar Petroleum in 2004

and under the auspices of H.H. the Emir Sheikh Tamim bin Hamad Al Thani, as well as H.E. Dr. Mohamed bin Saleh Al Sada, Minister of Energy and Industry, the JBOG project's Front-End Engineering Design (FEED) was awarded to the US-based company Fluor in October 2007.

Thereafter, Qatargas was permitted to lead the project on behalf of the project's stakeholders - Qatar Petroleum, Ministry of Environment, RasGas and Qatargas itself - playing a pivotal role in its successful delivery, thanks to the leadership of Qatargas Chief Executive Officer, Khalid Bin Khalifa Al Thani.

The project was led by Qatargas' Operations Development department, while the 'care, custody and control' was transferred to the Onshore Operations department with the 'Ready For Start-Up' (RFSU) certificate signed on 17<sup>th</sup> September 2014.

With Qatargas' vision to be a 'Premier LNG Company' and its 'Incident and Injury-Free' culture, the project was completed with an excellent safety record of 22 million man-hours without any lost time incidents (LTI). That record continued during red-blinds removal, the critical 'gas-in' phase and the most important milestones, the first ship recovery, with Central Compression Area (CCA) compressor trains in operation and distribution of compressed gas to ventures.

The project officially began recovery of jetty boil-off gases on 6<sup>th</sup> October 2014 from Q-Max ship Zarga at Berth-6.



The JBOG project officially began the recovery of jetty boil-off gases on 6<sup>th</sup> October 2014 from Q-Max ship Zarga at Berth-6 (Berth-4 pictured).



**Project milestones**

**1**



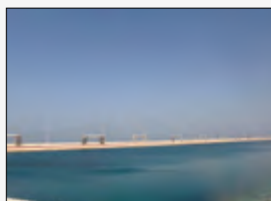
An early achievement of the detailed design stage was the effective and successful execution of the tie-ins at Berths 2 and 3. There was a window of opportunity to complete these tie-ins due to the rare shutdowns of the berths. The preparations made during the pre-EPC phase coupled with quick mobilisation to site during the detailed design phase ensured that JBOG completed its first site work safely and in a timely manner.

**2**



The CCA site needed approximately one thousand piles because the port area was largely reclaimed land. Piling and site preparation work began in mid-2010.

**3**



The project had to build a causeway linking the new and old breakwaters to carry the pipes and cables. This work began in the third quarter of 2010.

**4**



By summer 2011, the piling and causeway work had been completed and the foundation work began. By early 2012 foundations for buildings, compressors and piperacks could be seen mushrooming out of the ground.

**5**



Over the summer months of 2012, the three buildings ITR65, 33kV and 132kV were completed and handed over for the architectural and electrical work.

**Design and construction**

RasGas' initial design for the JBOG Recovery Project in 2004 was based on using liquefied nitrogen gas as a cooling medium to liquefy the boil-off gas into LNG at the berths. The LNG would then be sent to the storage tanks, and eventually exported with the bulk LNG.

The conceptual design undertaken at the FEED stage by RasGas showed that the volumes of nitrogen required to liquefy the boil-off gas generated from six berths would be too great, while the nitrogen gas vented into the atmosphere could prove harmful to the environment and the power consumption required to liquefy air to produce liquid nitrogen, too prohibitive.

In June of 2007, RasGas handed over the JBOG Project to Qatargas, which initiated a detailed review of the design, the results of which indicated that the location of the compressors at the berths might lead to safety, constructability, cost and scheduling issues. The subsequent awarding of the FEED contract to the US-based Fluor included a "Location Study", which led to an eventual change of design for the plant, and a relocation of all compressors to a central location.

Located in Qatar's Ras Laffan port area, the JBOG project is now part of the Common LNG Storage and Loading (CLNG S&L) Asset, and consists of a Central Compression Area (CCA), which is connected to all six LNG berths in the area through a 60-inch collection header.

Boil-off gas generated at low pressure during the process of LNG loading is collected via the collection header and routed to the CCA where it is compressed to 47.5 barg. The compressed gas from the CCA is then sent through distribution headers fitted with Custody Transfer Metres to each LNG producer, where it is consumed as fuel gas.

The CCA is comprised of two trains of LP (Low pressure), MP (Medium pressure) and HP (High pressure) compressors, with a design capacity of 163 tonnes per hour, equivalent to the maximum amount of boil-off gases generated by three ship loadings simultaneously. With this installed capacity, the CCA can recover 90 percent of the total flared gases at LNG berths.

**Technical innovations: From challenge to opportunity**

Conceptually, the overall design of the JBOG project had one overarching challenge: Space. The Ras Laffan City LNG terminal had not been designed with sufficient space to install a compressor, driver and associated equipment. This eventually led to in-depth analysis and a decision by the JBOG Project Management

Team to change the design of the plant, and relocate all the compressors to a central location.

This new concept relied heavily on the ships' High Duty BOG Compressors to deliver the gas at a pressure high enough to allow for the gas to be transported from the ships to the Central Compressors Area (CCA), approximately 5 kilometres away.

The JBOG Project Team worked with the Fluor FEED team to overcome these challenges, in the process introducing several technical design innovations. These included the implementation of Ultra Low Differential Pressure Check Valves, the design and use of the largest Boil-off Gas Compressor in the world (designed by GE Nuovo Pignone), and the use of Ultra Low Temperature Buckling Pins, designed with special seals and mechanisms to ensure reliability during operation.

Another challenge was the JBOG project's existence in brownfield areas, making construction itself difficult. During 2009, the Qatargas JBOG project team worked with Fluor to commission a 'Laser Scan Survey' of all the brownfield areas through which the JBOG facilities would be installed. This scan produced high resolution digital images, which were later incorporated into the 3D computer design model, and effectively saved millions of dollars by eliminating possible clashes and reducing the project's scheduled development time.

**Safety and sustainability**

Maintaining the safety of people and property was another great challenge, and the highest priority of the Qatargas JBOG



**As one of the greatest environment projects in the world, JBOG's largest environmental benefit is the reduction of 1.6 MTA of carbon dioxide emissions.**

**300,000**

The number of homes that JBOG's energy generation could power.

PMT. To date, the project has kept all of its 3000 workers safe from serious injury. The Incident and Injury Free safety behavioural programme was fully implemented on the JBOG Project, with many initiatives in place to enhance safe working practices.

As one of the greatest environment projects in the world, JBOG's largest benefit is the reduction of 1.6 million tonnes per annum of carbon dioxide emissions, which is in line with Qatar's National Vision and National Development Strategy.

In accordance with strict international standards, the JBOG project also recovers the loss of approximately 0.6 million tonnes of flared gas per year, producing 750 megawatts and generating enough energy to power roughly 300,000 homes. That saving translates to a cumulative windfall of one trillion cubic feet of gas over 30 years.

The landmark JBOG project also achieves the stipulated flaring standard of a 0.3 weight percentile in the total annual production of sweet gas, effectively decreasing the carbon footprint of Qatar's 77 MTA LNG industry to a minimum. ♻️

**Technical innovations developed for the JBOG project**

**Ultra Low Differential Pressure Check Valves**

- Due to the very low inlet pressures (0.5 BarG), no check valve design was available to perform in this application.
- JBOG PMT started a research project to design, build and test a special Tilting Disc Check Valve using an ultra-light titanium disc, shaped like an aerofoil
- The valve was tested in the US, and was proven to work even better than originally designed.

**Ultra Low Temperature Buckling Pins**



- Buckling pins are special pressure relieving devices used in applications where a quick pressure relief is required
- In order to protect the ship tanks from an overpressure scenario, JBOG has used buckling pin valves.
- These Buckling Pin Valves need to operate at cryogenic conditions, and the JBOG PMT has worked with the supplier to design special seals and mechanisms to ensure reliability during operation.

**Largest Boil-off Gas Compressor**

- 163 tonnes per hour coupled with low suction pressure has given rise to the largest Boil-off Gas Compressor in the world.
- Supplied by GE Nuovo Pignone, the compressor design went through several reviews, and special measures have been put in place to ensure safe and reliable operation of the compressor.

**Jetty Boil-off Gas recovery in numbers**

It recovers more than **90%**

of gas that was flared at the six berths or jetties in Ras Laffan Port.

This saves **600,000**

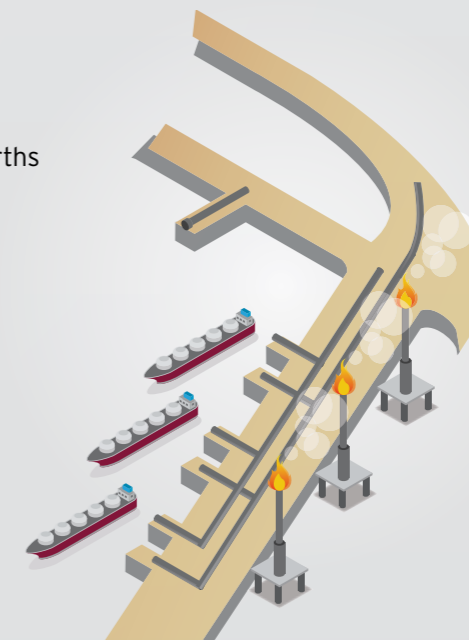
tonnes of LNG per annum,

which is enough natural gas to power

**300,000**

homes.

Source: Qatargas Sustainability Report 2013



Cost **USD 1 billion**

Recovers the loss of approximately **0.6 million**

TONNES OF FLARED GAS PER YEAR

this equates to a saving of **1.5 million tonnes** of CO<sub>2</sub> per year



# PLATEAU MAINTENANCE

## START-UP PROJECT SUCCESSFUL

The Qatargas 1 project was effectively executed within existing operating facilities and equipment with no impacts to Qatargas assets.



**42 million**

The number of man-hours worked to achieve start-up of the Plateau Maintenance Project at Qatargas 1.

The project required wide-ranging alignment and communication across several Qatargas departments, EPC and third party contractors. The entire team worked over 42 million man-hours while achieving a world-class safety performance.

**T**he successful start-up of the enhanced facility ensures that the production capacity of Qatargas 1 (QG1) is maintained at 10 million tonnes per annum (MTA) of liquefied natural gas (LNG) until 2021 and beyond.

"The Plateau Maintenance Project will help deliver that capability and enable Qatargas to continue to supply LNG safely and reliably to its customers," Qatargas CEO, Khalid Bin Khalifa Al Thani said. "The project is yet another important milestone in Qatargas' journey towards its Vision 2015, namely to be the World's Premier LNG Company. I would also like to congratulate the project team and the contractors on the safe and successful start-up of the project and thank all those involved for their hard work and commitment over the years."

#### Project details

All QG1 facilities were re-evaluated for their suitability to produce and process reservoir feedgas, and to determine any required modifications for its ongoing production. The project involved drilling and recompleting offshore wells, adding new onshore facilities for sulphur handling and modifying existing LNG production trains 1, 2 and 3. The project began initial operations in April 2011. The offshore drilling component involved the introduction of two new well locations in 2012: NFB-5 and NFB-22. Two further wells, NFB-24 and NFB-16, were also recompleted this year, with two additional 'ePMP' wells being drilled: NFB-21 and NFB-14.

New acid gas removal and sulphur recovery unit facilities, with a new capacity of 1.7 billion cubic feet per day (BCFD) of feedgas with two percent Hydrogen Sulphide (H<sub>2</sub>S), were implemented as part of the onshore facilities component. New storage tanks



**The project is yet another important milestone in Qatargas' journey towards its Vision 2015, namely to be the World's Premier LNG Company."**

**- Khalid Bin Khalifa Al Thani, Chief Executive Officer, Qatargas.**

for liquid sulphur and AGRU processes were also installed, along with additional instrument air compression, as well as water softening and desalination utilities. The project also saw the inclusion of a new sulphur export line tying into the CSP header 1.5 kilometres away, and the installation of new end flash gas compressors in the three QG1 LNG trains.

The onshore project had a major brownfield component, meaning virtually all of the work scope was conducted within existing operating facilities and equipment. The materials utilised in facilitating the development of the PMP project include 35,000m<sup>3</sup> of concrete works and 9300 tonnes of structural steel, with 8200 tonnes of equipment being erected. A sum total of 51,000 A/G piping spools were also erected with 5600 piping pressure tests performed. Also included were 351,000 metres of electrical cable, 652,000 metres of instrument cables, 6000 instrument loops and 134,000 m<sup>2</sup> of insulation. The nature of the work presented a special challenge to the teams, which required tremendous communication and alignment between several departments across Qatargas.

### COMPLETING THE PMP

Qatargas Project Team worked **42** million man hours with a

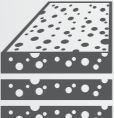
total recordable incident rate of **0.23** for every 200,000 hours worked

and a peak workforce of **6500** individuals.

Materials required to complete the project

**351,000m** of electrical cables laid 

**35,000m<sup>3</sup>** of concrete works 

**134,000m<sup>3</sup>** of insulation 

**9300 tonnes** of structural steel 





In the 2014 year-to-date, there have been zero Lost Time Incidents (LTI) and 92,000 STOP Cards filed.

**//**  
**The project is a shining example of the Qatargas 'Incident and Injury Free' culture, with over 665,000 safety observation cards.**

**Safely finishing strong**

Workforce safety was the highest priority objective on the PMP project. The project team, along with contractors, worked over 42 million man-hours, operating in a challenging plant work environment and achieving world class safety performance which included an exceptional Total Recordable Incident Rate (TRIR) of 0.23 for every 200,000 hours worked.

The project is a shining example of Qatargas' 'Incident and Injury Free' culture, particularly as regards the application of the STOP safety observation programme, where a peak workforce of 6500 individuals completed over 665,000 safety observation (STOP) cards, which helped identify and mitigate safety risks. In the 2014 Year To Date (YTD), there have been zero Lost Time Incidents (LTI) and 92,000 STOP Cards filed. In total, measures taken in Prevention Through Design (PTD) have

yielded 8.5 million safe Man-Hours since a walking related LTI.

According to the PMP project's Safety, Health & Environment (SHE) report, figures indicate the significant steps taken via PTD. The 'Safety Finishing Strong' campaign was initiated by PMP to raise awareness about systems completion and pre-mechanical completion activities, helping to mitigate or avoid entirely numerous potential incidents. The Shareholders in Qatargas 1 are Qatar Petroleum, ExxonMobil, Total, Mitsui and Marubeni. Technip-Chiyoda Joint Venture (TCJV) was the Engineering Procurement and Construction (EPC) contractor for the onshore work. Their major subcontractors included Kettaneh, Sepam, Descon and CCC. The project team, TCJV and subcontractors will maintain a start-up support organisation to assist QG1 Asset in achieving stable operations. ◻



The project involved drilling and completing offshore wells with two new well locations introduced in 2012.

The Qatargas 1 Plateau Maintenance Project recently celebrated its successful start-up.



**FIRST LNG DELIVERY TO CHINA'S HAINAN TERMINAL**

Qatargas recently delivered the first cargo of LNG to China National Oil Corporation's (CNOOC) Hainan LNG terminal.



Qatargas LNG carrier, Rasheeda, transfers the first load of LNG to China.

The cargo, which arrived aboard the Q-Max class LNG vessel Rasheeda, will be used to commission the new LNG terminal. Commenting on this milestone delivery, Khalid Bin Khalifa Al Thani, Qatargas Chief Executive Officer, said, "We are very pleased that LNG from Qatar continues to contribute towards meeting the growing demand for energy in the People's Republic of China. This achievement highlights Qatargas' capability to supply LNG to customers around the globe safely and reliably."

Al Thani commended the guidance of His Excellency Dr. Mohammed Bin Saleh Al Sada, Minister of Energy and Industry of the State of Qatar, in ensuring that Qatari LNG plays a key role in assisting countries around the world to improve their diversity of energy supplies. The commissioning of the new terminal meets China's growing demand for energy. Qatargas and CNOOC

have an existing Sales and Purchase Agreement signed in 2008 for the supply of a total of 2 million tonnes per annum (MTA) of LNG. The first delivery from Qatar to China with CNOOC was made in 2009.

Qatargas is the world's largest LNG producing company with a production capacity of 42 MTA. It is anticipated that China will become one of the world's largest gas markets.

The new terminal will have a first phase receiving capacity of 3 MTA adding to CNOOC's operating terminals located in Shanghai and the provinces of Guangdong, Fujian and Zhejiang, thus maintaining its position as China's largest LNG importer.

This is the third time Qatargas has provided a commissioning cargo for one of CNOOC's LNG receiving terminals and represents the sixth LNG receiving terminal in China to use LNG supplied by Qatargas for commissioning activities. ◻

**QATARGAS LAUNCHES "SEALO" IN THAILAND**

The SEALO office will help strengthen ties with existing and prospective customers.

The South East Asia region has one of the fastest growing economies in the world, and Qatargas believes its market demand for LNG could exceed 45 MTPA by 2025. As a result, and as part of Qatargas' best practice to ensure efficient and open communication channels with customers, a South East Asia Liaison Office, also known as SEALO, has been established in Bangkok.

Thailand's first LNG receiving terminal, Map Ta Phut, was constructed in 2011 with a capacity of five million tonnes per annum (MTPA). In December 2012, Qatargas-3 and PTT Public Co. Ltd. signed a long term Sales and Purchase Agreement to supply two million tonnes per annum (MTPA) of LNG to Map Ta Phut. Subsequently, it was decided to expand the terminal to 10 MTPA by 2017/18.

Since the start-up of the Map Ta Phut receiving terminal, the Qatargas and PTT relationship has grown. Qatargas demonstrated the

inherent advantages of LNG in securing Thailand's energy needs by providing two LNG cargoes at short-notice, compensating for a disruption of undersea gas pipeline deliveries. Since then Qatargas supplies have accounted for roughly half of all LNG purchases made by PTT.

The SEALO team will support Qatargas' activities not only in Thailand, but also in other South East Asia countries such as Singapore and Malaysia, as well as other potential markets such as Indonesia, Vietnam and The Philippines.

SEALO's main objective is to ensure Qatargas customer satisfaction and facilitate the smooth deliveries of LNG cargoes to their final destinations. The office was established to enhance relationships with existing and potential LNG buyers in South East Asia and to coordinate senior management visits to the region and customers' visits to Qatar. ◻



Inside the new SEALO office in Thailand.



# THE JOURNEY TO 5000

A DEMONSTRATION OF OPERATIONAL EXCELLENCE, QATARGAS CELEBRATES 5000<sup>TH</sup> LOADING BY RAS LAFFAN TERMINAL OPERATIONS (RLTO)

The 5000<sup>th</sup> landmark also marks the first cargo of ultra-low sulphur diesel, an environmentally friendlier fuel produced by the recently commissioned Laffan Refinery's Diesel Hydrotreater, from Ras Laffan Port.

**R**LTO is responsible for the storage and loading of all non-LNG liquid hydrocarbon products and bulk sulphur in Ras Laffan Industrial City produced by various end-users including Qatargas, Qatar Petroleum, RasGas, Laffan Refinery, Al Khaleej Gas, Dolphin Energy Limited, Qatar Shell GTL, Oryx GTL, Ras Laffan Olefins Company and Barzan.

To date, the equivalent of more than two billion barrels of product have been loaded by Qatargas through its Ras Laffan Terminal Operations (RLTO) since it was set up in 2006.

"Celebration of the 5000<sup>th</sup> cargo is, in fact, a celebration of the synergy between companies operating from Ras Laffan Industrial City. Ras Laffan Terminal Operations is a vital part of the supply chain for every producer in Ras Laffan Industrial City," said Khalid Bin Khalifa Al Thani, Chief Executive Officer of Qatargas.

"This achievement would not have been possible without their cooperation and support. For Qatargas, this is a significant achievement, demonstrating our operational excellence and commitment to providing a high level of service to all our customers and stakeholders."

#### Sharing the load

Conceptually developed as an RLC-led taskforce, RLTO was launched in 2006 and set up as a Single Operator (SO) in Ras Laffan for all liquid petroleum products' storage and loading. It was established around a concept of shared storage, to reduce the overall investment in tanks, as well as shared access to

berths to reduce the overall investment required in both capital and operational costs for the port expansion.

The rapid growth in the variety of products and number of cargoes leaving Ras Laffan port provided a strong case to create this integrated operating group, thereby providing the necessary level of coordination and the ability to capture synergies from economies of scale. Qatargas was appointed as the SO and RLTO, a division within Qatargas, loaded its first cargo in January 2007.

RLTO currently handles a wide range of products, including condensate and Liquefied Petroleum Gas (LPG) from

offshore production; refinery products such as naphtha, jet fuel and diesel; and GTL production of naphtha, gasoil and base oils. In addition, molten sulphur is delivered to the RLTO-operated common sulphur plant where it is turned to sulphur granules and loaded onto ships.

The other facilities currently operated by RLTO include Common Condensate Storage and Loading, Common Liquefied Petroleum Gas, Common Low Sulphur Condensate, Oryx GTL Loading, Qatar

Shell GTL Storage & Loading, Port Expansion Project (Fresh Water Fire Fighting System), Volatile Organic Compound, Liquid Products Berths and Laffan Refinery Tank Farm. More facilities will be added to the scope of the RLTO in the near future, with several others still in conceptual stage.

Having one single terminal operations group enables optimisation of cargo storage and exporting performance. Vessel and berth scheduling is coordinated in order to provide buyers fast and efficient access to Ras Laffan. Sharing of personnel and resources creates operating expense synergies, benefiting all producers. Safety risks are also considerably reduced due to a fully integrated, centrally coordinated operation.

#### Celebrating excellence

To commemorate the occasion, a ceremony was held aboard the vessel, Torm Helvig, which carried the 5000<sup>th</sup> cargo to the United Arab Emirates. In attendance were Mats Gjers, Chief Operating Officer of Operations; Ahmad Helal Al Mohannadi, Deputy Chief Operating Officer of Operations; Abdullah Khalid Idris, RLTO Manager; and other senior Qatargas officials.

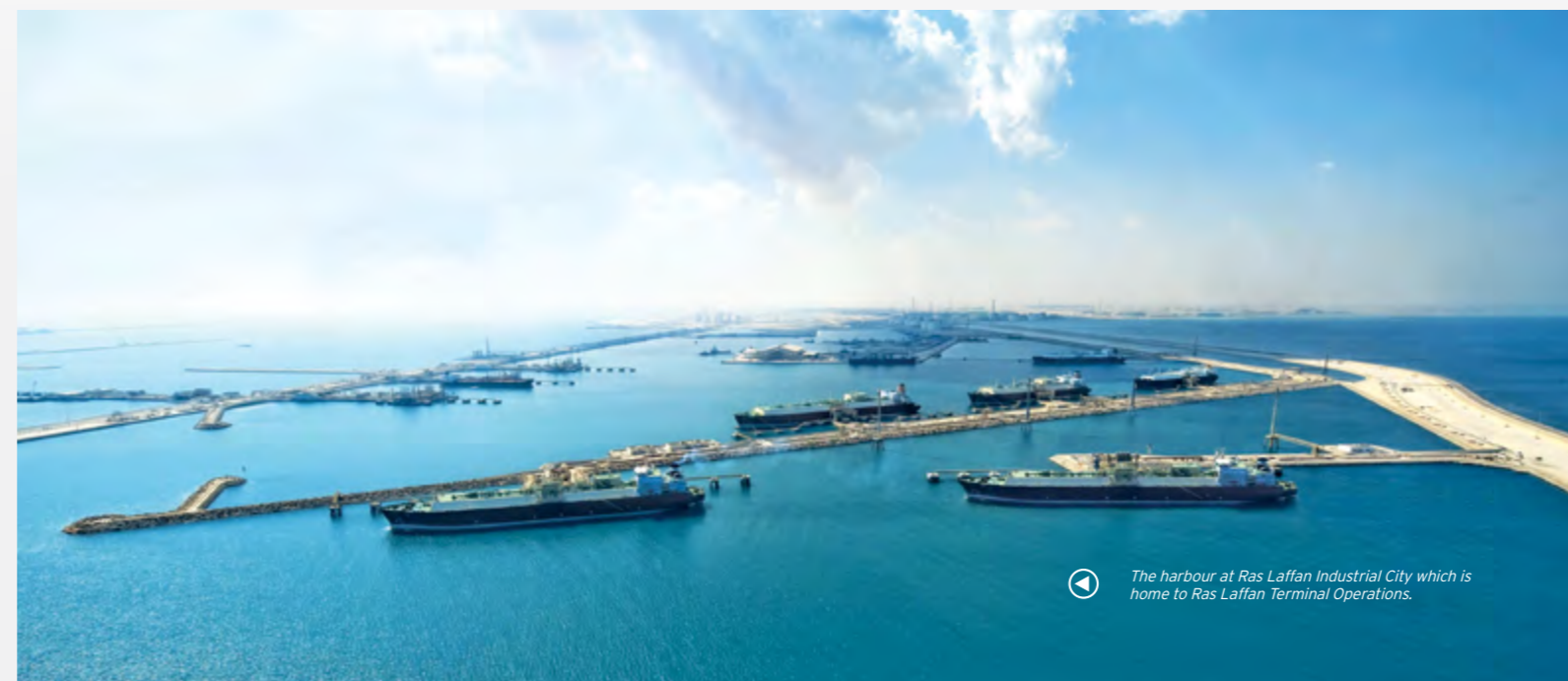
Commenting on the occasion, Mats Gjers said, "The 5000<sup>th</sup> loading is a significant milestone considering the diverse range of products and the scale of operations at Ras Laffan. This achievement demonstrates the excellent teamwork and coordination between



RLTO was formed around a concept of shared storage, to reduce the overall investment in tanks as well as shared access to berths and to reduce the overall investment required for port expansion.

**2 billion**

The number of barrels of product loaded by Qatargas since 2006.



The harbour at Ras Laffan Industrial City which is home to Ras Laffan Terminal Operations.

**//**  
**This is a celebration of the synergy between companies operating from Ras Laffan Industrial City." - Khalid Bin Khalifa Al Thani, Chief Executive Officer of Qatargas.**





The Torm Helvig recently delivered RLTO's 5000<sup>th</sup> cargo. This was also RLTO's first cargo of ultra-low sulphur diesel. The Torm Helvig was built in Korea in 2005.

RLTO and the various stakeholders involved."

**Loading for the future**

Projections show that the success of RLTO, in its loading facilities and storing capacity, will continue to grow throughout the next decade. With a cumulative growth in storage capacity from 2007 to 2019 of 4.7 Mm<sup>3</sup>, the increase from 2014 to 2019 alone shows a growth of 1.3 Mm<sup>3</sup>, with the production of some 45 new tanks in the same period.

Meanwhile, the number of cargo liftings is projected to rise from around 1080 in 2014 to approximately 1240 in 2018, whilst maintaining a steady annual unit operating cost. As such, RLTO's already considerable client base will continue to expand significantly in the coming years, with a potential of 20 or more stakeholders by 2018, a significant increase in just four years.

# OVER 20 MILLION HOURS WORKED WITHOUT A LOST TIME INCIDENT

On 1<sup>st</sup> September, Qatargas surpassed 20 million hours worked across all its assets and projects, without a lost time incident (LTI), marking an important milestone in the company's journey to being premier.



Qatargas celebrates the significant milestone of surpassing 20 million hours worked without a lost time incident.

Plateau Maintenance Project (PMP) also celebrated the milestone of 500,000 STOP cards earlier this year, another great example of how an IIF Culture can become a reality.

Qatargas' safety processes and programmes have been continually improved in recent years. This includes the introduction of Life Saving Rules, continuous improvement in Process Safety, refreshing IIF in Action, enhancing Risk Management and strengthening the company's Permit to Work System.

"Safety is a Qatargas core value that we have embedded in all our processes and programmes," Khalid Bin Khalifa Al Thani added. "This milestone, however, was not achieved by these programmes



UNDERSTAND. ASK. SPEAK UP.

alone, but more importantly by the hard work, dedication and constant focus on completing each task safely, by everyone working in a Qatargas asset or for one of our projects."

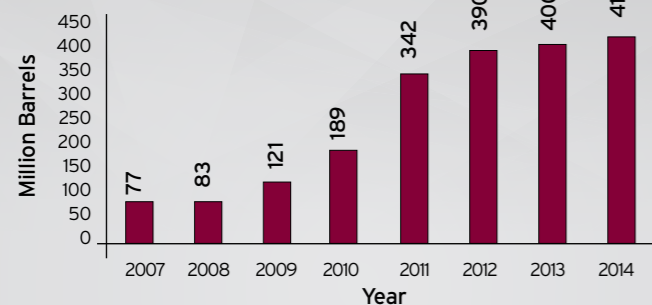
Randy Stadler, Qatargas Chief SEQ Officer, added, "The strong commitment of Qatargas and our people to IIF is a passion embraced by every employee and is reflected in all our processes. Ensuring each worker returns home safely, at the end of the workday, to their family and friends is the key objective of our Incident and Injury Free in Action programme."

Qatargas will continue to set ever higher safety standards and strive to reach new milestones in its continuing journey to premier.

# 15,000

Average number of people working at Qatargas everyday.

**Equivalent barrels of product shipped from RLTO**



**Products stored by and shipped from RLTO**



- » Disulfide Oil
- » Pyrolysis Gas
- » Naphtha
- » Paraffin
- » Sulphur
- » Base Oils
- » Gas Oil
- » Liquefied Petroleum Gas
- » Low sulphur Condensate
- » Sulfidic Caustic
- » Kerosene
- » Plant Condensate
- » Jet Fuel
- » Deodorized Field Condensate
- » North Field Condensate
- » Untreated Field Condensate



**"This is a significant achievement, demonstrating our operational excellence and commitment to providing a high level of service to all our customers and stakeholders."**  
 - Khalid Bin Khalifa Al Thani, Chief Executive Officer of Qatargas.

The first cornerstone of the Qatargas Vision is sustained premier performance in Safety, Health and Environment (SHE). In 2014, Qatargas set a new standard of safety performance by working 20 million hours without a lost time incident.

Commenting on the improvement in safety at Qatargas, Khalid Bin Khalifa Al Thani, Qatargas Chief Executive Officer, said, "This achievement is the result of our unwavering commitment to provide an Incident and Injury Free (IIF) workplace for all Qatargas employees and contractors."

The magnitude of construction projects, Qatar's climate conditions and, the regular introduction of new workers to projects are all key challenges. These challenges are addressed through management commitment supported by dedicated project safety teams, comprehensive SHE plans, a suite of SHE training and, a strong Incidents and Injury Free Culture. Both Jetty Boil-Off Gas (JBOG) and Diesel Hydrotreater (DHT) projects concluded in 2014 without a single LTI in the lifetime of the projects.

**"This achievement is the result of our unwavering commitment to provide an Incident and Injury Free workplace for all Qatargas employees and contractors."**  
 - Khalid Bin Khalifa Al Thani, Chief Executive Officer, Qatargas.



# RAISING THE BAR ON WELL INTEGRITY ASSURANCE

In the oil and gas industry, wellhead and tree systems stand at the vanguard of pressure containment on production equipment. The Qatargas Well Engineering and Intervention team has led the way in identifying viable solutions to safeguard QG asset integrity.

**A** gas well can be described as a series of concentric pipelines reaching from ground surface to the gas-producing formation, which for Qatargas is the Khuff reservoir. It is through the most inner conduit (i.e. the tubing) that gas flows to the surface. At surface, the concentric pipelines are terminated by installing the wellhead and tree system.

The wellhead and tree system constitute the equipment used to maintain surface pressure control of each of the concentric pipelines (i.e. casing strings). The combined well elements - casing strings, tubing, and wellhead/tree systems provide pressure

containment (i.e. barrier) and prevent unplanned release of hydrocarbons or other wellbore fluids to the environment.

The integrity of all well barriers' components requires great vigilance to ensure that any risk of unplanned release of hydrocarbons or other wellbore fluids to the environment, to the subsurface, or to closed void spaces within the well are kept to ALARP (as low as reasonably practical) levels for the entire well life cycle. When well barriers are compromised, the reliability of the LNG supply chain gets disrupted from the very beginning. The standing, unbroken quality of the well is therefore of the utmost importance for Qatargas production operations, and as such demands close and careful observation to ensure existing barriers are capable of containing the reservoir energy at all times.

**//**  
**The standing, unbroken quality of the well is therefore of the utmost importance for Qatargas production operations,** and as such demands close and careful observation to ensure existing barriers are capable of containing the reservoir energy at all times.

Tree removal and Tubing Hanger.



Operational well integrity and containment of well fluids is thus mandatory. Maintaining the effectiveness of well barriers involves a complex process, which includes casing annulus pressure monitoring, surface maintenance, reservoir fluid monitoring, downhole corrosion inspection and monitoring, reliability studies, well performance analysis and operator/service company competency.

Proper management of well integrity is essential to the sustainable development of gas resources.

### Background and challenges

Qatargas 1 (QG1) started production in 1996. Its first wellhead seal integrity issue was identified after five years of production, in 2002. At that time, the issue was deemed low risk and well operations continued under monitoring.

In late 2011, the Reservoir and Production (R&P) Department made the decision to reassess the risk posed by the wellhead seal integrity condition. In June 2012, the Well Engineering and Intervention (WE&I) Division hosted a technical workshop with QG1 Shareholders and the original equipment manufacturer, to understand the root cause of the situation, leveraging on Shareholders' technical strength and integrating the intimate knowledge of the manufacturer.

After gathering data from a detailed fit-for-purpose integrity test

Wellheads and christmas trees can be seen on a Qatargas offshore facility.



performed in the initial 20 QG1 wells and evaluating the results with Shareholders' technical experts and manufacturer, it was determined that the integrity of the wellhead seals in 17 wells was compromised and such wells must be fixed as soon as practical. Fixing wells implies performing work-overs which is a major project undertaking that requires expert knowledge, planning, time to order equipment, and most importantly budgeting with the appropriate level of contingencies to address the uncertainties inherent in opening and working on a well after 18 to 20 years of production.

A gas well is a series of concentric pipelines, which reach from ground surface to the gas producing formation.



### Innovations and solutions

With an objective to bring all wells back to full compliance, a recovery plan was devised in two stages. Stage one was a pilot work-over campaign on wells NFB-16 and NFB-18, leveraging the rig availability for ePMP wells to validate a newly designed wellhead seal concept for Qatargas and to minimise the operational uncertainties of future work-over implementation. Stage two will be a major work-over campaign that will implement the lessons learned from the pilot work-over on the remaining wells, targeting mid-2016 start date.

The pilot work-over campaign was carefully prioritised, addressing the most critical wells first. Proactive planning of different work-over execution scenarios was critical to prepare contingency equipment and procedures that could minimise downtime and increase the chances of successfully completing the work-over. Factory Acceptance Testing (FAT) was required to ensure the newly designed wellhead seal assembly would work at the well site, and proper procedures and tools would be available to assemble the solution.

### Conclusion

Thanks to the steps taken, such as access to technical expertise through the Shareholders, detailed engineering with scenario planning, and proper wellhead seal testing before field deployment, Qatargas reaffirmed its commitment to operational excellence by implementing the pilot work-over campaign in the QG1 venture. Q

**1996**

The year Qatargas 1 started production.




# DIVERSITY: A SOURCE OF STRENGTH

Qatargas currently has employees from 68 different nationalities - expatriate employees that have worked all over the world and bring an enormous amount of experience and knowledge of the industry's best business practices to the company.

## Leveraging diverse backgrounds and experience

The number of women at Qatargas has increased from 4% in 1996 to 10% in 2014. The Supervising the Qatargas Way (SQW) modules ensure that supervisors share their lessons and learn from their peers to improve performance across the company. This diversity promotes continuous improvement and underpins the organisation's current and future success, and contributes to the success of Qatar National Vision 2030.

territory, such as Hessa Al Nesf, Corporate Planning Analyst in the Planning Division. She has become the first National in Qatar to be awarded as an Incorporated Engineer (IEng) with the Institute of Chemical Engineers (IChemE). Qatargas' participation in the IGU-UNESCO workshop on 'Women in Engineering' in Paris is another example of the company's commitment to women in the workplace. 



## Connecting with the global community

Qatargas sends employees on assignments, secondments and training exercises all over the world, such as the USA, UK, Australia, Malaysia, Japan, Italy, UAE and Turkey. Development opportunities for the Qatari National workforce provides increased international experience and enables understanding of operational best practices. Some examples of these opportunities are: secondments to top London law firms for nationals in the Legal Department, Process Safety training in Italy for Engineering National Graduates, ongoing training partnership with Chiyoda in Japan and work assignments in partnership with RasGas in Malaysia.




Qatargas earned the distinction of becoming the first company in Qatar to be recognised as a Gold Partner of the Institute of Chemical Engineers (IChemE). The Learning and Development (L&D) Department is the only L&D Department in any LNG company in the world to receive the Investors in People (IiP) Gold Award.

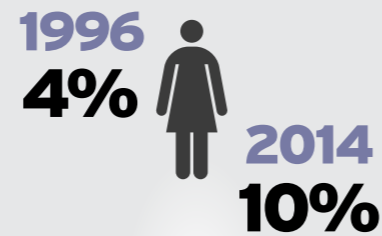


## Valuing women in the workplace

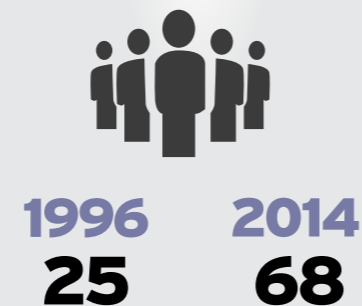
There is an increase in the number of national females in engineering at Qatargas who are chartering new

 The number of women working at Qatargas is growing year on year and females now make up close to 10 percent of Qatargas employees.

### Female employees at Qatargas



### Nationalities at Qatargas



# DRIVING PREMIER PERFORMANCE AND COACHING

Supervising the Qatargas Way (SQW) concentrates on how business is conducted at Qatargas, the way employees behave and interact with one another, the manner in which esteem, dignity and care is shown for one another, and how the work environment should be in order for talent to best flourish.

SQW provides the opportunity to create a path to premier on cognitive, emotional and behavioural levels. SQW was refreshed last year with a pioneering combination of:

- Positive psychology constructs, appreciative learning language, high quality connections and flow.
- Accelerated learning techniques.
- Learning through our 'Adult' ego state conversations - Transactional Analysis.
- The importance of truly listening through challenging dynamics, differing cultures and diversity issues (e.g., Killmann's Conflict Model, Hofstede's Cultural Dimensions), and
- Creativity through play.


The SQW workshops are designed to emphasise key areas of business expertise and operational excellence in the company, empowering employees to realise their potential and add to the daily Qatargas leadership conversations - 'Conversation 365'. They are aligned with the Qatargas Direction Statement in that they encourage:

- A high calibre, diverse workforce - "This course gives support to get the best out of us and our teams".
- Efficient and reliable operations - "I will encourage more face to face conversations with my colleagues, analyse behaviour and work more to gain an adult working relationship".
- Financial performance - "The course was excellent", I now commit to "better focus on budgeting and forecasting."
- Safety, health and environmental performance - "Inform my colleagues that behaviour is as important as technical competencies".
- Customer satisfaction - "I will apply SQW, not only in my workplace, but in my life".

## Honest, open conversations and enhanced learning


SQW encourages people to have honest, open conversations and deliver Stop, Start, Continue (S.S.C.) feedback, which leads to effective results. Optional enhanced learning sessions took place, covering:

- Genuine duty of care for colleagues.
- An increase in business-critical conversations with senior leaders.
- Taking on extra mid-year and year-end reviews to support the business.

The workshops were designed to further advance the SQW legacy that puts learning at the heart of the business, encourages business critical conversations and reminds people of choosing how to work and live the Qatargas way. 

# LEARNING OLYMPICS: GOLD EDITION



 Qatargas employees participating in a recent workshop.


The Learning Olympics: Gold Edition reinforced the SQW message behind 'Conversation 365', that performance feedback should be delivered year-round.

Workshop activities included a hands-on experience with the newly launched SAP Learning Management System, a survey and on-the-spot analysis of preferred learning styles.

A 'Writing Constructive Comments' workshop was also implemented to assist management with year-end appraisals. The workshop was born from a review, which focused on the quality of written feedback from management in the 2013 year-end appraisals.

**The workshops aligned with the Qatargas direction statement, with a particular emphasis on a high calibre, diverse workforce, efficient and reliable operations, and customer satisfaction.**

The focus of the workshop was how to deliver more quality comments as part of the employee appraisal process. It covered three key elements, which are to define expectations, evaluate based on evidence and direct observation, and to suggest areas of improvement.

The workshop also aligned with the Qatargas Direction Statement, with particular emphasis on a high calibre, diverse workforce, efficient and reliable operations, and customer satisfaction. 

**500**  
The number of employees that joined in the Learning Olympics: Gold Edition.



# SUSTAINING THE ENVIRONMENT FOR OUR FUTURE GENERATIONS

One of the highlights of Qatargas' 2013 Sustainability Report was the use of advanced treatment technologies to recycle and re-use wastewater currently discharged to the sea.

The Qatar National Vision 2030 includes sustainable water use as an important objective under the National Development Strategy (NDS) 2011 - 2016. As a key stakeholder in this process, Qatargas acknowledges the crucial role industry has in advancing this objective and has accordingly developed a sustainable wastewater management approach centred on three pillars:

- Re-use suitable streams for irrigation.
- Recycle suitable streams to produce desalinated water with advanced wastewater treatment technologies.
- Reduce disposal of wastewater to deep well injection through increased water recycling and reuse.

## Current wastewater treatment

The wastewater generated from Qatargas facilities includes produced water, which is separated from wet gas brought onshore from the gas reservoir in the North Field and other process wastewater streams generated from the onshore production facilities. Qatargas employs a suite of wastewater treatment and disposal systems ranging from physico-chemical processes, biological treatment systems and deep injection wells.

The produced water streams separated onshore for the QG2 and QG3&4 LNG mega-trains are treated and disposed of via deep injection wells into subsurface formations along with Low Pressure (LP) sour water and oily and chemical wastewater.

The QG1 LNG facility is not equipped with deep injection wells and hence its process wastewater is currently treated and partly utilised for onsite irrigation with the remainder discharged to sea. Due to the absence of common irrigation infrastructure within RLC, treated



Qatargas has developed a sustainable wastewater management approach.



**Qatargas employs a suite of wastewater treatment and disposal systems ranging from physico-chemical processes, biological treatment systems and deep injection wells.**

wastewater streams such as boiler blowdown, condensate regenerate water and stormwater are currently treated and discharged to sea.

## Future wastewater recycling and reuse facilities

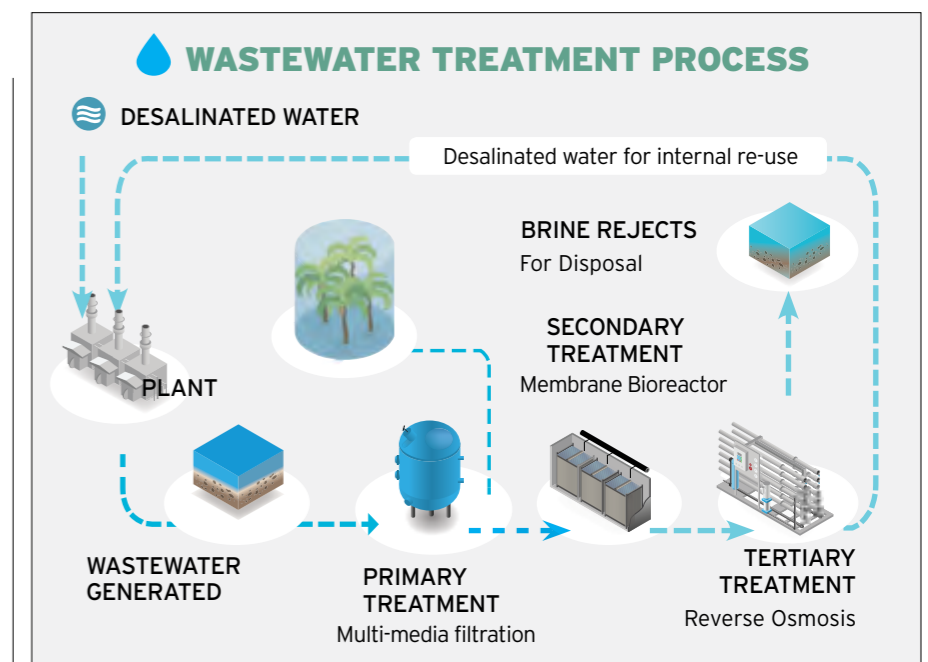
Based on the success of the QG1 Membrane Bioreactor (MBR) project, the advanced wastewater treatment approach adopted by Qatargas is based on upgrading existing treatment facilities to MBRs coupled with tertiary Reverse Osmosis (RO) units. Multiple wastewater recycling and reuse projects are currently underway at the QG1, QG2 and QG3&4 LNG facilities, and the

**60,1801**  
**m<sup>3</sup>**

Treated waste water used for irrigation in 2013.

Laffan Refinery targeted for completion by the close of 2016.

These facilities will treat process wastewater from the LNG trains and Laffan Refinery. The treated water will meet desalinated water specifications and will be reused as utility feed and service water within plant sites. Q



## Committed to achieving operating excellence for a safer environment.

It is through our operating excellence in producing LNG- the cleanest fossil fuel - that we make the world a brighter place. Delivering LNG to our customers around the world securely and reliably, we in Qatargas work hard day after day to maintain flawless operations in an incident and injury-free workplace.





# WASTE MANAGEMENT

## REDUCE, REUSE, RECYCLE - RESPECT

The State of Qatar has recognised waste management and reduction as one of its key national objectives in the Qatar National Vision (QNV) 2030. This recognition stems from the challenge that Qatar faces in managing waste in a sustainable manner as the country and its population grow.

According to figures released by Qatar Development Bank last year, Qatar generates approximately 28,000 tonnes of solid waste per day. The National Development Strategy (NDS, 2011-2016) outlines the national target to enhance waste recycling to 38 percent, from eight percent in 2011.

As the world's premier LNG Company, Qatargas' vision of corporate responsibility includes waste management as a key objective. In keeping with this vision, a recycling programme was launched in 2010, which includes the recycling of plastic bottles, metal cans and paper. From production operations, wood, concrete and oil are also recycled.

In parallel, Qatargas is also implementing a comprehensive Waste

Management System (WMS) to minimise and improve management of its facility wastes. Furthermore, to ensure long-term compliance and alignment with legislation and national objectives, the design and construction of state-of-the-art waste handling and treatment facilities is also being advanced.

The 3R philosophy, Reduce, Reuse and Recycle, is the single most important tool to tackle the generation of products we so readily call trash. Firstly, if we reduce our consumption, we will logically reduce our waste, as well as the consumption of materials and energy to generate those products in the first place. We should reuse materials such as paper and plastics, which lessen both resource consumption and waste output. Finally, in addition to reducing and reusing, we can choose to recycle our waste products.

### Waste Reduction, Reuse and Recycling Tips - How can I make a difference?

#### In the workplace:

- Think before you print. Do you really need to print? Print and copy double sided. Put waste/used paper in

- recycling bins.
- Go for reusable cups and bottles instead of disposable ones.
- Recycle plastic bottles and metal cans (recycle bins provided in Doha and RLC HQ buildings).
- Reuse office stationery such as



**As the world's premier LNG Company, Qatargas is implementing a comprehensive Waste Management System (WMS), to minimise and improve management of its facility wastes.**



paper clips, folders and company internal mail envelopes.

#### At home:

- Buy recyclable products. Use recyclable shopping and grocery bags.
- Do not throw away old clothes. There are many charities in Qatar that will collect and deliver them to those in need.

- Use rechargeable batteries. Spent batteries contain harmful chemicals which may leak and damage the environment when disposed in landfills.

#### Quick Facts - Global Waste

- Packaging materials account for ~five percent of landfill deposits.
- One tonne of paper from recycled pulp saves 17 trees, three cubic yards of landfill space, 7000 gallons of water, 4200 kWh (enough to heat a home for half a year), 390 gallons of oil, and prevents 60 pounds of air pollutants.
- Printing and photocopying on both sides saves paper and energy and can save up to 75 percent on the

- cost of purchasing and printing on new paper.
- Recycling one aluminium can will save enough electricity to run a television for three hours.

#### Quick Facts - Qatargas Waste

- Number of plastic bottles consumed by Qatargas per month: 156,000.
- In 2013, Qatargas offices used 26 tonnes of office paper which equates to 624 trees covering an area of 3.6 acres (15,000 m<sup>2</sup>).
- In 2013, Qatargas recycled almost 85 percent of non-hazardous wastes (paper, scrap steel, plastic and wood). Our overall recycling rate based on all types of waste (including process and plant wastes) was 32 percent.

**32%**

Qatargas' overall recycling rate in 2013.

## NEW SEASON OF THE QATARGAS LEAGUE TOURNAMENT KICKS-OFF

The 2014-2015 season of the Qatargas League, organised by the Qatari football governing body, Qatar Football Association (QFA), and supported by Qatargas, began on 20<sup>th</sup> September.

This season's Qatargas League has 18 reserve and second division teams participating, six more teams than when the league first launched last year.

Announcing league details recently were Khalid Al Kuwari, Chief Operations Officer, QFA and Mansour Rashid Al Naimi, Public Relations Manager, Qatargas. Representatives of QFA and Qatargas as well as the local media were also present at the announcement. Eighteen first and reserve team coaches attended pre-season press conferences to discuss with the media their preparation for the season.

Commending the Qatargas and QFA partnership, Khalid Al Kuwari, Chief Operations Officer, QFA, said: "We thank Qatargas for their continued support and look forward to continuing working with them for years to come. We are happy to be partners with a leading company such as Qatargas and are eager to organise a successful league again this year. Qatargas League is one of the most important leagues in Qatar, as two teams from the second division will ascend to Qatar Stars League (QSL) based on their ranking, whilst

the 13<sup>th</sup> and 14<sup>th</sup> place teams in QSL will be relegated directly from QSL to Qatargas League."

He added: "The Qatargas League will play a very significant role in developing the future of Qatari football and specifically the performance of our players."

Mansour Rashid Al Naimi, Qatargas Public Relations Manager, said: "We are delighted to continue our partnership with the Qatar Football Association. We would like to thank and congratulate the Association for organising an excellent tournament last season and look forward to an exciting new season. We are very optimistic that our support for the league will contribute in raising the standard of the game in Qatar and identifying new talents."

"As one of the leading energy companies of the world, our support to the game of football forms part of Qatargas' corporate social responsibility programme aimed at supporting the human development pillar of Qatar's National Vision 2030," he added.

The new season of the Qatargas League, which kicked off on 20<sup>th</sup> September, will



Khalid Al Kuwari, Chief Operations Officer, QFA and Qatargas Public Relations Manager, Mansour Rashid Al Naimi announced the Qatargas League details recently.

run until mid-April 2015 with a short break in December. Matches will be played in seven different stadia including Al Sadd, Al Gharrafa, Lekhwiya, Al Arabi, Al Wakrah, Al Khor, and Al Sailiya. The Qatargas League will be played according to a standard league format where two teams from the second division will ascend to Qatar Stars League (QSL) based on their ranking, whilst the 13<sup>th</sup> and 14<sup>th</sup> place teams in QSL will be relegated directly from QSL to Qatargas League.

**18**

The number of teams participating in the Qatargas League.

**28,000 tonnes**

The amount of solid waste generated in Qatar on a daily basis.



# HELPING ARSHEDNY BENEFIT SOCIETY

Qatargas has extended financial support to the Arshedny Centre, enabling it to continue delivering its key programmes to benefit society.

Mansour Rashid Al Naimi, Qatargas Public Relations Manager, handed over the financial contribution to Sultan Bin Abdulla Al Otaibi, Director, Arshedny Centre.

“We commend the initiative taken by the Sheikh Eid Charitable Association and Arshedny Center to address the issue of drug abuse and rehabilitation, and we are very pleased to support their efforts in this regard,” said Al Naimi. “Supporting initiatives aimed at enhancing the health and wellbeing of society are key elements of Qatargas’ Corporate Social Responsibility (CSR), aligned with the Human Development Pillar of the Qatar National Vision 2030,” he added.

The Arshedny Center is a specialised, non-profit organisation providing scientific programmes in counselling, rehabilitation, training and drug abuse prevention. The center works to establish effective partnerships with local, regional and global institutions and organisations competent in addressing the problems of addiction



Sultan Bin Abdulla Al Otaibi, Director, Arshedny Centre presents a token of appreciation to Mansour Rashid Al Naimi, Qatargas Public Relations Manager for financial contributions to the Arshedny Centre.

in accordance with international best practices and global standards.

Al Otaibi highlighted some of the global problems relating to drug abuse, saying, “We must do everything we can to prevent people from becoming addicted to drugs, as well as to rehabilitate those who have undergone de-addiction programmes, so that they can once again become productive members of society. We hope

this initiative will help in highlighting this issue and encourage other organisations in the country to follow.”

In appreciation of Qatargas’ support, Al Otaibi added: “Qatargas has always been keen to support the Arshedny Center and its projects that serve the community through counselling and rehabilitation and spreading awareness among young people and society as a whole.”

# SAFETY AND PERFORMANCE



Jassim Abdulla Al Mohannadi, Qatargas Chief Planning and Risk Officer, is pictured participating at the MEHSE Executive Plenary Session.

Qatargas supported and participated in the seventh SPE Middle East Health, Safety, Environment and Sustainable Development Conference and Exhibition.

The conference addressed topics such as social responsibility, sustainable development, risk management, environmental issues, health hazard management, behaviour-based and land

transportation safety, workforce welfare, and security issues.

Jassim Abdulla Al Mohannadi, Qatargas Chief Planning and Risk Officer, delivered a speech titled “Protecting People, Environment, Assets, and Reputation—Are We Prepared?” He explained the numerous steps taken by Qatargas to improve environmental safety and performance.

Other Qatargas representatives that also presented at the conference included Bashir Mirza, Project Manager, Jetty Boil-off Gas Project, who presented a paper on “Industry Leading Safety Performance While Building One of the World’s Largest Environmental Projects,” Khalifa Ahmed Al Sulaiti, Environmental Affairs Division Manager and Farhan Khan, Senior Environmental Analyst delivered a paper on the Qatargas Pulse Chlorination System and Tawfeeq Hamad, Head of Safety - Shutdowns and Projects presented a paper titled “The Case for a Case” which covered how Qatargas develops SHE cases for its assets.