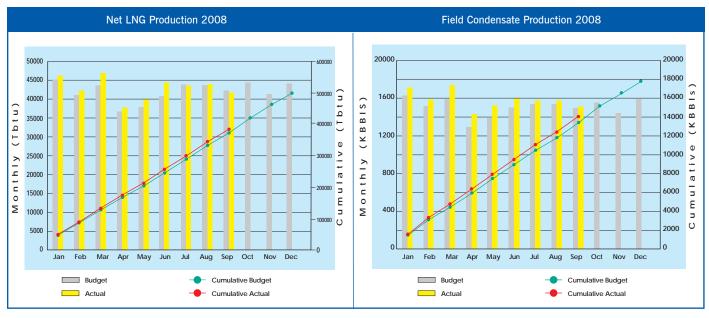
# THE PIONEER

The magazine of Qatargas Operating Company Limited



Qatargas' fourth LNG Train prepares for start up

## Scorecard 2008



## **Qatargas SEQ Monthly Safety Statistics**

Event Description	Qatargas		Contractors
Date of last LTA	1-Jul-02		26-Apr-03
Days worked since last Lost Time Accident	2,283		1,984
Personnel hours worked since last Lost Time Injury	14,234,880		8,978,097
Hours worked since last Lost Time Injury (04-26-03)		21,209,324	

Event Description	Qata	Qatargas		QG 2008 Business		Contractors	
	Current Month	Year to Date	Plan Targets		Current Month	Year to Date	
Number of Lost Time Accidents (LTA)	0	0	0	0	0	0	
Number of Medical Treatment Cases (MTC)	0	1	0	0	0	3	
Number of Occupational Illnesses (OI)	0	5	0	0	0	2	
Number of First Aid Cases (FAC)	3	4	0	0	5	20	
Number of Off the Job Injuries (OJI)	0	0	0	N/A	N/A		
Number of Major Fires	0	0	0	N/A			
Number of Minor Fires	0	5	0	N/A			
Number of Vehicle Incidents	0	3	0	0	0	2	
Number of Env. Releases	0	0	0	N/A			
Number of Env. Spills	0	5	0	N/A			
Number of Env. Waste Disposal Incidents	0	6	0	N/A			
Number of Moderate to High Risk Potential Incidents	1	139	100 N/A		7		
Number of Incident Notification	13	428	> 275				
Number of STOP cards	162	3,493	> 4000				
Days Lost due to LTA	0	0			0	0	
Hours Worked this Month	220,	220,000				71,968	
Hours Worked this Year	1,919	1,919,960				632,528	
Hours Worked combined (QG/Contractor)				2,552,488			
	Year to	Year to Date		Industry Benchmark		Year to Date	
LTA Frequency Rate	0.0	0.00		0.27		0.00	
LTA Severity Rate	0.0	0.00		2.00		0.00	
Total Recordable Incident Rate	0.1	0.10		N/A		0.95	

Our aim is to create an "Incident and Injury Free" site at Qatargas. However, for statistical purposes, targets for motor vehicle incidents and medical treatments are based on Year 2002 actual figures.

Except for Near Miss Reports, we encourage reporting of all near misses so that the hazardous conditions can be eradicated as soon as possible, through corrective actions

Total near miss cases also include those derived from different categories of incidents/accidents reported such as medical treatment, first aid, minor/major fire, vehicle incidents, spill/release etc.

These derived near misses were also included in the "Total Near-Miss reports" due to their potential to escalate into more serious incidents.

Please note the attached graphs giving an annualized overview of KPI statistics.

Note: Man-hours based on projected headcount of September and November.

You can contribute to 'The Pioneer'. Please send articles, comments or feedback to:

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### **CEO Address**



# Preparing to start up the largest ever LNG train

On October 11, gas from the new offshore wellhead platform 4 was introduced into the Qatargas 2 inlet receiving facilities in Ras Laffan, signaling the onset of the most crucial phase in the entire project – commissioning and start up.

The weeks that follow are critical.

During the commissioning phase,
numerous systems and equipment are
checked and tested to ensure readiness
to produce LNG safely and reliably.

Following the successful completion of
commissioning, the plant is started and
will begin to produce liquefied natural gas
from the largest LNG train in the world –
Qatargas Train 4.

On this occasion, I would like to thank everyone involved – the drilling team, offshore and onshore project teams and the contractors and sub-contractors for their perseverance and hard work.

The Expansion Start Up group also deserves praise for their outstanding efforts over the past couple of years. I am confident of their capability in the safe hand over of Train 4 to the Operating Company after a safe and successful start up.

We aim to be the world's premier LNG company, known for its people, innovation, operating excellence and corporate

citizenship. The success we have achieved so far in our expansion projects is a clear indication that we are on track to realize our vision.

People are our most valued and vital asset. The success that Qatargas enjoys today is essentially due to the pioneering spirit and high standard of performance demonstrated by its people everyday. Nowhere else in the world can you see people from so many different countries and cultures working together as one team and achieving such incredible feats.

Innovation is the hallmark of the Qatargas 2 project in every aspect. It is the world's first fully integrated value chain LNG venture – from wellhead to pipeline grid. Our new LNG trains will be the largest in the world, employing new cutting edge technology, many of them for the first time ever. We also pioneered the construction of the new generation of LNG carriers, Q-Flex and Q-Max. Our spirit of innovation extends beyond our assets and facilities to encompass our systems, procedures and the way we do business.

When you have the best people making use of the best technology, operating excellence is bound to be achieved. The results of the 2007 benchmarking exercise show that the Qatargas 1 LNG plant was the industry pacesetter for reliability,

availability and utilization. We plan to build on this success and ensure that the new trains and all of our other assets also operate at the highest standards.

As the Company grows in size and complexity, we need to ensure that we are prepared for new business, assets, technologies, people and ways of doing things. The process known as Building the Producing Organization – BTPO, is the tool to make the transition and build the capability to operate the new assets at pacesetter levels for the next 30 years.

As a company, we also need to evaluate ourselves relative to the best in our field, identify gaps and do what is required to close those gaps in order to take us closer to our vision. This is where our annual benchmarking exercise comes into play.

I hope you can appreciate how the four pillars of our business - people, innovation, operating excellence and corporate citizenship combined with innovative tools like the benchmarking are closely linked and together make us stand apart as a world class organization.

#### Faisal M. Al Suwaidi

Chairman and Chief Executive Officer

# Commissioning and start-up — living our values

Over the recent months there have been many significant achievements by all the people involved in Qatargas 2 project, the Expansion Start-Up group and Qatargas Operating Company.

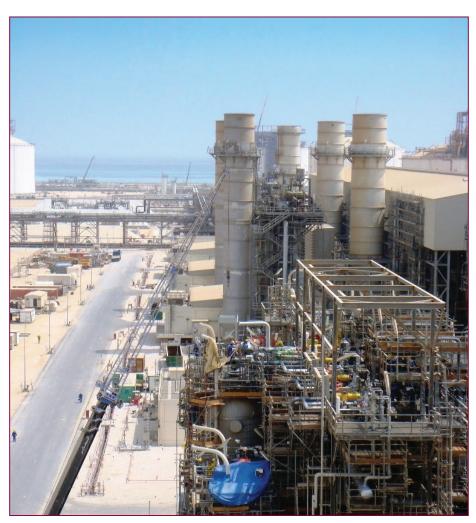
Much of what has been achieved over the past months and years is due to the hard work and dedication of many people. Every one of these achievements has moved us one step closer to the original vision of Qatargas to be the world's leading supplier of liquefied natural gas. In many ways the activities, in particular the recent start up and commissioning milestones also reflect where we want to go as a company.

The expansion start up work mirrors what we want to be known for – our people, innovation, operating excellence and corporate citizenship in our new vision.

### **Recent achievements**

There have been many recent highlights from the project team and Expansion Start-Up (ESU) group as they moved Qatargas Train 4 ever closer to producing its first liquefied natural gas (LNG). The most recent of these over the last two months has been the handing over of the inlet receiving area to the ESU on behalf of Qatargas operations (see detailed article on Page 7).

This follows the successful handover of the offshore pipelines, platforms and wells from the Project team to the Offshore Operations group to bring gas onshore and begin the process of starting up train 4. This is a complex operation but one that the Project teams and the ESU group, in



View of Train 4

particular, has been working tireless towards for the last two years.

Prior to bringing the gas onshore for the first time ESU, the Qatargas 2 project team and the contractors and subcontractors on the project had been working together to ensure all of the pre-commissioning and commissioning work was completed and that the facilities were ready for operations.

The main focus of all the teams has been to ensure that the new equipment starts up safely and that Qatargas can operate and serve our customers in many distant markets for the long term.

Reflecting on the company's recent milestones, Mr Faisal Al-Suwaidi said; "These are incredible achievements for the company, our country and the industry but

### **MILESTONE**

"A big part of our success to date has been the dedication of the people who work day in and day out to deliver the projects. I would like to thank each and every person for their continued commitment not only to the activities at hand but also to delivering safely."

- Faisal Al-Suwaidi, Qatargas Chairman & CEO

we have no time to rest on our laurels. We must continue to focus on the task at hand and make sure all of the expansion projects get delivered safely and can operate reliably in the long term."

Commenting further he said; "A big part of our success to date has been the dedication of the people who work day in and day out to deliver the projects. I would like to thank each and every person for their continued commitment not only to the activities at hand but also to delivering safely – everyone should get to go home safely at the end of every day."

### Our people

Part of the commitment of the new vision is to be known for our people. The ESU group has set down a new approach and industry standard in their start up of these new facilities.

The planning for the start up has been a team effort with groups from the contractors and subcontractors, project teams, the Operating Company and ESU working out how this could be done safely and efficiently. The "Building the Producing Organisation" (BTPO) has played a key role in facilitating this by getting different project teams together to

work across issues and making sure nothing gets missed.

Over the last year many new people have joined the Operations Group and ESU. This comes as a result of a comprehensive recruitment campaign which saw Human Resources and the technical teams working together to make sure the right people made it to Qatargas. To date more than 700 staff have been hired and trained to operate and maintain the facilities.

Mr Abdelkader Haouari, Expansion Start-Up Manager said; "Our job is to ensure a safe and flawless startup of all the new LNG facilities and to prepare them for future operations."

"I have great confidence and pride in the amazing team that has been built, everyone cares about doing a good job and doing it safely. We will continue to work hard to ensure the integrity of the facilities now for and the future, to meet our objective to be the world's premier LNG company."

## Innovation & technology

The integrated project chain approach of Qatargas 2 is a new and innovative approach for the LNG industry which broke with the traditional trains and markets coupling of other major projects being

developed around the world. The new mega-trains and mega-ships have allowed Qatargas to expand its reach beyond the traditional markets into new markets for Qatar which run both east and west of the Suez Canal.

With the new LNG trains and facilities there are many new and adapted technologies that are being put into use for the first time.

During the project appraisal phase the company performed rigorous technical reviews on the technologies new to the industry. This has continued through into the development and commissioning with the company working closely with vendors to reduce the risks during start up and commissioning.

Some of the technologies include the first ever application of Air Products & Chemical's APX process coupled with a mechanical drive system built around the first application of General Electric's Frame 9 turbines in LNG service. Some key features of this new design include N2 sub-cooling loop to de-bottleneck the refrigeration process, Frame 9E turbines with dry low NOx burners, waste heat recovery power generation and a motor-generator on each string which can supplement power or generate electricity.

"I have great confidence and pride in the amazing team that has been built, everyone cares about doing a good job and doing it safely. We will continue to work hard to ensure the integrity of the facilities now for and the future, to meet our objective to be the world's premier LNG company."

- Abdelkader Haouari, Expansion Start-Up Manager

### **MILESTONE**

### **Global reach**

The innovation and technology extends beyond the onshore facilities and into the ocean, the new class of ships – Q-Flex and Q-max – which have been designed and built in Korea allow Qatargas to reach beyond the markets we currently serve to new destinations in North America and Europe.

Each ship will have cargo capacity of between 210,000 and 266,000 cubic meters and are 60-80 percent larger than the current LNG fleet. These vessels have many innovative features, including full-scale application of an onboard re-liquefaction plant, allowing the ships to use more efficient slow speed diesel engines, the high value boil-off-gas, normally used to fire on-board boilers for propulsion, will now be re-liquefied and sold into the market. On the ships there are twin engines and shafts to ensure maximum propulsion safety and reliability and underwater coatings using the latest technology silicon anti-fouling system, which enhances the speed and performance of the vessel and also "friendly" to the marine environment.



Silent steam blowing to clean pipework

Qatargas has already started to take delivery of these vessels from the various ship yards in Korea with the most recent being the first Q-Max – "MOZAH" which was delivered in late September.

Chief Executive Officer, Mr Faisal Al Suwaidi said; "This is the first of the new generation of liquefied natural gas carriers for the company and we are pleased to see this ship delivered safely. It is an exciting time for Qatargas as the pioneers of these new LNG ships and the industry as a whole as we make this step change."

### The road ahead

Qatargas is at the start of the "start-up years" with commissioning of the new trains and the refinery to continue until the end of the decade. There will be many more milestones ahead but Qatargas has the right people, processes and attitude to achieve what needs to be done safely and to deliver reliably for the long term.



ESU Management team

# Qatargas 2 Inlet Receiving handover launches production from Wellhead 4

Key milestone achievements from the Inlet Receiving area of Qatargas 2 bring the Company one step closer to the project's first LNG production and delivery.

On October 10, 2008, the fabrication contractor, Chiyoda Technip Joint Venture (CTJV), handed over the safe operation of the Inlet Receiving facilities to Qatargas.

The Expansion Start Up group accepted care, custody and control of the facilities; and the team introduced gas from the project's new offshore Wellhead Platform 4 into Inlet Receiving area.

#### **Notable accomplishments**

During the handover, CTJV Project Director, Seiichiro Ikeda, said he is proud of the amazing efforts put forth by everyone involved in the project.

"Working together in a triple wing situation – company, contractor and sub-contractor – our team has achieved great things," he said; and maintaining that commitment will ensure ongoing success.

"The three parties must remain close, tight together to achieve the last goal – LNG production and LNG shipment."

Yow-Yeen Lee, Onshore Project Manager, said the handover of the Inlet facilities represents a significant Qatargas achievement, notably accomplished with an outstanding safety record and high



Personnel open valves to introduce gas into Inlet Receiving



(Front) Seiichiro Ikeda, CTJV Project Director, Yow-Yeen Lee, Onshore Project Manager, and Abdelkader Haouari, Expansion Start Up Manager, signed the IR handover certificates October 10, 2008. Also present were (back) Rock Lowery, HSE Manager, Dan Callens, QG2 Operations Specialist, Pierre Miccolis, CTJV Deputy Commissioning Manager, Abdel Kader Attou, Maintenance Division Manager, Mansoor Al-Marzooqi, QG2 Operations Manager, and Roland Bianciotto, CTJV Deputy Site Manager.

quality standards – a feat he attributes to all team members.

"We've made one big step, with bigger steps to follow. I have no doubt that the team will be successful," he says.

Abdelkader Haouari, Qatargas Expansion Start Up Manager, is equally confident, adding he is very pleased with the progress and the introduction of gas from the new offshore facilities.

"ESU supported this project during the construction and pre-commissioning; and



QG2 Inlet Receiving Main Control Room (MCR)

now we are proud to take ownership of the start up of Inlet Receiving," he says. "Our success would not be possible without the true team spirit between ESU, PMT and CTJV."

Mr. Ikeda, Mr. Lee and Mr. Haouari extended their personal gratitude to everyone who has contributed to this key event – from the welders, scaffolders and insulators, to the engineers and operations staff and thanked everyone for their hard work and dedication to make the project successful.



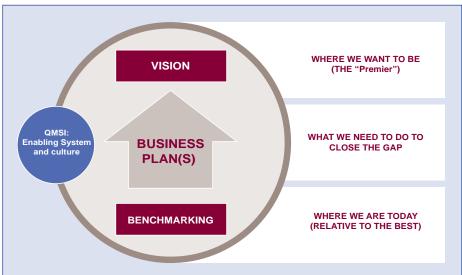
Offshore facility team

# **Benchmarking**



For the ninth consecutive year Qatargas participated in a global benchmarking exercise conducted by Shell Global Solutions (SGS). The exercise involves benchmarking our onshore operations and support activities against other liquefied natural gas companies around the world. The results of the exercise were presented to the Chief Executive Officer and other top management in May and later rolled out to the entire organization via a series of hour-long presentations.

Every year the benchmarking exercise starts in January with training of data collection coordinators. This is followed by the collection and validation of the input data, a review of the draft report and finally the presentation of the



findings to the senior management in May. This year 18 coordinators from Operations, Process Engineering and Production, Health Safety and Environment, Costs and Personnel participated in the exercise.

The results of the 2007 benchmarking

reflect overall good performance and clearly demonstrate the progress we have made towards becoming the world's premier LNG company. The results also show the areas where we need to further improve to reach pacesetter levels.

# Highlights of 2007 performance:

#### **Health and Safety**

- We achieved zero Lost Time Incident (LTI) in the existing operations for the fourth year running which represents pacesetter performance in the industry.
- We also achieved pacesetter levels for the number of potential incidents reported per person and in leaks and spills.

While we have concentrated on the development of a safety conscious company culture, the 2007 benchmarking results suggest that as individuals we should continue to build on our success by making safety part of our jobs and incorporating safety in every part of our day-to-day activities.

#### **Environment:**

- Emissions levels of CO2, CH4, N2O and NOx have reduced from previous years and are lower than the industry standard in most cases.
- Our Global Warming Potential (GWP)
   has moved closer to the pacesetting
   levels
- VOC emissions were better than pacesetting levels of 0.015%.
- Waste recycling continues to improve.

This performance is reflective of our corporate goals to reduce all emissions towards pacesetter levels.

#### **Personnel and Costs:**

Qatargas improved its overall personnel performance for the sixth consecutive year.

Personnel efficiency index at 319
 was third best in the industry, with

- improvements in operations, support and maintenance efforts.
- However, reversing a six-year trend, the total unit operating costs rose by 3%, but it is still slightly below the LNG peer average.

Most of this improvement is due to several initiatives started within the company to reduce costs, streamline business processes and identify synergies. With the new expansion projects due to commence in the next few years, we have a great opportunity, under the operating company structure, to take advantage of the economies of scale and the unprecedented level of synergies to become pacesetters in both manpower utilization and unit cost performance.

#### Availability and Utilization/ Production and Energy

- Our production of 9.8 MT of LNG in 2007 was a record for Qatargas.
- At 93.3% utilization level, Qatargas was the best performer among all LNG Plants with high Reliability levels of 97.5%.
- Annualized lost capacity for maintenance of the LNG trains also slightly improved to 6.6% from 6.7% in 2006.

Our LNG plant was the industry pacesetter for reliability, availability and utilization. This shows that we were not only able to maximize the potential of our plant by ensuring minimal downtime and maximum reliability, but were also able to take advantage of that potential by effectively marketing our LNG.

# How benchmarking relates to the Qatargas vision?

The improvement in benchmarking results didn't just happen, this came about because of our efforts to focus on our vision and implement our strategy, and demonstrate a commitment to continuously improve our performance.

Benchmarking played a key role in putting us on the path to achieving our original vision of becoming the leading LNG supplier in the world. Benchmarking will continue to play a key role in helping us achieve our new Vision of becoming "the world's premier LNG company." However, we recognize that benchmarking is not an end in itself but a tool to evaluate and guide us to improve performance.

Benchmarking highlights not only the good performance but also areas that need improvement. Key learnings from the benchmarking report are taken into account as next year's Business Plan is being developed. Benchmarking will also help us to decide where we will focus our efforts. As we continue to learn new skills and ways to fulfill our responsibilities we will close the gaps, meet our objectives and become the world's premier LNG Company.

As we look to the future, we should not forget that the other LNG participants are also trying to achieve pacesetter levels. The number of participating LNG sites grew to 10 in 2007, which represents about 80% of the 2007 world LNG capacity of 186 Million tonnes.. Therefore, we have to learn new skills and ways to fill the performance gaps while also maintaining the gains we have already achieved.

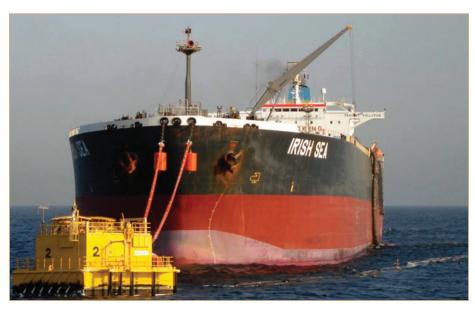
# Offshore Condensate Terminal started by Qatargas 2

On Monday, September 15th, the tanker M.T. Irish Sea accepted the first cargo load from the onshore common condensate tank farm. However, the M.T. Irish Sea was not pier side within the Ras Laffan harbor, but 52 kilometers offshore in the Arabian Sea. The tanker was docked at one of two offloading buoys that constitute the offshore condensate terminal.

Together, the two buoys form the core of the offshore terminal. They are commonly referred to as Single Point Moorings, or SPMs, and these particular SPMs are square shaped, about 10 meters to the side. Although floating, they are anchored to the seafloor by chains and driven piles in a water depth averaging 38 meters. The buoys are fed condensate from onshore through a 42 inch diameter pipeline that runs from an onshore tank farm, along the surface of the seafloor, and connects to the buoy through flexible submarine hoses.

The magic of the SPM is found in its cleverly engineered swivel and main bearing that allows the buoy to remain anchored in place while also allowing it to pivot completely around. This feature allows a moored tanker to weather vane aligning itself with the ever-changing wind, wave, and current forces while continuing to offload.

The terminal is designed to accommodate all Aframax, Suezmax, and Very Large Crude Carriers (VLCCs) tankers currently engaged in worldwide trade and ranging in size between



First Loading at Offshore Condensate Terminal, September 15, 2008

80 to 320 thousand deadweight tons. About 1500 tankers in total, known in the industry as 'tankers of opportunity' can load from the terminal without any modifications.

While some distance offshore, offloading buoys in this location have certain commercial advantages compared to offloading in the Ras Laffan harbor. Harbor traffic projections for the years 2010 and onward in the Ras Laffan Port indicated congested conditions occurring between LNG Carriers and condensate tankers competing for the same harbor facilities. By moving the condensate loading offshore, the future harbor traffic and related congestion was greatly reduced.



### **UPDATES**

Achieving this significant milestone on schedule and within budget while maintaining the highest standards of safety, health, environmental protection and quality is testimony to the exceptional team effort not only within the Qatargas 2 Project Team, but also among the various Common Condensate Owners in Ras Laffan. 

- Jerry Gallagher, QG2 Common Facilities Project Manager



Condensate Buoys 1 & 2

Also, condensate tankers visiting the offshore SPM Buoy are no longer restricted by the harbor's maximum 12.5m draft. So the larger tankers that will frequent the terminal, referred to as VLCCs, can receive condensate loads that fill them to their maximum capacity, which can be at a draft of 23 meters. This deeper draft limit results in

improved condensate marketability and shipping flexibility.

The condensate that is loaded to these tankers is originally extracted from the North Field, about 30 kilometers to the north of the offshore terminal. This condensate stream is sent ashore via pipelines for processing to remove the water, gas, and impurities. The resulting

purified condensate is then stored in a tank farm that consists of eight 90,000 cubic meter tanks. This storage volume provides about eight days of storage once the condensate is being produced at its peak rate of about 500,000 barrels per day. The offloading rate of 8,000 cubic meters per hour will meet the industry expectation of loading a one million barrel parcel of condensate in 24 hours

The Qatargas 2 Project Team that executed the offshore terminal scope formed in the third quarter of 2005, and successfully completed the project within budget and in harmony with the overall project schedule driven by the start-up of Qatargas 2 Train 4. Alfred Mackay, the Sub-Project Manager, stated, "The offshore terminal is a world-class facility that I predict will reliably and safely offload condensate for the next thirty years. My congratulations to the project team on their significant accomplishment." Jerry Gallagher, the QG2 Common Facilities Project Manager, added; "Achieving this significant milestone on schedule and within budget while maintaining the highest standards of safety, health, environmental protection and quality is testimony to the exceptional team effort not only within the Qatargas 2 Project Team, but also among the various Common Condensate Owners in Ras Laffan."



# Qatargas 2 Offshore Project Successfully Completes Train 4 Facilities

#### INTRODUCTION

The Qatargas 2 Offshore Project recently achieved several major Train 4 milestones that will transition the Project's focus from the construction and mechanical completion activities to commissioning and start-up. These milestones include successful handover of all major portions of the Facilities, including the PL4 (34") and PL5- 4 (16") pipelines and the two topsides.

These accomplishments have been achieved together with NPCC, Technip and all of their subcontractors with an excellent safety record, which shows the Project's dedication to maintaining an "Incident and Injury Free" work environment. Earlier in August 2008, the Project celebrated five years without a Lost Time Incident. This focus will remain one of the most important aspects while continuing the work on the remaining Train 5 Facilities.

On 23rd August, the QG2 Offshore Project handed over to the Expansion Start up (ESU) group the Train 4 pipelines: PL4 (34") and PL5-4 (16"). PL4 transports the gas from the QW4 topsides to the QG2 Train 4 onshore facilities. PL5-4 transports the gas from the QW5 topsides to the PL4 pipeline and from there to the QG2 Train 4 onshore facilities. This was the first in a series of handovers that will enable the ESU group to complete commissioning of the pipeline system, including pressurization to 80 bar pressure using dry gas from Qatargas 1. This pipeline pressurization was successfully completed in early September.

Shortly after pipeline handover, the first of two Train 4 platforms was completed by NPCC and handed to QG2 Offshore PMT. The QW4 platform, which will be used for the initial start up of the Train 4 facilities, was successfully handed over to the

Expansion Start Up (ESU) group on 31st August. After handover, the ESU group continued preparations for the startup, including completion of the commissioning activities such as downhole plug removals and pressurization of the platform piping. The second platform, QW5 was completed and handed over to ESU on 23rd September. The ESU group is completing the commissioning activities that will prepare this platform for the startup.

The handover of the Train 4 facilities will allow the ESU group to continue with final preparations for the startup. "The handover of Train 4 facilities is a major milestone for the QG2 PMT and ESU teams. We worked together to achieve this, and it took everybody's dedication and efforts to achieve this common goal." said Mostefa Benzair, ESU Startup Lead responsible for offshore facilities. "Since ESU group received these facilities, we



QW4 topsides and the workboat AMER



PL4 handover to ESU

### **UPDATES**

\*\*The handover of Train 4 facilities is a major milestone for the QGII PMT and ESU teams. We worked together to achieve this, and it took everybody's dedication and efforts to achieve this common goal.\*\*

- Mostefa Benzair, ESU Startup Lead responsible for offshore facilities

were able to safely introduce gas into the pipeline and pressurize the QW4 topside facilities"- added Mostefa.

Work by ESU group on the platforms continues with final preparations underway for the start up of QW4. Expansion Start Up (ESU) Management continues to ensure a smooth transition and successful start up remain the key focus areas for the Project.

#### **Safety Milestone**

Safety continues to be a priority for the QG2 Offshore Project since the beginning. In August 2008, the Project achieved a safety milestone of five years without a Lost Time Incident. In support of this important milestone, project completed over 9.3 million manhours. "This major safety achievement was a result of continuous effort by each and every employee and subcontractor since the

beginning of the project. Everyone played an important part by safely completing their daily activities", said Jim Volker, QG2 Offshore Project Manager.

#### **Update on Train 5 Activities**

In addition to the Train 4 startup activities, work is continuing on the Train 5 facilities. One of the Train 5 major milestones was achieved when the installation of the third wellhead platform was completed in the North Field, 80 kilometers offshore Qatar. The QW6 platform was installed safely on 26th September, 2008 using National Petroleum Construction Company's Heavy Lift ship HLS-2000. The topside, which was the heaviest of the three QG2 platforms, weighed approximately 2200 MT (or 2450 ST). The installation of QW6 was completed safely and was the record lift for the NPCC's flagship vessel HLS-2000.

This milestone takes the project one step closer to completion. Following the installation of the topsides, the offshore Hookup and mechanical completion work campaign is underway.

On 10th of August PLB-1000 completed approximately 8.2 Km section of the PL6 pipeline from the QW6 jacket to expansion loop located at the junction with PL5-6 (16") line. The completion of this section enabled NPCC to install the 38" riser and set the QW6 topsides in place. After completing this short section, DLB-1000 started laying the remaining section of the PL6 (38") pipeline. It is particularly noteworthy that laying of 'snake-lay' portion of the pipeline, designed to reduce lateral buckling, commenced on 27th of September. The 'snake-lay' section is using very tight design and installation requirements.



WH5 installed



QW5 Handover

# Qatargas 2 Completes Train 4 Electrical Power Generation and Distribution System



QG2 Electrical team at SS-2901 during the second QG2 black out and auto re-energization

The Expansion Start Up group and Qatargas 2 Project Management Team celebrated a major milestone in Quarter 3 with the safe and successful completion of Train 4 electrical power generation and distribution system.

The commissioning and start-up of QG2 electrical generation and distribution system started in June 2007 with energization of the first utilities substation SS-2902 in June 2007. This was followed by the main substation SS-2901 in September 2007 with the help of 33kV/66kV tie-lines from Qatargas 1.

The Electrical team utilized power from Qatargas 1 for the initial commissioning and start up activities. Later, two QG2 steam turbine generators were brought on line and synchronized with QG1 in June 2008. Another significant achievement was the "QG2 Black Out and Auto

Re-energization from QG1" test, conducted successfully in April 2008 and repeated in August.

Since that time, the team has safely and successfully energized a very large electrical distribution system, 15 substations, some of which are extremely large, and three VFD buildings. Fully operational, these complex systems contain over 1100 items of electrical switchgears, from 132kV to 415V, and more than 160 power transformers in addition to UPS, battery chargers, HVAC, fire and gas, earthing, lighting and telecommunications systems.

This has been a remarkable achievement considering the scale of the electrical power generation equipment and substations that the team had to install and energize throughout the facility. At present, the electrical system operates in island

mode supported by generation from two steam turbine generators (STGs), rated at 44MW each. ESU is currently using these generators for Train 4 start up and production. The team will further supplement the two STGs by another steam turbine generator and a Frame 6 Gas turbine generator for Train 5.

The electrical system also includes the implementation of two cutting edge state-of-the-art equipment:

- 1. Variable Frequency Drive Generators (VFDG): an electrical machine with dedicated high voltage switchgear and control system used in conjunction with the Frame 9 gas turbines that drive the MR, C3 and N2 refrigerant compressors. The VFDG functions as:.
- A starting motor to bring the gas turbine up to speed where gas firing can begin;

## **UPDATES**

- A helper motor to provide additional mechanical power to the turbine compressor string to keep the compressor running at optimum performance;
- A generator to convert any excess power the gas turbine has, after meeting the compressor demand, into electrical power for the QG2 electrical system.
- A turning gear motor to keep a hot gas turbine rotating at a low speed to cool it down if shut down for any reason.

#### 2. Electrical Integrated Control System (ELICS) and Power Management System (PMS):

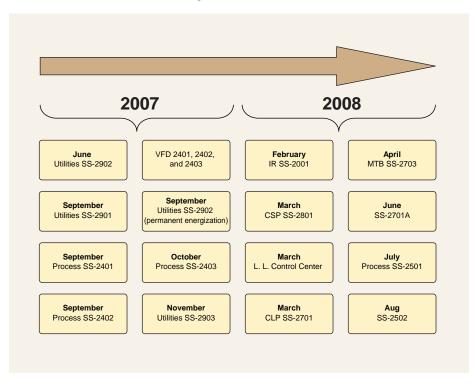
An electrical power generation and distribution control system that performs the following functions for the QG2 electrical power generation and distribution system:

- Regulates the amount of electrical power produced by the generators according to the demands of the plant;
- Automatically load sheds individual electrical circuits in order of priority to protect the distribution system from collapsing, if any generator shuts down unexpectedly; and
- Automatically connects the electrical system to QG1 electrical network if all generators shut down, allowing QG2 equipment to restart with the minimum of downtime.

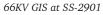
In August, the Expansion Start Up group and Qatargas 2 Project Management Team hosted a dinner in Doha to celebrate this achievement. Representatives from Qatargas, CTJV and the various subcontractors and equipment manufacturers attended the dinner during which the achievements and dedication of the Electrical team were highlighted.

The management team recognized everyone involved in the design, construction, commissioning and safe energization of these systems and thanked all the personnel from Qatargas, CTJV, subcontractors and equipment manufacturers for their safe work practices and commitment.

The following table illustrates the Qatargas Train 4 and Train 5 substations energizes since June 2007





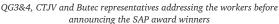




Substation SS-2902

# Supervisor Assessment Program – Raising safety standards







QG3&4 IIF facilitator (in orange) and Butec management presenting an award to a worker

The Qatargas 3&4 onshore project recently launched the Supervisor Assessment Program. It is based on a program carried out successfully by the QG3&4 offshore team in Jebel Ali. The program has been designed to raise the overall standard of safety within the project by placing the primary responsibility for safety on the supervisors, rather than safety officers. While safety officers continue to play an important advisory role, supervisors have line responsibility, which includes the safety of their workers.

While the workers are responsible for safe execution of the job, the supervisor will be held accountable. Among other responsibilities, it is up to the supervisor to: 1) Do adequate work planning, 2) Ensure his workers are trained for the

job, 3) Make his workers aware of the hazards and how to mitigate them, and 4) Rewards his workers for good behaviour and coaches them where improvement is needed.

The program runs on a bi-weekly basis and supervisors will be evaluated against specific safety criteria. By ranking the supervisors against each other, a friendly but competitive atmosphere is created with the ultimate goal of raising the safety standard on the project.

An additional advantage of the program is that the evaluation team consists of representatives of QG3&4, CTJV and Subcontractor management. Their presence on site gives an additional opportunity to demonstrate their commitment to safety to their supervisors and workforce.

On Thursday 28th August the first Supervisor Assessment Program was held with BUTEC, a subcontractor on the QG3&4 project responsible for erecting tanks in the Utility, Fresh Cooling Water, Chemical, Sulfur and Restricted areas. The team in the Fresh Cooling Water area had the best safety performance relative to the other areas. Five supervisors and 30 workers received cash awards and were presented with QG3&4 certificates. Every two months the best overall team will win a dinner in Doha.

With successful results in Jebel Ali, and promising results on the QG3&4 onshore project, the plan is to roll out the program to more subcontractors, with the ultimate goal of raising the overall standard of safety on the project.

# A day in the life of Messaoud Benslimane

Messaoud Benslimane is the Head of Utilities in the Operations Department. After graduating from the Algerian Institute of Petroleum in 1973, Messaoud worked at Sonatrach, Algeria, for seven years followed by over 12 years at ADGAS in Abu Dhabi. He joined Qatargas in 1995 as Shift Supervisor in the Startup Utilities section. Since then, Messaoud has moved up through various jobs in the Operations Department before being promoted to his current position in September 2006.

Describing his typical day at work, Messaoud says; "I am usually in my office before 07:00 in the morning. I log on to my computer and check my e-mails. I also look at the utilities shift reports, check Process Information System trend for the past 24 hours, check the work permit system and call the shift supervisor to make sure everything is running smoothly".

"The rest of the day is usually spent in various meetings. These include Risk based work selection meeting, plant and terminal operations coordination meeting, Operations weekly meeting in addition to various other meetings as required. Then there is the regular visit to the Power Control Center and Main Control Room followed by a quick plant tour during which I talk to the Shift Supervisor and advise him of any action."

Messaoud's work also includes checking and reviewing various documents like interface agreements and Engineering Service Requests. Checking the shift manning and arranging manpower requirement, organizing leave schedules and ensuring coverage in all crews and arranging and planning training for



operators also come under his responsibilities.

We asked Messaoud what the most interesting aspect of his job was, to which he replied, "The utilities section is the most critical part of the plant and should be kept running all the time to avoid interruption of LNG production and keep the plant running safely. It also plays a key role in environment friendliness as it treats and processes waste before being reintroduced to nature, including sewage water, chemical neutralization etc."

Messaoud's biggest challenge is maintaining the availability and reliability of the utilities section at all times. "Our Direction Statement states that we will set the standard for efficient and reliable operations and this is what we strive to achieve every day. We have an excellent team and tremendous level of support from the management to achieve our goal." he said.

With three boys and three girls, Messaoud is a true family man. His oldest son Jamal has just completed his degree in Instrument and Control Engineering. Fatiha, the oldest of the girls, has also completed her degree in Biomedical Science. Yousef has just joined his first year of University studying mechanical engineering. Yousef's younger brother Mohamed Al Habib is in his year 11 at Al Khor International School. Then there is Zahra who is in year one at Al Khor International School and the youngest one Rodina goes to the nursery. "Ours is a modest family under the supreme authority of the manager - their mother", Messaoud sums up.

Off the job, Messaoud likes to spend his time playing with his little daughters, watching TV and walking. About his aspirations for the future, Messaoud said, "To be part of the Operations team maintaining safe and steady operation of Qatargas with its four mega LNG trains before my retirement."

# Al-Anoud Darwish participates in "Youth at Annual Meetings 2008"

Al-Anoud Darwish, who works as a Gas Marketer at Qatargas was one of the 20 young people from around the world to be invited to participate in the first ever "Youth@Annual Meetings" held at the World Bank Headquarters in Washington DC from 8 – 10 October.

The event was organized by the International Monetary Fund and the World Bank Group in conjunction with their annual meetings. The "Youth@Annual Meetings 2008: Partners in Development" program was conceived as a pilot, where youth leaders, NGOs, youth foundations and the World Bank experts could

convene and discuss topics of mutual interest.

Several topics including youth citizenship and the school to work transition were discussed. One of the key objectives of the conference was to recognize young people as equal partners and provide youth a space to discuss major development concerns from the youth perspective.

Regarding her participation Al-Anoud said; "It is a matter of great pride for us that Qatar is making tremendous progress in all aspects – be it economic, political or social development. I was truly honored to represent my country at such a prestigious event. During the annual

meetings, I was able to participate in the Civil Society Policy Forum (CS Forum), town hall meeting with senior Bank and Fund officials, attend programs and seminars, and last but not least, take part in fruitful discussions at the (Youth@Annual Meetings 2008: Partners in Development) program."

Al-Anoud who has been with the Qatargas Commercial and Shipping Department for just over a year, was the only Arab youth at the meeting. "I want to thank Qatargas for all the support it has given me – not just for this event, but for the genuine interest in my development since day one", she concluded.

# e-Learning Center - providing development opportunities

The Qatargas Training & Development policy is currently under revision to reflect the new realities in the workplace as Qatargas continues to grow and expand. These policies exist to provide standardization across the organization.

Now is the time to step forward and ensure that your language proficiency assessment is complete as the new policy reflects the need for English language skills in the workplace. All employees of Qatargas considered for promotions and further development may be required to achieve an appropriate level of English. Further benefits include enhancement of personal skills for future opportunities.

The e-Learning Centre exists to promote self and company directed development opportunities. Personal support is available to identify where we can cater to your development needs. This includes:

• Assessment of your current English language level

- Identification of soft skills and computer literacy courses to enhance your skill set
- Registration and enrollment in Atlas technical courses related to your field of expertise.

Currently courses are offered in the following venues:

- English Language Assessment e-Learning Center at Ras Laffan
- Global English (for Nationals) on the internet and in the e-Learning Center
- Atlas Interactive Technical courses on the internet and in the e-Learning Center
- Soft Skills courses (including English for non-Nationals) on the intranet and in the e-Learning Center
- All mandatory e-Learning courses must be completed in the e-Learning Center.

The eLC is available during all normal working hours. Should you require, we would be pleased to assist you in whatever way we can.

