PLANNING FOR A HIGH PERFORMANCE FUTURE

GROWTH, SAFETY, PEOPLE AND PREMIER PERFORMANCE AT HEART OF QATARGAS’ STRATEGIC PLAN 2020-2025

NORTH FIELD BRAVO LQX PROJECT REACHES MILESTONE
LQX JACKET & TOPSIDE SAIL-AWAY MARKS
HISTORICAL FIRST FOR STATE OF QATAR
Greater flexibility to meet our customers’ needs

Qatargas, the World’s Premier LNG Company, provides quality LNG and other hydrocarbon products to the global market safely and reliably. With a production capacity of 77 million tonnes per annum of LNG and a dedicated fleet of 70 LNG vessels, we have greater flexibility to meet the needs of our customers across the globe.
QATARGAS CORPORATE SCORECARD
YEAR TO DATE FEBRUARY 2020

SAFETY, HEALTH AND ENVIRONMENTAL PERFORMANCE

TRIR

<table>
<thead>
<tr>
<th>Actual</th>
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Flaring (Onshore) (% of Sweet Gas)

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EFFICIENT AND RELIABLE OPERATIONS

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<tr>
<td>LNG Reliability</td>
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<td>LR Reliability</td>
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CUSTOMER SATISFACTION

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<tr>
<td>Late deliveries - LNG</td>
<td>0%</td>
<td>0%</td>
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<tr>
<td>Positive Responses to Customer Change Requests (over and above firm commitments)</td>
<td>100%</td>
<td>100%</td>
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AT THE FOREFRONT OF GROWTH

Qatargas’ impressive 2019 performance indicates that, as an organisation, we are solidly aligned with our corporate Vision, Mission and Values, which have steadily driven us towards success with a unified sense of purpose.

From our continuously improving environmental and safety results, on-target production, and best-in-class reliability performance, to excellence in project execution, high levels of customer satisfaction, and solid financial outcomes, we have many accomplishments in 2019 of which we can be especially proud.

A firm foundation has indeed been laid for Qatargas to continue building towards growth and opportunity. And it is against this backdrop of accomplishments that we introduce the Qatargas Strategic Plan 2020-2025.

The Strategic Plan is the result of a months-long process that drew insights from internal and external stakeholders, and placed significant focus on the Company’s performance trends and key challenges. Together, we identified the critical goals, initiatives and key performance indicators across six strategic pillars. These pillars include: Safety, Health & Environmental Performance, High Calibre Workforce, Efficient and Reliable Operations, Quality & Flawless Execution, Customer Satisfaction and Financial Performance.

It is a compelling roadmap for Qatargas’ next five years.

In 2020, we will capitalise on our strengths, capture opportunities and overcome challenges, including challenges brought about by the global coronavirus pandemic. Innovation and process efficiency will continue to be essential to how we work, and we will continue executing expansion and sustainability projects while effectively planning and organising for their readiness. We will develop a long-term strategy for environmental performance, and at the core of this, will be our high-calibre workforce.

Qatargas is the World’s Premier LNG Company thanks to the collective commitment of our people. Together we seek innovative, enhanced and more efficient ways to meet the world’s energy demands, execute projects to the highest standards, ensure the safety of our workforce and communities, and reliably serve our customers and shareholders.

With our Vision, Mission and Values as a compass, and the Strategic Plan as a guidebook, I am confident that Qatargas will continue to be at the forefront of growth in the liquefied natural gas industry.

KHALID BIN KHALIFA AL THANI
CHIEF EXECUTIVE OFFICER, QATARGAS
At the advent of the new decade, Qatargas set out its Strategic Plan 2020-2025. This comprehensive roadmap aims to further strengthen Qatargas’ global reputation for reliability, flexibility, safety and deliverability, and it was formulated by the Management Leadership Team (MLT) after an extensive review of company performance trends, and key internal and external challenges Identifying the 6 Strategic Pillars

Crucial to Qatargas achieving its goals, vision and mission, is a comprehensive understanding of the Company’s priorities over the next 5 years. By identifying and focusing on six Strategic Pillars, Qatargas is able to set strategic goals and key performance indicators (KPIs), identify and implement strategically sound initiatives, and effectively deploy the required resources.

Pillar 1: Safety, Health & Environmental Performance
With the over-arching strategic goals of striving for an incident- and injury-free workplace, and protecting our assets and the environment, some of the 2020 key performance indicators for this pillar include:
• 0 Lost Time Incidents
• 65 Consecutive Injury-Free Day
• A percentage decrease in the Total Recordable Injury Rate - Overall (0.5%), Opco (0.42%) and Major Projects (0.60%)
• 0 Tier 1 Process Safety Events
• Green House Gas Emissions of 0.36%
• Onshore Flaring at 0.37% and Offshore Flaring at 0.07%

The Health, Safety, Environment and Quality (HSEQ) Group will thus strengthen its contractor selection and Contracts Safety Management, implement a Safety Leadership Enhancement programme that will be extended to contractors, operationalise safety cases through the effective barriers scenario management, and develop a long-term environmental performance strategy.

“We value, recognise and appreciate all our people.”
Ghanim M Al-Kuwari,
Chief Human Capital Officer

“We care for, and value, people and process safety above all else.”
Khalid Al-Hemaidi,
Chief HSEQ Officer
**Pillar 2: A High Calibre Workforce**

Qatargas’ success has always hinged on its excellent people strategy, and this continues to be a significant pillar in achieving the Company’s vision.

In attracting, developing and retaining a high calibre workforce, the Company aims to achieve Qatarization targets through a skills-based Qatarization strategy, and to ensure that optimum skills and experience levels are maintained among employees. Additionally, the Company seeks to sustain its commitment to building employee capability.

To this end, the 2020 KPIs for this strategic pillar include:

- 29.4% Qatarization, amounting to 1,580 national employees
- A regretted attrition of 3.6%
- 100% technical competence framework compliance

Two key strategic initiatives will be implemented to achieve said goals: the Technical Competence Framework, and Job Family Model.

**Pillar 3: Efficient & Reliable Operations**

Availability, reliability and utilisation form the foundation of this strategic pillar, with Qatargas striving to improve uptime across all these areas to achieve full plant capacity and/or meet supply rights. Additionally, there will be an extensive effort to enhance and promote the Company’s reliability culture in order to drive efficiency and ownership.

Qatargas’ 2020 KPIs in this regard include:

- 98.1% LNG reliability
- 95.8% LNG availability
- 98.3% Laffan Refinery reliability
- 96% Laffan Refinery availability
- 99% Sales Gas reliability
- 29% delivery of North Field Production Sustainability (NFPS) wells

**Pillar 4: Quality & Flawless Execution**

Under this pillar, Qatargas will focus on expanding and sustaining production, ensure readiness to operate, and enhance quality processes.

The 2020 KPIs here focus on:

- Progress on the North Field Expansion (NFE) project of 7.6%
- Achieving approved progress targets for NFE Offshore, NFPS EPC and FEED, the NFB Living Quarters Expansion project, ICS Security Enhancement and plant projects.
- 50% progress on the implementation of the QGMS Process Quality Assurance project

A holistic integrated planning process for expansion and sustainability will be initiated, and the afore-mentioned QGMS Process Assurance project will be developed and executed.

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**“We proudly and safely operate our facilities to Premier standards.”**

Ahmed H Al-Mohannadi, COO Onshore & Operations Support

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### DEVISING THE QATARGAS STRATEGY

<table>
<thead>
<tr>
<th>August-September</th>
<th>September-October</th>
<th>October</th>
<th>November</th>
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<tr>
<td>Strategic Interviews</td>
<td>Issue and Opportunities Workshop</td>
<td>Offsite Meeting</td>
<td>Strategic Plan 2020-2025</td>
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Conducted interviews with all MLT members and 12 representatives from shareholder

External: SWOT Results

Benchmarking Results

Offsite Meeting

Market Outlook Insights

Internal: Performance Analysis

**A comprehensive approach to devising Qatargas’ Strategic Plan 2020-2025**

The Qatargas Strategic Plan 2020-2025 is the result of internal and external assessments and inputs, including interviews, workshops, benchmarking studies and market reports.

Since August 2019, the Company has set about obtaining the insights of our shareholders, the MLT, subject matter experts and PLE members, in order to develop a detailed SWOT analysis that identified strengths, weaknesses, opportunities and threats.

The strategy was crafted during an MLT Offsite Meeting, and it is being stewarded by the Corporate Planning and Enterprise Risk Management Department.

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**“Our people consistently deliver excellence and solid performance through empowerment & innovation.”**

Fahad M Al-Khater, COO Offshore, Terminals & Refining
In 2020, our focus will be to capitalise on our strengths, capture opportunities, and overcome the challenges we see ahead of us. At Qatargas, we work together to collectively pursue our vision to be the world’s Premier LNG Company, and we will continue to use our direction statement as our compass in making decisions.”

Khalid bin Khalifa Al Thani,
Chief Executive Officer, Qatargas

“We place customers at the heart of the business.”

Alaa Abu Jabara,
Chief Commercial & Shipping Officer

Pillar 5: Customer Satisfaction
A crucial goal for Qatargas will be to maximise customer satisfaction and gain competitive advantage through flexibility, while retaining both contractual and financial performance.

In this regard, the following 2020 KPIs have been identified as significant in achieving this goal:

- Aiming for 100% positive responses to customer change requests
- 100% on-spec LNG cargoes

Pillar 6: Financial Performance
Strategically, Qatargas will seek to generate value through innovation and enhancement of capacity, while maximising revenue through new market penetration.

Per the 2020 Work Programme & Budget, KPIs include gross costs, LNG unit cost, Sales Gas unit cost, shipping costs, RLTO Unit costs, and the optimisation netback uplift.

“The scope for a cross-functional innovation platform will be developed to encourage the achievement of Qatargas’ financial performance goals.”

Garry Looker,
Chief Financial Officer

“We are actively developing new facilities to sustain and expand our production capacity.”

Nafez Bseiso,
Chief Major Projects Officer

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With the successful and safe completion of the onshore fabrication and offshore installation of jacket, piles and topside weighing 5000 tonnes in North Field Bravo (NFB) for Living Quarters Expansion (LOX) Project, Qatargas has achieved a significant milestone for the State of Qatar.

Supporting local

The project marks the first time that a major offshore living quarters structure has been entirely fabricated at a local yard. Nakilat-Keppel Offshore & Marine Limited (N-KOM) completed the structure at the Erhama Bin Jaber Al Jalahma Shipyard, a testament to Qatargas’ support of ‘Tawteen’, a supply chain localisation programme initiated by Qatar Petroleum for the energy sector.

Speaking at a special ceremony held to mark the sail-away of the jacket and topside of the structure, Qatargas’ Chief Executive Officer (CEO), Khalid bin Khalifa Al Thani, said, “This project is a historic milestone for the State of Qatar as it highlights a new and important capability. It is the first time that the fabrication of a major offshore structure of this magnitude has been completed in a Qatari yard. This achievement showcases the capabilities, skills and resources which are available locally at the Erhama Bin Jaber Jalahma Shipyard for the fabrication of large and complex offshore structures.”

Celebrating a massive achievement

The celebratory ceremony was held at Ras Laffan, and attended by Qatargas’ shareholders and senior executives, N-KOM, the project’s Engineering, Procurement and Construction (EPC) contractor, Rosetti Marino, who undertook the engineering designs and procurement of equipment in Italy, and Heerema, who were responsible for the transportation and installation of the jacket and topside structures at NFB. The event was also attended by senior diplomats from both the Italian and Dutch embassies in Qatar.

Mr Al Thani congratulated the project team and contractors, “who successfully ensured the project’s delivery, and were able to overcome the challenges that are expected of projects of such a scale and nature. This is a positive reflection of the dedication and commitment demonstrated by all parties.”

Speaking on the occasion, Sheikh Khalid Bin Abdulla Al-Thani, Chief Engineering & Projects Officer, Qatargas, said: “The Project team successfully turned the many challenges into opportunities. It was a steep learning curve for both Qatargas and Rosetti Marino, and they certainly stood up to all these challenges and delivered.”

Qatargas’ sentiments were echoed by Nakilat’s CEO, Abdullah Fadhalah Al Sulaiti, who expressed his company’s pride in delivering the project safely and efficiently, and confirmed, “Moving ahead, we look forward to handling more large-scale projects that are made with pride in Qatar, for Qatar.”

The project-at-a-glance

The NFB LOX Project provides additional living quarters for the NFB Offshore Living Quarters, increasing its capacity by 90 on-board personnel. The original NFB accommodation, installed in 1995, was designed for the operational needs of Qatargas trains 1 and 2, and subsequent expansion projects have necessitated the NFB LOX.

The project’s scope includes the construction of a four-legged jacket and piles, weighing approximately 2,200 tonnes, to support the new living accommodation platform weighing approximately 2800 tonnes, which consists of five decks, a fully equipped helideck and six bridge links to existing living quarters, services and utilities.

Significantly, the project has already achieved 2.5 million man-hours without a lost-time incident, with a peak project workforce of more than 900 people.

Congratulations to Qatargas and the entire project team for supporting local knowledge- and technology-based businesses in realisation of the aims of the Qatar National Vision 2030.
QATARGAS PRAISED FOR OPERATIONS INTEGRATION

Company is hailed for remarkable integration of Operations North and South.

The complete and successful integration of Qatargas’ Liquefied Natural Gas (LNG) Operations North and South has been recognised as a remarkable achievement in the Company’s history.

A remarkable feat for - and by - Qatargas

His Excellency Mr Saad Sherida Al Kaabi, Minister of State for Energy Affairs, President and Chief Executive Officer of Qatar Petroleum, and Chairman of Qatargas’ Board of Directors, praised the feat at a luncheon hosted by Qatargas. The event was organised to acknowledge the efforts of the Company’s Management Leadership Team, as well as the leaders of the Operations Task Forces that were involved in the integration process.

In expressing his appreciation to the teams and team leaders, His Excellency hailed the successful integration of Qatargas’ LNG Operations as a significant step in the journey of the Company.

Khalid bin Khalifa Al Thani, Chief Executive Officer of Qatargas, confirmed that the integration was especially impressive given that it was accomplished within a challenging timeframe. He commended the focus, dedication and skill that the teams exhibited in reaching their objective.

A journey years in the making

Preparations for the merging of Operations North and South began in earnest in 2017, following the equally successful integration of the Company’s non-Operations functions.

In the subsequent years, Qatargas’ Operations and non-Operations teams have worked steadfastly towards accomplishing a fully integrated Qatargas, with the new merged Operations Group going live on 1st January, 2020.

Positioned for performance

The merged Operations Group will play a key role in the Company’s competitive positioning. By leveraging best practices, it will deliver on ambitious projects such as the North Field Expansion Project, which will grow the Company’s LNG production capacity from 77 million tonnes per annum (Mtpa) to 110 Mtpa.

In undertaking so, the newly integrated Operations Group is poised to make a substantial contribution to further solidifying Qatargas’ position as the World’s Premier LNG Company.
Qatargas among industry leaders at Bangla LNG Workshop 2019 to discuss country’s rapid LNG adoption and opportunities for further growth.

In early November, Qatargas joined more than 120 government and industry leaders at the Bangla LNG Workshop 2019 to discuss the critical role of liquefied natural gas (LNG) in facilitating Bangladesh’s growing economy and demand for energy.

Hosted by Excelerate Energy L.P. (Excelerate), the one-day event was held in Dhaka, Bangladesh, and included esteemed guests such as the HE Ambassador Ahmed Mohammed Nasser Al-Dehaimi of the State of Qatar to the People’s Republic of Bangladesh, and the Honorable Energy Advisor to the Prime Minister Dr Tawfiq-e-Elahi Chowdhury, who delivered a keynote address.

Representatives from Qatargas joined business leaders at the workshop, where Shahid Ahmad Din, Qatargas’ LNG Marketing and Business Development Manager for the region, presented one of the keynote speeches, “The Evolving LNG Market and Gas Value Chain - The Qatar Bangladesh LNG Story”.

**LNG imports support industrial growth**

Bangladesh became the 39th country to import LNG with delivery of the country’s first LNG import terminal, Moheshkali Floating LNG (MLNG).

“Together with Excelerate, Petrobangla and other parties in the Moheshkali Floating FSRU project, Qatargas brought the first drops of LNG to Bangladesh in 2018, and has since gone on to deliver almost 50 cargoes to date,” stated Mr Din.

Astonishingly, the country has subsequently received more than 1% of total global LNG production in the first 12 months of operations, underpinning Bangladesh’s commitment to developing its infrastructure and further stimulating domestic growth against a backdrop of annual Gross Domestic Product (GDP) growth of more than 7% over the last three years.

“As in all growing economies,” said Mr Din, “access to energy - particularly clean fuels such as LNG - will be key in the development of Bangladesh.”

Indeed, Bangladesh’s LNG imports represent a 15% uplift in gas supply for the country, allowing power plants, fertiliser factories and industries that had previously been shut down due to a lack of feedstock, to resume production.

**Qatargas’ continued commitment**

Highlighting Qatargas’ commitment to working with customers and partners to secure energy supply in countries such as Bangladesh, Mr Din noted that the initial challenges posed by conditions in the Bay of Bengal were overcome “to make Bangladesh one of the most exciting LNG markets in the world.”

“In less than two years,” he continued, “Bangladesh has secured a total regasification capacity of more than 7 million tonnes per annum, an incredible milestone, with one of the highest utilisation rates in Asia.”

Qatargas will continue to ensure a reliable supply of energy to the rapidly growing country under the terms of its long-term Sales and Purchase Agreement with Petrobangla, which commits Qatargas to supply up to 2.5 million tonnes of LNG per annum to Bangladesh for a period of 15 years.
Qatargas recently achieved two historic delivery milestones in its long-standing relationship with India. In December 2019, Qatargas delivered its 2000th cargo of liquefied natural gas (LNG) to Dahej LNG terminal, and in February 2020, delivered the commissioning LNG cargo to the Country’s newest LNG Terminal, Mundra.

2000 reliable, safe deliveries
Qatargas’ 2000th delivery to India is a nod to the Company’s continuous commitment to provide customers with reliable and safe deliverability, underpinned by operational excellence.

Qatargas’ relationship with India continues to strengthen
Qatargas achieves significant delivery milestones in support of India’s drive towards varied energy mix.

India is aiming to increase the share of gas in its energy mix from 6% to 15% by 2030, in an effort to cut its carbon emissions.

The historic milestone was, as emphasised by Qatargas’ Chief Executive Officer (CEO), Khalid bin Khalifa Al Thani, the latest step in a partnership with India that has been in place “since July 1999. India is a key market for Qatargas,” he confirmed, citing the country’s geographic proximity to Qatar and its tremendous growth potential as positive drivers in the relationship.

The 2000th cargo was transported aboard ‘Aseem’, a conventional LNG vessel with a capacity of 155,000 cubic metres, and delivered to India’s Dahej LNG Terminal, owned and operated by long-term Qatargas customer, Petronet LNG Limited.
Qatargas’ 2000th delivery to India is a nod to the Company’s continuous commitment to provide customers with reliable and safe deliverability, underpinned by operational excellence.

Two commissioning cargoes in 12 months
This year, another significant delivery marked the firmly-entrenched relationship between Qatargas and India, namely, the commissioning LNG cargo delivered by Qatargas to India’s newest LNG receiving terminal, Mundra, located on the west coast of India.

The cargo, loaded in Ras Laffan on 17th January 2020 aboard Murwab, a Q-Flex vessel with an overall cargo-carrying capacity of 216,000 cubic metres, arrived at Mundra on 22nd January 2020. This is the second LNG terminal that Qatargas has helped commission within a year, the first being the Ennore LNG receiving terminal, located near Chennai.

Mundra, meanwhile, is located in the Adani Ports and Special Economic zone in the Kutch district of the western state of Gujarat. With a nominal capacity of five million tonnes of LNG per annum, it comprises of two storage tanks, each with an overall capacity of 160,000 cubic metres, and can receive LNG vessels with a capacity of between 75,000 and 260,000 cubic metres.

India seeks to expand energy mix
India is one of the world’s biggest consumers of oil and coal, but, in an effort to reduce its carbon emissions, the country is aiming to increase the share of gas in its energy mix from 6% to 15% by 2030.

To this end, India recently announced a USD 60 billion investment to build a national gas grid and LNG import terminals by 2024.

India is indeed a key market for Qatargas, with upcoming developments slated to increase the country’s capacity to import LNG from 30 million tonnes per annum (Mtpa) to 44 Mtpa, representing a 46% increase.

“As India continues to make big strides towards achieving its ambitious target of 15% natural gas in the country’s overall energy mix,” stated by Mr. Al Thani, “we are committed to extending all possible support by reliable delivery of this clean fuel. As the World’s Premier LNG Company, Qatargas continues to play a major role in ensuring energy security for countries across the globe.”

India & Qatargas: A long-term partnership
Qatargas has signed a 25-year Long Term Free On Board (FOB) Sale and Purchase Agreement (SPA) with India’s Petronet LNG Limited. Qatargas loads approximately 116 LNG cargoes per year under the terms of this agreement, in addition to supplying significant volumes on a short term and spot basis.

The relationship between Qatargas and India dates back to July 1999, when the Company began the first of its LNG deliveries to Petronet, now reaching more than 2000 cargoes under various long-term, short term SPAs and spot basis.
A slew of recent delivery milestones have marked Qatargas’ commitment to deliverability, reliability and safety in its relationship with key customer, the Bangladesh Oil, Gas and Mineral Corporation (Petrobangla).

**The ‘Summit’ FSRU delivery**

In January 2020, Qatargas successfully delivered its first Q-Flex cargo of liquefied natural gas (LNG) to the ‘Summit’ LNG Terminal’s (SLNG) Floating Storage and Regasification Unit (FSRU), located offshore from Bangladesh.

The cargo was loaded onto the Qatargas-chartered Q-Flex vessel, the ‘Al-Safliya’, which has an overall cargo capacity of 210,000 cubic metres, at Ras Laffan, and delivered to the ‘Summit’ FSRU in the first commercial open water ship-to-ship transfer involving a Q-Flex vessel.

The ‘Summit’ was jointly developed by Excelerate Energy and Petrobangla on a build, own and operate basis, and it is under a 15-year charter deal to Petrobangla.

**Qatargas' long-term reliability**

Qatargas’ deliveries to Petrobangla have been made under the long-term Sale and Purchase Agreement (SPA) signed in September 2017. Under the terms of the SPA, Qatargas will supply Petrobangla with up to 2.5 million tonnes (Mtpa) of LNG per annum for 15 years.

According to natural resources consultancy, Wood Mackenzie, Bangladesh’s demand for LNG could reach 8 Mtpa per year by early next decade, and Qatargas is pleased to continue supporting Petrobangla in providing Bangladesh with a secure and reliable energy supply.

**The ‘Excellence’ FSRU delivery**

Similarly, in late-2019, Qatargas delivered its first LNG cargo on a Q-Flex vessel to the ‘Excellence’ FSRU, known as the Moheshkali LNG Terminal (MLNG), and also located offshore from Bangladesh.

The MLNG is another project jointly developed by Petrobangla and Excelerate Energy on a build, own and operate basis. This Qatargas delivery, made with the ‘Al Thumama’ - a Q-Flex vessel with an overall cargo carrying capacity of 216,000 cubic metres - also marked the first commercial open water ship-to-ship transfer involving a Q-Flex vessel to the terminal.

As with the SLNG, the ‘Excellence’ is under a 15-year charter deal to Petrobangla. Notably, it carried the inaugural LNG cargo from Qatar in April 2018.

**The delivery marked the first commercial open water ship-to-ship transfer involving a Q-Flex vessel**
Qatargas is pleased to confirm the safe delivery of the first cargo of liquefied natural gas (LNG) on a Q-Flex vessel to Greece's newly expanded Revithoussa LNG Terminal.

The delivery, which took place in July 2019, was part of a multi-port delivery executed by Qatargas in cooperation with the European utility, ENGIE.

Expanding Qatargas' deliverability
Qatargas’ ‘Al Gharrafa’ made the successful cargo delivery after being loaded at the Ras Laffan Terminal. The same vessel subsequently made a second delivery to the Cartagena LNG Terminal in Spain.

As a Q-Flex vessel, the ‘Al Gharrafa’ has an overall cargo carrying capacity of 216,000 cubic metres, and this was the first time that a Q-Flex vessel has called at the Revithoussa terminal since its expansion.

Qatargas’ Chief Executive Officer, Khalid bin Khalifa Al Thani, pointed to the delivery as an example of the company’s market penetration strategy: “This significant delivery is aligned with Qatargas’ strategy to continue growing the ever-increasing number of terminals that our Q-Flex and Q-Max vessels can deliver to. “An achievements such as this,” he continued, “coupled with multi-port deliveries on Q-Flex vessels and a global reputation as a safe and reliable supplier, reinforce Qatargas’ position as the World’s Premier LNG Company in an increasingly dynamic LNG market.”

Greece looks to reduce carbon footprint with LNG
The Revithoussa LNG Terminal is the only LNG terminal in Greece and is located in the Gulf of Megara, west of Athens. Completed in 1999, it is operated by Greece’s National Natural Gas System Operator (DESFA) S.A., and recently underwent a substantial expansion which increased its storage capacity by 73% to 225,000 cubic metres. The terminal’s jetty was also upgraded to accommodate up to the capacity of a Q-Flex-sized vessel.

This has enabled Greece to receive larger LNG cargos, whereas previously, Qatargas was only able to deliver cargoes to the country via smaller, conventional-sized vessels.

Besides positioning Revithoussa as a south-east Mediterranean hub for natural gas, Greece is also seeking to boost its use of LNG in electricity, transportation and households, in an effort to reduce energy costs and its carbon footprint.

The Revithoussa LNG Terminal is the only such terminal in Greece and recently underwent expansion to increase its storage capacity by 73%
FIRST Q-MAX LNG CARGO DELIVERED TO ZEEBRUGGE

Qatargas’ multi-port delivery includes its first cargo discharge at the Belgian terminal.

In mid-2019, Qatargas delivered its first cargo of liquefied natural gas (LNG) to the Zeebrugge LNG Terminal in Belgium. The delivery was made aboard the ‘Al Dafna’, a Q-Max vessel, marking the first time a Q-Max vessel has discharged a cargo at this terminal.

Notably, Qatargas successfully and safely completed the largest multi-port cargo delivery in early June 2019, when a Q-Max vessel safely discharged LNG at two different terminals in Spain, namely at the Barcelona and Cartagena LNG terminals.

While the established practice in the LNG industry has been to deliver a single cargo of LNG to a single location, Qatargas pioneered the multi-port delivery by using the world’s largest class of LNG vessel, the Q-Max.

Thanks to the Q-Max’s cargo capacity of 266,000 cubic metres, it is able to deliver two conventional-sized cargoes to multiple destinations and customers with just one vessel.

Operational flexibility & supply chain efficiency
The Belgium delivery included a discharge of the first LNG parcel at Zeebrugge, followed by a second parcel delivery at the South Hook LNG terminal in the United Kingdom.

Belgium’s Pascal De Buck, CEO of Fluxys, Belgium’s gas infrastructure group and owner and operator of the Zeebrugge terminal, said of the delivery, “We are particularly pleased with this new milestone at Zeebrugge in our long-standing cooperation with Qatargas.

“The Q-Max delivery demonstrates the versatility we offer our customers, with LNG carriers of all types and sizes able to dock at the facility, ample pipe gas takeaway capacity for delivery throughout Northwestern Europe, and a range of options for downstream small-scale LNG distribution.”

Qatargas’ commitment to seeking innovative solutions - such as multi-port deliveries - serve to optimise resources, meet customer needs, offer operational flexibility, and achieve supply chain efficiency, and continue working to ensure our unique position as the World’s Premier LNG Company.

“[Multi-port deliveries] provide our customers with flexibility and reliability to help them meet their demand for clean-burning natural gas.”
Qatargas’ CEO, Khalid bin Khalifa Al Thani
In November 2019, Qatargas delegates attended the Emerson Global User Exchange event in Nashville, Tennessee, to present technical papers and exchange best practices relating to the DeltaV Distributed Control System (DCS).

The event, which drew more than 3,000 attendees, afforded the opportunity to closely review the technical innovations, reliability and challenges of the DeltaV DCS, with Qatargas presenting four technical papers relating to the recent upgrades implemented across four mega-trains and offshore.

Challenges & successes reviewed

The first of these, titled ‘Achieving Operational Excellence Through Virtualisation’, deep-dived into the impact of Virtualisation on Qatargas’ operational excellence. The new technology was recognised as a long-term solution to obsolescence, effective maintenance, cyber security requirements, and more.

A second paper, ‘Operations Certainty at Qatargas through DeltaV System Upgrade’, reviewed how the recent system upgrade had achieved operational certainty and reliability through patch management, back-up and recovery solutions, and effective System Health Monitoring tools.

The system’s ease of implementation was highlighted in a third paper titled, ‘Upgrading Large Scale QG2 System from 9.3.1 to 13.3.1 in Three Days’. Here, Qatargas discussed how the DeltaV DCS was safely and successfully applied in a shutdown window of less than three days, with zero impact on plant operations.

Finally, ‘Splitting of the Largest DeltaV System into Two Zones’, the fourth Qatargas technical paper, studied how the Company split the biggest DCS into two zones, and discussed the challenges faced during the process and the steps taken to overcome them.

Company delegates discuss innovations and challenges of recent DeltaV DCS upgrades implemented offshore and on four mega-trains.

An eye to the future

In addition to presenting the Company’s experiences with DeltaV DCS, the event also enabled delegates to exchange best practices and share lessons learned through presentations delivered by global experts, conference sessions, and an exhibition that showcased future technologies in the control systems field.

Most significantly, it provided a significant opportunity for Qatargas to examine the new control systems, field instrumentation and cyber security technology that can optimise processes, increase reliability, and improve operations efficiency.
3000th LNG DELIVERY TO JAPAN MARKS SPECIAL QATARGAS RELATIONSHIP

Qatargas deeply proud of 22-year relationship built on respect and reliability.
In mid-July 2019, Qatargas reached a historic milestone in its long-standing relationship with Japan with the 3000th delivery of liquefied natural gas (LNG) to the Asian country.

The delivery, made more than two decades after the first Qatar LNG delivery to Japan, was transported aboard the ‘Al Jasra’, a conventional LNG vessel with a capacity of 135,000 cubic metres. The milestone delivery was made to JERA, a joint venture between Chubu Electric and Tokyo Electric.

**Flexibility, reliability at heart of milestone delivery**

Speaking on the significance of the delivery, Khalid bin Khalifa Al Thani, Chief Executive Officer of Qatargas, noted the strength of the relationship between the Company and its valued Japanese customers.

“Through our flexible and reliable operations, I am proud that we are able to celebrate the uninterrupted supply of 3000 cargoes to Japan. This delivery demonstrates our continued commitment to providing Japan, and all of our customers around the globe, with a safe and reliable source of clean energy.”

Qatargas, a long-term supplier, is contracted to supply LNG to many of the key Japanese buyers, including JERA, Tohoku Electric, Kansai Electric, Chugoku Electric, Tokyo Gas, Osaka Gas, Toho Gas and Shizuoka Gas. Additionally, Qatargas delivers a significant amount of LNG to Japanese customers on a spot basis.

**A relationship built on respect**

The 3000th delivery comes more than two decades after the first delivery to Qatar’s foundation customer in Japan. That shipment was made on 10th January 1997 to the same Kawagoe LNG Receiving Terminal.

Commenting on the milestone, His Excellency Mr Saad Sherida Al-Kaabi, Minister of State for Energy Affairs, President and CEO of Qatar Petroleum, and Chairman of Qatargas Board of Directors, said, “Qatargas’ commitment to serving Japan's energy needs has never been stronger. We are focused on boosting future cooperation with Japan, and building even stronger relations with our Japanese customers and friends.”

In a 2019 interview with the Nikkei Asian Review, His Excellency The Minister stressed the importance of this relationship, noting that, in the aftermath of the Fukushima nuclear disaster, Qatar cancelled its LNG shipments to other customers in order to divert them to Japan instead.

“We wanted to show the people of Japan our respect,” he confirmed. “Japan has a very special place in our heart, and we are looking forward to extending our contracts with Japanese customers.”

**Japan’s demand for LNG**

Japan is the largest LNG buyer in the world, and imported approximately 83 million tonnes of LNG in 2018, representing around 27% of the world’s total LNG trade transactions at an import value of USD43.8 billion.

Qatar is one of the country’s major LNG suppliers, a relationship that has endured over a long term and that Qatargas is committed to maintaining.
In a testament to Qatargas’ unwavering commitment to safety, the Company is proud to confirm that Laffan Refinery 1 (LR1) has achieved an incredible 10 years without a single Lost Time Injury (LTI). Additionally, the facility recently completed a second turnaround LTI-free.

Qatargas has managed operations at the refinery since 2009, when production began. Commenting on the milestone, Khalid bin Khalifa Al Thani, Qatargas Chief Executive Officer, said, “This world-class achievement is testament to the dedication and focus of our employees and contractors in operating Qatargas’ assets safely, efficiently and reliably.”

Safety: A culture, commitment and core value

The Company indeed exhorts staff and contractors to meet stringent safety performance standards across all liquefied natural gas (LNG) assets and associated facilities.

With safety as a guiding core value, Qatargas has successfully created and sustained an Incident and Injury Free (IIF) culture, continuously improving its safety processes and programmes. Their success, however, depends on strong leadership and compliance, with employees and contractors committing to completing each task safely.

This has demonstrably been accomplished at LR1, which also notably completed its second general turnaround with zero injury in November 2019, indicating a well-entrenched adherence to Qatargas’ safety culture.

With safety as a guiding core value, Qatargas has successfully created and sustained an Incident and Injury Free culture.
Qatargas has signed a new, long-term Sales and Purchase Agreement (SPA) with Shell to deliver 1 million tonnes per annum (MTPA) of Liquefied Natural Gas (LNG) to Kuwait. The SPA follows the agreement signed between Qatar Petroleum (QP) and Kuwait Petroleum Corporation, and provides for the supply of LNG from Qatar Liquefied Gas Company Limited (4) (Qatargas 4), a joint venture between QP and Shell.

His Excellency Mr Saad Sherida Al Kaabi, the Minister of State for Energy Affairs, President and Chief Executive Officer (CEO) of Qatar Petroleum, and Chairman of the Qatargas Board of Directors, said, “These agreements demonstrate our commitment to the State of Kuwait, which is a very important LNG market... We look forward to continuing to work together with our partner, Shell, to put LNG at the forefront of the world’s drive towards cleaner and more sustainable energy sources.”

Khalid bin Khalifa Al Thani, Chief Executive Officer of Qatargas, stated, “This agreement provides a win-win solution for both companies, and deepens the relationship with a valued partner and shareholder. Qatargas is committed to meeting the clean energy needs of customers who depend on reliable, flexible LNG deliveries.”

The new SPA demonstrates Qatargas’ ability to capture opportunities in a highly competitive industry.
A FORUM FOR SUCCESS

Annual CEO Forum inspires young national employees to achieve career success.

The most recent iteration of the annual CEO Forum, held in December 2019, continued its long-standing tradition of bringing national graduates and trainees in two different forums to discuss their achievements, challenges and career paths with the Chief Executive Officer (CEO) of Qatargas, Khalid bin Khalifa Al Thani.

An enriching opportunity

Held over two days and themed, ‘Commitment to Premier National Development’, the forum was hosted by the Learning & Development Department and gave national graduates and trainees a unique and enriching opportunity to get motivated and inspired for future growth. The event was held over two days, hosting national graduates on the 4th December, and national trainees on the 11th December.

An inspiring tone was set by the motivational speeches of national employees who had themselves completed their development programmes, and had subsequently achieved career success by steadily progressing to key Company positions. Among these was Ali Dashti, Operations Excellence Manager, who shared the story of his career trajectory with attendees.

Young nationals have their say

As continuous improvement is key to the success of Qatargas, the CEO Forum also asked national graduates for their feedback on the Company’s Qatarization programme.

Attendees were asked to share their experiences, highlight challenges, and to provide suggestions that would enable Qatargas to better refine and improve its vital training and developmental programmes.

National graduates and trainees were encouraged to participate in open discussions with the Company’s senior management, actively engaging themselves in their career and personal development, as well as fostering a culture of communication in the Qatargas family.

“Qatargas is committed to fulfilling the State of Qatar’s vision, which promotes the increased participation of Qatari nationals in the workplace...I am proud to celebrate and recognise the great efforts being made.”

Qatargas Chief Executive Officer, Khalid bin Khalifa Al Thani.

Building a culture of excellence and ownership

Finally, Qatargas’ best national graduates and trainees, scholars with outstanding academic achievements, and coaches who had excelled in their mentorship relationships, were all recognised at the event with CEO-presented awards.

Said the CEO in his address, “Qatargas is committed to fulfilling the State of Qatar’s vision, which promotes the increased participation of Qatari nationals in the workplace. I am proud to celebrate and recognise the great efforts being made, as we work towards achieving our Qatarization goals and supporting the Qatar National Vision 2030.”

Indeed, the CEO Forum is an apt reflection of Qatargas’ commitment to developing, promoting and rewarding its employees, encouraging young nationals to take ownership of their development, embrace their myriad career opportunities, build their skills base and ultimately progress their careers.
National graduate and Qatargas employee, Hamda Saif Al-Naimi, brings ingenuity to emergency situations with her winning ‘Emergency Drone’ project.

Ms Al-Naimi, a Control Automation Engineer II in the Instrumentation and Control Systems Division of the Facilities and Discipline Engineering Department, nabbed her award for her ‘Emergency Drone’ project.

Designed to deliver medical and essential supplies to the critically ill, Ms Al-Naimi’s drone would ensure that the injured would not have to wait for ambulances to arrive at emergency situations. Linked to the country’s 4G network, the drone’s movement is controlled by an autopilot system.

His Excellency Jassim Saif Al-Sulaiti, Minister of Transport and Communications for the State of Qatar, suggested that Ms Al-Naimi’s design be adopted by the Hamad Medical Corporation.

Drone’s in the Oil and Gas Industry

Often used in performing inspections of critical infrastructure within the oil and gas industry, the application of drones is set to increase substantially, thanks to the latest innovations in drone technology.

According to a study conducted by GlobalData Thematic Research, titled ‘Drones in Oil & Gas – Thematic Research’, drone makers are collaborating with oil and gas companies to develop customisable applications that collect different types of data to obtain real-time insights.

Some of the key drone trends identified by the research include:

» Remote monitoring and surveillance
» Inspection and predictive maintenance
» Methane management
» Emergency response
» Material handling

More insights from the research can be found at https://www.offshore-technology.com/comment/drones-oil-gas-applications/
Qatargas is proud to laud the achievements of Al Khor International School (AKIS) students who were recently recognised with a spate of national and international awards.

Winning solutions in oil and gas SHE&Q
A team of five Grade 12 AKIS students won the “Young Budding Engineer Award 2019”, a competition that pitted seven Qatar-based Central Board of Secondary Education (CBSE) schools against each other, as part of the International Engineering Congress.

Organised by the Institute of Engineers India (IEI) - Qatar Chapter, the competition, themed ‘Models of Smart Engineering’ in the oil and gas sector, challenged students to provide solutions that would limit the environmental impact of oil spillages, reduce health and safety risks during gas leakages, and reduce the impact of accidents on people.

The AKIS team won first place by designing and engineering an autonomous oil-spill cleaning robot, an oil and gas surveillance drone, and a multiple utility gesture glove.

The winning team comprised of students, Reshma Setharaman (child of Qatargas Supervisor, Sethu Raman), Het Paresh Ajmeri (child of Qatargas Operator, Paresh Ajmeri), Maadhyam Rana (child of Qatargas Foreman, Mukesh Kumar Rana), Asim Jawahir (child of Qatargas LIMS Administrator, A V Jawahir), and Rohit Philip Panackal (child of Qatargas’ Senior Engineer in ICS Security, Thomas Philip). Congratulations to all!

Academic excellence, nationwide & worldwide
Qatargas would also like to extend our congratulations to AKIS British curriculum Year 13 student, Muhammad Usman Babar, who achieved two Outstanding Learner Awards from the United Kingdom’s largest awarding body for academic qualifications, Pearson.

Muhammad was recognised for his performance in the International A Level Business Studies examination, where he achieved the highest mark in Business Studies (Qatar), and the Highest mark in...
Qatargas’ LMS Module to Empower Employees Through Learning

Following the successful launch of the Company’s new Performance Management system and Employee Profile functionality, Qatargas’ Learning and Development Department has now introduced the Learning Management System (LMS), which is the third Success Factors module in the planned series.

Released on the 26th of January 2020, the LMS has been specifically designed to maximise the knowledge and effectiveness of each Qatargas employee, enabling them to reach their full potential.

By encouraging employees to take ownership of their learning, the LMS aims to enhance the Company’s continuous learning culture and empower employees to build on their professional competence.

The LMS module also provides managers with better oversight in terms of progress, reporting, course completion and overall compliance.

Further modules will be developed during 2020, including the Recruitment module and the Career & Development Planning module, with progress updates to follow in due course.

Seven Core Modules

The seven core integrated modules Learning and Development Department will deliver in 2019 and 2020 encompass:

Employee Profile (EP)
Performance & Goal Management (PM-GM)
Learning Management System (LMS)
Recruitment Module (RM)
Career and Development Planning (CDP)
Succession Planning (SP)
Workforce Analytics (WFA)

Qatargas & AKIS - In pursuit of knowledge

AKIS, situated approximately 40 kilometres north of Doha in Al Khor Community, is a co-educational, non-selective school owned by Qatargas.

The school provides 4,000 students with a world-class education under the Ministry of Education and Higher Education Curriculum of Qatar, British Curriculum, and Central Board of Secondary Education of India.

Qatargas is deeply committed to providing employees’ children with an enriching learning environment, so that each and every student is able to fully realise their potential. The Company’s significant investment in education is a testament to its support of human development in alignment with the objectives of the Qatar National Vision 2030.
OUTSTANDING ENVIRONMENTAL PERFORMANCE AT LR AND LR2

Despite significant complexities and challenges, Qatargas has achieved substantial environmental wins at Laffan Refinery and Laffan Refinery 2.

Qatargas’ commitment to reducing the impact of its operations on the environment is highly evident in a review of the environmental performance of Laffan Refinery (LR) and Laffan Refinery 2 (LR2).

In recent years, the Company has implemented a range of operational best practices and technologies at both facilities to significantly improve their environmental performance across four key parameters, including flaring, acid gas flaring, wastewater reuse and recycling and the monitoring and mitigation of fugitive emissions.

Notably, during the total shutdown of LR in November 2019, shutdown and start-up flaring was 58% below the planned target, and more than 59% lower than flaring during the previous total shutdown in 2014. This milestone was accomplished through mitigation measures such as adherence to the planned shutdown sequence to minimise off-spec production and flaring.

An Acid Gas Flaring Mitigation Methodology was developed following an extensive engineering study that reviewed the various technical options to minimise acid gas flaring. The methodology centred on the utilisation of the LR and LR2 rich amine interconnection during periods of Sulfur Recovery Units’ (SRU) downtime.

Prior to 2018, sour fuel gas was flared from both refineries during downtime, resulting in acid gas flaring and associated Sulphur and Sulphur Dioxide (SO₂) emissions.

The Acid Gas Flaring Mitigation Methodology allows rich amine to be transferred from the refinery that is impacted due to SRU downtime, to the other refinery and its SRU, instead of flaring acid gas.

This proactive approach has been successfully implemented multiple times since the start-up and attainment of normal operations by LR2.

Additionally, sour fuel gas is also bubbled through the LPG amine absorbers with lean amine flow adjustment to fuel gas absorbers. This was tested in 2018, and resulted in a much reduced or negligible period of flaring during amine interconnection line-up.

Significantly, Qatargas has, through the implementation of the above mitigation strategies, successfully reduced LR SO₂ emissions by an exceptional 90% from 2016 to 2018 as a result of Acid Gas Flaring Mitigation Methodology implementation.

LR and LR2 generate process wastewater at a rate of approximately 1000 m³ per day. Both facilities have separate, identical conventional wastewater treatment units that treat process wastewater with physico-chemical and biological processes according to the State of Qatar’s irrigation water quality standards.

Additionally, a new common unit comprising an Ultrafiltration and Reverse Osmosis (RO) package was commissioned in 2018. The unit facilitates tertiary treatment to desalinated water quality standards, allowing the final permeate to be reused within the refinery production processes. The reject water, meanwhile, is used for irrigation within the refineries and in the larger RLC area.

As a result, Zero Liquid Discharge (ZLD) has been achieved by Qatargas, with close to 100% of the process wastewater now being reused, rather than being discharged to the sea as was previously done. This is Qatargas’ first wastewater reuse and recycling facility, and the Company’s only ZLD unit, contributing significantly to the MME’s mandate to prevent discharge to the sea, in alignment with the Qatar National Vision 2030.

In 2018, in its first year of operation, the LR and LR2 ZLD unit successfully utilised up to 96% of the treated wastewater for process reuse (as desalinated water) and internal and external irrigation, with only 4% discharged to the sea.

Through process reuse, LR and LR2 have been able to reduce their desalinated water intake from Kahramaa by up to 21%, representing an overall reduction of 165,000 m³ and significant cost savings.
LR’s flaring has been reduced by 45% since 2014, while LR2’s flaring between 2017 and 2019 was approximately 40% below its regulatory target.

**Monitoring the continued success of Zero Liquid Discharge**

A stringent environmental surveillance programme has been implemented to monitor ZLD process and compliance performance. This includes up to 30 sampling parameters with weekly performance reporting to Ras Laffan Industrial City (RLC), and quarterly reporting to the MME.

A detailed environmental procedure has also been developed and implemented to mitigate discharges to the sea, encompassing extended storage on-site in the ZLD and LR and LR2 wastewater tanks, maximisation of internal irrigation, and the flexibility to send treated wastewater directly to RLC for irrigation in the event of a ZLD upset.

**Mitigating fugitive emissions**

Fugitive emissions of Volatile Organic Compounds (VOCs) from piping components contribute to atmospheric photochemical reactions that lead to the formation of ground-level ozone, a health hazard.

In 2011, a robust Leak Detection and Repair (LDAR) Programme was established by Qatargas throughout its facilities, with the objective of minimising these fugitive emissions to the lowest possible levels.

Broadly structured according to the United States Environmental Protection Agency (USEPA) Code of Federal Regulation (CFR) Title 40, Part 60, Qatargas’ LDAR programme includes all equipment/component handling fluids that contain at least 10% by weight (10% w/w) of VOCs, such as pump seals, compressor seals, valves, atmospheric pressure relief devices (PRDs), flanges and connectors, and open-ended lines.

Out of a total of approximately 120,000 overall components at Qatargas, LR and LR2 constitute approximately 30% of the components in VOC service (the single largest LDAR component group) that are monitored on an annual basis through the LDAR programme. Components monitored with concentrations > 500 ppmv are classified as ‘leakers’ and a maintenance schedule is established to repair and re-monitor them.

This is Qatargas’ first wastewater reuse and recycling facility, and the Company’s only ZLD unit, contributing significantly to the State of Qatar’s direction to minimise treated wastewater discharge to sea.

**58% below target**

Flaring during the LR total shutdown in November 2019

**Down by 90%**

The decrease in LR SO2 emissions from 2016 to 2018 as a result of Acid Gas Flaring Mitigation Methodology implementation.

**>95%**

Wastewater recycling to process and irrigation reuse has been achieved by LR and LR2.

**57%**

Overall reduction in number of fugitive VOC leaking components since 2014. Equates to 54-70% reduction in VOC mass emissions.

**LR, LR2 and the Qatar National Vision 2030**

Laffan Refinery and Laffan Refinery 2 are two of the world’s largest condensate refineries, designed to operate at capacities of 160,000 and 146,000 barrels per stream day respectively. Both comprise complex process facilities with a range of environmental operational aspects such as flaring, air emissions, and wastewater generation and treatment.

Qatargas strongly believes in implementing advanced solutions and technologies to reduce environmental impact across its value chain, and the Company’s approach to environmental management is proud to be closely aligned with the goals of Qatar National Vision (QNV) 2030, which seeks to preserve the environment for future generations.
Qatargas’ comprehensive approach to flare management has resulted in significant success in flare volume reduction.

Thanks to its commitment to sustainable environmental protection and compliance, operational excellence, and an unwavering commitment to investing in technological innovation, Qatargas has successfully reduced its flaring by 76% in the past decade.

A comprehensive approach to flare systems

As the world’s Premier Liquefied Natural Gas (LNG) Company, Qatargas is unique in terms of its size, service and reliability.

The Company’s onshore facilities comprising 14 LNG trains, Al-Khaleej Gas (AKG) 1 and 2 sales gas facilities, Laffan Refinery and Laffan Refinery 2 are equipped with multiple flare systems to ensure process safety while meeting environmental regulatory requirements in terms of operational efficiency. Additionally, the Company’s LNG and Liquefied Petroleum Gas (LPG) storage tanks, LNG berths or jetties, and offshore platforms also feature their own dedicated flare systems.

The flared gases from the onshore LNG and gas processing plants are sent via dry, wet and sour flare headers that are equipped with Ultrasonic Meters (USMs) to continuously measure flare volumes, providing real-time flaring data through a plant information system. Regular flaring surveillance by Engineering, Manufacturing, and Environmental teams further note, track and address any deviations. An equipment strategy ensures that the flare system hardware is maintained and validated regularly.

An effective rationale for flare reduction

While key contributors to flaring are from trips/upsets and planned turnarounds (shutdowns and start-ups), a certain volume of purge gas needs to be sent to the flare system continuously to keep the flare lines on positive pressure as an essential process safety requirement.

Qatargas is fully committed to implementing measures to keep flaring to a minimum while maintaining process safety. The Company’s main drivers in flare reduction stem from its commitment to the Qatar National Vision 2030 and Qatargas’ own Direction Statement.

These drivers have contributed to the formulation of a comprehensive and effective Flare Management Programme that has proven to be robust, sustainable and well-managed, resulting in Qatargas’ outstanding flare reduction results.

A 5-pillar programme to success

Dependent on five main pillars, the Flare Management Programme addresses the Company’s key areas of focus:

1. Regulatory Framework: Qatargas ensures adherence to environmental permit and land lease flaring-related requirements. The regulatory requirement is an aspirational target of 0.3% flaring as a percentage of sweet gas production, while the land lease provides requirements relating to sour gas flaring.

2. Management Support: At every level, Qatargas’ Management is firmly committed to flare reduction as a Company strategic objective, and subsequently, there are clear lines of management focus, oversight and direction.

3. Dedicated Resources: In addition to resources being allocated across various departments - including Operations, Engineering, Maintenance, and Environment- to comprehensively address flare reduction, dedicated and multi-disciplinary flare management teams (FMTs) meet monthly to discuss flare performance, issues/challenges, and reduction projects/initiatives/ opportunities, ‘maintaining Qatargas’ consistent focus on flaring minimization.

4. Monitoring and Reporting: The key to Qatargas’ success in flare reduction has been the diligent tracking/surveillance and reporting of flare performance. The previously mentioned USMs and real-time information system enable the Company to identify and address any issues contributing to flare quantity increase.

5. Verification and Calibration: The accuracy and reliability of flare meters are ensured through an approved equipment strategy, while the flare data is audited by independent/external auditors as part of QP Greenhouse Gas (GHG) accounting and reporting guidelines and Environmental Management System (ISO14001).
Flare reduction is a key focus area across the Company’s operations, during normal plant conditions as well as during trips and planned turnarounds. Thanks to this committed approach, Qatargas has successfully reduced its flaring intensity by approximately 76% for its onshore facilities, including more than 90% flare reduction from its LNG ship loading facilities.

Some of the key projects and initiatives that have played a significant role in this achievement include:

The Jetty Boil-Off Gas (JBOG) Facility: This USD1 billion investment helps Qatargas reduce its LNG-loading-related flaring at the jetties by as much as 90%, equating to approximately 30,000 MMSCF of gas saved per year.

Purge Gas Reduction Project: Initiated in 2012 and operational in 2013, this project has resulted in a 45 to 50% reduction in mega-train purge rates, contributing a reduction of approximately 3,000 MMSCF in gas per year.

Passing Valve Monitoring Programme: By using an acoustic ultrasonic leak detection method, this programme monitors and identifies internal leakage from valves tied in to the flare headers. It has successfully reduced flaring by approximately 3,600 MMSCF annually.

Operational initiatives: Additionally, multiple operational-related initiatives have been implemented to reduce flaring during normal operations, trips and turnarounds. These include excess fuel gas management by improving the fuel gas control system, enhancing plant reliability through equipment strategies, an operator care programme and implementation of robust root cause failure analysis, plant start-up procedure improvement, use of N2 for purging, optimised usage of defrost gas in all units and recycling dry gas to defrosting system, and start-up time/flare reduction using interconnection lines and long-loop recycling facilities.

A new Flare Reduction Project (FRP) has been completed at the Qatargas 2 and Qatargas 3&4 LNG mega-trains which includes the installation of gas interconnections to help divert gas to other operating trains instead of flaring. Multiple options and engineering solutions for additional flare reduction are currently being studied.
QATARGAS’ TREATED INDUSTRIAL AND PROCESS WATER FACILITY NOW OPERATIONAL

Company is able to reprocess and reuse almost all treated industrial wastewater generated by South LNG plant.

Qatargas has safely and successfully commissioned the Treated Industrial and Process Water (TIPW) facility, a key environmental project to eliminate the discharge of almost all treated industrial and process water at Qatargas facilities in Ras Laffan Industrial City (RLIC).

A positive impact on the environment
Motivated by the Ministry of Municipality and Environment’s (MME) mandate to stop discharge to the sea, the now-fully operational TIPW facility was developed by Qatargas in line with directives from the MME and Qatar Petroleum.

Using state-of-the-art water processing technology, the TIPW is able to reprocess the treated industrial wastewater generated by Qatargas’ South Liquefied Natural Gas (LNG) plant, at a rate of up to 275 cubic metres per hour.

Contaminants in the wastewater are removed via biological treatment, ultra-filtration and reverse osmosis purification, achieving water purity of the same quality as desalinated water.

Sustainable solution
Prior to the completion of the TIPW, excess treated water of irrigation quality was discharged to a buffer zone, an approved, fenced-off area of 500,000 square metres in RLIC, where it was used to irrigate native plants.

Yet, thanks to the implementation of the TIPW, Qatargas’ commitment to sustainability and reducing its environmental footprint can be further realised, as the facility’s water is being reused within the Company’s South LNG plant.

Culture of commitment
Notably, when the facility commenced operation, it did so having recorded no recordable injuries, highlighting too Qatargas’ unwavering adherence to safety management in the development and commissioning of the Company’s projects.

Serving as an example of what can be achieved when a spirit of collaboration and cooperation is employed, the TIPW is also a clear demonstration of Qatargas’ support of the objectives of the Qatar National Vision 2030, especially in relation to the protection of the country’s natural resources.
Qatargas’ “Warm Their Hearts” campaign is a newly-launched Corporate Social Responsibility (CSR) programme dedicated to easing the lives of orphans enduring the cold winter in Korea.

Comfort in a cold climate
The Company’s Korea Liaison Office (KLO) launched the initiative in December 2019 to assist the Sundukwon and Angel’s Haven orphanages in Seoul, South Korea. Donations of more than 300 items of winter clothing and accessories including jackets, scarves and gloves, thermal blankets and heated beds, aim to comfort the children as the city’s temperatures plummet to below zero degrees Celsius. Qatargas also invested in weatherproofing and provided improvements to the facilities such as indoor and outdoor heaters.

Bringing warmth to children
Special ceremonies, including cultural performances by the children, were held at each of the orphanages, with attendees including representatives of Qatargas and the State of Qatar’s Embassy in Seoul, as well as directors, teachers and volunteers from Sundukwon and Angel’s Haven.

Mashel Al Merekhi, General Manager and Representative of the KLO, said: “Qatargas is proud and delighted to launch this CSR activity for the children of Sundukwon and Angel’s Haven. It gives us great pleasure to be able to touch these children’s hearts, and to bring them some warmth and joy this winter.”

Thanks to the tremendous work of the Sundukwon and Angel’s Haven orphanages, more than 1,500 orphans of different ages have been raised and cared for since 1965 and 1959 respectively. They are currently caring for 200 orphans.

Caring for the community
Through the winter-focused “Warm Their Hearts” campaign, the Company has also been able to extend its support to orphans in foster care and disability facilities. Qatargas is deeply committed to making a difference in the communities in which it operates and with whom it enjoys relationships with, and is proud to provide comfort to the children of South Korea.

“It gives Qatargas great pleasure to be able to touch these children’s hearts, and to bring them some warmth and comfort this winter.”
The Qatar Football Association (QFA) recently kicked off the 2019-2020 season of the popular Qatargas U23 League. This is the League’s third consecutive season, after it was first inaugurated in 2017-2018. In the highly competitive and thoroughly entertaining League, 12 teams are pitted against each other in a total of 132 matches played over a period of 22 weeks.

Investing in future football heroes

For Qatargas, the partnership with the QFA has been a long-standing and successful one, with the Company committed to supporting the QFA in preparing young football players for top-level football in the country.

Speaking at a press conference held jointly with the QFA to announce the launch of the League, Ali Ibrahim Al Sulaiti, Qatargas PR Manager, confirmed, “We are hopeful that Qatargas' support for the League will go a long way in taking Qatar’s football to new heights, especially as the country is getting ready to host the World Cup in 2022. We are optimistic that our [partnership] with the QFA will ultimately benefit football and the growing talent in the game.”

GET FIT, HEALTHY & STRONG ON NATIONAL SPORTS DAY

Qatargas’ annual celebration of National Sports Day continues to be one of the most eagerly anticipated events on the Company’s calendar. This year was no different, with Qatargas employees and colleagues gathering at the Aspire Zone in Doha and the Al Khor Community’s sports facility to participate in a range of physical activities.

Held on 11 February 2020, the event offered a wide variety of physical activities that appealed to all ages and abilities, including football, volleyball, basketball, kickboxing and aerobics.

Al Khor additionally offered badminton, cricket, a cycling race, 100-metre run, children’s swimming and a martial arts demonstration. At both locations, children were encouraged to participate in a dribble challenge, jumping sacks and a tug of war.

Commenting on the day, Qatargas’ Chief Executive Officer, Khalid bin Khalifa Al Thani said, “It cannot be emphasised enough the benefit of adopting and maintaining a healthy lifestyle,” pointing to the annual Qatargas event as a vehicle for the Company to support the health and wellbeing of employees and their families.

The Company’s drive to motivate employees to live more physically active lifestyles can be seen in its sponsorship of Ibrahim Al-Harami, from the Environment Regulatory and Compliance Division, to participate in the Samla Race 2020. In 2019, Mr Al-Harami won second place in the contest, an extreme desert trek.

Building a healthy society is a key objective of the Human Development pillar of the Qatar National Vision 2030, and events such as this are integral to Qatargas’ Corporate Social Responsibility programme. Congratulations to all who participated!

THIRD SEASON OF QATARGAS U23 LEAGUE UNDERWAY


The Qatar Football Association (QFA), which was founded in 1960, is a pioneer among Qatari sports associations, and has played a pivotal role in laying the foundation for football in Qatar, advancing the game locally, and ensuring the country’s place on the regional and international football stage. Qatar will be the first Arab nation to host the World Cup in 2022.

THE QFA: BRINGING QATAR FOOTBALL TO THE WORLD

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The Company's recent successful completion of the Banana Island environmental project is a big win for ensuring the protection and sustainability of Qatar’s rich marine biodiversity.

The successful installation of 200 artificial coral reef modules in November 2019 off Banana Island by Qatargas is testament to the Company's commitment to preserve and protect Qatar’s marine ecosystem.

This project was the latest in a line of marine biodiversity projects that have been undertaken by Qatargas in cooperation with the Ministry of Municipality and Environment (MME) that are aligned with the Environmental Developmental pillar of the Qatar National Vision (QNV) 2030.

Corals have always played a significant role in Qatar by protecting its vulnerable coastline and providing a sustainable habitat for vibrant populations of fish, sea urchins, algae and varied flora and fauna. In 2007, Qatargas first relocated approximately 4,500 live corals from nearshore pipelines to a suitable recipient area during the construction of the Qatargas Liquefied Natural Gas (LNG) expansion projects. Subsequently, an additional 3,000 live corals were relocated from 2012 to 2014 and attached to a mix of native limestone boulders and artificial coral reef modules.

The latest project by Qatargas involved the fabrication and installation of artificial coral reef modules that were approved by the MME. The installation location was selected after performing a Marine Environmental Assessment (MEA) of a number of potential sites, which involved an evaluation of substrate conditions, water quality, interference from ship traffic and future disposition of the area including dredging plans. Once the appropriate installation site was selected and approved, the patented design of the artificial reef module was fabricated using environmentally-friendly materials. Each module made of a special reinforcement-free, low pH concrete mix was carefully hand sculpted on a mold that allows for a variety of interstitial spaces which attracts different kinds and sizes of fish and other marine organisms.

In November 2019, Qatargas completed the installation of the artificial reef modules a few hundred meters east from Banana Island in water depths of about 12-13 meters with a shallow veneer of sediment and no rocky outcrops. The installation was done successfully and in a safe manner.

Qatargas is proud to have implemented this important environmental project despite substantial logistical and technical challenges. This project will serve to enrich the marine ecosystem while ensuring a sustainable future for Qatar's marine biodiversity.
Qatargas closed 2019 with its 19th Golf Open tournament, one of the oldest and most popular corporate golfing events in Qatar.

Held at the Doha Golf Club on the 13th and 14th of December, the tournament attracted almost 320 golfers, including members of the Qatar Golf Association and numerous Qatargas employees, shareholders and stakeholders. A junior competition, held adjacent to the Academy Course, pitted close to 20 young golfers against each other.

Sam Priest was recognised as the overall winner and top player among Qatargas employee entrants, and Nada Mir was top in the ladies category. The winning team of the Academy juniors tournament included Adam Abousabana, Lee Yu Tong and Ali Mahammed Azfar. Prizes were presented to the winners by Qatargas’ Chief Commercial and Shipping Officer, Alaa Abu Jbara, and Chief Financial Officer, Gary Looker.

Easy ways to reduce your plastic consumption

- Buy and use glass water bottles. The bottles that are now being used by the NFE Offshore team are BPA-free, pose no health risks, and are transparent so that daily water intake can be managed. The glass water bottle is also entirely recyclable.
- Take a travel mug to your local Starbucks or Costa, and ask the staff to fill that rather than use their disposable cups with plastic lids. Some coffee shops will give you a discount if you do this, so don’t forget to ask.
- Invest in canvas or cloth bags for your grocery shopping.
- Always refuse a plastic straw. Instead, buy your own straw or look for paper straws which can be recycled and are biodegradable.
- Never use plastic cutlery or plates. Try to use proper cutlery and crockery whenever possible.

NFE OFFSHORE SAYS NO TO PLASTIC

Qatargas’ North Field Expansion Offshore team and McDermott pledge to limit plastic pollution with reusable glass water bottles in new environmental campaign.

The North Field Expansion (NFE) Offshore team has joined in the global fight against plastic pollution by committing to using refillable glass water bottles instead of disposable, single-use plastic water bottles.

NFE Offshore Topsides and Pipelines FEED contractor, McDermott, Qatar, provided NFE staff with 5-gallon water bottles, as well as glass jugs and drinking glasses, in return for signed “Personal Commitment to the Environment” statements. The campaign has been extended to the NFE Offshore Jacket team in Batam, Indonesia.

The move to reusable glass water bottles is a proactive response to global concerns about plastic pollution, especially within our oceans, and forms part of NFE’s Plastic-Free and Risk-Free Environment Campaign.

“As we are all aware, plastic is non-biodegradable, and the continued intensive use of plastics endangers the environment and the future of our children,” said Antoine Moreau, Senior Project Manager - NFE Offshore, who further encouraged, “Let’s try to limit the use of plastic water bottles during the execution of our NFE Offshore contracts.”

Time for change

Single-use plastics, such as drinking straws, grocery bags, and the top of your takeaway latte, are a significant contributor to the 8 million metric tonnes of plastic dumped every year into waterways around the world.

Because of their impact on the environment, 112 countries have either banned or curbed the use of single-plastic items, including South Korea, Tunisia, Bangladesh, Georgia, the United Kingdom, Taiwan, New Zealand, Canada, Kenya, France, Morocco, and some states within the United States of America.

We congratulate the Qatargas’ NFE team for taking the simple yet impactful step of significantly reducing their plastic usage.

SINKING PUTTS AND DRIVING AMBITION AT QATARGAS’ 19TH GOLF OPEN

SINKING PUTTS AND DRIVING AMBITION AT QATARGAS’ 19TH GOLF OPEN