

Qatar Petroleum Sustainability Report 2014







The Emir of the State of Qatar

10



## ABOUT QATAR PETROLEUM

- Message from the President & CEO
  - About Qatar Petroleum
    - Scope of the Report

6

8

12

13

16

17

18

46

64

محمة النتاج الغازا DAE PRODUCTION COMPLEX-A

MINIST -

19

06

2014 Sustainability Highlights 10

### CHAPTER 1 Achieving 'World-Class' Sustainability Management

- Aligning with Our Country's Vision
  - Balancing Stakeholder Needs
    - Focusing on What Matters
- Acknowledging Our Scope of Influence
  - Our Sustainability Governance

### CHAPTER 2 QP's Sustainability Performance and Initiatives

- Production and Economic Output 20
- Health, Safety and Environment Management 25
  - Health and Safety 28
  - Environment and Climate Change 33
    - Human Capital 40

### CHAPTER 3 Creating Sustainable Roots in Qatar

- Investing in Qatar 47
- Driving the Adoption of 49
- Sustainability Management across the
  - Energy and Industry Sector
  - Managing Industrial Cities 51
- Making Qatar's Flagship Projects a Reality 58
  - Giving Back to Our Community 59
    - Shaping Qatar's Future 62

### CHAPTER 4 Influencing Sustainability Internationally

An Overview of Our International Presence 65

#### **Appendices**

Acronyms and Glossary 68 Feedback & Contact Details 70

### **MESSAGE FROM THE PRESIDENT & CEO**

It is my great pleasure to launch Qatar Petroleum's first annual sustainability report, which provides an opportunity to reflect on our contribution to a sustainable Qatar, as well as on the challenges and opportunities that lay ahead. This report also describes our corporation's environmental, social and economic impact across our scope of influence within Qatar and throughout our international investments.

As I reflect on our performance over the past 12 months in each of these areas, I am proud of the strength and determination with which QP met

the challenges it has faced, as it embarked on a new phase of transformation to realize its vision *"to be a world-class oil and gas corporation, with its roots in Qatar, and a strong international presence."* 

Today, QP is firmly placed to achieve higher levels of excellence in every aspect of its core business operations and activities, as well as its health, safety and environmental performance, its management, standards, and the competencies of its workforce at all levels and in all fields.

Safety and security continue to be on the top of our highest priorities, and are at the heart of all our efforts towards sustainability. We work in a hazardous industry – operating with combustible liquids and gases, with heavy equipment using complex processes, and in challenging onshore and offshore locations.

Our duty is to manage all associated risks, keep our employees safe from harm, and enhance our role as responsible stewards of the environment. This requires a culture that emphasises individual accountability for safety, clear leadership, strong systems and a high level of competence.

As this report shows, QP made important progress in safety in 2014. We have reduced our lost time injury frequency rate to 0.31 incidents per million hours worked from 0.78 in 2013. Lam also pleased



hours worked from 0.78 in 2013. I am also pleased hificant efforts to ensure the security es, which was highlighted by being O 28000 certification in 2014.

> of some of the most pressing global problems like drawing on water greenhouse gas emissions that obal climate change. We also our responsibility to play a role in se and other environmental is is why QP strives to continuously n environmental performance.

h Oil Field Gas Recovery and ect has helped QP to save 10.5 of CO2-equivalent emissions over ars, and is expected to cut another es by 2021. This has helped us global recognition for our efforts in g and CO2 emissions.

en finding innovative ways to echnologies through initiatives like ustrial Water Project and the spent catalysts from the QP

I pride in one particular milestone: If Gas Recovery Project, which is gest environmental project in the one of the largest investments of its one billion dollars.

o highlight QP's commitment to leadership in human and social development in the State of Qatar, particularly in the development of Qatar's human resources. QP's Strategic Qatarization Unit continued to provide oversight to the energy sector's Qatarization plan covering 41 companies, in order to maximize the employment of qualified and skilled Qatari nationals. Through our continued investment in the development of educational resources, programmes and infrastructure, we provide Qataris with all the support they need to develop to international standards of competence.

Qatar Petroleum is continuously raising the bar for operational efficiency and performance through well-planned cost optimization, which allows us to minimize resource waste and operating costs without undermining our health, safety and environmental policies and commitments.

While QP is a national oil corporation, our ambitious vision and strong international presence motivate us to demonstrate world-class standards in all our activities, particularly in how we create value for society. I am confident that sustainability management and reporting will serve as a catalyst for QP to continue to grow and to evolve our operations and management practices in alignment with international best practice. It will serve as a fundamental lever in our efforts to meet the challenges that face our corporation, our country, and the global community. Equally, it will enable us to build on the foundations we have laid over the past 40 years and to create still greater value for our stakeholders in alignment with the Qatar National Vision 2030, as launched and guided by His Highness Sheikh Tamim bin Hamad Al-Thani, the Emir of the State of Qatar.

I look forward to a successful year ahead on the road to a more sustainable Qatar Petroleum.

#### Saad Sherida Al-Kaabi

President & CEO

### **ABOUT QATAR PETROLEUM**

Qatar Petroleum (QP) is a state-owned public corporation established by Emiri Decree No. 10 in 1974. It is responsible for all phases of the oil and gas industry in the State of Qatar.

The principal activities of QP, its subsidiaries and joint ventures are the exploration, production, local and international sale of crude oil, natural gas and gas liquids, liquefied natural gas (LNG), refined products, synthetic fuels, petrochemicals, fuel additives, fertilizers, steel and aluminum.

**1939 – 1940** Dukhan 1 was drilled, resulting in the discovery of oil in Qatar.

E A

100

TR

11 INT

**IOBINELLO** 

₽P

محمع المتاج الغادة معة PRODUCTION COMPLEX-A

and all the set of a

T = T.1

**1949** – First crude export occurred.

**1974** – Establishment of the Qatar General Petroleum Corporation (QGPC) through Emiri Decree No. 10.

**2001** – QGPC renamed as Qatar Petroleum.

### **SCOPE OF THE REPORT**

#### **QP Directly Managed Operations**

The operations and activities of QP and its affiliates are conducted at various onshore locations, including Doha, Dukhan and the Mesaieed and Ras Laffan Industrial Cities, as well as offshore areas, including Halul Island and offshore production stations and drilling platforms located in the North Field.



#### Dukhan Field

Located 84 km west of Doha, Dukhan is an onshore oil and gas field, covering an area of approximately 80x8km. The oil and gas extracted are separated in four manned degassing stations and two unmanned satellite stations. Stabilized crude oil is transported by pipeline to Mesaieed Port. The extracted natural gas is processed in plants for associated and non-associated gas, NGL and condensate production facilities, and other operational support facilities for injection of North Field gas and separated water. With the first export of Dukhan oil on the 31st of December 1949, Dukhan has extensively developed its extraction activities and has grown into a city with housing, medical, recreational and educational facilities and related services.

#### Halul Island

Located around 96 km northeast of Doha, the island serves as the crude oil export terminal for oil produced from offshore oilfields. The extracted oil is transported to the island by pipelines and blended up to export specifications before being exported by tankers. Eleven crude oil storage tanks are located on the island. Transported by helicopters for a seven-day shift, employees live in specially dedicated accommodations, equipped with all necessary medical, sports and recreational facilities.

#### QP Gas Operations

QP Gas Operations is responsible for management of non-associated gas production and processing, local transmission and distribution of associated gas and natural gas liquids (NGL), export of liquefied petroleum gas (LPG) and condensate. It operates gas production in the North Field and Dukhan, the NGL complex of gas processing plants in MIC, the LPG and condensate storage in MIC, the export of LPG from the NGL Jetty in MIC, and the transmission and distribution pipeline network.

#### QP Refinery

Located in MIC from its start in 1958, the QP Refinery now operates a large refinery complex consisting of two crude refineries, condensate refinery, FCCU complex and associated utilities and logistic facilities. The refinery complex processes crude oil and condensate into various finished products, mainly LPG, naphtha, premium and super gasoline, jet fuel, diesel, decant oil and fuel oil.

#### Offshore Platform (PS-2)

This offshore production station is located in the Maydan Mahzam (MM) field and has been operated by QP since its discovery in 1963. It produces crude oil, associated gas and condensate. Oil is transported by pipeline to Halul Island, while gas is transported to Mesaieed.

#### Offshore Platform (PS-3)

This offshore production station is located in the Bul Hanine (BH) field and has been operated by QP since the field's discovery in 1965. It produces crude oil, associated gas and condensate. Oil is transported by pipeline to Halul island, while gas is transported to Mesaieed.

#### Doha Support Services

QP management and departments are responsible for centralized coordination of QP activities and its workforce are located in Doha.

Our first QP Sustainability Report has been organized in four chapters around the key elements of our vision which drives our focus. This approach also allows us to cover all our spheres of influence including our direct and indirect operations as well as national and international investments.

Chapter	QP's Vision Element	Spheres of Influence
1 – Achieving World Class Sustainability Management	'To be a world class oil and gas corporation	All QP's direct and indirect operations
2 - QP's Sustainability Performance and Initiatives		QP's seven direct operations as mentioned above
3 - Creating Sustainable Roots in Qatar	with its roots in Qatar and	<ul> <li>QP's wider and indirect operations:</li> <li>Subsidiaries, Joint Ventures and Associates</li> <li>Energy and Industry Sector</li> <li>Industrial Cities Management</li> <li>Wider Community</li> </ul>
4 - Influencing Sustainability Internationally	a strong international presence.'	QP's international investments





# **CHAPTER 1:**

ACHIEVING 'WORLD-CLASS' SUSTAINABILITY MANAGEMENT

## **ALIGNING WITH OUR COUNTRY'S VISION**

Qatar Petroleum's approach to sustainability management is inspired and directed by the four pillars of the Qatar National Vision (QNV) 2030 and the National Development Strategy (NDS) 2011 - 2016, which is fully reflected in our corporate vision and objectives.

As the custodian of Qatar's hydrocarbon resources, QP has a central role in contributing to the sustainability of our country. This implies providing the State of Qatar with reliable and sustainable income through the wise and responsible harnessing of our hydrocarbon resources, to support the state in its planned transition to a highly competitive and self-renewing knowledge-based economy.





### **BALANCING STAKEHOLDER NEEDS**

In the context of constantly fluctuating oil prices, sustainability in our business is all about achieving a delicate balance. We need to balance reserves maintenance and production, economic diversification and the degree of depletion, and cost-effectiveness with a constant investment in innovation, infrastructure and Qatari talent.

As an oil and gas corporation driving the development of the petrochemical sector and heavy industry in Qatar, we will always have an impact on the environment and communities in which we operate. Therefore, at the heart of our sustainability commitment is a pledge to strive to meet world-class standards of health, safety and environmental protection throughout our direct operations and value chains. Overall, QP's contribution to the four pillars of the Qatar National Vision 2030 requires striking a balance that addresses the needs of a wide range of stakeholders, including the present and future generations. Our stakeholders are represented and involved in shaping our business decisions and in harnessing hydrocarbon resources in a sustainable and responsible way. QP considers every group of people that is impacted by its business as a stakeholder; we have classified our stakeholders according to their interest and influence in our business.

#### **QP STAKEHOLDER MAPPING**



Contractors and Suppliers	<ul> <li>Support for local suppliers</li> <li>Fair contract bidding and awarding</li> <li>On-time payments</li> <li>Good working conditions</li> <li>Ethical business dealings</li> <li>Collaboration to ensure workers welfare</li> </ul>	<ul> <li>QP website – Supply Management</li> <li>Bidding and tendering</li> <li>Collaborative monitoring of project delivery</li> <li>Customer surveys</li> <li>Audits and site visits</li> <li>Incident reports and investigations</li> </ul>
International Oil Company (IOC) Partners	<ul> <li>Joint working, shared knowledge</li> <li>Development of best practices</li> <li>Elevation of industry standards</li> <li>Sharing of technical data, knowledge and expertise</li> <li>Leadership of industry-wide initiatives</li> <li>Collaboration to address emergencies</li> <li>Effective management of industrial cities</li> </ul>	<ul> <li>Exploration and Production Sharing Agreements (EPSA)</li> <li>Development and Production Sharing Agreements (DPSA)</li> <li>Subsidiary web portal</li> <li>Regular meetings and workshops</li> <li>Shared initiatives</li> <li>Conferences, exhibitions and knowledge sharing forums</li> <li>Interactive dialogue</li> <li>Reporting</li> <li>Cost sharing agreements</li> <li>Memoranda of Understanding</li> <li>Joint crisis and emergency preparedness exercises</li> <li>Sponsorship collaborations</li> <li>Papers in energy-related publications</li> <li>Drilling Operations Incident Review Committee (DOIRC)</li> <li>Management of industrial cities</li> </ul>
Investors	<ul> <li>Clearly defined corporate governance</li> <li>Proactive risk management</li> <li>Business continuity</li> <li>Transparency and disclosure of information</li> <li>Cost-effective operations</li> <li>Strong financial performance</li> </ul>	<ul> <li>Annual reports</li> <li>Press releases and newsletters</li> <li>Website</li> <li>Exploration and Production Sharing Agreements (EPSA)</li> <li>Development and Production Sharing Agreements (DPSA)</li> </ul>
Clients and Customers	<ul> <li>Reliable and efficient operations and high-quality products at acceptable prices</li> <li>Excellent customer service</li> <li>Business continuity</li> </ul>	<ul> <li>Tasweeq manages marketing and other commercial aspects of refinery products sales</li> <li>Contracts and agreements</li> <li>Customer satisfaction surveys</li> <li>Feedback through ongoing sales engagement</li> </ul>
Education and Research Institutions	<ul> <li>Assistance to educational institutions in preparing students to enter the workforce</li> <li>Scholarship grants</li> <li>Technical support to promote research and innovation</li> </ul>	<ul> <li>Joint research initiatives</li> <li>Public reports</li> <li>One-to-one meetings</li> </ul>
Communities and Associations	<ul> <li>Investment in the community and social development</li> <li>Development of national talent</li> <li>Employment opportunities</li> <li>Regular engagement with the community</li> <li>Minimal environmental impacts</li> <li>Safe operations</li> <li>Minimization of the impact of operations on local communities</li> <li>Investment in infrastructure</li> <li>Compliance with laws and regulations</li> <li>Timely access to accurate information</li> </ul>	<ul> <li>Joint charitable initiatives supporting important local causes and events</li> <li>Public reports as required</li> <li>Media relations activities</li> <li>Career fairs, school visits, and internships at QP</li> <li>Community Outreach Programme (Ras Laffan COP)</li> <li>Social media</li> </ul>

## FOCUSING ON WHAT MATTERS

We are committed to balancing a contribution to the economic prosperity of the State of Qatar with managing our environmental impacts and supporting the well-being of our workforce and wider society. To achieve this, we are conscious that we need to focus our efforts on the areas that matter more to our stakeholders and where we can make the biggest difference. A solid strategy should be grounded in the prioritization of the most significant sustainability issues for our business, and that's why materiality analysis is a fundamental part of our approach to sustainability management. The issues we have identified as the ones we need to manage to make sure we are generating both corporate and societal value are presented below. They are based on years of experience in leading the Qatar Energy and Industry Sector Sustainability (QEISS) Program, internal bespoke sustainability studies, consultation with focal points across our business units, as well as best practice international guidance. We have focused our 2014 reporting on the most material sustainability issues for our business.

We are proud of our achievements and appreciate our influence and responsibility in shaping the future of our country. We believe that a leading sustainability management approach that permeates to all our spheres of influence will balance the long-term creation of value for QP, our business partners and the wider community.

#### Key Issues We Need to Manage to Generate Long-Term Corporate and Societal Value

# Support the well-being of our workforce and wider society

- \* Achieve world-class health and safety standards
- \* Employ and develop Qatari nationals
- \* Promote human rights
- \* Invest in society

#### World-Class Sustainability Leadership

#### Manage our environmental impacts

- \* Mitigate and adapt to climate change
- \* Manage water resources

High ever standing

- \* Protect biodiversity
- \* Reduce other emissions and waste

## Contribute to long-term economic prosperity

Stakenolder Engagement

- \* Achieve reliable financial performace
- \* Lead downstream development and strategic international investments
- \* Support local value chains
- \* Improve operational efficiency

Strategy and Performance Management

## ACKNOWLEDGING OUR SCOPE OF INFLUENCE

The reach, influence and responsibilities of Qatar Petroleum go far beyond our direct productive facilities. Being one of the oldest and most experienced institutions in Qatar, it is no surprise that QP has had the opportunity to contribute to a wide range of social investments and flagship projects for our country. We also support and influence the sustainability practices of a large number of businesses and projects in Qatar and internationally, including our subsidiaries, joint ventures, associates and wider value chains. This influence happens in a number of different ways, including QP's participation in board-level decision making, the provision of services and regulation through our Industrial Cities, and the decisions to channel valuable hydrocarbon resources to competing companies and projects. We acknowledge our impact on the entire energy and industry sector in Qatar, including our leading role in driving the sector's sustainability program, which has been running since 2010, and we are committed to approach this impact with a deep sense of responsibility and increasing world-class standards.



#### **Creating Value Through Leading Sustainability Management**

Sustainability Report 2014 17

### **OUR SUSTAINABILITY GOVERNANCE**

QP's Corporate Health, Safety and Environment (HSE) Department directs the development and implementation of QP's corporate HSE and sustainability strategy. It also provides guidance and advisory support to all QP directorates and departments; oversees and monitors the effectiveness and quality of HSE and sustainability programs in achieving goals and standards; and represents QP's interests in local, regional and international HSE and sustainable development forums. A pool of experts from across the business units makes up QP's sustainability team, whose role includes coordinating the development of external disclosures including this Sustainability Report, updating the Sustainability Reporting Procedure and ensuring the sustainability performance is aligned with the QP Vision and the Qatar National Vision 2030. QP's HSE Manager leads these efforts and reports to the HSE and Business Services Vice President who in turn reports to QP's President & CEO.

QP is in the process of building corporate-wide awareness on the principles and practices of sustainability by developing an online sustainability awareness course for employees.

# **CHAPTER 2:**

# QP'S SUSTAINABILITY PERFORMANCE AND INITIATIVES

### **PRODUCTION AND ECONOMIC OUTPUT**



Qatar Petroleum contributes to the economy of Qatar in a variety of ways. We have committed to the responsible utilization and development of Qatar's hydrocarbon resources to maximize the benefits for our country, and to heavily support its goals of transitioning into a knowledge-based economy. That's why operational excellence is a cornerstone for our business as reliable and efficient production and distribution deliver sustainable income for our corporation and the State, and maximize the energy resources available for economic development.

Using those resources, we have diversified the economy through the establishment of Qatar's petrochemical and heavy industrial sectors, and continue to foster their expansion and productivity through knowledge transfer and leadership. The non-hydrocarbon sector in Qatar continues to drive economic growth, with the growth of real GDP from the non-hydrocarbon sector averaging 11.9% in 2014, and pushing its share of nominal GDP to just over half (51.6%).

#### **Production and Operational Excellence**

We strive to continuously raise the bar on operational efficiency and performance by constantly applying

world-class standards. This allows us to minimize resource waste and operating costs per barrel, and reliably meet the needs of our customers. Ultimately, applying best operational practices empowers us to become a more sustainable corporation, economically, socially and environmentally.

QP's actual annual production of crude oil and natural gas is based on reservoir management requirements. A number of projects have been implemented to ensure our production is maintained for many years to come. Work continues in earnest to re-evaluate the potential of QP-operated fields through comprehensive reservoirs studies involving the latest modelling techniques, seismic surveys, and data processing. As part of this effort, QP announced plans in 2014 to invest over 40 billion Qatari riyals for the re-development of the Bul Hanine offshore oil field. In addition, studies are ongoing for the redevelopment work already underway in fields like Dukhan (through the implementation of the enhanced water flood and CO2 Water Alternating Gas (WAG) Pilot projects) and Maydan Mahzam. We are also reviewing further development plans for Al-Shaheen and ISND fields.

#### **QP** Refinery Operations

QP's refinery production has remained consistent from 2011 to 2014, with no significant change in the total refinery throughputs. Super gasoline, diesel, and jet fuel are our three principal products, accounting for more than half of the total barrels of products produced per day.

Table 1: Refinery Operations Production (thousand barrels per day)				
	2011	2012	2013	2014
Super gasoline	27.771	27.759	25.340	29.090
Diesel	27.318	26.246	22.509	25.821
Jet fuel	23.280	23.258	21.492	22.856
Premium gasoline	15.598	14.167	12.566	15.462
Naphtha	21.292	17.210	17.187	14.517
Liquefied petroleum gas (LPG)	4.458	4.205	3.635	4.665
Decant oil	3.424	3.508	2.916	3.478
SRFO	0.278	1.551	3.356	0.252
Sulfur (metric tonne per day)	0.093	0.070	0.057	0.061
Total refinery throughputs	128.894	124.766	114.815	120.838

#### QP Gas Operations

Production of lean gas and associated by-products decreased moderately from 2012 to 2014. Production of lean gas and North Field Stabilized Condensate (NFC) was reduced by 8%. Production of ethane and NGL condensates remained relatively constant, while propane and butane production both fell as well.

Table 2: Gas Operations Production			
	2012	2013	2014
NF Lean Gas (mmscf/d)	787	774	723
Offshore Stripped Associated Gas (OFFSAG) (mmscf/d)	77	61	67
Ethane Rich Gas (ERG) (mt/d)	4,033	4,508	4,151
Propane (mt/d)	3,519	3,643	3,214
Butane (mt/d)	2,690	2,671	2,366
NGL Condensates (mt/d)	1,322	1,353	1,295
North Field Stabilized Condensates (NFC) (mb/d)	23	23	21
Liquid Sulfur (mt/d)	182	0	86

#### **Financial Performance**

We are committed to delivering competitive and sustainable returns to the State of Qatar by focusing on strong cost management and core assets and investing in projects that deliver the best possible returns.

In 2014, we saw a slight reduction (5%) in net profit for the year, due to the fall in oil prices. In light of the current crude price environment, QP has reviewed discretionary spending to continue to drive a sustainable,

cost-conscious culture across all levels of the organization. This cost-conscious culture will not deter our focus on safe, reliable and environmentally sound operations as these areas are critical to the long-term viability and to the success of QP.

Table 3: Direct Economic Value (thousand QAR)				
	2012	2013	2014	
Total revenue	180,908,697	180,796,072	168,661,173	
Total expenses	109,725,562	111,428,521	111,665,960	
Net operating profits	71,183,135	69,367,551	56,995,213	
Share in profits of joint ventures and associates	96,668,982	100,963,139	98,189,586	
Taxes	52,859,054	51,636,031	42,427,717	
Net profit for the year	115,029,300	118,643,243	112,612,946	
Net operating profit as a percentage of GDP	10%	9%	7%	
Net profit as a percentage of GDP	16%	16%	15%	

For more information on our operational and financial performance and strategy, please refer to our annual report: http://www.qp.com.qa/en/MediaCentre/Lists/QPPublications/Attachments/5/2014%20Annual%20Report%20-%20English.pdf

#### Advancing Petroleum Technology

Our strong balance sheet allows us to invest in new technologies, for potential use to enhance our operational efficiency and reduce the overall environmental footprint of our business. In 2014, QP spent approximately 50 million QAR on operational expenditure, projects and capital investments to support technology research and development. Some of the research projects undertaken include:



Establishing a comprehensive geochemistry database for all reservoirs in Qatar.

Improving existing procedures and technology in acid simulation and developing new techniques related to well stimulation.





Using medical CT- scanners for generating high resolution 3-D images of carbonate samples.

Developing a new analytical technique for geochemical characterization, identification and quantification of oil samples.





Researching produced water treatment for reinjection.

Establishing maps for QP-operated regions showing acceptable materials and coatings for asset integrity.





Developing an improved process technology for the removal of CO2 and sulfur components from natural gases in Qatar-based plants. In 2014, Mr. Saad Sherida Al-Kaabi, QP President & CEO, signed the framework agreement for research cooperation between QP and Qatar University (QU), which will focus on establishing bilateral research programs in the areas of materials and corrosion, gas processing, and the environment. QP and UOP LLC, a Honeywell company, also signed a joint research and development agreement to develop new ways to cost-effectively treat natural gas for the production of liquefied natural gas (LNG).

QP has also been cooperating with Total since 2012 on a joint acid stimulation research project, with the aim of increasing production from Qatar's oil and gas fields by injecting acid into wells and thus increasing reservoir permeability. In September 2014, the project reached an important milestone with the successful installation of the QP Dual Core Rig, designed and built by Texas A&M University based on QP specifications.

Another joint initiative, involving QP, Shell and the Qatar Science & Technology Park, is the funding of the Qatar Carbonates and Carbon Storage Research Center (QCCSRC), which is described in greater detail in the section of this chapter on the "Environment and Climate Change".

#### **Sustainable Procurement Practices**

In order to ensure the reliability and continuity of our business, we must secure the integrity of our supply chain. QP procures a wide range of materials and services, such as equipment for operations, electrical and instrumentation materials, chemicals, piping, tubes and valves, and building and construction materials, as well as exploration, drilling, engineering, construction, installation, maintenance and operational support services.

In 2014, QP spent over 12 billion QAR on procuring goods and services, with over 9 billion QAR (76%) of that going to suppliers based in Qatar<sup>1</sup>. It has 8,669 registered suppliers, over 40% of which are based in Qatar. Given the scale of our supply chain, we also recognize that we can have a significant impact through our procurement practices. QP is committed to working with suppliers to build local capacity to meet QP's procurement demands, to enhance both the efficiency and reliability of its supply chain and to ensure the quality and sustainability of the goods and services it procures.

Table 4: Local Procurement					
	2011	2012	2013	2014	
Total procurement spending (billion QAR)	9.57	10.70	7.93	12.03	
Total procurement spending on suppliers based in Qatar (billion QAR)	8.02	7.24	4.42	9.15	
Goods and services sourced locally (%)	84%	68%	56%	76%	

QP has introduced several initiatives to build the capacity of suppliers in Qatar and the Arab region, as detailed in the case study on the Al Shaheen Workshop. QP is also working to ensure that its supply chain meets its own standards of protection for people and the environment; see page 26-27 for more information about its approach to HSE management in the supply chain. The corporation has also helped to create a regional procurement network, called 'Materials Managers', allowing a group of companies in the GCC to view one another's stock and purchase necessary replacement parts from among themselves, thereby avoiding costly and prolonged shipments from Europe.

<sup>1</sup>*This includes distribution houses representing foreign companies in Qatar.* 

#### Al Shaheen Workshop: Building Local Supplier Capacity

QP has a large quantity of equipment produced by General Electric (GE). QP has partnered with GE to establish the Al Shaheen Workshop to conduct maintenance and repair of this equipment in Qatar. The workshop provides shutdown support services and repairs high-value capital parts three times before procuring a replacement, thus avoiding unnecessary purchase of new parts and saving costs.

Through the workshop, local engineers have been trained in the overhauling of gas turbines, compressors and control valves. This project is a unique example of supplier-offtaker cooperation, guaranteeing timely replacement of critical components and ensuring continuous operation.



### HEALTH, SAFETY AND ENVIRONMENTAL MANAGEMENT



It is one of QP's core objectives to achieve world-class standards of health, safety and environmental protection. QP understands the risks inherent in oil and gas production, and thus manages occupational health, safety, and environmental (HSE) matters as an integral part of its business activities, striving for an incident-free workplace. QP's commitment to health, safety and environmental protection is laid out in its Health, Safety, and Environmental Conservation and Protection Policy issued in 2007.

In QP, the HSE governance is entrusted to the Corporate HSE Department, while operational business units implement HSE management on a day-to-day basis. The Corporate HSE Department aims to control and manage all HSE risks related to the corporation's activities in line with State and corporate requirements. It does this through the development of corporate governance frameworks for HSE and sustainable development, as well as their relevant implementation mechanisms and implementation assurance.

# Governance Frameworks and Implementation Mechanisms

Corporate HSE governance addresses major accident hazard risks. With the recent completion of its reorganization program, Corporate HSE is in the process of developing and implementing a new HSE governance framework to ensure that HSE risk management responsibilities and accountabilities are cascaded in a coordinated and structured manner across QP.

QP is committed to maintaining and monitoring the corporate-wide HSE risk registers, and an annual report is made to senior management on effective HSE risk mitigation activities across QP via robust frameworks, procedures and guidelines. Corporate procedures addressing HSE risk assessment and HSE objectives, targets and programs incorporate Enterprise Risk Management (ERM) elements, as with other best industry practices.

The corporation integrates an HSE management system through established governance frameworks. ISO 14001 and OHSAS 18001 certifications have been achieved at the operational level, and are planned to be made corporation-wide with the rollout of additional corporate HSE procedures.

Sustainability Report 2014 25

#### **Implementation Assurance**

QP has a quarterly internal reporting process addressing HSE compliance, and is in the process of strengthening its integrated HSE audit function by providing the required technical expertise and granting due authority.

The Corporate HSE Department has a strong coordination partnership with operational areas addressing HSE in order to further minimize HSE risks and enhance performance. It undertakes targeted inspections of HSE management practices and planned interventions, when needed, with a focus on major hazard risks.

To reward good performance, QP completed, approved and disseminated a new procedure for recognition of HSE achievements of QP staff and contractors in 2014.

#### **Compliance Assurance**

QP has issued a corporate procedure on HSE legal requirements, which is available on the QP Intranet with all the relevant information on national, corporate and other legal and regulatory requirements. Reports are provided to the national regulatory bodies, government institutions and other relevant entities, in accordance with the requirements of the pertinent authority.

#### **Setting Goals**

In 2014, Corporate HSE developed a business plan setting out 14 strategic objectives and an accompanying implementation action plan to be rolled out over the next five years, from 2015 to 2019. During the QP Planning Forum 2014, the Corporate HSE Department presented its business plan and aligned the existing system of HSE objectives, targets and programs with the strategic and business planning process.

#### **Contractor and Supplier Management**

QP recognizes that its objective of world-class standards of health, safety and environmental protection cannot be achieved without the active involvement of the contractors who carry out a portion of QP's work. It has, therefore, set out HSE regulations for contractors to ensure that they demonstrate the same commitment to HSE as QP itself. Suppliers of procurement services and products to QP must comply with these regulations; non-compliance can result in QP's suspension of the supplier.

The framework within which QP and its contractors work to achieve compliance to these rules and regulations is in line with that of the International Association of Oil and Gas Producers (IOGP), as shown in Figure 1. While working together on each contract, responsibility for HSE management activities is shared between QP and the contractor.



Figure 1: QP and Contractor HSE Management Activities in the Contracting Process

Please refer to the following link to view the complete QP HSE regulations for contractors:

https://www.qp.com.qa/en/SupplyManagement/Tenders/Pages/QPHSERegulationsforContractors.aspx

Contractors report on their HSE performance on a monthly basis, which is integrated into the corporate HSE performance report. QP is currently in the process of developing a Monthly Contractor HSE Performance Submission System (MCHS) to facilitate contractor reporting and QP monitoring activities. The approval of the business case for the system was obtained in 2014.

### HEALTH AND SAFETY



Ensuring the health and safety of our employees and local communities is one of our top priorities. We endeavor to continuously evolve our safety strategy to reflect organizational learning and offer the best protection we can provide for our people. QP's safety approach encompasses both personal safety and process safety: personal safety covers protecting the safety, health and well-being of people engaged in work for us, while process safety covers the reliability, integrity, efficiency and general fitness for service of our physical assets.

#### **Personal Safety**

QP recognizes that safety leadership and culture are fundamental to good safety performance. A knowledgeable, well-trained and alert workforce can often be the most effective tool for preventing incidents. For this reason, QP has rolled out the Behavioral Accident Prevention Process (BAPP) technology across its Industrial Cities and Refinery Operations functions, and is planning to implement BAPP across all of its operational functions by 2017 and 'BAPP Lite' in all non-operational departments by 2018. BAPP technology has a proven record of success, and is focused on four key elements:

- Critical behavior identification, definition, and communication.
- Data gathering (sampling or observations).
- Real-time feedback.
- Using data to remove barriers to safe work.

In 2014, QP also completed the development of the QP Life Saving Rules to improve accountability for HSE and to further promote a positive safety culture. The draft Code of Practice document was reviewed by stakeholders and approved by the President & CEO of QP, and a rollout strategy was proposed.

To ensure that employees performing safety-critical tasks have the right knowledge and skills, QP is also in the process of developing an HSE Critical Competency Management Standard. As part of this process, QP will identify safety-critical positions and tasks, safety-critical competencies, and competency gaps among staff, and will develop and implement a training requirement.

#### Personal Safety Performance

On most safety performance indicators, QP has seen improved performance from 2012 to 2014, with minimal regression in 2013. Lost time injury rates (LTIR) for employees and contractors have improved by 28% and 30%, respectively, since 2012. QP's combined LTIR for employees and contractors was better than the global rate calculated by the IOGP (0.36).

The total recordable incident rate (TRIR) for contractors has decreased as well by 31%; however, QP has seen an increase of 14% in the TRIR among its employees in the past two years. Overall, the combined TRIR for employees and contractors was also better than the global rate calculated by the IOGP (1.54). QP has witnessed no fatalities among its own employees in the past three years; regrettably, however, it recorded one contractor fatality in both 2013 and 2014. The companies responsible have carried out extensive examinations of the accidents' causes, and have put in place a range of measures designed to ensure that such situations can never arise again. In both cases, concerned QP departments engaged the contractors involved in relation to the accident investigation and implementation of recommendations. The two incidents were also reviewed by QP at the corporate level at the quarterly Corporate Leadership Team meeting.

Table 5: Personal Safety*			
	2012	2013	2014
Employee fatalities	0	0	0
Contractor fatalities	0	1	1
Lost time injury rate (employees)	0.46	0.62	0.32
Lost time injury rate (contractors)	0.43	0.87	0.31
Lost time injury rate (employees and contractors)	0.43	0.78	0.31
Total recordable injury rate (employees)	0.95	0.95	1.08
Total recordable injury rate (contractors)	1.25	1.29	0.86
Total recordable injury rate (employees and contractors)	1.18	1.17	0.91
*Lost time injury rates and total recordable injury rates are calculated per million hours worked.			



#### LTIR and TRIR for Employees and Contractors

#### **Health and Welfare**

QP endeavors first to protect every employee from any occupational health risks posed by day-to-day activities, and further encourages its employees to make healthy choices beyond their work environment, recognizing that healthier employees are more engaged and productive employees.

Comprehensive health checks have been implemented at all points of entry into QP's offshore sites to ensure that all employees working offshore are fit for the demands of offshore activities and have no pre-existing conditions that may pose an immediate risk to their health. QP also provides specific training for all individuals to address any identified health risks for particular jobs. For example, all personnel in Dukhan receive Naturally Occurring Radioactive Material (NORM) training to ensure that they take the appropriate precautions to protect their health. To promote rapid first response in case of any medical emergency, QP has established a first aid standard, ensures the distribution of first aid boxes across all QP locations, and provides training to designated employees on basic life support, including instruction in the use of an Automated External Defibrillator (AED).

To address health risks for office employees, QP has engaged an industrial hygienist to select office furniture, and has programmed employee computers to display a short video with tips for stretch breaks periodically during the day.

Several health promotion events and awareness sessions were also held in Ras Laffan, Mesaieed and Dukhan in 2014 to promote health and wellness among employees, families and residents as part of QP's health outreach program. These events target common health issues such as obesity, diabetes, and smoking.



#### Workers' Welfare and Well-Being Forum

In 2014, QP's biannual Workers' Welfare and Well-Being Forum, was held with the theme "Go Healthy, Go Productive," thus highlighting the benefits of a healthy lifestyle on both personal and professional levels.

The forum featured several presentations by HSE professionals and medical experts. It also had workshops focusing on various health and well-being topics including body mass index, stress control, and advice on proper diet and physical activities. The workshops were a blend of discussions, Q&A sessions, tests and personal evaluation, thus providing the participants with a quick assessment of their physical and mental state, two things that are intimately linked.

The promotion of healthy lifestyles among all employees and workers was an opportunity for the HSE experts at the forum to highlight the positive effects of good health and well-being on workplace safety and productivity.

#### Heat Stress Events

QP recognizes that heat stress is a major health concern for employees working outside during the summer months. QP operations have, therefore, established heat stress management procedures in line with the Heat Stress Management Guideline created by the QP HSE DG in 2013. QP developed a heat stress awareness course based on these procedures, which has been offered since mid-2014. QP has managed to decrease the number of heat stress events recorded among employees by 10% from 2012 to 2014.

Table 6: Heat Stress Events			
	2012	2013	2014
Heat stress events (employees)	97	91	88

#### **Process Safety**

Process safety encompasses the reliability, integrity, efficiency and general fitness for service of our physical assets. To ensure process safety within its operations, QP is focused on supporting the challenge of asset integrity management for aging facilities and applying inherent safe design principles for new projects.

All QP assets are currently registered in a robust SAP planned maintenance system. To ensure compliance with Safety Critical Element (SCE) preventive and corrective maintenance scopes and schedules, the corporation is in the process of establishing an SCE Asset Register, developing performance standards for identified SCEs, and developing and implementing an SCE compliance plan. QP is also working to ensure that drilling contractors implement a software-based preventive maintenance management system. In 2014, it introduced new software applications for both onshore and offshore operations for better management of well integrity concerns.

#### **Emergency Response Preparedness**

In the event that an incident or an emergency should occur, we are committed to addressing it as quickly and safely as possible. To that end, we are continually building our emergency preparedness capabilities in response to credible emergency scenarios. We are currently in the process of developing a corporate crisis management procedure and establishing a QP crisis management center, to be completed by 2016.

QP is also an active member of LASTFIRE (Large Atmospheric Storage Tank Fires), a consortium of international oil companies reviewing the risks associated with fires in storage tanks and developing the best industry practice to mitigate these risks.

#### **Joint Crisis Management Exercise**

QP and RasGas conducted a large-scale crisis management exercise within Ras Laffan Industrial City (RLIC) in 2014 to test their respective multi-level emergency response capabilities.

Through the joint exercise, the companies integrated their response with state-level government agencies, major operating companies at RLIC and mutual aid agencies to an unprecedented scale.

The exercise included the involvement of the General Directorate of Civil Defense and Hamad Medical Corporation's Emergency Medical Services.

Upon completion of the exercise, RasGas led a workshop in which participants were debriefed and feedback was obtained from independent observers. The exercise allowed for a comprehensive evaluation of existing procedures and communication protocols as well as major-event disaster management involving heightened security and mass casualty handling.

#### Security

Harvesting the fruit of more than three years of QP efforts to develop, implement, monitor and improve its Security Management System, QP was presented with the ISO 28000 Standard Certificate in 2014. Besides being the first in Qatar to earn this certificate, QP is now among the few oil and gas companies worldwide to be certified to this standard.

### **ENVIRONMENT AND CLIMATE CHANGE**

At QP, we are committed to addressing global environmental issues, such as greenhouse gas emissions, as well as regional issues such as low air quality, water scarcity, waste generation and biodiversity protection. Through proactive environmental management and investment in new technologies, we strive to reduce to the minimum practicable any adverse effects of our operations on the environment.



sand storm event

#### **Energy Efficiency and Emissions Reduction**

QP works to contribute to the global response to climate change by playing an active role in climate change working groups and negotiations under the United Nations Framework Convention on Climate Change (UNFCCC). We regularly monitor global climate change policies and regulations and engage with state governments in the region on programs and activities related to climate change mitigation and adaptation.

There are three key ways in which QP works to reduce its own greenhouse gas (GHG) emissions: reduction of energy consumption, reduction of flaring events and investment in carbon management technologies.

QP's recent HSE strategy for 2015-2019 includes several actions to enhance QP's carbon and energy management over the next five years, such as determining QP's baseline in terms of energy and GHG emissions, validating emissions and energy inventories, setting SMART targets and goals related to GHG emissions and energy consumption levels, and organizing implementation and monitoring programs. In 2009, QP introduced a pilot GHG verification and reporting scheme to establish a GHG emissions inventory and energy profile for all QP facilities. QP's GHG inventory for 2014 has been developed using the SANGEA<sup>™</sup> software system, which ensures consistent reporting of GHG emissions across various operational units in QP, and reports compliance with the parameters of regulatory requirements. The system is based on both the Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Gas Industry published by American Petroleum Institute in 2009, and the US EPA GHG Mandatory Reporting Rule (MRR). QP is currently using the system to complete a preliminary evaluation of emission reduction opportunities across all its operations.

Emissions from stationary combustion sources accounted for almost 74% of the total direct GHG emissions in 2014, followed by flaring and process emissions at 17% and 7%, respectively. QP is currently measuring only its direct (Scope 1) GHG emissions, which make up the bulk of its total emissions, and is in the process of establishing a system for measuring indirect (Scope 2) emissions for future reporting.

Table 7: Energy and GHG Emissions	
	2014
Direct energy consumption (GJ)	53,579,406
Direct energy intensity (GJ/ton of hydrocarbon produced)	2.04
Scope 1 GHG emissions (tonnes of CO2eq)	4,953,486
Scope 1 GHG emissions intensity (tonnes of CO2eq/tonnes of hydrocarbon produced)	0.188



#### Breakdown of QP's 2014 GHG Emissions by Source Type

#### Al-Shaheen Oil Field Gas Recovery and Utilization Project

QP's Al-Shaheen Oil Field Gas Recovery and Utilization Project, directed at reducing associated gas flaring, has been accredited as a Clean Development Mechanism (CDM) project since 2007, within the framework of the Kyoto Protocol establishing mechanisms for reducing GHG emissions at the international level. This project has helped QP to save 10.5 million tons of CO2-equivalent emissions from its initiation until May 2014, and is expected to have abated 8.4 million tons more by 2021.

#### **Energy Saving through Steam Leak**

The QP Refinery in MIC initiated a Steam Leak Survey in 2013 as one measure to prevent the unnecessary escape of energy. All steam traps were surveyed for leakages of steam and the results were passed to the maintenance department in order to initiate repairs during the shutdown in 2014. These measures have not only helped to avoid energy loss by increasing efficiency in steam generation, but have also reduced water consumed for steam generation, which in turn has led to the reduced use of anti-corrosion chemicals necessary for treating this water.
#### Qatar Carbonates and Carbon Storage Research Center (QCCSRC)

The Qatar Carbonates and Carbon Storage Research Centre (QCCSRC) is a \$70-million, 10-year research partnership between QP, Shell, Qatar Science & Technology Park and Imperial College London. The program addresses the key science and engineering challenges to the safe and permanent storage of carbon dioxide in Qatari carbonate reservoirs. It will provide Qatar with state-of-the-art predictive reservoir carbon storage modeling capabilities and enhanced understanding of fundamental subsurface reservoir issues affecting CO2 storage. The QCCSRC research collaboration started in 2008 and is organized around four major research projects:

- Fundamental research applied to carbonate reservoirs
- Carbonate reservoir pore/fracture scale physics and chemistry
- Integrated simulation technology for carbonate reservoirs
- Integrated experiments and modelling: translation of program data, models and concepts to enable field-scale application

A large body of new knowledge and data has resulted from this project:

- Several students have completed PhD and postdoctoral research projects;
- Field data (e.g. geobodies, fractures, dolomite bodies descriptions) on reservoir outcrop analogues to Qatar hydrocarbon reservoirs;
- Development of a new technology (Clumped Isotopes) to decipher and understand digenetic processes;
- Various laboratory data on rock fluid interactions.



Qatari PhD student Ibrahim Daher loading rock cores into a CT scanner in the new flagship Qatar CCS Multiscale Imaging Laboratory at Imperial College London.

#### Flaring

Flaring of gas during extraction and operational processes has traditionally been a significant source of GHG emissions for oil and gas producers. However, technological modifications can substantially reduce or eliminate the necessity for flaring.

In 2014, QP's upstream facilities flared 0.8% of annual production, and QP's midstream facilities flared 0.8% of the hydrocarbon processed. Unfortunately, the installation of a new Sulfur Recovery Plant in the NGL complex in 2014 caused the temporary shutdown of the existing Sulfur Recovery Unit (SRU), leading to continuous flaring of acid gas and higher overall flaring compared to 2013. However, with the installation of the new SRU, flaring is expected to return to previous levels, while the new facility will bring the additional benefit of a higher rate of sulfur recovery.

Table 8: Flaring	
	2014
Flaring (mmscm)	523
Flaring intensity (scm/ton of hydrocarbon produced)	19.9

QP's Flare Reduction Initiatives 2005-2014	Status
Recovery of heavy ends from flare gas at the Gas Recycling Plant in Dukhan Fields.	Ongoing since 2012
Participation in the World Bank's Global Gas Flare Reduction (GGFR) partnership program to reduce gas flaring by implementing industry best practices.	Ongoing since 2009
Upgrade of gas sweetening facilities in QP Operations in Dukhan and Mesaieed to reduce acid gas flaring and achieve 99.5 % recovery of sulfur.	Ongoing since 2009, commissioning stage
Reduction of Rich Associated Gas (RAG) flare from Fahahil Stripping Plant in Dukhan Fields.	Implemented in 2009
Installation of wet bi-directional pipeline in Khatiyah Main Degassing Station to Khatiyah South to avoid flaring of 170 psig gas of KMDG in case of compressor shutdown.	Implemented in 2009
Improvement of flare systems in Dukhan Fields through installation of elevated flare systems and new flare technologies for all emergency flares.	Implemented in 2009
Flare mitigation project implemented for QP's operations in Mesaieed Industrial City (MIC), to recover the liquid accompanying gas during the flaring process, thus eliminating dark flaring in accordance with regulatory requirements. This helped to improve flaring efficiency by 25%.	2009-2005

#### **Air Emissions**

There are officially established air emission standards in Qatar to which all companies should adhere. In order to determine compliance with these regulations, QP is in the process of installing Continuous Emissions Monitoring Systems (CEMS) at its facilities. Six new CEMS have been installed by Gas Operations in MIC in 2014 in addition to the previously existing two, which will increase the quality of emissions monitoring.

QP is currently undertaking several initiatives to reduce SO2 and NOx emissions. The new Sulfur Recovery Unit being commissioned in MIC will allow QP to recover 99% of SO2 emissions. Sulfur recovered at the existing Sulfur Recovery Units of the QP Refinery is currently directed to QAPCO for utilization. In order to ensure that all required units within QP facilities meet the required NOx emission standards set out by the regulator, QP is undertaking a corporation-wide NOx study to identify irregularities and eventual opportunities for NOx reductions. As part of its HSE strategy for 2015-2019, QP will compile a NOx profile for all QP affected sources, assess compliance with the 125 mg/NM3 emission level, and develop a QP Strategy of Engagement with the Ministry of Environment (MoE).

QP has also invested USD 150 million in the Common Volatile Organic Compound (CVOC) Control Project, which aims to collect and recover vapor during condensate loading at the liquid product berths in MIC. Capture of the vapor emissions through the vessel venting system (recovery system) significantly reduces VOCs and CH4 emissions.

#### Leak Detection and Recovery (LDAR) Project

Both gas and refinery operations units operating in MIC have initiated measures to identify sources of "fugitive emission", or emissions originating from leaks in equipment, with the aim to prevent further leakage above 10,000 ppm, as per US EPA standards.

Gas Operations has completed a detailed survey to track fugitive emissions; as a result, 60,000 components in need of fugitive emissions monitoring were identified. In the near future, a database system will be established, with the use of a software program that will allow automatic monitoring of all the components and initiation of repair for any component with leakage higher than 1%.

The QP Refinery has engaged its own employees to identify and report on the sources of leakages along its production structure. In a pilot project started in 2014, 10,000 points of potential leakage were monitored at both condensate and crude refineries, using SMART LDAR infrared cameras and analyzers. A total of 393 leakage points were identified and reported to the maintenance department for initiation of the repair work during the following shutdown. As a result, the VOC reduction is estimated to reach 25,000 kg per year.

The LDAR project will bring environmental, health, safety and financial benefits. This initiative will lead to the reduction of VOCs, as well as of other emissions such as methane and hydrogen sulfide (H2S), a health threatening odorless gas. LDAR will prevent leakage of methane in hydrocarbon carrying lines, thus preventing emissions of a high-impact GHG, and also bringing monetary benefits by saving a primary material and neutralizing the risk of an explosion. H2S is monitored by individual portable detectors, which trigger a frequent alarm if H2S exceeds safe concentration levels.

#### Water, Effluents, and Waste Management

QP consumes a significant amount of water through its industrial operations, with the water then treated for partial reuse and discharge in accordance with the environmental regulation of Qatar. QP's water management strategy includes building a water consumption baseline by 2015 and establishing a reduction plan with SMART targets and goals, and then setting up implementation and monitoring programs. Introducing more efficient water use measures will allow QP to consume less water and thereby decrease the final discharge of industrial treated water.

Produced water is the most significant liquid discharge associated with exploration and production operations. QP's Operations Directorate has adopted a policy of down-hole re-injection of produced water generated so that there is almost no discharge of this significant stream to the surface environment. Offshore Operations re-inject produced water to the Umm er-Radhuma Aquifer, while Dukhan's onshore operations re-use 81% of their produced water for enhanced oil recovery. The remaining Dukhan produced water is re-injected to the Umm er-Radhuma Aquifer for disposal. With respect to effluent management within QP's midstream operations, the QP Refinery currently reuses approximately 35% of wastewater for cooling purposes after initial treatment, while the rest of the wastewater is pre-treated in the existing wastewater treatment plant before being discharged into the sea. New wastewater treatment plants will be operational for Gas Operations and for the QP Refinery by 2018, with a wastewater treatment capacity of 500 m3/day. With an additional tertiary treatment of wastewater, it will allow complete reutilization of wastewater for irrigation and other purposes and will reduce general water offtake from the water supply company, Kahramaa.

To further protect the Gulf marine life, the Ministry of Environment (MoE) is introducing a new policy of near-zero liquid discharge of industrial treated water to the sea from 2017 onwards. In preparation for the implementation of this policy, QP has implemented its Treated Industrial Water Project, which is referred to in more detail in the Ras Laffan Industrial City part of the "Managing Industrial Cities" section.

#### Waste Recycling at the QP Refinery

The QP Refinery utilizes various types of catalysts for its operations. After being used, some of these catalysts are sent abroad for regeneration before being utilized again in the production process. Catalysts not suitable for reuse in the refinery process are sent to Qatar National Cement Company for them to use the material extracted from catalysts in the cement production process. QP also reuses metal and plastic containers in which catalysts or other materials are supplied.

Since March 2012, this program has allowed for the reutilization of 2,600 tonnes of spent catalysts, bringing environmental benefits and monetary savings in terms of avoided waste management costs. Currently Qatar Steel is testing the potential to utilize catalysts in their production process, which would allow further reutilization of the hazardous waste from the QP Refinery. In 2013, the QP Refinery received the Silver HSE Excellence Award, in the category of QP Business Units, for its reuse of catalyst waste.

Another hazardous waste suitable for reutilization is activated carbon, which is a component of the refinery side product coke. During the shutdown in 2014, 24 tonnes of coke were taken out of the refinery units and directed to Qatar Steel for reutilization of the activated carbon as a fuel.

#### **Oil Spills**

The QP Oil Spill & Emergency Response Department (OS&ERD) is the designated spill notification point and oil spill responder for the State of Qatar. QP OS&ERD provides the On–Scene Commander (OSC) for all major spills within Qatar. In the event of an oil spill in Doha port, the Doha Port Management Company would be responsible for responding to the oil spill and the clean-up operation, and QP OS&ERD would monitor operations. Elsewhere within the territorial limits of Qatar, the response would be provided by QP OS&ERD. If the spill was as a result of joint venture operations, the joint venture would be

required to respond and could call on QP OS&ERD for assistance if necessary.

In all cases, reliance is placed on QP and joint venture oil spill equipment resources to combat offshore spills. QP holds a considerable amount of oil spill response equipment at Mesaieed, Ras Laffan, and Halul Island, and is also a member of the Regional Clean Sea Organization (RECSO) and could request additional resources from other member companies in the region. Aerial surveillance would be mounted by QP's Gulf Helicopters.

QP has contingency plans for spills for all of its operations.

#### **Biodiversity**



Several key species with recognized international conservation significance live either as residents or itinerants on a seasonal basis within the Gulf. Qatari waters are home to five of the seven sea turtle species recorded globally, six species of Odontoceti (including the common bottlenose dolphin), and Mysticeti (baleen whales). Arabian oryx and gazelles are found in the Shahaniya wildlife park area, Ras Osheirij and Al Mas-habiyya areas. Khor Al-Odaid is another biodiversity hot spot and a natural habitat for a large number of mammals, birds and reptiles including gerbils, hedgehogs, snakes, foxes, iguanas, ospreys and scorpions.

Acknowledging the inherent disruption to natural habitat due to oil and gas activities, QP invests in a number of initiatives to protect wildlife and enhance biodiversity in Qatar.

Halul Island, situated 96 km northeast of Doha, is QP's main storage and export terminal of crude oil, which is transported from offshore extraction sites to Halul Island by pipeline. Expanding undersea infrastructure of pipelines and harbor activities have an impact on the marine life surrounding the island – phytoplankton, seaweeds, seagrasses and corals. Since 2004, QP has commissioned several ecological surveys to evaluate the environmental impact of industrial activities on the island in order to identify actions for mitigation.

In response to potential risk to coral reefs, QP deployed 50 artificial reef balls around Halul Island at suitable marine locations in 2007. Since then, QP has regularly monitored the reefs to measure and record the marine life that has developed around the reefs. The reefs have been proven to be highly successful in enhancing marine biodiversity.

The sea around Halul Island has proved an excellent location, far from the mainland and not easily approachable by outsiders; marine biodiversity observed around the reefs is comparatively richer than around deployed reef balls in other locations in the Qatar Marine Zone. In 2012, scientists observed the establishment of stony corals on the reef balls for the first time in Qatar. This is very promising, as fractions of the corals obtained from sites suffering from bleaching can be fixed in transplant experiments. The artificial reef project received the Excellence in Environmental Projects and Products Award at the Offshore Arabia Conference and Exhibition in 2010.

















QP Artificial Coral Reefs

**HUMAN CAPITAL** 

The employees of QP are its most valuable asset, providing it with a crucial competitive advantage in the industry. QP makes sure it attracts professionals at both the local and international level, provides an attractive working environment to them, as well as opportunities for professional development. In 2014, QP made extensive use of an advanced set of data analysis tools and metrics for comprehensive workforce performance measurement and improvement. Pronounced emphasis was also placed on support and interaction with other companies in the energy and industry sector. The Human Resources Department organized the first QP HR Conference, where 300 representatives of management and Human Resources from companies in the energy and industry sector were invited to discuss the key issues and challenges related to the human capital management in the sector and to explore possible solutions. QP's workforce has been stable over recent years at over 11,000 individuals, reflecting a strong brand in Qatar's challenging labor market. QP attracted 900 new employees in 2014, 146 of which were fresh university graduates starting their career with QP.



#### **QP Headcount By Region**

Table 10 : Workforce					
	2012	2013	2014		
Total number of employees*	11,453	11,453	11,525		
Number of employees on a permanent contract	9,626	9,676	9,730		
Number of employees on a temporary contract	1,827	1,777	1,795		

\*Includes position holders, developees and trainees

#### Workforce Engagement

Keeping employees engaged is central to retaining talent. To achieve this, we offer our employees the chance to be part of a dynamic team, with competitive compensation and benefits, growth and development opportunities.

#### Communication and Engagement

We strive to maintain a culture of open and honest two-way communication in order to ensure that we are responsive to our employees' needs and expectations. Targeted employee surveys are conducted for various reasons, such as to assess the effectiveness of particular learning programs or our IT services. A corporation-wide employee engagement survey is planned for 2016.

Internal communications tools, such as circulars, intranet and team meetings, are in place to help employees connect more effectively with each other and the organization. An example of direct communication with employees using the QP intranet is the QP online forum, an electronic venue for QP employees to discuss work-related issues. Employee comments and questions are reviewed by the HR Department, which, where appropriate, then follows up with the employee and others concerned. The QP online forum offers qualitative insights into the views, concerns and issues voiced by QP employees.

#### Benefits and Compensation

QP offers competitive salaries and benefits to attract, retain, and reward the talent it needs. Benefits for employees include medical insurance, education assistance, housing and transport allowances, and pension for eligible employees. In addition, QP provides allowances to address specific business needs, such as shift and location allowance.

#### Employee Turnover

Ensuring attractive working conditions for the best talent has resulted in a steadily declining turnover since 2012. In order to retain its talent, QP creates attractive working conditions that are competitive in relation to the energy and industry sector. Thus, Human Resources Department has been working on benchmarking human resources policy, compensation and recruitment process with other companies.

Table 11: Employee Turnover				
	2012	2013	2014	
Total employees leaving the organization (%)	7.5	6.2	5.7	



#### **Qatarization**

QP is committed to advancing Qatarization within its own workforce as well as the energy and industry sector as a whole. At the sector level, QP's Strategic Qatarization Unit provides advice on matters governing Qatarization, as well as a link with educational institutions, domestic government ministries and agencies, and consulting bodies. It executes its role covering 41 companies, in line with Qatar National Vision 2030 and the National Development Strategy 2011- 2016. In 2014, the unit conducted a series of meetings with the sector's partners in the education community as well as with individual companies in the energy and industry sector to review their Qatarization plans. The unit also organizes the Annual Qatarization Awards, which honor select companies and education partners for their contribution to Qatarization efforts.

"Qatar Petroleum attaches a great deal of importance to attracting and developing Qatari youth through strategic education and training programs designed to create highly skilled and qualified manpower in all fields. We also take major strides to raise the technical skills of young Qatari men and women through our scholarship program which offers specialized academic and technical qualification opportunities both in Qatar and abroad."

- Saad Sherida Al-Kaabi, President & CEO of Qatar Petroleum

To advance Qatarization, QP has its own Qatarization plan, which takes a multi-pronged approach to to promote the development of the national workforce.

QP's Approach to Advancing Qatarization						
Vocational Training	Work Experience	Development Plans				
Qatari secondary school gradu- ates can enroll in one of five	Qatari secondary school graduates can also apply	University students can apply for internships,	Some fresh Qatari graduates join QP through a development			
vocational training programs to prepare them to enter the QP	for direct scholarships, scholarship transfers, or	work terms, and workplace learning	position and a Personal Career Plan (PCP), which prepares them			
workforce: <ul> <li>Technician Preparation</li> <li>Program</li> </ul>	enrollment in the Academic Bridge Program (ABP), a	programs to gain on-the-job experience while they are still in	to take over a job through on-the -job activities and assignments, technical and non-technical			
<ul> <li>Clerical Preparation Program</li> <li>Fireman Preparation Program</li> </ul>	premier pre-university program.	school.	training courses, and sometimes attachments to other			
<ul><li>Security Preparation Program</li><li>Tailor Made Program</li></ul>			departments or organizations. Once developees demonstrate that they have mastered the			
			knowledge and skills required to perform the key responsibilities			
			that position.			

The greater majority of Qatari nationals enters the QP workforce through completion of one of the vocational programs listed earlier or through successful completion of their academic studies sponsored by QP and a personal career plan. Of the 791 students sponsored by QP in 2014, 146 successfully migrated from their academic studies to professional careers at various locations within QP. During the year, 65 employee-level developees and 85 senior-staff developees were also confirmed to their target positions across QP. In addition, QP recruits experienced Qataris for targeted positions within its workforce.

Table 13: Participation in QP Programs for Qatarization				
	2012	2013	2014	
Vocational trainees	846	1,114	628	
Technician Preparation Program	607	549	344	
Clerical Preparation Program	35	65	61	
Fireman Preparation Program	0	14	48	
Tailor Made Program	204	486	175	
Sponsored university students	401	803	791	
Developees for employee-level positions*	-	132	127	
Employees being developed to assume senior-staff positions*	-	553	487	
*These figures include both nationals who were hired to a vacant position and then trained, and nationals trained to take over				

\*These figures include both nationals who were hired to a vacant position and then trained, and nationals trained to take over an expatriate position and hired upon mastery of the target job.

All of these efforts at developing the national workforce have contributed to QP's strong Qatarization performance. The corporation has maintained 33% Qatarization among its workforce for the past three years, with nearly 80% of management positions filled by Qataris. A leadership program was organized for Qatari managers in 2014 in partnership with the Qatar Leadership Centre (QLC), which aims to enhance the capability of QP leaders.

Table 14 : Qatarization	
	2014
Share of Qatari employees in the total workforce (%)	33
Share of Qatari employees in management positions* (%)	79
*Management category includes Assistant Managers and above	

#### **Technician Preparation Program**

In recent years, attraction and retention of Technician Preparation Program (TPP) trainees have proved to be very challenging, given the competition with other sectors. In order to attract more trainees into the TPP and to reduce their attrition, QP has evaluated areas for improving the Technical and Further Education (TAFE) Certificate II Program. QP conducted a survey of current trainees, graduates, coaches, instructors, supervisors and management of the TAFE program. The survey was aimed at collecting the feedback of stakeholders on the effectiveness of the program and its relevance to the needs of the industry and individuals, as well as gathering suggestions for improvements.

As a result of the survey, several improvements were introduced into the program, including improved compensation for graduates, the relaunch of the National Curriculum program under QP supervision, reduction in the duration of the program, an improved English competency level, and the upgrade of current training facilities.

These improvements led to an increase in the number of program participants from 98 in 2012 to 225 in 2013. However, intake fell to 156 students in 2014, reflecting the intense competition for qualified Qatari nationals. Attrition also improved, decreasing from 102 trainees in 2012 to 54 in 2013.

#### **Training and Development**

In addition to providing numerous training and development opportunities to Qatari students and fresh graduates preparing to enter QP's workforce, QP also offers an array of training and development opportunities for current employees of all nationalities. These include more than 200 short technical and non-technical programs run in house, covering everything from process safety, loss prevention, and vessel traffic services to leadership, project management, coaching and presentation skills. At the same time, over 70% of these courses fall into the category of technical training, targeting various technical specializations serving a complex industry operation. QP employees also have access to more than 3,000 up-to-date online courses through QP's e-learning system, as well as opportunities for external training when not available in-house.

In 2014, almost 300,000 hours of training were provided to QP employees, amounting to an average of 26 hours per employee.

Table 15 : Training					
	2012	2013	2014		
Total hours of training provided to employees	275,208	268,975	299,321		
Average hours of training provided per employee	24	23	26		

#### **Train the Trainer**

QP's workplace coaching program provides coaches and supervisors in the Operations Directorate and the energy and industry sector with the theory, skills and knowledge to deliver effective workplace training and support to developees. To date, the program has trained over 60 coaches of different nationalities and technical backgrounds. QP enhanced its coaching resources in 2014 by posting a new set of internal coaching guidelines and tools to support workplace coaches in providing a standard development experience.

#### **Diversity and Inclusiveness**

QP supports a diverse workforce, with many nationalities working side by side and contributing with their varied perspectives and experience towards its development. We seek to cultivate this diversity and ensure a respectful and inclusive workplace. The QP Code of Ethics requires employees to treat all persons fairly regardless of such factors as race, color, national origin, sex, marital status, age, religion, creed or political belief, physical handicap or disability, or status.



#### Female Employment

QP has maintained a 12% female share in its total workforce for the past three years, along with 2% of management positions occupied by female employees. Female employment is a key element of the sector's Strategic Qatarization Plan.

Table 16 : Female Employment				
	2012	2013	2014	
Female employment (%)	12	12	12	
Percentage of female management employees (%)	2	2	2	
Female employees leaving the organization (%)	8.4	9.0	8.2	

To support the development of female professionals, QP has increased its sponsorship of female students for university studies by 27% since 2011.



#### **Human Rights**

QP is committed to providing a work environment that respects human rights and ensures fair, safe and healthy working conditions across our entire workplace and supply chain. In 2014, it initiated work to ensure that QP's corporate policies and procedures are in line with the United Nations "Guiding Principles on Business and Human Rights", and this is to be completed in 2016. QP has a Human Rights Group in place and is monitoring compliance with UN Guiding Principles across QP business activities, suppliers and contractors.

In 2014, QP received one complaint alleging labor issues related to a sub-contractor. To prevent recurrence, QP set up a team to meet with worker representatives of the sub-contractor, inspect the housing and worksite facilities on a monthly basis, and ensure salaries are paid on time.

# **CHAPTER 3:**

## CREATING SUSTAINABLE ROOTS IN QATAR

Cleaner Energy from Qatar to the World



## **INVESTING IN QATAR**

QP is responsible for all phases of the oil and gas industry in the State of Qatar. Its national investment portfolio includes some of the most influential companies that are critical to the achievement of the country's national sustainable development goals. These companies are expanding Qatar's productive base and helping to diversify its economy. Subsidiaries and joint venture companies cover activities across the oil and gas value chain, including exploration, drilling and production operations, transport, storage, marketing and sale of crude oil, liquefied natural gas, gas-to-liquids, refined products, petrochemicals and fertilizers, power and utilities, metals and support services.

Investments in Qatar	Exploration, Drilling & Production • GDI • EPSAS & DPSAS	Refining & Gas Processing • Qatargas • RasGas • Oryx GTL	Storage & Transportation • Qatargas • RasGas • Woqod • Qatex	Power & Utilities • RLPC • M Power • RGPC	Petrochemicals & Fertilizers • QAPCO • QAFAC • QVC • QATOFIN • RLOC • Q-CHEM • SEEF • QAFCO • Gulf Formaldehyde • Qatar Melamine	Support Services • Gasal • Al-Shaheen distribution • Al-Shaheen Weatherford • Al-Shaheen GE services • Gulf Helicopters • Amwaj • Al-Koot	Metals  • Qatalum  • Qatar Steel
Products & Services	• Crude oil • Raw gas • Condensate	<ul> <li>Crude oil</li> <li>Raw gas</li> <li>Condensate</li> <li>LNG</li> <li>Condensate</li> <li>Sulfur</li> <li>Helium</li> <li>PG/LPG</li> <li>Naphtha</li> <li>Kerojet</li> <li>Gas oil</li> <li>Diesel</li> </ul>	<ul> <li>Shipping</li> <li>Fuel</li> <li>distribution &amp; service</li> <li>stations</li> <li>Aviation fuel</li> <li>storage &amp; transportation</li> </ul>	• Water • Electricity	<ul> <li>Ethylene</li> <li>Polyethylene</li> <li>Ethylene</li> <li>dichloride</li> <li>Vinyl</li> <li>chloride</li> <li>monomer</li> <li>Caustic</li> <li>soda</li> <li>Normal</li> <li>alpha olefins</li> <li>Paraffin</li> <li>Benzene</li> <li>Ammonia</li> <li>Urea</li> <li>Orreal</li> <li>Urea</li> <li>formaldehyde</li> <li>Melamine</li> <li>Fuel</li> <li>additives</li> </ul>	<ul> <li>Oxygen</li> <li>Nitrogen</li> <li>Hydrogen</li> <li>Argon</li> <li>Sales &amp; marketing</li> <li>Energy related services for drilling</li> <li>Repair of gas turbines &amp; compressors</li> <li>Helicopter services</li> <li>Catering</li> <li>Insurance</li> </ul>	• Aluminum • Steel

#### Table 17 : QP's National Investment Portfolio

Perhaps the most important challenges facing the development of the oil and gas industry in the State of Qatar relate to accessing modern technology and securing the necessary capital to cover the large investments required for exploration, development and production projects. To overcome these challenges, QP has adopted, since the early 1990s, a policy of developing oil and gas fields through production-sharing agreements with major international oil companies to increase production and develop the reserves.

QP's Downstream Development Directorate has been the driver of petrochemical and downstream sector

development in the State of Qatar for more than 40 years, building a multi-billion dollar business across five industry sectors. Worldwide, petrochemical usage has increased exponentially during the last few decades and demand continues to grow. Refining has also seen demand growth in markets with large population or GDP growth. QP has completed several projects in the last few years to drive growth in the sector to meet this demand, including its Diesel Hydrotreater (DHT) Project in Ras Laffan and its Eco Methanol project in Mesaieed. In 2014, construction for the Laffan Refinery 2 (LR2) project began; this facility will add 146 kb/d of condensate processing capacity and produce more jet fuel, naphtha and diesel to supply demand growth in Qatar and the region.

In line with the Qatar National Vision 2030, the downstream sector has already delivered industry diversification and opportunities for the development of small and medium enterprises in the State of Qatar. There is now an increasing focus on consolidating and getting the most out of existing assets. Applying industry best practices, the latest developments in catalysts and process technology, and harvesting synergies between joint ventures can continue to deliver significant additional value to the existing asset base. In the future, QP's downstream business will continue to be an exciting area with many opportunities to deliver growth of value added to Qatar's oil and gas resources and its existing downstream ventures.

In addition to QP's activities in the field of oil and gas exploration and production, and downstream development, the corporation has also established a number of specialized companies in fuel distribution, supply services, transportation, insurance and others.

#### Products and Services Provided by QP's National Investments

QP's national investments can be categorized into seven subsectors, offering an array of products and services detailed in Table 17.

The exploration and production, refining and gas processing, and fuel storage and distribution sectors all work to provide the fuels we use every day to travel by car, train, ship or plane, and to manufacture and transport goods. The power and utilities sector uses that fuel to generate electricity and water.

The petrochemicals sector uses products and by-products of oil refining and gas processing to create a myriad of products used by people every day.

- Q-Chem, QAPCO, and Qatofin produce polyethylene, which is the most common plastic, found in all facets of modern life, from plastic bottles and dishes to phones, computers and cars.
- Qatar Vinyl Company (QVC) produces vinyl chloride monomer (VCM) and caustic soda. VCM is used to make polyvinyl chloride (PVC) resins, which are used in pipes, flooring, packaging film and sheet, and bottles, while caustic soda is used in the production of soap, detergent, paper and aluminum.
- QAFAC produces methanol, which provides alternative and cleaner fuel options in addition to being used as a raw material in packaging, paints, refrigerants, and carpeting.
- QAFCO produces urea fertilizer, the most popular nitrogen fertilizer source, which is applied across the world to maintain soil fertility and improve crop development, yield and quality to produce the food we eat.

The metals sector contributes both steel and aluminum. Qatar Steel's steel rebar is used in concrete for infrastructure construction of all types throughout Qatar and internationally: in museums, schools, homes, offices, hospitals, bridges, and pavement. Qatalum's aluminum goes primarily to the automotive industry.

The support services sector provides a number of services to support the sectors mentioned above, from catering, insurance, and sales and marketing services, to helicopter transport and equipment repair.

## **DRIVING THE ADOPTION OF SUSTAINABILITY**

## MANAGEMENT ACROSS THE ENERGY AND INDUSTRY SECTOR

QP is committed to the adoption of sustainability management and reporting by all of its national investments, seeing it as a tool to drive world-class performance across the portfolio. QP has put this commitment into practice by developing the Qatar Energy and Industry Sector Sustainability (QEISS) Program. Through this program, QP has provided its national investment portfolio, and the wider energy and industry sector, with a sustainability framework that is aligned to the delivery of the Qatar National Vision (QNV) 2030 and the National Development Strategy (NDS) 2011-2016.

#### **The QEISS Program**

QP, together with the Ministry of Energy and Industry, created the QEISS Program in 2010. Since then QP has been responsible for the program's development and implementation, working with all companies across the sector. Initially a voluntary sustainability reporting initiative, the program has been a remarkable success and has become a platform for driving the adoption of sustainability across the sector. Participation in the program has doubled from 2010 to 2014 to include 33 companies in 2014. Public sustainability reporting by companies in the sector has also increased dramatically, from four reports released in 2010 to 20 released in 2014.

#### Objectives of the QEISS Program

The key objectives of the QEISS Program are to:

- Drive the implementation of sustainability within the sector;
- Align with, and support the achievement of the Qatar National Vision 2030;
- Demonstrate the sector's measurable contribution to national development plans and strategies;
- Be an open and transparent source of data and information on the performance of the sector enabling companies to learn from best practice;
- Encourage a culture of innovation and business excellence;
- Support individual companies to implement sustainability management and reporting.

For more information on the QEISS Program and its growth and performance over the past 5 years, please visit, corporate HSE & Quality Department the link below:

www.qp.com.qa

As the sector continues to make significant progress in developing a strong reporting foundation, it is increasingly able to intensify its focus on performance improvements, long-term strategy development and ambitious target-setting, implementation of supportive policies, and stronger international engagement. More than half of all participating companies have also developed a five-year sustainable development strategy. By aggregating corporate strategies, the QEISS Program is able to further align its priorities and test its expected performance with the Qatar National Development Strategy (2011-2016), which outlines medium-term targets for achieving the Qatar National Vision 2030. This longer-term visibility is in turn offering specific insights into strategy enhancements and policy support required to achieve Qatar's ambitious development goals.

#### Purpose of the QEISS Program

Enhancing the management of economic, environmental and social impact within the energy and industry sector, optimizing its contribution to the State of Qatar.



Sustainability Report 2014 49

#### **National Investment Sustainability Performance**

With more and more companies now producing annual public sustainability reports, the QEISS Program has made it possible for QP to collect and monitor the sustainability performance of many of the companies in its national investment portfolio. As QP's internal sustainability management and reporting program continues to mature, this performance will be aggregated, apportioned based on the investment percentage and presented in future QP Sustainability Reports. This will allow QP to measure, monitor and report on its full economic, social and environmental impact on the country across its national investment portfolio.

The links to national investment company sustainability reports published in 2014 can be found below:

Table To: National Investment Company Sustainability Reports 2014				
Company	Effective Holding %	Report		
GDI	100.00%	http://www.gdi.com.qa/English/Annual_report/AnnualReportList/GDI_INTERG RATED_REPORT_2014.pdf		
Qatargas	70.00%	https://www.qatargas.com/English/CorporateCitizenship/Documents/Qatargas %20-%20Sustainability%20Report%202014%20-%20EN.pdf		
RasGas	70.00%	https://sustainability.rasgas.com/sustainabilityreport2014/		
Oryx GTL	51.00%	http://www.oryxgtl.com.qa/sustainability-reports/		
Qatar Steel	51.00%	http://www.qatarsteel.com.qa/Publications/Reports/QatarSteelSustainabilityRe port2014.pdf		
Qatalum	50.00%	https://www.qatalum.com/Lists/Publications/Sustainability%20Report-2014/Ind ex.html		
QAPCO	40.80%	http://www.qapco.com.qa/userfiles/annualreport/QAPCO-Integrated-Report-20 14.pdf		
Q-Chem	38.39%	http://www.qchem.com.qa/internet/Documents/Sustainability%20Report%2020 14%20En%20-%20Web.pdf		
QAFCO	38.25%	http://www.qafco.qa/sustainability2014/		
QAFAC	25.50%	https://www.qafac.com.qa/qsr/QSR14.pdf		
Woqod	20.00%	printed version available		

## **MANAGING INDUSTRIAL CITIES**

The backbone of Qatar's oil and gas industry is formed by three major industrial areas, which include planned cities, managed by QP. The Industrial Cities Directorate has overall responsibility for Mesaieed Industrial City (MIC) and Ras Laffan Industrial City (RLIC) and the Dukhan Concession Area (DCA). The directorate is responsible for developing and providing land, infrastructure, facilities, utilities and services required by the industries operating within the specific industrial city, with a view towards ensuring that the best economic value is obtained from the State's oil and gas resources. The directorate also manages fire services and rescue emergency response coordination, environmental monitoring, safety and risk, medical services and security for the industrial cities.

All three industrial cities aim to operate in accordance with the best internationally recognized practices and to integrate sustainability into their management and operations. RLIC's and MIC's operations are governed and certified by OHSAS 18001, and RLIC has achieved ISO 9001 and ISO 14001 certification as well. Health, safety and environment regulations, procedures and guidelines are incorporated into the lease agreements between QP and industries. RLIC has established a reporting system for all companies located in RLIC to report their HSE performance. RLIC also developed a sustainability strategy in 2012 in alignment with the QP Sustainability Strategy and Framework established that year.

#### Dukhan Concession Area

Dukhan, where the first Qatari oil well was drilled, houses workers from the Dukhan oil and gas facilities as well as their families.



#### Mesaieed Industrial City (MIC)

MIC is home to refining and processing plants and production facilities for metals, fertilizers, petrochemicals, methanol, vinyl and primary building materials. MIC also encompasses a full service port and a residential community with a population of over 35,000 people.



#### Ras Laffan Industrial City (RLIC)

RLIC is the base of all the onshore operations that support the development and utilization of Qatar's North Field gas assets, including gas processing, GTL, LNG, condensate refining and major power companies. It also serves as an important maritime port for energy products with the largest LNG export facility in the world.



## Environmental Monitoring and Management in Industrial Cities

QP plays an important role in ensuring all projects in its industrial cities implement appropriate environmental management procedures by examining Environmental Impact Assessments (EIA) together with the Ministry of Environment (MoE) prior to approving the implementation of new projects. The Industrial Cities Directorate also conducts extensive monitoring of water and air quality and flaring in the industrial cities to ensure compliance with MoE standards; RLIC is currently operating and maintaining remote buoys for the implementation of continuous seawater quality monitoring. Upon discovery of any incident of non-compliance, QP issues an alert to the relevant parties, and measures are introduced to address the issue.

The Laffan Environmental Society (LES) has been established jointly by RLIC and industries to monitor and provide services in the area of environmental management. Its primary services include the operation and maintenance of the ambient air quality monitoring stations, conducting marine ecological surveys and handling the related data acquisition systems. The LES's objectives are to promote open communication and the exchange of ideas among members and to maintain outreach with neighboring communities on environmental issues and social development. LES is also responsible for responding to all community complaints with respect to environmental impacts. MIC is currently in the process of establishing a parallel entity, the Mesaieed Environmental Society (MES), in Mesaieed.

In addition to monitoring environmental performance to ensure that all companies are operating in compliance with State laws and regulations, the Industrial Cities Directorate also coordinates several city-wide environmental initiatives, as detailed next.

#### Water and Effluent Management

Industrial water is generated through the various operations of industries based in different industrial cities. The Ministry of Environment (MoE) has proposed that maximum treated industrial water be reused, avoiding the discharge of this water to sea by 2016. As a result, the Industrial Cities Directorate, in collaboration with the MoE, has developed the "Treated Industrial Water" (TIW) master strategy to support industries to employ advanced treatment technologies and further remove contaminants from the treated industrial water so as to reach water guality standards that will allow it to be reused internally. The TIW reuse project is a pioneer project, involving the collaboration of third party consultants to study best practices for the completely sustainable reuse of TIW, and is the first project to be implemented at such a wide level in Qatar.

Previously, TIW from various industries would be collected and reused for peripheral applications like city landscaping. RLIC commissioned a study to evaluate alternative options for treatment and re-use of TIW beyond peripheral recycling uses. Upon the study's completion, industries were advised to enhance the treatment of industrial water to reach desalinated water quality standards through the installation of individual reverse osmosis plants. This would then allow the internal process reuse of industrial water rather than its recycling for peripheral applications. Eleven RLIC industries are now upgrading their industrial water treatment facilities accordingly for an approximate cost of USD 750 million through 2018. The upgrade will allow about 84% of TIW to be reused and will reduce costs to industries for the purchase or production of desalinated water. As a result, increased volumes of desalinated water presently supplied by Kahramaa to industries will be available for other purposes.

In MIC, QP operates a Domestic Wastewater Treatment (DWT) facility, where all sanitary water collected from industrial facilities is treated. Previously, the treatment plant did not have the capacity to treat all wastewater collected, and the excess was transported to the Doha Ashghal Treatment Center. However, a new facility is currently in the commissioning stage, with partial operation already in place. The new facility will add 6,750 m<sup>3</sup>/day of additional wastewater treatment capacity, thus reducing the energy consumption and emissions from wastewater transportation into Doha.



MIC Wastewater Treatment Facility

#### Waste Management

Operational and residential facilities situated in the industrial cities generate non-hazardous and hazardous waste. Both MIC and RLIC operate various facilities that receive this waste, and manage disposal and recycling to minimize the environmental impact of the waste collected.

RLIC operates a non-hazardous Waste Management Facility (WMF) to manage industrial non-hazardous waste generated by operating industries. The RLIC waste management facility includes four landfill units, land treatment units and an inert pile area. In addition, the facility includes waste recycling and waste reduction equipment such as paper/cardboard shredding machine, light bulbs and fluorescent tubes equipment, and a heavy-duty drums crushing and compacting system.

In MIC, non-hazardous waste is collected by a waste management company, and is delivered to the landfill, which lies outside the MIC area. Prior to sending the waste to the landfill, MIC segregates wood, paper, plastics, metals and tires for recycling. Wood mulch is removed from waste and reused to produce the water retention material used in landscaping. As a result of this initiative, 125 tonnes of wood were collected for recycling in 2013 and 2014, which is equivalent to the weight of nine 200-year old oaks. Overall, 14% of non-hazardous waste received at the MIC landfill was recycled in 2014. MIC has also introduced an initiative to segregate paper in schools and the community, which is estimated to recycle 8,000 kg of paper per month once it is fully implemented.

The Mesaieed Hazardous Waste Treatment Center (HWTC), the only facility of its kind in Qatar, has been designed to treat, inactivate and immobilize contaminants prior to disposal by evaporation or land filling. The facility serves the waste treatment requirements of all industries in Qatar. The center recycles several hazardous waste streams, including recovered oil from the Oily Waste Treatment Facility, crushed metal drums, shredded plastic from empty plastic drums, and drained lead acid batteries.

A new marine waste reception facility was also completed at RLIC port in 2014 to safely dispose of oily waste received from ships in accordance with international marine pollution (MARPOL) standards.

QP is also establishing synergies between companies in MIC for the exchange of waste materials, following the principle that 'one man's trash is another man's treasure.' Some of these initiatives are described in the Environmental Section of Chapter 2, on page 37.

#### Energy and Emissions

RLIC has formed an energy saving committee and installed meters to monitor and optimize power consumption among industries. RLIC has also worked closely with resident companies and established a GHG emission reporting and accounting system based on European guidelines for all companies in RLIC. The system is currently being used, and reports are submitted to QP for verification on a quarterly basis.

In 2014, RLIC started Phase I of its Ambient Air Carrying Capacity (AACC) study of the Ras Laffan air shed, for criteria pollutants SO2 and NOx across the city. Phase II of the AACC will focus on modelling Volatile Organic Compounds (VOC), ozone effects and particulate matters, and will be completed by the end of 2015. Ultimately, the results of this study will be used to assess the impact of air pollutants due to industries in RLIC, and to suggest additional control measures as required to guide industries in developing the necessary monitoring, management and mitigation measures.

#### **Biodiversity**

RLIC is also responsible for managing a number of wildlife conservation programs, including the flagship marine turtle conservation initiative. RLIC diligently monitors eight turtle breeding grounds across Qatar to ensure that they are not disturbed especially during the nesting season, thereby ensuring the survival of this indigenous species. The initiative also involves tagging, nesting and hatchling monitoring, DNA testing and satellite tracking for turtles. RLIC organized a Turtle Beach Clean-Up Day in 2014, where volunteers from companies and schools participated in cleaning RLIC's northern beach, one of the best nesting spots in Qatar for hawksbill



turtles. Such initiatives not only protect environmentally sensitive sites from human impact, but also raise environmental awareness among RLIC workers and the neighboring community.

Other conservation programs include mangrove conservation, reef cultivation, and restoration of seagrass. Additionally, breeding programs to grow the population of the gazelle, houbara and ostrich are also in place. A mango plantation, which is successfully fruiting, is the cornerstone of a greenbelt in the conservation area.



#### Safety, Health and Welfare

QP Industrial Cities acknowledges the importance of risk based sustainable development and, hence, has deployed international best practices in risk based future land use planning. The Risk Management Forum in both MIC and RLIC, which is chaired by the Industrial Cities' HSE professionals, involves all the major oil, gas and petrochemical industries in identifying risk improvement opportunities in the industrial cities. Risk management is embedded in the core activities of the industrial cities to protect employees, the public, the environment, assets, stakeholders' interests and QP's reputation at large.

To ensure occupational health and safety, MIC and RLIC provide safety monitoring, auditing and implementation of safety policies, standards and safe working practices to ensure that all industries adhere to the necessary safety standards. They also investigate accidents and are responsible for firefighting response and emergency response coordination. Health, Safety, Risk and Environment regulations, procedures and guidelines are incorporated into the lease agreements between QP and industries.

To demonstrate leadership in the promotion of workers' welfare and well-being, QP has established a workers welfare and well-being assessment program aligned with Qatar law and Industrial Cities' camp regulations. The program organizes regular inspections of worker accommodation, mess halls and camps to ensure compliance to all the applicable regulations and standards within the industrial cities.

In RLIC, QP has also established a workers well-being group committee with all industries operating in the city to discuss workers' issues and concerns and necessary corrective actions on a monthly basis.

In 2014, the third edition of QP Industrial Cities' Occupational Health Forum largely focused on workers' welfare, featuring presentations by HSE and medical experts and panel discussions.

#### Ras Laffan Emergency & Safety College (RLESC)

QP and the Ministry of Interior have established the Ras Laffan Emergency & Safety College (RLESC), the premier emergency and safety college in the Middle East. The primary aim of RLESC is to train emergency and safety professionals in the following functional areas: oil, gas and petrochemical industries, marine, civil aviation, civil defense, industrial firefighting, emergency medical services, hazardous materials, search and rescue, health and safety, emergency response and driver training. RLESC is a major strategic initiative in public safety and emergency management in Qatar. The Texas Engineering Extension Service (TEEX), a member of the Texas A&M University System, is the training provider. TEEX is internationally acclaimed in the area of advanced practical emergency and safety training. RLESC also offers courses that are accredited by the National Board on Fire Service Professional Qualifications (ProBoard). The college has been equipped with some of the most advanced simulators and training props at teaching facilities of this kind anywhere in the world.



#### Community Engagement in Industrial Cities

In order to effectively manage the industrial cities, QP's Industrial Cities Directorate maintains open and frequent communication and engagement with all stakeholders of the city, most importantly the resident industries and individuals. The directorate has put a number of mechanisms in place to ensure that it can respond to stakeholders' needs quickly and effectively.



#### Engagement with Resident Companies

RLIC has established an interface with the CEOs of all resident companies to discuss high-level projects and issues of common interest. Supporting this interface are three functional committees in which senior managers share information and work on common interest projects and standards and procedures; the HSE, Operations, and Projects committees. Additionally, various sub-committees have been established to drive common initiatives, such as workers health and hygiene, road safety, risk management, the Laffan Environmental Society, contractor safety management and emergency response.

QP's Industrial Cities Directorate and the major industries in MIC held their own inaugural mutual cooperation meeting in 2014, which was attended by the top management of all the major companies located in MIC. At the conclusion of the meeting, the leaders of industries in MIC endorsed QP's proposal to establish the MIC Chief Executives' Committee, which would be the vehicle for continued engagement between industries and QP's Industrial Cities Directorate going forward.

#### Local Community Outreach

QP receives any concerns from community members in MIC and RLIC through various grievance mechanisms. QP responds to these concerns when it can, even those that are outside of its management scope. On issues that are publicly sensitive, the corporation channels requests to the relevant public authorities.

RLIC and the major industries in the city have implemented a joint Community Outreach Program (COP) to support the community in the northern area of Qatar. COP aims to implement initiatives targeted to address specific social and environmental needs in the community as identified through discussion with members of the local community. The COP office, established in Al Khor in late 2011, serves as a base to build closer relationships with the local community and to establish an open dialogue to build meaningful partnerships that meet community needs. The COP administers surveys to collect community feedback on ways to make RLIC and its neighborhood a better place to live in and it also conducts quarterly meetings between members of RLIC and community representatives.

COP has identified three strategic areas where its contribution can have maximum impact:

- Education and capacity building;
- Health, safety, and environmental awareness;
- Cultural heritage.

The major initiatives currently being executed include environmental awareness and road safety training. RLIC issues a quarterly newsletter called "Biatouna" to raise environmental awareness in northern communities. In addition, monthly HSE awareness campaigns are carried out using a number of electronic and strategic notice boards and leaflets in three different languages. The directorate was awarded the Golden Award for Road Safety by the Minister of Energy & Industry for cutting down road accidents in the city by 70% from 2012 to 2013 through an effective campaign. Current major projects including the greenbelt and labor issues are managed by ORYX GTL and Pearl GTL, respectively, on behalf of QP and RLIC industries.

## **MAKING QATAR'S FLAGSHIP PROJECTS A REALITY**

Based on its considerable experience in and resources for the delivery of large capital projects, QP has been requested to deliver a number of prominent high-profile buildings and facilities for the State of Qatar since 1998, commissioned primarily by the Qatar Foundation (QF). The Onshore Engineering Department established its Special Projects Division in 2002 to work in collaboration with Contracts, Planning, Cost and other support departments within QP to deliver these projects for the country. Some of the major projects delivered include:

#### Education City

At Education City, on the outskirts of Doha, eight branches of overseas universities sit alongside residential, health and sports facilities (including a FIFA 2022 stadium), parks, shops, and hotels. QP has contributed to the development of four key buildings on the campus, including the Weill Cornell Medical College in Qatar. Carnegie Mellon University in Qatar - College of Business, Texas A&M University at Qatar and the Liberal Arts & Science building.

#### Museum of Islamic Art



Designed by world-renowned architect I.M. Pei, the Museum of Islamic Art (MIA) building has become an icon. Standing apart on the waters of the Corniche, the building draws influence from traditional Islamic architecture and is made from limestone, which captures hourly changes in light and shade. The geometric patterns of the Islamic world adorn the inside space, making for a grand interior. With incredible views across the bay, it is the foundation for Doha's burgeoning cultural scene.

#### Qatar Science & Technology Park

Qatar Science & Technology Park (QSTP) is Qatar's primary incubator for technology development, fostering the environment required for accelerating the commercialization of research and supporting innovation and entrepreneurship. QSTP provides world-class offices and laboratories that are specifically designed for technology-based companies. The park aims to grow Qatar's "post-carbon economy" by encouraging companies and institutes from around the world to develop and commercialize their technology in Qatar, and by helping entrepreneurs launch technology businesses.





#### Al Shaqab Equestrian Center



The AI Shaqab Equestrian Center was specifically designed to honor the distinguished classic beauty as well as the treasured and versatile skills of the Arabian breed. Situated in a stunning 980,000 square-meter horseshoe shaped design, AI Shaqab has many distinctive architectural elements. A central water feature, significant green areas and the landmark main arena create a welcoming environment for both human and equine visitors. In 2008, both entities (QP and QF) decided to form a strategic joint venture partnership to take over these projects, and therefore established ASTAD Project Management. QP and QF aimed to develop a locally owned and operated, sustainable consultancy capable of providing world-class project management, engineering, and construction consultancy services to the State of Qatar and the region. ASTAD has grown from the foundation of QP's expertise to become fully capable of delivering to Qatar the current portfolio of amazing and innovative world-class projects that require absolute project management and engineering excellence. Since 2008, ASTAD has delivered a myriad of facilities and infrastructure for health, education, research, sports, transportation, utilities, and museums. QP remains involved in the venture through ASTAD's joint QP/QF executive management structure, and the control and governance frameworks of both entities that have been aligned in joint oversight of sovereign and state-funded programs of work. More information about ASTAD can be found online at www.astad.ga.

## **GIVING BACK TO OUR COMMUNITY**

In addition to integrating sustainability principles into our core operations, QP also seeks to contribute to sustainable development through the investment of its funds and other resources in projects for the benefit of the community.

#### **QP Environment Fair**

QP's flagship community investment project is its Environment Fair, which it organized for the eighth year in a row in 2014. The fair provides an opportunity for a wide array of companies and organizations in the energy and industry sector to showcase their best environmental programs and initiatives, thereby facilitating knowledge sharing in the sector, and promoting environmental awareness among the community at large. In 2014, eight QP directorates and departments as well as 31 companies and organizations participated in the event, under the theme "Use of Water in the Oil and Gas Industry". More than 1,000 students from some 31 local schools in Qatar also took part through various competitions as well as educational and cultural presentations.



Sustainability Report 2014 59

#### Seabed Clean-Up

QP endeavors to offer not just funding but also the expertise of its employees to address community needs where it can. QP divers have worked to clean up the seabed around various areas of operation, most recently around the NGL Jetty and Multi-Product Berth Area of Mesaieed Port in January 2014. Teams were able to remove a large volume of rubbish and debris, including car tires, empty plastic bottles, tin cans and a discarded tent.



Seabed Clean-Up Team



QP-Volunteer Divers

#### **Tire Safety Research**

The QP Research & Technology Centre (QPRTC) started a project in 2012 to investigate the role that tires play in fatal car accidents in Qatar. Project results to date show that, in general, the manufacturer-approved tires provided with vehicles are of good quality;

however, some cheap nylon off-road tires, called 'sand' or 'balloon' tires, are linked to multiple fatal car accidents on public roads during 2012 and 2013, despite having been declared illegal for import.



#### **Sponsorships**

Lastly, QP sponsors a number of projects and programs in Qatar. Highlights of initiatives sponsored in 2014 include:

• Society of Petroleum Engineers (SPE) Middle East Health, Safety, Environment & Sustainable Development Conference & Exhibition (MEHSE)

• 31st International Association of Science Parks and Areas of Innovation (IASP) World Conference

QP also engages its employees to contribute funds to those in need. QAR 1,293,725 were gathered from three internal donation campaigns which ran from November 2013 – June 2014, and the funds were donated to Qatar Charity, the Qatar Red Crescent Society, the Sheikh Eid Bin Mohammad Al Thani Charitable Association, and the Sheikh Thani Bin Abdullah Al Thani Foundation (RAF). The funds were used by the four charitable organizations for medical missions and humanitarian work for Syrian refugees, who continuously need assistance as the crisis drags on, as well as for typhoon and cyclone victims in the Philippines and Somalia, both of which were ravaged by severe weather events in late 2013.

## Shaping Qatar's Future

QNV 2030		NDS 2011 - 2016
Human Development		
Development of all its people to enable them to sustain a prosper- ous society.	An Educated Population	Building knowledge and skills
	A Healthy Population: Physically and Mentally	Nurturing a healthy population
	A Capable and Motivated Workforce	Fostering a capable and motivated workforce
Social Development		
Development of a just and caring society based on high moral	Social Care and Protection	Strengthening family cohesion
standards, and capable of playing a significant role in the global		Safeguarding social protection and promoting inclusive development
partnersnip for development.	A Sound Social Structure	Enhancing public safety and security
		Promoting an active and sporting society
		Preserving and leveraging Qatar's heritage and culture
	International Cooperation	
Economic Development		
Development of a competitive and	Sound Economic	Expanding the productive base
diversified economy capable of meeting the needs of, and securing a high standard of living for all its people for the present	Management	Enhancing economic stability
and for the future.		Enhancing efficiency
	Responsible Exploitation of Oil and Gas	
I TO BEALS	Suitable Economic Diversification	Building a diversified economy
Environmental Development		
Management of the environment	A Balance between	Cleaner water and sustainable use
such that there is harmony between economic growth, social	Protecting the	Cleaner air
development and environmental	Environment	Improved waste management
protection.		sustainably managed
		A nealthier urban living environment
		Strategie partnershipe
		Improved governance and outcomes
		improvod govornanoo ana odtoornoo

#### **QP's Contribution**

- Training and development resources for employees across the energy and industry sector
- Contribution to national research and educational infrastructure like Education City and Qatar Science & Technology Park
- Investment in scientific research
- Supporting sector compliance with health requirements
- Provision of medical facilities and services in industrial cities
- Health education for employees
- Qatari development plans
- Oversight of sector Qatarization plan
  Sponsorship of scholarships for Qatari students
- Sponsorship of scholarships for Qa
   OP UP Conference
- QP HR Conference
- Creation of the QP Human Rights Policy
- Monitoring of human rights compliance in industrial cities
- Female employment among QP's workforce
- Sponsorship of female students
- Corporate Social Responsibility and RLIC Community Outreach Program
- Occupational health and safety for QP operations
- Tire safety research
- Road traffic safety education and campaigns
- Emergency response coordination in industrial cities
- RLESC
- Fitness campaigns and education for employees
- Contribution to national sports infrastructure like AI Shaqab Equestrian Centre
- Investment in sports events and activities through COP and CSR
- Contribution to national cultural infrastructure like the Museum of Islamic Art
- Investment in cultural events and activities through COP and CSR
- Hosted the 2012 climate change negotiations, contributing to and cooperating on the global fight against climate change

Investment in national energy and industry companies

- Management and implementation of capital projects for Qatar
- Building local capacity in project management
- Supporting small and medium enterprises via investments in local suppliers
- Zero Liquid Discharge and Treated Industrial Water Project
- Operational efficiency initiatives
- Investment in the development of the gas industry
- Research and technological innovation
- Management and maintenance of oil and gas reserves
- Investment in the development of the petrochemicals, metals and other downstream industries
- Minimizing environmental impact of QP operations
- Environmental monitoring and performance management in industrial cities
- Investment in environmental education and awareness, like the QP Environment Fair

# **CHAPTER 4:**

INFLUENCING SUSTAINABILITY INTERNATIONALLY

# Developing Qatar's Energy Resources for the World

## **AN OVERVIEW OF OUR INTERNATIONAL PRESENCE**

While maintaining its focus as a leading national oil corporation, QP's vision is to continue to build its international presence with investments that provide opportunities for QP to build its core competencies, diversify its portfolio and extract further value for QP and the State of Qatar across the oil and gas value chain.

Qatar Petroleum International (QPI) was founded in 2007 as QP's independent international investment arm, in order to secure a portfolio of global investments for QP with leading international oil companies. In January 2015, QP's Board of Directors made the decision to integrate QPI within QP to combine the strength of both companies to become a fully integrated international energy player.

With this integration, QP is now directly responsible for managing the multibillion dollar portfolio of international investments built by QPI. This portfolio includes ten joint ventures spanning four continents and the oil and gas value chain. QP's international assets include upstream (gas and oil exploration), midstream (LNG terminals) and downstream (refining hydrocarbon into derivative products) operations based in the USA, Canada, UK, Italy, Greece, Singapore, Vietnam, Egypt, the Republic of the Congo, and Brazil. An overview of QP's direct international investments can be found on pages 66-67.

QP takes part in the technical, financial and management committees of most of its international joint ventures. This allows it to influence all operational decision-making through quarterly meetings and interim communications. We also have secondees working directly in South Hook and Golden Pass operations, contributing to day-to-day management and channeling their work experience to QP in Qatar. QP's participation in the management of international assets enriches QP with valuable experience concerning best practices in safety, operations, and technology. An overview of the sustainability approach implemented for each of QP's direct international investments can be found on pages 66-67.

QP has a number of other international ventures in which it has invested indirectly through its holdings in Gulf Helicopters, Al Shaheen Holding, Qatar Steel and RasGas, as well as its membership in the Organization of Arab Petroleum Exporting Countries (OAPEC). More information about these investments can be found at the websites of the investor organizations.

QP Investment	International Ventures	Website
OAPEC	Arab Shipbuilding and Repair Yard Company (Bahrain) Arab Maritime Petroleum Transport Company (Kuwait) Arab Petroleum Investment Corporation (KSA) Arab Petroleum Services Company (Libya) Arab Petroleum Pipelines Company (Sumed) (Egypt)	www.oapecorg.org
Al Shaheen	Al Shaheen Energy Services Ltd. (UK) PII North America LLC (USA) PII Group Ltd (UK)	www.alshaheenholding.com.qa
Qatar Steel	Qatar Steel Company FZE Dubai (UAE) SOLB Steel Company (KSA) Algerian Qatar Steel Company (Algeria)	www.qatarsteel.com.qa
Al Shaheen	Redstar Havac1I1k Hizmetleri A.S. (Turkey) AlMaha Aviation Company (Libya) United Helicharters Private Ltd. (India)	www.alshaheenholding.com.qa



#### Total Exploration and Production Congo (TEPC) Republic of Congo 15.00% effective share

TEPC's assets include a major development of the Moho Nord field, comprising a total of 28 subsea wellheads tied back to floating production units (FPUs) and with 17 more wells from a new tension leg platform (TLP). Drilling commenced in early October 2014; first oil from Moho Nord is expected in October 2015. By 2016, the project will have a production capacity of 140,000 boe/d. During 2014, the average daily production (QP net) from Congo assets was 14,000 boe/d.

Total's program 'Betosala' aims to support Congolese entrepreneurs on a long-term basis. The company offers an array of training programs to local businesses in such areas as safety, the environment and human rights. The goal is to enable them to bid in Total's international tenders and, down the road, work with other international companies. For more details, please see:

www.total.com/en/energies-expertise/oil-gas/exploration-production/projects-achievements/deep-offshore-project s/moho-nord-industrial-and-human-challenge-congo

#### BC-10 PSC Brazil 23.00% effective share

QP and Shell share assets in Brazil that include both the Brazilian upstream assets of the BC-10 Concession and the related Tamba JV that owns the FPSO vessel and facilities to support the BC-10 Concession. The average daily production (QP net) from BC-10 assets reached 12,000 boe/d in 2014. In Brazil, Shell has supported long-term research on the South Atlantic humpback whales in the area.

In 2013 the company launched a version of the global program, Shell LiveWIRE, which supports young entrepreneurs. Shell also runs an Environmental Education Project (PEA) designed to engage with 20 communities descended from slaves, known as "quilombolas". For more details please see: www.shell.com/global/aboutshell/major-projects-

#### CQ Energy Canada Partnership Canada 40.00% effective share

The CQ Energy Canada Partnership is a joint venture shared by Centrica and QP, possessing Canadian upstream natural gas assets located principally in South and Central Alberta and North East British Columbia. Average daily production (QP net) from CQ assets reached 26,000 boe/d in 2014.

A strong sustainability management and reporting system which focuses on safety, customers, people and communities, securing energy and reducing carbon.

#### Total Exploration and Production Mauritania 20.00% effective share

QP has a share in two blocks of Total's Mauritania exploration venture, located in the Taoudeni Basin of the Sahara Desert, 1,000 m east of Nouakchott. Drilling in the blocks started in 2009, and the project is in the exploration phase.

#### South Hook Gas UK 70.00% effective share

South Hook Gas is a UK-based LNG import company, which owns and manages the South Hook Terminal in South Wales, one of the largest LNG terminals in Europe. South Hook can provide up to 20% of the UK's natural gas needs and has supplied gas since 2009. South Hook LNG has integrated sustainability concerns into the core of its operations – the company's six values include People, Safety, Integrity, Excellence, General Interest and Social Responsibility, and the company is active in improving its performance in each of these areas. For more details, please see: www.southhookIng.com

#### Adriatic LNG Italy 22.05% effective share

Adriatic LNG operates an LNG Terminal located offshore Italy, in the northern Adriatic Sea. The terminal's 8 billion cubic meters capacity is approximately equal to 10% of the country's entire gas consumption. The Adriatic LNG Terminal is the world's first offshore Gravity Based Structure (GBS) for unloading, storing and regasifying LNG.

Overall the project has completed four Environmental Impact Assessments, which have resulted in the adoption of more than 100 specified environmental protection measures and implementation of an extensive monitoring program. For more details, please see: http://www.adriaticIng.com/

#### Golden Pass LNG USA 70.00% effective share

The Golden Pass LNG Terminal in Sabine Pass, Texas, is among the largest LNG facilities in the world and can accommodate up to approximately 2 billion cubic feet of natural gas per day. The terminal includes associated pipeline facilities to transport natural gas to existing intrastate and interstate natural gas pipeline systems. Golden Pass is now proposing to add export capabilities to its existing LNG import terminal, allowing it the flexibility to import and export natural gas in response to market conditions.

Golden Pass has a strong commitment to safety, the environment, and community engagement. More information about action in of each these areas can be found on the company's website. For more details, please see: www.goldenpasslng.com

#### Heron II Viotia Thermoelectric Station Greece 25.00% effective share

The Heron II Viotia Thermoelectric Station is a 435 MW gas-fired power plant outside of Thebes. It is the one of the most modern and efficient combined cycled gas turbines in Greece, with reduced fuel consumption and lower CO2 emissions.

Heron has its own CSR program in place and works with its customers to help them save energy. For more details, please see: http://www.heron.gr/

#### Egyptian Refining Company (ERC) Egypt 27.95% effective share

ERC is a state-of-the-art refinery under construction to convert lowest value fuel oil into middle and light distillates, which Egypt is in dire need of for its domestic consumption. Upon its completion, the refinery will have the capacity to produce 4.2 million tonnes of refined products per year, including 2.3 million tonnes of Euro V diesel, representing more than 50% of Egypt's current imports and 600,000 tonnes of jet fuel. ERC will also reduce the amount of SO2 currently released into the air by 186,000 tonnes/year, and improve the quality of the national petrol supply.

ERC conducted an Environmental and Social Impact Assessment of the project and has also instituted a Community Relations Team dedicated to proactive communications with its neighboring communities and development of programs and activities in response to the community's needs. For more details, please see: http://www.ercegypt.com/community-relations.html

#### Long Son Petrochemical Company Vietnam 25.00% effective share

Long Son Petrochemical Company is building a petrochemical complex near the Long Son oil refinery in the Long Son Industrial Zone. The complex will produce 2.7 million tonnes of polyethylene and polypropylene, as well as 700,000 tonnes of compounds for the production of polyvinyl chloride and 840,000 tonnes of other chemicals for the petrochemical and chemical industry. The complex is scheduled to commence operations in mid-2019.

#### QPI & Shell Petrochemicals (Singapore) Singapore 49.00% effective share

QP and Shell share a joint venture called QPI and Shell Petrochemicals (Singapore) (QSPS), founded in 2009. Through the venture, QP effectively holds 24.5% of the Petrochemical Corporation of Singapore (PCS) and 14.7% of The Polyolefin Company (Singapore) (TPC).

PCS is the upstream company of the Singapore Petrochemical Complex, the premier hub of Singapore's petroleum and petrochemical industries. Its main role is to supply high quality ethylene, propylene, acetylene, butadiene, 1-butene, MTBE and benzene. TPC is one of the largest and most successful polyolefin producers in Southeast Asia.

Singapore's Chemical Industry Council is a member of the chemical industry's global 'Responsible Care' initiative to drive continuous improvement and achieve excellence in environmental, health, safety and security performance. For more details, please see: http://www.pcs.com.sg/ and www.tpc.com.sg/

#### ACRONYMS AND GLOSSARY

#### Acronyms

AACC	Ambient Air Carrying Canacity
RAPP	Rehavioural Accident Prevention Process
CDM	Clean Development Mechanism
CEMS	Continuous Emissions Monitoring Systems
COR	CO <sub>2</sub> equivalent
	Community Outreach Program
FIΔ	Environmental Impact Assessment
FRG	Ethane Rich Gas
FRM	Enterprise Risk Management
GGER	Global Gas Elare Reduction
GHG	Greenhouse Gases
GJ	Gigaioule
H <sub>2</sub> S	Hydroaen Sulfide
HR	Human Resources
HSE	Health. Safety and Environment
IOGP	International Association of Oil and Gas Producers
LDAR	Leak Detection and Recovery
LES	Laffan Environmental Society
LNG	Liquefied Natural Gas
LPG	Liquefied Petroleum Gas
LTIR	Lost Time Injury Rates
MIC	Mesaieed Industrial City
MoE	Ministry of Environment
NDS	National Development Strategy 2011-2016
NFC	North Field Stabilized Condensates
NGL	Natural Gas Liquids
NOx	Nitrous Oxides
OS&ERD	QP Oil Spill & Emergency Response Department
QEISS	Qatar Energy and Industry Sector Sustainability
QF	Qatar Foundation
QNV	Qatar National Vision 2030
QP	Qatar Petroleum
QPRTC	QP Research & Technology Centre
QSTP	Qatar Science & Technology Park
QCCSRC	Qatar Carbonates and Carbon Storage Research Centre
QU	Qatar University
RAG	Rich Associated Gas
RLESC	Ras Laffan Emergency & Safety College
RLIC	Ras Laffan Industrial City
SCE	Safety Critical Element
SMART	Specific, Measurable, Attainable, Realistic and Timely
SO <sub>2</sub>	Sulfur Dioxide
TAFE	Lechnical and Further Education
TEEX	Texas Engineering Extension Service
	I reated Industrial Water
IPP	Technician Preparation Program
	Total Recordable Incident Rate
US EPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound

#### Glossary

Clean Development Mechanism	One of the Kyoto Protocol Mechanisms providing for emissions reduction projects which generate Certified Emission Reduction units, tradable in emissions trading schemes
CO <sub>2</sub> equivalent	Measurement of various greenhouse gases in the weight equivalent to CO <sub>2</sub> gas
Developee	Qatari, employed by QP, placed on a development program to gain necessary practical experience
Global Gas Flare Reduction	Public-private partnership, led by the World Bank, that comprises international and national oil companies, national and regional governments, and international institutions. GGFR works to increase use of natural gas associated with oil production by helping to remove technical and regulatory barriers to flaring reduction, conducting research, disseminating best practices, and developing country-specific gas flaring reduction programs.
GRI	The Global Reporting Initiative (GRI) is an international independent standards organization that helps businesses, governments and other organizations to understand and communicate impacts of their activities on sustainability related issues in economic, environmental and social spheres
ISO 28000:2007	An international standard, developed by International Organization for Standardization (ISO) to improve transport security and align the requirements for security management system
ISO 14001	An international standard, developed by International Organization for Standardization (ISO) providing tools and for companies and organizations to manage their environmental responsibilities
LTIR	Lost Time Injury Rate is derived by multiplying the number of lost time injuries in a calendar year by 200,000 (i.e. equivalent of 100 employees working 2,000 hours per year) and dividing this value by the total man-hours actually worked in the year. Thus, the absolute number of Lost Time Injuries is normalized for 100 workers.
National Development Strategy 2011-2016	Document establishing targets on the way of achieving goals established by the Qatar National Vision 2030, in the spheres of economic, social, cultural, and environmental development
OHSAS 18001	Framework for setting up best practices for occupational health and safety management system
Qatar National Vision 2030	Document defining long-term outcomes for the country to enable it to sustain its own development and providing for a high standard of living for its people and generations to come
Qatarization	Process of increasing the ratio of national employees in public and private companies and organizations in Qatar
QEISS Program	Qatar Energy and Industry Sector Sustainability Program aiming to enhance sustainability performance and reporting of the energy and industry sector in Qatar
SANGEA <sup>™</sup> program	Software that ensures consistent reporting of GHG emissions across various operational units
Secondee	Employee assigned to assist another employee or organisation on a temporary basis
SMART targets and goals	Criteria, widely used as a guidance for setting objectives in a management process
Stakeholders	Entities or individuals that can reasonably be expected to be significantly affected by the organization's activities, products, and services; and whose actions can reasonably be expected to affect the ability of the organization to successfully implement its strategies and achieve its objectives
TRIR/ LTIR	Total Recordable Injury Rate or Loss Time Injury Rate is defined as the number of recordable injuries (fatalities + lost work day cases + restricted work day cases + medical treatment cases) per million hours worked.

### Feedback & Contact Details:

Saif Saed Al-Naimi Manager, Corporate Health, Safety, Environment & Quality Department Qatar Petroleum Tel. :+974 4013 2555 / 4013 1588 Email : sss\_alnaimi@qp.com.qa

2.7 -5
## **OUR VISION**

To be a world class oil and gas corporation, with its roots in Qatar, and a strong international presence.

## **OUR MISSION**

## OUR OVERALL OBJECTIVE

## STRATEGIC OBJECTIVES

To ensure that Qatar receives maximum benefit from its oil and gas resources by engaging in activities that add value to these resources.

To maximize our contribution to the national wealth of Qatar and its National Vision, through the safe, efficient and environmentally acceptable exploitation of the country's hydrocarbon resources and through related support activities.

• Provide the state with a reliable and sustainable cash flow, from a range of business interests.

• Prudently manage the hydrocarbon reserves of the State of Qatar.

• Meet national oil and gas demand in a cost-effective manner.

• Achieve world-class standards of health, safety and environmental protection.

• Maximize the employment of qualified and skilled Qatari nationals, and effectively develop them to international standards of competence.

• Manage our infrastructures of supporting services and Industrial Cities in the most secure, cost-effective and socially responsible manner.